STUDY PROGRAMME ACCREDITATION MATERIAL:

POWER, ELECTRONIC AND TELECOMMUNICATION ENGINEERING

DOCTORAL ACADEMIC STUDIES

Novi Sad

2012.

Prevod sa srpskog jezika:

Jelisaveta Šafranj

Ivana Mirović

Marina Katić

Vesna Bodganović

Dragana Gak

Ličen Branislava

Content

Content

Content

Content

Content

Content

Programme name	Power, Electronic and Telecommunication Engineering
Independent higher education institution where the programme is being executed	University of Novi Sad
Higher education institution where the programme is being executed	Faculty of Technical Sciences
Educational-scientific/educational-art field	Technical-Technological Science
Scientific, proffesional or art field	Electrical and Computer Engineering
Type of studies	Doctoral Academic Studies
Study scope, expressed in ECTS	180
Academic degree, abbreviation	Doctor of Science - Electrical and Computer Engineering, Ph.D.El.Comp.Eng.
Study length	3
Programme implementation starting year	2005
Future course implementation starting year (for new programme)	
Number of students attending this programme	54
Planned number of students to be enrolled in this programme	120
Programme approval date (state the approval issuer)	14.11.2012 - Science Education Council 29.11.2012 - University of Novi Sad Senate
Programme language	Serbian, English
Programme accreditation year	2008
Web address containing programme information	http://www.ftn.uns.ac.rs

Standard 00. Higher Education Institution Competence for the Implementation of PhD Studies

The Faculty is fully prepared in terms of academic staff, equipment, classroom capacity and other facilities for administering doctoral studies in all fields studied at the Faculty based on indicators related to scientific work and research. The Faculty has a short-term and long-term plan and is accredited as a scientific and research institution, as required by law.

The capability of the Faculty to administer doctoral studies can be verified by the following:

•the number of the Ph.D. and Master theses defended at the higher education institutions which are in the area for which the study programme is accredited, in terms of the ratio of the number of the doctoral and master theses and the number of the students who have graduated from the programme and the number of professors.

•the ratio between the number of the professors and the number of the professors involved in the scientific and research projects.

•the ratio between publications in the Ministry of Science acclaimed international journals in the last 10 years and the number of the professors.

•cooperation with institutions in the country and abroad

•the Faculty employs a number of tenured teachers who have acted as doctoral thesis supervisors.

The capability of the Faculty to administer doctoral studies is obvious from the references which are enclosed with the accreditation material.

Standard 01. Programme Structure

The name of the Doctoral Study Programme is Power, Electronic and Telecommunication Engineering. The acquired academic degree is a Philosophy Doctor in Power, Electronic and Telecommunication Engineering. The outcome of the learning process is the knowledge that enables students to become capable of independent scientific research.
Doctoral studies in Power, Electronics and Telecommunication Engineering last three years and they are worth at least 180 ECTS. The first 90 ECTS are obtained through examination of the subjects, 30 ECTS trough laying theoretical basis for doctoral dissertations, and 60 ECTS are acquired by preparing and the doctoral thesis defense.
Doctoral studies last at least three years (six semesters) and no longer than ten academic years.
Research study on theoretical background is a part of the doctoral dissertation qualifying exam for the preparation of the doctoral thesis in which students demonstrate that they have mastered theoretical knowledge in the scientific area of interest. Theoretical foundations are laid as examination (written and / or oral) in certain fields of the study, from at least three courses defined in the study programme.
Student`s research interest is profiled by selecting the courses which will be studied, thus contributing to the in-depth knowledge and understanding of the areas (themes) of the doctoral dissertation. Optional courses are selected from the group of the proposed subjects of the study programme. The students have the opportunity to choose a number of courses, as agreed with their mentor (co-mentor), from a set of subjects for Doctoral Studies at the Faculty of Technical Sciences, University of Novi Sad, or any other university in the country or abroad. The conditions for the lecture attendance and other in the selected classes have to be fulfilled.

Teaching activity for the courses (mandatory or optional) is a group or individual (mentoring) activity. Group classes are held when the course is chosen by five or more students or when this type of the training is necessary to organize due to the nature (character) of the subject.
The decision on the type of the instructions and optional courses that are taught is made by the Head of Doctoral Studies and with the consent of the Manager of the Doctoral Studies at the Faculty.

Standard 02. Programme Objectives

The purpose of this Study Programme is education of the students capable of high quality and independent scientific research in accordance with the needs of our society. On the other hand, the educating staff who are trained to critically evaluate the research work and independently carry out the original and scientifically relevant research, enables the development of the new technologies and procedures that contribute to the overall development of the society. In addition, the purpose of this Doctoral Study Programme is a contribution to our national science as well as the application of the new scientific solutions to industry and in broader areas of power, telecommunications, electronics and computing.

Study Programme at Doctoral Studies in Power, Electronic and Telecommunication Engineering is designed to provide acquisition of skills that are socially justified and useful. The Faculty of Technical Sciences defined tasks and goals for educating highly competent personnel in the field of technology. The purpose of this Study Programme is completely in line with the high objectives and goals of the Faculty of Technical Sciences and at the level of strict standards of the Ph.D.education worldwide in electrical engineering and computer science.

Standard 03. Programme Goals

The objective of the study program is to develop student`s competencies and academic skills in the field of Electrical and Computer Engineering. Besides, this includes the development of the creative abilities in considering the problems as well as the ability of critical thinking, development of teamwork and mastering specific practical skills necessary to master the profession.

The objective of the study program is to educate an expert who has sufficient extended knowledge consistent with all contemporary directions of the development of the science in the world.

One of the specific objectives in accordance with the educational goals of the experts at the Faculty of Technical Sciences is to develop students` awareness of the need for a personal contribution to the development of the society in general and the environment protection. The objective of the study program is also to educate experts in the field of teamwork and development of the technical capacity for communication and presentation of their original results to the scientific public.

Standard 04. Graduates' Competencies

PhD graduates of the academic study programme in Power, Electronic and Telecommunication Engineering are competent to conduct research and solve problems in real life activities. Competencies include, above all, the development of critical thinking skills, the problem analysis capabilities, the synthesis solution, predicting the behaviour of the selected solutions with a clear understanding of what are the advantages and disadvantages of the selected solution.

The qualifications that indicate the completion of the doctoral academic studies, are gained by the students:

•who have demonstrated systematic knowledge and understanding in the field of electrical and computer engineering which is the basis for developing critical thinking and application of knowledge;
•who have mastered the skills and methods of research in this field;
•who have shown the ability of making concepts, design, construction and application of the selected solution;
•who have shown the ability to adapt the research process with the necessary level of academic integrity;
•who have performed original research and work, extending the existing boundaries of knowledge, which is verified by publishing papers in the appropriate scientific journal and by the references at national and international levels;
•who are capable of critical analysis, evaluation and synthesis of the new and complex ideas;
•who are capable of knowledge and ideas transfer to their colleagues, wider academic community and society in general
•who are capable of promoting technological, social and cultural progress in the academic and professional environment

After graduation, the PhD programme allows the students to have the knowledge, skills, developed abilities and competencies to :

•independently solve practical and theoretical problems and organize and develop activities and research;
•be involved in international scientific projects
•be able to implement the new technologies and procedures in the field of electrical and computer engineering and to understand and use modern knowledge;
•think critically, work creatively and independently;
•respect the code of ethics and principles of good scientific practice;
•be capable to present scientific research results at scientific conferences and publish in scientific journals, verifying them through patents and new technical solutions;
•contribute to the development of scientific disciplines in science generally.

After this study programme completion, the student obtains the following subject-specific competences:

• thorough knowledge and understanding of the disciplines that are subject of their involvement;
• ability to solve problems using scientific methods and procedures;
• linking basic knowledge in various fields and their application;
•ability to follow modern developments in the field of their profession;
•necessary skills and ability in applying knowledge in the field of electrical and computer engineering;
•the use of information and communication technologies.

Acquired competences are verified by scientific papers published by the candidate, at least two papers at the international conferences of M33-level (according to the categorization of the Ministry of Science) and at least one paper in the SCI journal list (M21, M22 or M23 level).

Standard 05. Curriculum

The curriculum of the Doctoral Academic Study Programme is supposed to meet the set goals. The structure of the study programme enables the students to choose optional courses which will be worth at least 70% of the ECTS credits.
During the doctoral academic studies, the students are encouraged to specialize in the specific field of the study they are most interested in. Through optional courses they are able to take further interest in the scientific and research areas studied during their graduate academic studies.
All courses last one semester and are worth a certain number of the ECTS credits, one credit comprising approximately 30 hours of the student`s activity.
The curriculum defines every course of the study programme and states the following: the course name, type, the year and the semester when the course is to be taken, the number of the ECTS credits, the name of the lecturer, the course objectives with the expected outcomes, the knowledge and competences the student will acquire, the prerequisites for the course, the course content, the recommended literature, the methods of lecturing, the tests and evaluation style and the other relevant data. Each course is designed in a way to provide about half of the class load in the form of lectures and half of the class load in the form of research. The research is an independent work of the PhD student, who has been doing the detailed study in the field of the selected course, as agreed with the course teacher.

The study programme is consistent with European standards regarding enrolment requirements , duration of the study, terms of enrolling into the next year, the acquisition of a diploma and the mode of the study.
The curriculum enables students to attend 7 courses during the first three semesters. In the first semester two compulsory courses are taught, namely: the research method and selected topics in mathematics as well as an elective course in which a list of elective courses is included, in the typical fields of electric power engineering, power electronics, electrical machinery, electronics, instrumentation and electrical measurement, telecommunications and signal processing. In the second and the third semester (each containing two optional courses), students elect optional courses after consulting with their mentor, available to every student of the doctoral studies.
In accordance with his/her own preferences, and with the consent of the mentor and the head of the study programme, the student can choose more than one course from the same group of elective courses.
The doctoral studies are worth at least 180 ECTS, out of which at least 90 ECTS are acquired by taking examinations in the courses prescribed by the study programme and research. Additional 90 ECTS are aquired by realization, elaboration and defence of the doctoral dissertation.
The doctoral studies in one study programme last at least 3 (three) academic years (6 semesters), and not more than 10 academic years. The research study in the theoretical framework of the doctoral dissertation is completed by passing a qualifying examination for the doctoral dissertation elaboration. The exam is supposed to show that the student mastered the necessary theoretical knowledge in the chosen scientific field of interest. The student has to pass the examination in the theoretical foundations (either written or oral) in different fields (issues), choosing from at least three courses of the study programme.
The doctoral studies involve classes, research as well as completion and defence of the doctoral dissertation.
The course lectures are carried out either in a group or individually (with a mentor). Group lectures are necessary if more than five students are taking the particular course, or if the nature of the course requires group work. The decision on the type of the lectures and elective courses is made by the Head of Doctoral Studies with consent of the Head of the Doctoral Studies of the Faculty of Technical Sciences.
Before the thesis defence, the candidate is required to have at least one paper published or accepted for publication in the journal with SCI (science citation index) list.
Doctoral dissertation is to be defended before a committee consisting of at least 5 teachers, one of whom has to be from the related academic or scientific institution, but from the faculty other than the Faculty of Technical Sciences. The most of the thesis defense members have to be chosen from the Faculty in respect to the study program.

Table 5.2 Course specification

Course:		Scientific Research Method
Course id:	DZ001	
Number of ECTS:	5	
Teachers:		Atanacković M. Teodor, Folić J. Radomir
Course status:		Mandatory

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
0	0	0	3	0

Precondition courses: None

1. Educational goal:

To enable students for successful writing of scientific papers and doctoral dissertations.

2. Educational outcomes (acquired knowledge):

- Ability of understanding varius scientific metods witch was used in scientific literature
- Ability of successful managing in proffesonal literature
- Ability of successful writing of scientific paper in area of of interests
- Ability of successful creating and ending of doctoral dissertation

3. Course content/structure:

Definition of science. Development of science through history.
Scientific methodology.
General and special scientific methods.
Structure of a scientific paper. Types of scientific results.
Writing and publishing scientific papers.
Writing the doctoral dissertation.
Evaluating scientific results.

4. Teaching methods:

Lectures. Consultations with students. Seminar paper.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Oral part of the exam	Yes	70.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Karl Poper	Logika naučnog otkrića	Nolit, Beograd	1973

Table 5.2 Course specification

Course:	Selected Chapters in Formal Methods for Hardware Design and Verification
Course id: DE100	
Number of ECTS: 13	
Teacher:	Malbaša D. Veljko
Course status:	Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses

1. Educational goal:

The objective of the course is to introduce students to the contemporary approaches in hardware design and verification based on mathematical formalism.

2. Educational outcomes (acquired knowledge):

Students who successfully complete this course will be able to follow the newest results, understand the professional and research literature and become participants in the scientific work in the area.

3. Course content/structure:

Overview of formal methods in hardware design and verification.
Part of the course is conducted through individual research and study work in the field of hardware design and verification.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Teaching is performed individually with each student. The teacher in cooperation with each student selects his (or hers) areas of interest and in accordance with it selects the theme and the literature that the student has to individually present and defend. Study and research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Theoretical part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Razni autori	Noviji članci iz časopisa		2007

Table 5.2 Course specification

Course:		Contemporary Microelectronic Technologies and Materials
Course id:	DE101	
Number of ECTS:	13	
Teacher:		Živanov D. Ljiljana
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

To present students with the overview of contemporary microelectronic technologies and materials so they can successfully and individually apply them in their research practice.

2. Educational outcomes (acquired knowledge):

- Ability to select the proper microelectronic technology depending on the set objectives and limitations
- Ability to understand the most significant electrical properties of materials in electronics
- Select the proper material for demanded application.

3. Course content/structure:

- Introduction (Review of current materials and technology in microelectronic).
- Crystal growth (Crystal growth from the melt, the float zone process).
- Single crystal thin film (epitaxy) (Epitaxy in vacuum: evaporation, molecular beam epitaxy - MBE, Epitaxy in gas atmosphere (vapour phase epitaxy - VPE, Metallo – organic vapour phase epitaxy - MOVPE).
- Technology of si integrated circuit (ic) (Planar operation. Material characterization. Bipolar and unipolar (MOS) IC. BiCMOS).
- Fundamental limits of IC. Heterojunction bipolar IC based on Si-Ge alloy.
- Technology of GaAs IC (Unipolar (MESFET) IC, heterojunction, optoelectronic and ballastic circuits).
- High-temperature microelectronic (Semiconductors with large band gap: SiC, III - V nitride, diamond).
- Technology of thick and thin film ic (Thick and thin film passive devices, and circuits: design and fabrication, Active circuits: semiconductor, magnetic, dielectric, optoelectronic, superconductor).
- Technology of hybrid ic (Design and fabrication).
- Nanoelectronic (Fabrication of nanostructure. Quantum - mechanic aspects of transport in nanoelectronic. Limits of nanofabrication).

Part of the course is conducted through individual research and study work in the field of contemporary microelectronic technologies and materials.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Lectures, tutorials. Presentation of films on the technological process of ic production in the Infinion. Study and research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	5.00	Written part of the exam - tasks and theory	Yes	70.00
Homework	Yes	5.00			
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	S.M.Sze	Semiconductor Devices: Physics and Technology	Wiley	1985
2,	S.M.Sze	VLSI Technology	McGraw-Hill	1988
3,	CRM Grovenor	Microelectronics Materials	Adam Hilger	1989

Table 5.2 Course specification

Course:		Microwave Technique 1
Course id:	DE102	
Number of ECTS:	13	
Teacher:		Crnojević-Bengin B. Vesna
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

To provide students with the advanced knowledge in the field of microwave technology that have not been mentioned in their previous education, and in dependence on their Doctoral dissertation topic.

2. Educational outcomes (acquired knowledge):

Advanced knowledge in the field of microwave technology that enables students to elaborate their Doctoral dissertation in the area.

3. Course content/structure:

Passive microwave circuits (Resonators, filters, antennas, couples). Active microwave circuits. Characterization of microwave circuits. Microwave measuring. Specialized programme software.
Part of the course is conducted through individual research and study work in the field of microwave technology.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Lectures, auditorial, laboratory and computer practice. Tutorials if necessary. Study and research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Laboratory exercise attendance	Yes	10.00	Oral part of the exam	Yes	60.00
Term paper	Yes	30.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	...	IEEE Transaction on Microwave Theory and Technique	IEEE	2007

Table 5.2 Course specification

Course:		Measurement Systems
Course id:	DE103	
Number of ECTS:	13	
Teacher:		Vujičić V. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Acquiring knowledge in the field of measurement systems.

2. Educational outcomes (acquired knowledge):

Ability to design a complex measurement system.

3. Course content/structure:

Conditioning the measurement signals. Digital measurement systems. Correlation standards. Oscilloscopes. Digital measurement of frequency and time. Sources of measurement and test signals. Signal analyzers. Designing measurement instruments and systems. Combined measurement methods (combining measurement and processing). Adaptive measurement instruments. Parallel measurement. Measurement at high frequencies (voltage and harmonica measurement). Filters in high-frequency measurements. Modulation measurement. Measuring high-frequency electro-magnetic field.
Part of the course is conducted through individual research and study work in the field of measurement systems.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Lectures. Tutorials. Study and research.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Written part of the exam - tasks and theory	Yes	50.00
			Oral part of the exam	Yes	20.00

Literature

Ord.	Author	Title	Publisher	Year
1,	V. Vujičić, S. Milovančev, D. Pejić	Adiciona A/D konverzija (monografija)	FTN Novi Sad	1999

Table 5.2 Course specification

Course:		Regulation and Operation Management of Distribution Networks
Course id:	DE104	
Number of ECTS:	13	
Teacher:		Strezoski C. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main objective of the course is to acquire knowledge on the operation management of distribution networks, regulation of voltage and reaction forces as basic regulation contour, as well as systems for operation management of distribution networks.

2. Educational outcomes (acquired knowledge):

Knowledge on the operation of distribution networks. Knowledge on the regulation in distribution networks. Knowledge on the management system of distribution networks.

3. Course content/structure:

Introduction (main goal of operation management; technical and economical analysis of distribution management system application; basic control variables). Technical information system in the management of distribution networks (data base; monitoring values, SCADA system).
Main management functions in real time (data acquisition; data storage; control of network topology and switching operation; state estimation; checking alarm violations; monitoring current operations; real time voltage control; reconfiguration; fault management; under voltage reconfiguration).
Part of the course is conducted through individual research and study work in the field of regulation and operation management of distribution networks.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Lectures. Study and research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	T.Gonnen	Electric Power Distribution System Enginering	McGraw-Hill Book Company; New York; NY; USA	1986
2,	E.Lakervi and E.Holmes	Electricity Distribution Network Design	Peter Peregrinus Ltd; London; U.K.	1989
3,	J.J.Burke	Power Distribution Enginering	Marcel Dekker; Inc.; New York; NY; USA	1986
4,	V.C.Strezoskii D.S.Janjić	Sistem regulacje napona disstributivnih mreža	Institut za energetiku i elektroniku, FTN, Novi Sad	1996

Table 5.2 Course specification

Course:		Optimization Methods in Power Engineering - II
Course id:	DE105	
Number of ECTS:	13	
Teacher:		Švenda S. Goran
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Osnovni cilj predmeta je sticanje znanja o vrstama metoda optimizacije i mogućnostima njihove primene pri rešavanju problema elektroenergetskih sistema.

2. Educational outcomes (acquired knowledge):

Knowledge on the models and problems in the application of static optimization methods. Knowledge on the models and problems in the application of numerical methods. Knowledge on the models and problems in the application of dynamic programming methods. Knowledge on the models and problems in the application of global optimization methods.

3. Course content/structure:

Fundamentals in optimization: setting and classification of optimization problem. Integer programming: Gomory Cutting Algorithm, “branch and bound” algorithms, binary and “mixed integer” programming. Genetic algorithms for discrete programming. Dynamic programming. Direct methods for partial browsing. Global optimization. Monte Carlo method: method of statistical sampling: computer simulation. Game theory. Multi criteria optimization: Pareto optimization. Sensibility analysis and post-optimal analysis.
Application of optimization methods in power systems.

4. Teaching methods:

Partially lectures are realized through individual research work in the field of regulation and distribution network management.
Study and research work includes active following of the primary scientific sources, organization and carrying out of experiment and statistical data processing, numeric simulations, scientific paper writing in the field of the doctoral thesis.
Lectures. Auditory practical classes. Consultation.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Theoretical part of the exam	Yes	40.00
Term paper	Yes	40.00			
Test	Yes	10.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	V.Levi, D.Bekut	Primena računarskih metoda u elektroenergetici	Stylos, Novi Sad, Jugoslavija	197
2,	E.K.P.Chang, S.H.Zak	An Introduction to Optimization	John Wiley & Sons, New York, USA	2001
3,	J.A.Momoh	Electrical Power System Application of Optimization	Marcel Deccer, Inc, New York, USA	2005
4,	S.S.Rao	Engineering Optimization – Theory and Practice	John Wiley & Sons, New York, USA	2009

Table 5.2 Course specification

Course:		Reliability of Power Systems
Course id:	DE106	
Number of ECTS:	13	
Teacher:		Nimrihter D. Miroslav
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main objective of the course is to acquire knowledge on the principles of planning development and maintenance of power, transfer and distribution companies, from the point of work in states with failures. Planning implies the analysis on the influence of elements and system in general onto the damages due to failure, as well as element and system management.

2. Educational outcomes (acquired knowledge):

Knowledge on the conditions for failure and their analysis within production, transfer and distribution companies. Knowledge on the methods and tools for modelling system behaviour in states with and without failure. Knowledge on the manners of managing financial means with the objective of the optimal selection of additional production, transfer and distribution capacities. Knowledge on the procedures for property management.

3. Course content/structure:

Stochastic process. Reliability of elements. Outages and scheduled maintenance. Managing economic and non-economic risks.
Generation system model. Line reliability modelling, plant reliability. Reliability of the power systems. Reliability of distributions systems. Improvement of distribution network reliability. Fault passage indicators. Remote signalization and control. Techno-economical analysis. Outage costs. Estimation of outage costs of different types of customers. Selecting optimal level of reliability.
Part of the course is conducted through individual research and study work in the field of reliability of power systems.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Lectures. Study and research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance	Yes	5.00	Oral part of the exam	Yes	70.00
Lecture attendance	Yes	5.00			
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	R.Bilinton, R.N.Allan	Reliability Evaluation of Power Systems	Pitman Press	1984
2,	Wenyuan Li	Risk Assessment of Power Systems-Models, Methods, and Applications	IEEE PRESS	2005
3,	Razni autori	Izabrani naučni članci iz oblasti analize, prognoze i upravljanja pouzdanošću.		xxx

Table 5.2 Course specification

Course:		Decision-Making and Optimization
Course id:	DE107	
Number of ECTS:	13	
Teacher:		Katić A. Nenad
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Acquiring fundamental knowledge on economic decision-making and economic optimization of distribution network power networks.

2. Educational outcomes (acquired knowledge):

Knowledge on the principles of economic decision-making, planning and economic optimization of distribution network power network.

3. Course content/structure:

Overall economy of business and decision-making in power engineering companies. Procurement and consumption of electric power and tariff system. Consumption costs of power distribution networks. Economic (profit) optimization of distribution network power plants. Economic load of built electric power facilities. Technical and economic analysis in planning the erection of electric power facilities. Automation of electric power distribution networks.
Part of the course is conducted through individual research and study work in the field of decision-making and optimization.Study and research work includes active following of the primary scientific sources, organization and carrying out of experiment and statistical data processing, numeric simulations, scientific paper writing in the field of the doctoral thesis.

4. Teaching methods:

Lectures or mentor work. Consultation. Study and research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	50.00
Term paper	Yes	40.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	grupa autora	Zakon o energetici	Službeni glasnik Republike Srbije	2011
2,	N.Katić	Ekonomski metodi u elektroenergetici	skripta	2004
3,	E.Lakervi, E.J.Holmes	Electricity Distribution Network Design	Peter Peregrinus Ltd.,London	1989
4,	S.Stoft	Power System Economics	Wiley	2002
5,	D. Kirschen, G. Strbac	Power System Economics	John Wiley & Sons	2004
6,	N.Katić	Elektroprivreda u uslovima slobodnog tržišta	FTN	2012

Table 5.2 Course specification

Course:		FACTS Devices and Electric Power Quality
Course id:	DE108	
Number of ECTS:	13	
Teacher:		Katić A. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Objective of the course is to present students with the advanced knowledge in FACTS systems and their interaction with the problems of electric power quality. The course will deal with contemporary algorithms for the management and usage of digital micro processing devices in the work of power distribution system, as well as universal devices providing flexibility of the transfer system and significant contribution to the increasing quality of electric power and general work of power distribution system.

2. Educational outcomes (acquired knowledge):

Educational outcome is to acquire latest global knowledge enabling the design, work analysis, construction and scientific contributions to the development and improvement of the FACTS devices from the aspect of the electric power quality and adjoining managing algorithms for diverse real situations in a power system.

3. Course content/structure:

Systematization of FACTS devices. Electronic power converters for FACTS. Converter management methods and algorithms. Influence on electric power quality – positive and negative influences. Quality standards. Universal devices. Comparative analysis and economic feasibility estimation. New solutions.
Part of the course is conducted through individual research and study work in the field of FACTS devices and electric power quality.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Teaching methods comprise lectures for theoretic setting, tutorials and practice for utilizing the mathematical modelling and computer simulations. Study and research.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project defence	Yes	50.00	Written part of the exam - tasks and theory	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	E. Acha, V. Agelidis, O.Anaya-Lara, T. Miller	Power Electronic Control in Electrical Systems	Butterworth-Heinemann	2002
2,	E.Acha, C.Esquivel, H.Perez, C.Camacho	FACTS Modelling and Simulation in Power Network	John Wiley & Sons	2004
3,	Vladimir Katić	Kvalitet električne energije - viši harmonici	UNS-Fakultet tehničkih nauka, Edicija Monografije, Br.6	2002

Table 5.2 Course specification

Course:		Selected Chapters in Electromotive Drives
Course id:	DE109	
Number of ECTS:	13	
Teacher:		Marčetić P. Darko
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Introduction to contemporary electromotive drives development trends. Introduce students to basic modelling tools and operation simulation of the controlling structure within a plant.

2. Educational outcomes (acquired knowledge):

In this course the candidate is introduced to electromotive drives development trends. Huge amount of references is covered in the selected field, and one drive within the department is used for acquiring selected experimental results. The candidate is trained for solving current problems in the field of electromotive drives.

3. Course content/structure:

Introduction. Classification of electromotive drives. 1) Electromotive drives with asynchronous engine (AE). 1?) Matlab-Simulink model of vector controled drive with AE and position indicator 1b) Synthesis of digital power, speed and position regulator. 1c) Analysis of drive sensitivity to parameters change. 1d) Matlab-Simulink model of vector controled drive with AE and without position indicator (MRAS and SMO estimators of speed and position), 1?) vector controled drive with AE and with and without position indicator and on-line paramenter estimation realized in programme language C on TI DSP 320F2812 . 2) Electromotive drives with synchronous engine (SE). 2?) Matlab-Simulink model of vector controled drive with SE and position indicator 2b) Matlab-Simulink model of vector controled drive with SE and without position indicator (SMO and one of the methods based on impression of test signal), 2c) Analysis of sensitivitiy of SE shaft- sensorless drive to paramenters change. 2d) vector controled drive with SE and with and without position indicator ? on-line paramenter estimation realized in programme language C on TI DSP 320F2812.
Partially classes are realized through independent study and research work in the field of electromotive drives. Study and research work includes acrive following of primary scientific sources, organization and conducting experiments and statistical data processing, numeric simulations, elaboration of a paper in the filed of doctoral disertation.

4. Teaching methods:

Lectures. Mentor work. Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	Slobodan N. Vukosavić	Digitalno upravljanje električnim pogonima	Akademska misao	2003
2,	Darko Marčetić	Mikroprocesorsko upravljanje energetskim pretvaračima	FTN Novi Sad izdavaštvo	2012

Table 5.2 Course specification

Course:		Stochastic Processes in Telecommunications
Course id:	DE110	
Number of ECTS:	13	
Teachers:		Bajić D. Dragana, Trpovski V. Željen
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Additional knowledge on mathematical methods in telecommunications.

2. Educational outcomes (acquired knowledge):

Enabling candidates for individual and creative solving of the problem-type tasks based on stochastic processes.

3. Course content/structure:

Introduction: field of probability, random variables, conditional probability, moments, distribution, characteristic functions. Concepts of stochastic convergence and limit theorems. Bernoulli processes. Stationarity and ergodicity. Poisson processes: superposition, decomposition, composite, non-stationary. Renewable processes. Markov processes.
Part of the course is conducted through individual research and study work in the field of stochastic processes in telecommunications.
The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Lectures. Study and research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project defence	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Papoulis	Probability, random variables and stochastic processes	Willey	1989

Table 5.2 Course specification

Course:	Algorithms for Digital Signal Processing
Course id: DE111	
Number of ECTS: 13	
Teachers:	Delić D. Vlado, Šećerov E. Emil
Course status:	Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

As a main course for the doctoral studies students whose major choice is digital signal processing, this course has an educational objective to provide students with all the necessary knowledge on digital signal processing and its application. It is necessary to consolidate the knowledge from graduate studies regarding digital signals in both time and frequency domains, digital filters and methods for their design. The objective of the course is to increase and deepen students` knowledge by introducing them to the advanced algorithms and applications for digital signal processing. They should get acquainted with the methods for designing optimal filters and adaptive systems which are increasingly utilized in practice.

2. Educational outcomes (acquired knowledge):

Main algorithms for signal processing in discrete time and the most important transformations of discrete signals, including the algorithms for the Fast Fourier transformation. Digital filters are introduced via concrete examples, and only then theory is learned and methods for their design are introduced. Based on the acquired knowledge, students will be able to competently analyse the set problem, select the appropriate digital filter class and optimal design method, design with the usage of adequate software tools and implement a digital filter on the general purpose processor or DSP platform. Students will learn to select optimal structures for the realization and to design even the complex systems for digital signal processing.They will be introduced to the methods for signal spectrum estimation, as well as adaptive systems. In practical work, they will gain experience with the Matlab DSP Toolbox and Simulink.

3. Course content/structure:

•Practical aspects of A/D and D/A conversion and selection theorems. •Transformations of discrete signals and links between them (ZT, FTD, DFT). •Fast FT and fast convolution. •Examples of digital FIR and IIR filters and their characteristics. •Main methods for digital filter design (with the introduction to Matlab DSP Toolbox). •Design methods and the selection of structure for the realization of optimal digital FIR and IIR filters. •Multirate systems. •Adaptive systems. •Frequency spectrum estimation (with the introduction to Matlab Simulink). •Part of the course is conducted through individual research and study work in the field of algorithms for digital signal processing. The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Teaching is the combination of lectures and tutorials. Individual students` work is supported by the web portal of the Chair for Telecommunications and Signal Processing. There, they can find PowerPoint presentations from lectures in .pdf format, as well as certain on-line exercises intended for individual work and homework elaboration. During the tutorials, students are led through the selected chapters in the Tasks for Digital Signal Processing with the objective of acquiring additional knowledge to the one from their graduate studies. At the Laboratory for Digital Signal Processing at the Faculty, students obtain practical experience in the work with software tools for digital signal processing and with the development systems for DSP where they perform the implementation of the DSP algorithm. Some of the obtained knowledge is tested during the semester in the form of elaborating short design tasks and homework. During the final examination, the entire knowledge from the course is e

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	5.00	Written part of the exam - tasks and theory	Yes	50.00
Homework	Yes	5.00			
Homework	Yes	5.00			
Homework	Yes	5.00			
Project	Yes	30.00			

Literature				
Ord.	Author	Title	Publisher	Year
1,	J. Proakis and D. Manolakis	"Digital Signal Processing – Principles, Algorithms, Applications	Prentice Hall	1996
2,	E. Ifeachor and B. Jervis	Digital Signal Processing – A Practical Approach	Prentice Hall	1993
3,	S. Mitra	Digital Signal Processing, A Computer-Based Approach	McGraw-Hill	2002
4,	Miodrag Popović	”Digitalna obrada signala”	Nauka, Beograd	1994
5,	Milan Sečujski, Vlado Delić, Nikša Jakovljević, Igor Radić	”Zbirka zadataka iz digitalne obrade signala”	FTN, Novi Sad	2007

Literature

Ord.	Author	Title	Publisher	Year
6,	Vlado Delić i dr.	”PPT prezentacije sa predavanja i on-line vežbe preko Web portala Katedre za telekomunikacije i obradu signala”		2007

Table 5.2 Course specification

Course:		Non-deterministic Modelling
Course id:	DE112	
Number of ECTS:	12	
Teacher:		Nimrihter D. Miroslav
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	3	0

Precondition courses: None

1. Educational goal:

Introduction to the fundamental criteria and techniques that are deterministically based and used in the planning of the power system. Considering main drawbacks of these criteria which do not reflect the stochastic nature of the system. Survey of the main areas for probabilistic modelling of the system behaviour and adequate probabilistic methods and techniques developed. Developing knowledge and understanding of the specificities in modelling electric sources, transfer and distribution systems. Encouraging students to apply their skills and knowledge from probabilistic theory and statistic onto the problems of planning a power system.

2. Educational outcomes (acquired knowledge):

Students will be able to design the power sources and transfer systems in order to increase their reliability. They will be able to understand the differences between analytic and simulation modelling methods. They will develop simple power system models for reliability studies. They will be able to estimate adequate power system reliability parameters. They will know to develop the power system technology and the working processes in the sense of overall reliability and feasibility. They will be able to use the specialized software for power system reliability studies, to write technical reports and use software for the analysis of alternative configurations to find the optimal one. They will be competent to utilize the acquired knowledge in solving all problems concerning the power system reliability studies.stem reliability studies.

3. Course content/structure:

Introduction to deterministic criteria for the application in power systems. Main reliability development concept for power systems. Main performances of the power system reliability indicators. Markov modelling. Analytical methods for the production reliability estimation and electric power transfer. Monte Carlo methods. Simulation methods for the production reliability estimation and electric power transfer. Stochastic modeling for hydro-power plants and wind mills parks. Reliability parameters for the power system equipment. Market-oriented performances of the transfer and distribution system indicators working on the competitive market of electric power.

4. Teaching methods:

Lectures. Computing practice. Consultations. Homework. Lectures are performed in a combined manner. Theoretical part is performed using the contemporary tools with characteristic examples contributing to the explanations of the theoretical lecturing part. In practice that follows the lectures, specialized software is introduced, and adequate tasks are done to elaborate the content presented in lectures.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	30.00	Oral part of the exam	Yes	30.00
Term paper	Yes	40.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	G. Levitin (Ed.)	Computational Intelligence in Reliability Engineering	Springer, Berlin	2007
2,	H. Wang, H. Pham	Reliability and Optimal Maintenance	Springer, Berlin	2006

Table 5.2 Course specification

Course:		Application of Power Electronics in Power Systems
Course id:	DE113	
Number of ECTS:	13	
Teacher:		Katić A. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Course objective is to introduce to students the advanced knowledge in FACTS systems and their interaction with the problems of electric energy quality. The course will consider modern algorithms for managing and utilizing digital microprocessing devices in the work of a power system, as well as universal devices providing the flexibility of the transfer system and significantly contributing to the increase in quality of the electric power and the entire power system.

2. Educational outcomes (acquired knowledge):

The course outcome is the knowledge on the last worldwide trends enabling the design, work analysis, construction and scientific contribution for various real situations in the power system.

3. Course content/structure:

Systematization of energy electronics devices in the power system (Back-to-Back converters, FACTS devices) applied in power systems. Methods and algorithms for managing converters. Influence on the electric power quality – positive and negative influences. Quality standards. Universal devices. Comparative analysis and economic feasibility estimation. New solutions. Part of the course is conducted through individual research and study work in the field of the application of power electronics in power systems and their influences on the electric power quality. The study and research work is based on active study of primary scientific sources, organization and performance of experiments and statistic data processing, numerical simulations, and writing a paper in the narrow scientific area within the topic of the Doctoral dissertation.

4. Teaching methods:

Teaching methods are lectures for theoretical bases, tutorials and practice utilizing mathematical modelling and computer simulations. Study and research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	70.00	Oral part of the exam	Yes	30.00

Literature

Ord.	Author	Title	Publisher	Year
1,	E. Acha, V. Agelidis, O.Anaya-Lara, T. Miller	Power Electronic Control in Electrical Systems	Butterworth-Heinemann	2002
2,	E.Acha, C.Esquivel, H.Perez, C.Camacho	FACTS Modelling and Simulation in Power Network	John Wiley & Sons	2004

Table 5.2 Course specification

Course:		Selected Chapters in Distribution Network Analysis
Course id:	DE114	
Number of ECTS:	13	
Teacher:		Strezoski C. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Acquiring knowledge on:
1) Concept of distribution networks
2) balanced and unbalanced distribution networks
3) power flow calculation and fault state
4) voltage regulation

2. Educational outcomes (acquired knowledge):

Students will acquire knowledge necessary for cope with questions in the domain of management, planning of plants and planning of distribution networks development.

3. Course content/structure:

1) Uvodni deo (načela distribucije električne energije).
2) Koncepti evropskih i američkih distributivnih mreža, kao reprezenti svih tipova svetskih distributivnih mreža.
3) (Ne)uravnoteženost distributivnih mreža i (ne)simetrija njihovih stanja.
3a) Proračuni tokova snaga (ne)uravnoteženih distributivnih mreža;
3b) Proračuni režima s kvarovima (kratkim spojevima i prekidima faza) (ne)uravnoteženih distributivnih mreža.4) Regulacija napona distributivnih mreža.

4. Teaching methods:

Lectures or mentor work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	T.Gonnen	Electric Power Distribution System Enginering	McGraw-Hill Book Company; New York; NY; USA	2000
2,	E.Lakervi and E.Holmes	Electricity Distribution Network Design	Peter Peregrinus Ltd; London, UK	2000
3,	J.J.Burke	Power Distribution Enginering	Marcel Dekker; Inc.; New York	2000
4,	V. Strezoski, D. Janjić	Sistem regulacije napona distributivnih mreža	Institut za energetiku i elektroniku, FTN Novi Sad	2008

Table 5.2 Course specification

Course:		Selected Chapters in Power Engineering System Analysis
Course id:	DE115	
Number of ECTS:	13	
Teacher:		Strezoski C. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Course objective is to introduce to students new techniques of power system modelling (production/transmission and distribution networks) and algorithms for their solution. The course will deepen the modelling and calculation of not only European, but of all world-wide power systems with a special emphasis on smart networks.

2. Educational outcomes (acquired knowledge):

The course outcome is the knowledge and skills of students for individual and team scientific work and research in the subject area.

3. Course content/structure:

Within the course the following methods are applied: 1. Lectures-presentation of the theoretical part is followed by examples that contribute to a clarification of certain parts of the curriculum, 2. Consultations-in addition to regular lectures, consultations are held regularly 3. Study research work – studying the scientific journals and other literature, colleagues are able to independently deepen the lecture material. By working with the course teacher, colleagues are trained to write their own scientific work.

4. Teaching methods:

Lectures or mentor work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Vladimir Strezoski, Dragan Popović	Proračuni stacionarnih režima elektroenergetskih sistema	Fakultet tehničkih nauka, Novi Sad	2008
2,	Emil Levi, Vladan Vučković, Vladimir Strezoski	Osnovi elektroenergetike – energtski pretvarači	Fakultet tehničkih nauka, Novi Sad	1996
3,	Vladimir Strezoski	Analiza elektroenergetskih sistema - skripta	Fakultet tehničkih nauka, Novi Sad	2010

Table 5.2 Course specification

Course:		Electrical Substations 2
Course id:	DE116	
Number of ECTS:	13	
Teacher:		Salamon D. Dragutin
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main course objection is introduction to electrical equipment and commutation processes in a plant, characteristics and selection of measurement transformers and protection devices, commanding and synchronization in the plant. Calculation of reliability of electrical substations.

2. Educational outcomes (acquired knowledge):

Knowledge on selection of protection against atmosphere charge. Knowledge on selection possibilities of measurement and protection equipment in electrical substations. Knowledge on possibilities of choosing supply scheme of the plant based on reliability methods in economic principles.

3. Course content/structure:

Electrical arch and commutation processes in the plant. Selection of isolation level and selection of protection against atmosphere charging. Current and voltage measurement transformers. Relay protection, measurement, commands and signalization in electrical substations. Reliability of electrical substations. Determination of plant schemes on the basis of its reliability parameters.

4. Teaching methods:

Lectures. Auditory practice. Computer practice.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	30.00	Written part of the exam - tasks and theory	Yes	35.00
			Oral part of the exam	Yes	35.00

Literature

Ord.	Author	Title	Publisher	Year
1,	J. Nahman, V. Mijailović	Visokonaponska postrojenja	Beopres	2000
2,	H. Požar	Rasklopna postrojenja	Školska knjiga, Zagreb	1984
3,	J. Nahman	Metode analize pouzdanosti elektroenergetskih sistema	Naučna knjiga, Beograd	1992
4,	Lj. Gerić, P. Đapić	Razvodna postrojenja	FTN, Novi Sad	2006

Table 5.2 Course specification

Course:		Selected chapters from optoelectronics sensors systems
Course id:	DE117	
Number of ECTS:	13	
Teachers:		Slankamenac P. Miloš, Stojmenović D. Ivan, Tomić J. Josif, Živanov B. Miloš
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Acquisition of knowledge from selected chapters of general optoelectronics, optoelectronic components, lasers, optical fibers, optoelectronic sensors, fiber-optic and distributed optoelectronic sensors.

2. Educational outcomes (acquired knowledge):

- Ability to design systems with LED and laser diodes and photodetectors
- Ability to design systems with displays
- Ability to design systems with optoelectronic sensors
- Ability to work with the most advanced optoelectronic systems
- Ability to design fiber-optic sensor systems

3. Course content/structure:

Introduction to optoelectronic systems. Characteristics of optoelectronic components (light emitting diodes, lasers and detectors). Optical resonators. Application of optoelectronic components for telecommunications and computers. CWDM and DWDM systems.
Optoelectronic sensors. Basic circuits with optoelectronic components: excitation of lighting and laser diodes, circuits with optical receivers. Gas, and liquid lasers čvstotelni. Applications of lasers in industry, graphic arts, medicine, the military, research and the like. Fiber-optic sensors. Distributed fiber-optic sensors. Part of teaching the course is conducted through independent study research. Research work includes active monitoring of primary source research in the field of optoelectronic sensors, as well as the writing of scientific papers in the field close to the dissertation topic.

4. Teaching methods:

Lectures. Auditory practice. Computer practice. Laboratory practice. Tutorial work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Written part of the exam - tasks and theory	Yes	30.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	S.O. Kasap	Optoelectronics and Photonics: Principles and Practices	Printece Hall	2001
2,	Shizhuo Yin, Paul B. Ruffin, Francis T.S. Yu	Fiber Optic Sensors	CRC press	2008
3,	Le Nguyen Binh	Digital Optical Communications	CRC Press	2008

Table 5.2 Course specification

Course:		Selected Chapters in Physics
Course id:	DZ01F	
Number of ECTS:	12	
Teachers:		Budinski-Petković M. Ljuba, Kozmidis-Luburić F. Uranija, Kozmidis-Petrović F. Ana, Satarić V. Miljko, Vučinić-Vasić T. Milica
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	3	0

Precondition courses: None

1. Educational goal:

To acquire the knowledge of physics which is applied in modern engineering.

2. Educational outcomes (acquired knowledge):

The students will have acquired the knowledge which enables them to develop models for solving problems in practical professional work as well as evolvement in science and research work in the corresponding areas.

3. Course content/structure:

Student can choose in consultation with programme supervisor, one of the suggested modules: 1. Lasers, their applications in engineering, 2. Quantum tunnelling effect and applications, 3. Quantum dots, wires and tubes, Applications in nanotechnologies, 4. New materials, amorphous materials, spin glass, 5. Natural and artificial polymers and their application in nanotechnologies, 6. Numerical method of statistics physics, random number generator. Monte Carlo simulation.

4. Teaching methods:

Lectures. (The student can choose in consultation with co-mentor, one or more modules depending on module scope). Consultations. Lectures are organized in combined form. The presentation of the theoretical part is followed by the corresponding examples. In addition to lectures there are regular consultations. Through research and study work the student will, on the bases of scientific journals and other relevant literature that has been studied independently, develop further understanding of the material covered in lectures. Working with the course teacher the student develops the ability to independently work on a scientific paper.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	K. Binder, D.W. Heermann	Monte Carlo Simulation in Statistical Physics	Springer-Verlag	1988

Table 5.2 Course specification

Course:	Selected Chapters in Mathematics
Course id: DZ01M	
Number of ECTS: 12	
Teachers:	Adžić Z. Nevenka, Doroslovački D. Rade, Gilezan K. Silvia, Grbić P. Tatjana, Kostić Z. Marko, Kovačević M. Ilija, Mihailović P. Biljana, Pantović B. Jovanka, Pilipović R. Stevan, Rajković R. Milan, Ralević M. Nebojša, Sladoje Matić I. Nataša, Stojaković M. Mila, Teofanov Đ. Ljiljana, Uzelac S. Zorica
Course status:	Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	3	0

Precondition courses: None

1. Educational goal:

To acquire knowledge which can be used in professional subjects and practical work, develop and solve mathematical models for engineering courses using the knowledge gained through selected chapters in mathematics.

2. Educational outcomes (acquired knowledge):

Student will have been competent enough to develop and solve mathematical models in further professional education.

3. Course content/structure:

Student can choose in consultation with programme supervisor, one of the suggested modules: 1. Numerical Mathematics, 2. Optimization. 3. Pattern Recognition. 4. Partial Differential Equations, 5. Nonlinear Equations. 6. Computational geometry. 7. Elements of Functional Analysis. 8. Combinatorics. 9. Graph Theory.10.Operational Research- Linear Programming. 11. Probability 12. Statistics .13.Stochastic Processes. 14. Vector analysis. 15. Complex Analysis. 16. Linear Algebra. 17. Differential and Difference Equations. 18. Euclidean and Non-Euclidean Geometry. 19. Fractional Calculus,Differential Equations . 20. Operational Research-Quiuing theory. 21. Logic in Computing. 22. Discrete Mathematics. 23. Higher order Logic. 24. Theory of Mobile Processes. 25. Numerical Methods of Linear Algebra. 26. Fuzzy Sets. 27. Economic and Financial Mathematics. 28. Groups and Algebras Li. 29. Formal Languages and Automata Theory. 30. Process Algebras. 31. History of Mathematics. Part of the course is in the form of independent research and study in the field of mathematics. Study and research work is based on primary scientific sources, organization and conduction of experiments and statistical data analysis, numerical simulations, and possible paper in the field of mathematics.

4. Teaching methods:

Lectures. (The student can choose in consultation with supervisor, one or more modules depending on module scope). Consultations. Lectures are organized in combined form. The presentation of the theoretical part is followed by the corresponding examples which contribute to better understanding of the theoretical part. In addition to lectures there are regular consultations. Through research and study work the student will, on the bases of scientific journals and other relevant literature that has been studied independently, develop further understanding of the material covered in lectures. Working with the course teacher the student develops the ability to independently work on a scientific paper.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Alexander Mood,...	Introduction to the theory of statistics	McGraw Hill	2005
2,	Athanasios Papoulis	Probability, random variables and stochastic processes	McGraw Hill	2002
3,	I. Kovačević, N. Ralević	Funkcionalna analiza	FTN (edicija tehničke nauke-udžbenici), Novi Sad	2004
4,	N.Ralević,I.Kovačević	Zbirka rešenih zadataka iz Funkcionalne analize	FTN (edicija tehničke nauke-udžbenici), Novi Sad	2004
5,	M.Stojaković	Slučajni procesi	FTN, Novi Sad	1999
6,	V.Jevremović,J.Mališić	Statističke metode u metorologiji i inženjerstvu	Savezni hidrometorološki zavod, Beograd	2002
7,	Zeidler E.	Nonlinear Functional Analysis and Aplications	Springer-Verlag, New York-Berlin-Heidelberg-Tokyo	1985
8,	Zlobec S., Petrić J	Nelinearno programiranje	Naučna knjiga, Beograd	1989
9,	Dauxois, M. Peyrard	Physics of Solitons	Cambridge University Press, Cambridge, New York	2006
10,	Saaty, T. L	Modern Nonlinear Equations	Dover Publications, Inc., New York	1981
11,	N. Ralević, S.Medić	Matematika 1 - drugi deo	FTN, Novi Sad	2002
12,	Heinz-Otto Peitgen, H. Juergens, D. Saupe	Chaos and Fractals	Springer Verlag, New York	2004

Literature

Ord.	Author	Title	Publisher	Year
13,	Mileva Prvanović	Osnovi geometrije	Građevinska knjiga, Beograd	1990

Table 5.2 Course specification

Course:		Current State in the Field
Course id:	SID04	
Number of ECTS:	2	
Teachers:		Atanacković M. Teodor, Katić A. Vladimir, Kulić J. Filip, Vilotić Ž. Dragiša
Course status:		Mandatory

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
0	0	0	2	0

Precondition courses: None

1. Educational goal:

Introducing students to the current research directions and manners in solving problems from the wider study field.

2. Educational outcomes (acquired knowledge):

Knowledge on the current research directions worldwide in the field, based on lectures by prominent professors from the universities in Europe or prominent experts from the well-known companies abroad.

3. Course content/structure:

Contemporary topics in the field of research, presented by prominent professors and experts on lectures on invitation. Students select topics or attend lectures as they wish or as they find the topic interesting.

4. Teaching methods:

Survey on solving contemporary problems by theoretical methods and multimedia presentations.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Oral part of the exam	Yes	70.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	Razni	Časopisi sa SCI liste	IEEE Publishing, i dr.	2008

Table 5.2 Course specification

Course:		Algorithms and Complexity-an Advanced Course
Course id:	DE200	
Number of ECTS:	14	
Teachers:		Dautović B. Staniša, Novak O. Ladislav, Struharik J. Rastislav
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses

1. Educational goal:

The course objective is to enable students to acquire knowledge on the advanced theoretical aspects of algorithms and their complexity including the examples of algorithms applied to different fields of Electrical and Computer Engineering.

2. Educational outcomes (acquired knowledge):

Students who successfully complete the course will acquire knowledge on the advanced theoretical aspects of algorithms and their complexity including naive and formal aspects of algorithms, asymptotic notations, complexity class hierarchy, different levels of algorithm complexity, the reduction of problems and advanced algorithmic techniques in solving various problems in the field of Electrical and Computer Engineering

3. Course content/structure:

Problems and algorithmic solutions, alphabets and languages, machines and elementary operations, asymptotic notation, analysis of algorithms, algorithm techniques, concept of algorithmic complexity, naive and formal theory of algorithms, computability, Turing machine, Abacus machine, recursive functions, complexity classes and relations between complexity classes, reduction and completeness, P, NP and co-NP classes and Cook-Levin Theorem.

4. Teaching methods:

Classes, tutorials, study research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Oral part of the exam	Yes	70.00

Literature

Ord.	Author	Title	Publisher	Year
1,	L. Novak	Algoritmi i njihova složenost - skripte	FTN Novi Sad	2007
2,	Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, Clifford Stein	Introduction to Algorithms	The MIT Press	2009
3,	Christos H. Papadimitriou	Computational Complexity	Addison-Wesley	1993

Table 5.2 Course specification

Course:	Selected Chapters in Optoelectronics and Photonics
Course id: DE201	
Number of ECTS: 14	
Teachers:	Slankamenac P. Miloš, Živanov B. Miloš
Course status:	Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Acquisition of modern theoretical and applied knowledge in the field of optoelectronics and photonics, optoelectronic components, lasers, optical fibers, optoelectronic sensors, optical amplifiers, complex optical systems in the diagnosis of optic fibers.

2. Educational outcomes (acquired knowledge):

- Ability to understand the physical processes in systems with LEDs, laser diodes and photodetectors - Ability to understand complex optoelectronic communication systems - Ability to understand optoelectronic measuring systems - Ability to work with advanced software for the simulation of optoelectronic systems - Ability to work on modern systems in the field of photonics

3. Course content/structure:

Planar waveguides, the dispersion in waveguides, waveguides with a refractive index gradient, step-index waveguides, the dispersion in gradient structures, attenuation and nonlinear effects in waveguides, dielectric waveguides prvougaoni. Analysis of beam propagation through the theory and application of coupling, coupling via optical sources and waveguides, optical detectors, noise in optical detectors, optical radiation and amplification, optical amplifiers and lasers, semiconductor lasers. Part of teaching the course is conducted through independent study research in the field of optoelectronics and photonics. Research work includes active monitoring of primary scientific sources, organizing and conducting experiments and statistical analyzes, simulations, and writing a scientific paper in the area close to the dissertation topic.

4. Teaching methods:

Classes, tutorials, study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Presentation	Yes	10.00	Practical part of the exam - tasks	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	C.R, Plolock	Fundaments of Optoelectronics	Irwin, Chicago	1995
2,	S.O. Kasap	Optoelectronics and Photonics: Principles and Practices	Printece Hall	2001
3,	Jones, K. A.	Introduction to Optical Electronic	New York, John Wiley and Sons	1987
4,	Kressel, H.	Semiconductor Devices for Optical Communication	Berlin, Springer-Verlag	1987
5,	Milatović, D.	Optoelektronika	Svjetlost, Sarajevo	1987
6,	Živanov, M.	Optoelektronika za elektroničare (skripta)	FTN, Novi Sad	2007
7,	Živanov, M. i M. Slankamenac	Optoelektronika, praktikum za vežbe	FTN, Novi Sad	2007

Table 5.2 Course specification

Course:	Advanced Techniques in Electronic Component and Material Characterization
Course id: DE202	
Number of ECTS: 14	
Teacher:	Stojanović M. Goran
Course status:	Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Students become familiar with research work in the field of Electronic Component and Material Characterization as well as with experimental work with modern measurement instruments in the field of Microelectronics.

2. Educational outcomes (acquired knowledge):

-the ability of wafer measurement before the computer case enclosure using the Wafer Probe Station
-the ability of s/z/y parameter measurement of microelectronic components using the Vector Network Analyzer up to high frequencies
-the ability to conduct successful electronic calibration in the process of measurement
-the ability to measure the impendance, inductivity, Q-factors for characteristic electronic materials and deduce the most important material parameters from the measurement data

3. Course content/structure:

Characterization and testing of electronic components (resistors, condensers, inductors, filters, amplifiers). Wafer measurement using the Wafer Probe Station. Measuring of s/z/y parameters, the Q-factor measuring, the reflection/transmission coefficient measurement. Practical work with the Vector Network Analyzer up to high frequencies resulting in special effects. Calibration during the course of measurement. Material parameter measuring (permittivity, permeablity) using the Impendance Analyzer. Observing the internal structure of materials by using different microscopic techniques. The acquired data analysis and presentation. The overview of the most recent advancements in this field by reading scientific articles and journals.
A part of the curriculum is carried out through individual study research work in the field of Electronic Component and Material Characterization. The study research work involves active reading of primary scientific sources, the organization and realization of experiments and statistical data processing, numerical simulations and writing a research paper in the specific scientific field to which the approved doctoral thesis relates to.

4. Teaching methods:

Classes, tutorial work. The classes will also demonstrate work on the most up-to-date measurement instruments focusing on students` active involvement and independent work. The study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	60.00
Term paper	Yes	30.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Jaime Aguilera amd Roc Berenguer	Design and Test of Integrated Inductors for RF Applications	Kluwer Academic Publishers	2003
2,	Schaper and R. K. Ulrich	Integrated Passive Component Technology	1st ed., L. W., Eds. Piscataway, NJ: IEEE Press	2003

Table 5.2 Course specification

Course:		Selected Chapters in Quantum Electronics
Course id:	DE203	
Number of ECTS:	14	
Teacher:		Satarić V. Miljko
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course objective is to provide students with a solid base in the field of modern quantum electronics, starting from electromagnetic fields and spreading, and continuing with the interaction between light and matter and the application in linear and nonlinear optical systems such as lasers and modulators.

2. Educational outcomes (acquired knowledge):

-the ability to solve and apply Schrodinger equations focused on quantum electronics problems
-the ability to understand the operation and utilization of the superconducting quantum interference device- SQUID
-the ability to use and apply the methods of quantum electronics

3. Course content/structure:

Planck`s radiation law, photoeffect, Compton`s effect, De Broglie wave-particle duality, Schrodinger and Heisenberg formalism of quntum mechanics: examples:
Quantum effects in metals and semiconductors (Fermi-Dirac statistics)
Quantum nanoelectronics; quantum point, quantum wire, nanotube.
Up-to-date technological applications of quantum electronics.
A part of the curriculum is carried out through individual study research work in the field of Quantum Electronics. The study research work involves active reading of primary scientific sources, the organization and realization of experiments and statistical data processing, numerical simulations and writing a research paper in the specific scientific field to which the approved doctoral thesis relates to.

4. Teaching methods:

By becoming familiar with the extensive reading materials, students are able to reach the required level of knowledge in this field. After completing the course students should be able to read scientific materials in this field such is the IEEE Journal of Quantum Electronics. Students are also encouraged to do study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	15.00	Oral part of the exam	Yes	50.00
Lecture attendance	Yes	5.00			
Term paper	Yes	30.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	M. Marder	Condensed Matter Physics	John Wiley, New York	2000

Table 5.2 Course specification

Course:		Selected Chapters in Metrology
Course id:	DE204	
Number of ECTS:	14	
Teacher:		Županski Ž. Ivan
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Acquiring knowledge in the field of metrology.

2. Educational outcomes (acquired knowledge):

The ability for independent problem solving in the field of metrology. Becoming familiar with the theory, applications and regulations related to the field of metrology.

3. Course content/structure:

Experimental work in the field of metrology. Measurement result processing in certain fields of science.
A part of the curriculum is carried out through individual study research work in the field of Metrology. The study research work involves active reading of primary scientific sources, the organization and realization of experiments and statistical data processing, numerical simulations and writing a research paper in the specific scientific field to which the approved doctoral thesis relates to.

4. Teaching methods:

Classes, tutorials and study research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Written part of the exam - tasks and theory	Yes	30.00
			Oral part of the exam	Yes	20.00

Literature

Ord.	Author	Title	Publisher	Year
1,	EIA	Expression of the Uncertaintz of Measurement in Calibration	European Cooperation for Accreditation	1999
2,	ISO	Guide to the Expression of Uncertainty in Measurement	ISO	1993

Table 5.2 Course specification

Course:		Planning the Distribution Networks Development
Course id:	DE205	
Number of ECTS:	14	
Teacher:		Popović N. Željko
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main course objective is obtaining knowledge on planning distribution power systems development.

2. Educational outcomes (acquired knowledge):

Knowledge on planning tasks in distribution networks. Possibilities of formulating and solving basic problems of distribution systems development planning: planning of supply transformer stations, planning of systems of middle voltage lines (networks), planning of distributive transformer stations and low voltage networks. Knowledge on mathematical optimization methods applied for solving planning problems in distribution network. Using programming tools for planning real distribution systems

3. Course content/structure:

Introductory part. Types of costs and fundamentals in engineering economics. Forecast of energy consumption and distribution system power. Technical and safety criteria in planning of distribution systems of networks. Planning process of distribution systems – planning problem identification, planning goals determination, various variations identification, selection of the best variation (development plan). Static and dynamic approaches (models) in distribution systems planning. Planning of new supply transformer stations. Planning of middle voltage distribution network. Planning of secondary distribution transformer stations and low voltage networks. Planning of distribution system development in deregulated power systems. Impact of distributed sources and load management on planning of distribution systems. Uncertainty in planning of distribution systems. Tools and approaches for risk management. Tools, approaches and methods for planning of distribution networks development in the case of uncertainty.

4. Teaching methods:

Lectures or mentor work. Consultation. Study and research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Written part of the exam - tasks and theory	Yes	70.00
Term paper	Yes	20.00	Coloquium exam	No	30.00

Literature

Ord.	Author	Title	Publisher	Year
1,	T.Gonnen	Electric Power Distribution System Enginering	McGraw-Hill Book Company; New York; NY; USA	1996
2,	E.Lakervi and E.Holmes	Electricity Distribution Network Design	Peter Peregrinus Ltd; London; U.K.	1989
3,	J.J.Burke	Power Distribution Enginering	Marcel Dekker; Inc.; New York; NY; USA	1986
4,	V.C.Strezoskii D.S.Janjić	Sistem regulacje napona distributivnih mreža	Institut za energetiku i elektroniku, FTN, Novi Sad	1996
5,	S. Talukdar, C. W. Gellings	Load management	IEEE Press	1986
6,	C. W. Gellings	The Smart Grid: Enabling Energy Efficiency and Demand Response	The Fairmont Press, Inc., GA, USA	1988
7,	Ž. Popović	Metodologija za određivanje optimalne strategije direktne kontrole opterećenja uređaja u širokoj potrošnji	Magistarski rad, Elektrotehnički fakultet, Beograd	1999

Table 5.2 Course specification

Course:		PES Failures
Course id:	DE206	
Number of ECTS:	14	
Teacher:		Bekut D. Duško
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main objective of the course is to enable students to understand failures in electrical power systems. The method of symmetrical components and the relative value system are the basis for these calculations. The student`s goal is to understand the models and calculations of failures focusing on the relay protection and system design both in transmission and distribution networks.

2. Educational outcomes (acquired knowledge):

Students are familiar with the symmetrical component method and are able to utilize failure calculation standards. They understand failure calculation models in transmission lines and are familiar with failure calculation methods and models in distribution networks, as well as with the procedures of value measurements on specific energy electronic devices.

3. Course content/structure:

The symmetrical component method and the relative value system. Failure calculation standards. Failure calculations focused on the relay protection of transmission lines (electromagnetic links in mutually coupled lines, alternating and direct components, phase breakers, complex failures). Failure calculations including the grounding system (the overhead transmission line with the conductor system, phase conductors and protection relays, the overhead line grounding system and the contol machinery at its ends, electromagnetic links of overhead lines). Mathematical models for failure calculation in distribution networks.
A part of the curriculum is carried out through individual study research work in the field of EPS Failure. The study research work involves active reading of primary scientific sources, the organization and realization of experiments and statistical data processing, numerical simulations and writing a research paper in the specific scientific field to which the approved doctoral thesis relates to.

4. Teaching methods:

Classes, tutorial work, study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Razni autori	pisani materijal koji se dobija od predavača		xxx

Table 5.2 Course specification

Course:		Selected Chapters on Electromagnetic Compatibility			
Course id:	DE208				
Number of ECTS:	14				
Teachers:		Juhas T. Anamarija, Pekarić-Nađ M. Neda			
Course status:		Elective			
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
5	0	0	4	0	
Precondition courses		None			

1. Educational goal:

The course objective is to teach the students the terminology and basic principles of electromagnetic compatibility.

2. Educational outcomes (acquired knowledge):

After a successfully completed course, students are able to understand the design of the devices which do not disturb the operation of other devices or disturb them within acceptable limits. Besides that, the students acquire knowledge on how to protect devices, people and the environment from the electromagnetic fields. The students are able to successfully communicate with experts in the related scientific fields and become successful members of multidisciplinary teams.

3. Course content/structure:

Maxwell equations. Transmission lines. Antennas. Conduction and Radiation Interference. The interferences caused by analogue and digital signals. Signal Distortion. Screening. Grounding. A part of the curriculum is carried out through individual study and research in the field of Electromagnetic Compatibility. The research may include reading of scientific papers, organization and realization of experiments and statistical data processing, numerical simulations and writing a scientific paper in the specific scientific field.

4. Teaching methods:

The inductive method is used. Students acquire knowledge by observing a number of different experiments/examples and are able to make generalizations which can later be applied to the solution of a specific problem. Classes, tutorial work, research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Theoretical part of the exam	Yes	70.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	CR Paul	Introduction to Electromagnetic Compatibility	John Wiley & Sons	2006

Table 5.2 Course specification

Course:		Energy Converters in Renewable Power Sources
Course id:	DE209	
Number of ECTS:	14	
Teacher:		Katić A. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course objective is to present students with the latest solutions, control methods and application of electronic energy converters in power sources (wind power stations, solar power stations, small hydro stations etc.) based on renewable energy resources.

2. Educational outcomes (acquired knowledge):

Students acquire knowledge that enables them to actively participate in independent study research work and to apply the up-to-date mathematical tools and software in the field of the Application of Energy Converters in Renewable Power Sources.

3. Course content/structure:

Electronic energy converters in renewable electric power sources (wind power stations, solar power stations, small hydro-power stationsetc.), control methods, mathematical and software tools, computer simulations and result validation, system generation, new designs and configurations, protection methods and future development.
A part of the curriculum is carried out through individual study research work in the field of Energy Converters in Renewable Power Sources. The study research work involves active reading of primary scientific sources, the organization and realization of experiments and statistical data processing, numerical simulations and writing a research paper in the specific scientific field to which the approved doctoral thesis relates to.

4. Teaching methods:

Classes, tutorial work, laboratory work, study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project defence	Yes	50.00	Theoretical part of the exam	Yes	30.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Allen Wood	Power generation, operation, and control	J.Wiley & Sons, New York	1996
2,	Thomas Ackermann	Wind Power in power systems	J.Wiley & Sons, New York	2005

Table 5.2 Course specification

Course:		Selected Chapters in Electric Machinery
Course id:	DE210	
Number of ECTS:	14	
Teacher:		Vasić V. Veran
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course objective is the study of physical properties of electric machinery of specialized design and characteristics in a steady operating routine. Besides, students become familiar with machine design elements and the exploitation effects. Students acquire further knowledge in the field of electromechanical conversion of energy, electric machinery, energetic and electronic devices and of electro-motor drives used in specialized electric machinery.

2. Educational outcomes (acquired knowledge):

Students are enabled to, apart from identifying machinery, also understand the process of the exploitation and maintenance of machinery of specialized design. The students should be able to: understand the principles of electro-mechanical energy conversion that is the result of using the machinery of specialized design- to understand the properties and operation of rotating electric machinery of specialized design.

3. Course content/structure:

Synchronous motors with permanent magnets: type of rotating machines according to permanent magnet shape, basic relations, torque, equivalent schemes, the block diagram, transfer functions, transience, transient functions, characteristics. Step motors: types of step motors, torque and power, block diagram, transient functions, transience, static and dynamic stability, breake torque, characteristics. DC servo motors: rotor power driven servo motors, constant regulation, power loss, the possibility of torque constant change, power supply impact on motor function, the block diagram of transience function, servo motors driven by field power, transience function, block diagram and operating stability. Brushless DC motors: supply, basic relations, block diagrams of transience functions, motor torque and power. Selsyn: types, basic relations, operation failure, static and dynamic stability, the block diagram, speed, oscillations.
A part of the curriculum is carried out through individual study research work in the field of Electric Machinery. The study research work involves active reading of primary scientific sources, the organization and realization of experiments and statistical data processing, numerical simulations and writing a research paper in the specific scientific field to which the approved doctoral thesis relates to.

4. Teaching methods:

Teaching is carried out in the form of classes, tutorial work and individual study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project task	Yes	30.00	Oral part of the exam	Yes	50.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	C.M.Ong	Dynamic Simulation of Electric Machinery	Prentice Hall	1998

Table 5.2 Course specification

Course:		Contemporary Techniques of Digital Signal Transmission
Course id:	DE211	
Number of ECTS:	14	
Teacher:		Milošević S. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

To acquire knowledge on contemporary techniques of digital signal transmission, which are used in modern systems of mobile radio transmissions and transmissions with physical connectors.

2. Educational outcomes (acquired knowledge):

Theoretical knowledge, utilization of programme simulations, work on DSP platform.

3. Course content/structure:

Transmission techniques in a wider spectrum (DS, FH and combined methods), techniques of multiplexing with multiple approach, OFDM, multiplexing in wavelengths in optimal communication.
Part of the teaching is realized through independent research and study work in the field of digital signal transmission techniques. Research and study work includes active following primary scientific sources, organization and conducting experiments and statistical data processing, numeric simulations, writing scientific paper in the field of doctoral thesis topics.

4. Teaching methods:

Lectures, consultations, and individual work in laboratory (research and study work).

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	70.00	Theoretical part of the exam	Yes	30.00

Literature

Ord.	Author	Title	Publisher	Year
1,	B.Sklar	Digital Communications	Prentice Hall, New Jersey	1988
2,	Proakis J.G.	Digital Communications	McGraw-Hill	1995

Table 5.2 Course specification

Course:		Selected Chapters in Acoustics and Audio Engineering
Course id:	DE212	
Number of ECTS:	14	
Teacher:		Delić D. Vlado
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The goal of the course is to provide doctoral students with further knowledge in Audio Signals (spech, music and/or noise) and in Audio Engineering. Numerous topics are covered in classes to a certain extent, after which students will work with a mentor and be encouraged to use further reading materials available at the Telecommunications and Signal Processing Department. A doctoral student selects certain chapters and the extent of study depending on the plan and curriculum he/she has agreed upon with his/her mentor, and in accordance with the subject professor`s recommendations. Apart from the elements of physical and psycho-physiological acoustics (what and how we hear), the obligatory part of the curriculum also involves digital techniques for sound recording and reproduction, the up to date audio engineering, as well as the basic means to process and transmit the audio signal.

2. Educational outcomes (acquired knowledge):

Doctoral students acquire necessary knowledge in Audio Signals (speech, music and/or noise), Audio Engineering, and/or Noise Protection. Apart from understanding hearing sound, Electrical Engineering students also learn how to use electro-mechanical- acoustic analogies for acoustic system analysis. After that the students will become familiar with electroacoustic converters (microphones, speakers and headphones), as well as with other devices and equipment, by using which they acquire practical experience at the Acoustics and Speech Technologies Laboratory, as well as by visiting music studios and the play recording complex of Novi Sad Radio Station. Students will also acquire experience in working with electrical-acoustic and measuring devices and learn how to fully evaluate the acoustic space and complete acoustic room processing.

3. Course content/structure:

•Physical Acoustics: Emission and Spreading of Sound, Sound Characteristics. •Physiological Acoustics: Sound Perception and Influence on People (what and how we hear: dB, Phon, Sone, dB(A). •Psychoacoustics: Sound Perception (the intensity, pitch and timbre), binaural sound localization, sound masking effect. •Analogies: electro-acoustic and electro-mechanical analogies. •Electro-acoustic converters: microphones, speakers and headphones. •Electro-acoustic devices: tone technique, measuring devices, filters, amplifiers. •Sound Recording and Production: analogue (magnetic and optical) and digital (disc, CD, DVD, MP3). •Compression and Transmission of Audio Signal: analogue (FM stereo) and digital (GSM, VoIP, DAB-the digital radio). •Room Acoustics: sound in closed space, reverberation time, sound absorbers, acoustic room processing, the acoustics of music and film studios, the acoustics of concert halls, opera houses and churches. •Space sound: indoor and outdoor sound systems. •Music: tune, rhythm, dynamic, music quality, musical instruments, an orchestra seating assignment and recording. •Studio recording: recording of a conversational radio programme or a play with multiple participants, background sounds (effects and noise). •Noise: sources and spreading, noise level and intensity, regulations on acceptable noise level, measuring standards and techniques, noise monitoring in the work and life surroundings, noise reduction and protection methods. •Acoustics in Civil Engineering: noise spreading pathways, the insulating power of barriers, acoustic barriers and protectors.

4. Teaching methods:

Classes are a combination of lectures and tutorial work. Doctoral students` independent work is supported by a Web portal of the Telecommunications and Signal Processing Department. There the students can find Power Point presentations of lectures in the PDF format, as well as numerous on-line practice details intended for individual work and project task completion. The lecture presentations demonstrate and show the key topic details using the audio content and animation. A part of the subject matter involves the work on smaller project papers, while the second part of the course includes the practice work at the Acoustics and Speech Technologies Laboratory at the Faculty of Technical Sciences and at the Speech Studio at UNS, as well as at Novi Sad Radio Station, where the doctoral students are further acquainted with the audio technique, music and speech studies, the silent room and the play complex. A part of the examination involves the completion of a practical project, whose defe

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Husnija Kurtović	Osnovi tehničke akustike	Naučna knjiga, Beograd	1990
2,	Petar Pravica, Dragan Drinčić	“Elektrokustika”	VETŠ, Beograd	2006
3,	Arpad Osnović, Ivan Fece, Stevan Tibai	“Akustika i tonsko snimanje”	Sveučilište “M. Pijade”, Zagreb, str. 369	1990
4,	Ozren Bilan	“Akustika prostorija, zvučnici, pojačala i spojni vodovi”	Sveučilišna knjižnica, Split	1998
5,	Krešimir Lukić	Tonska tehnika	Sveučilište “M. Pijade”, Zagreb	1986

Literature

Ord.	Author	Title	Publisher	Year
6,	Vlado Delić i dr.	”PPT prezentacije sa predavanja i on-line vežbe preko Web portala Katedre za telekomunikacije i obradu signala”		2007

Table 5.2 Course specification

Course:		Computational Intelligence in Power Systems
Course id:	DE216	
Number of ECTS:	14	
Teacher:		Švenda S. Goran
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Training students to apply the latest knowledge of modern computer systems to ensure quality, reliable and safe operation of electro-energy system, as well as for monitoring, measuring and controlling its parameters.

2. Educational outcomes (acquired knowledge):

Students will be able to apply the latest methods of computational intelligence, including genetic algorithms, neural networks, fuzzy logic, evolutionary strategies and other methods, and successfully apply for an application in the management and planning of power systems.

3. Course content/structure:

Overview of computational intelligence (artificial neural networks, fuzzy systems, evolutionary computation, genetic algorithm, evolution strategies and evolutionary programming, optimization in swarms, ant colonies of a search algorithms, Tabu search, simulated cancellation, hybrid systems) Summary of various applications in power systems (Planning power systems, forecasting consumption, the order of power systems, power systems control, quality of electricity, etc.)

4. Teaching methods:

Lectures. Computer exercises. Consultation. Homework assignments. Lectures are conducted combined. The theoretical part presents the use of modern equipment with the development of typical examples of which contribute to the clarification of theoretical lectures. On computer exercises, which follow the lectures, specialized software is taught and appropriate tasks are done, and deepens the presented material from the lectures. Homework assignments are used for the elaboration of certain topics and review of certain aspects of the subject matter.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	40.00	Oral part of the exam	Yes	30.00
Term paper	Yes	30.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Kwang Y. Lee, Mohamed A. El-Sharkawi	Modern Heuristic Optimization Techniques: Theory And Applications To Power Systems	IEEE Press, Series on Power Engineering	2008
2,	Joe H. Chow, Felix F. Wu, James A. Momo	Applied Mathematics For Restructured Electric Power Systems: Optimization, Control And Computational Intelligence	Springer Science	2005

Table 5.2 Course specification

Course:		PES Analysis 4
Course id:	DE217	
Number of ECTS:	14	
Teacher:		Popović S. Dragan
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Study of fundamental principles and methodology for analysis of static and dynamic plant safety in the phase of planning and PES exploitation, modern tools for solving practical problems in this field and influence of deregulated energy market on the safety of current interconnections operation.

2. Educational outcomes (acquired knowledge):

Knowledge on basic models for individual safety problems (static and dynamic) of PES plants. Analytical approaches and program tools for solving problems of static uncertainty of PES. Analytical approaches and program tools for solving problems of dynamic uncertainty of PES. Solving of these problems in real power systems interconnections.

3. Course content/structure:

General aspects of dynamic safety of power system interconnections, model aspects in dynamic analysis, numeric methods in dynamic analysis, numeric integration of corresponding differential equations, solving of electric network model, static stability, transinient stability, middle term and long term dynamics, voltage stability.

4. Teaching methods:

Lectures or mentor work. Consultation. Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	P.Kundur	Power System Stability and Control	McGraw-Hill, Inic., New York	1994
2,	P.W.Sauer and M.A.Pai	Power System Dynamics and Stability	Prentice Hall, Inc., New Jersy	1998
3,	E.S.Lukašov i dr	Dugotrajni prelazni procesi u elektroenergetskim sistemima	"Nauka", Novosibirsk	1985
4,	D.Tošić	Uvod u numeričku analizu	Naučna knjiga, Beograd	1978
5,	B.Stott	Power System Dynamic Response Calculation	Proc.IEEE, Vol.67, February 1979, pp.219-241	1979

Table 5.2 Course specification

Course:	Randomised Approximation Algorithms
Course id: DE300	
Number of ECTS: 14	
Teachers:	Dautović B. Staniša, Novak O. Ladislav, Struharik J. Rastislav
Course status:	Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Study of probable and approximate (randomized) algorithms in recent years has become one of the leading research topics. This course aims to review the techniques for effective use of randomization and approximate algorithms analysis as well as examples of many settings and problems.

2. Educational outcomes (acquired knowledge):

- ability to understand the concept of deepened probable and approximate algorithms,
- ability to apply these algorithms to problems in the field of doctoral dissertation topics

3. Course content/structure:

Aproximability (approximation algorithms, approximation and complexity, nonaproximability), Randomised computation (randomised algorithms and randomised complexity classes, Las Vegas and Monte Carlo algorithms circuit complexity, Tools and techniques for randomised computation (Chernoff bound Lovasz local lemma, Markov chains), Cryptography (one-way functions and protocols)

4. Teaching methods:

Lectures. Consultation. Preparation of seminar papers. Study research.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Oral part of the exam	Yes	70.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Rajeev Motani and Prabhakar Raghavan	Randomized Algorithms	Cambridge University Press	1995
2,	Christos H. Papadimitriou	Computational Complexity	Addison-Wesley	1993

Table 5.2 Course specification

Course:		Molecular Electronics
Course id:	DE301	
Number of ECTS:	14	
Teacher:		Satarić V. Miljko
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Molecular Electronics introduces the individual molecules as electronic components, molecular systems as an alternative to conventional electronics, belt and portable structures, polymer and organic semiconductors, molecular external links, the transfer of molecular structures, carbon nanotubes.

2. Educational outcomes (acquired knowledge):

- The ability of understanding carbon nanotubes
- Ability to apply logic circuits based on molecules
- The ability of understanding polymer and organic semiconductors.

3. Course content/structure:

• Elements of molecular dimensions.
• Molecules that go beyond the conventional basic electronic circuits.
• Logic gates using a molecular diode.
• The application of carbon nanotubes in electronics.
• Semiconductor nanocristals.
• Directed molecular self-assembly of molecular circuits.
• Properties of DNA and potential applications in molecular electronics.
• Possible molecular self-assembly of molecular circuits in the future.

Part of the teaching activitz on the subject is going through self-study research in the field of molecular electronics.
Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, the writing a paper with the topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Lectures. Consultation. Review of professional journals in this field of study. Study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	15.00	Written part of the exam - tasks and theory	Yes	60.00
Term paper	Yes	25.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Hagen Klauk	Organic Electronics: Materials, Manufacturing, and Applications	Wiley; 1st edition	2001

Table 5.2 Course specification

Course:		Design and Characterization of Components for EMI Protection
Course id:	DE302	
Number of ECTS:	14	
Teacher:		Damnjanović S. Mirjana
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Gaining deepen knowledge in the field of design and component characterization for EMI protection.

2. Educational outcomes (acquired knowledge):

- The ability of modeling, simulation, design and implementation of new configuration of Ferrite EMI suppressor
- The ability of modeling, simulation, design and implementation of improved configuration of varistors as EMI protection
- Ability to design microelectronic circuit systems immune to EMI

3. Course content/structure:

Sources and methods of propagation of electromagnetic interference (low-frequency electric and magnetic fields, atmospheric discharge, radio transmitters, the inclusion of transitional processes in the device, electrostatic discharge). Practical examples of application of standards related to electromagnetic interference (EMI) and electromagnetic compatibility (EMC). The concept of EMI / EMC protection in modern integrated circuits. ESD (Electrostatic Discharge) protection. Components for protection (resistors, capacitors, inductors). Varistors. Ferrite. EMI simulation of various structures. Reduction of immunity. EMC measurement techniques. Filters for Power Supplies.Shielding. Grounding. Principles of designing devices and systems immune to EMI. Printed circuit board design immune to EMI. Part of the teaching activity on the subject is carried out through self-study research in the design and characterization of components for EMI protection. Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with a topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Lectures. Consultation. Small projects or seminar papers. Study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	50.00
Project	Yes	45.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	M. Mardiguian	EMI troubleshooting techniques	McGraw-Hill	2002
2,	C. Christopoulos	Principles and techniques of electromagnetic compatibility	CRC Press	2000

Table 5.2 Course specification

Course:		Biomedical Instrumentation
Course id:	DE303	
Number of ECTS:	14	
Teachers:		Sovilj M. Platon, Spasić-Jokić M. Vesna
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Introduction to the principles of biomedical instrumentation, design of biomedical instrumentation and design of quality assurance systems and programs in biomedicine.

2. Educational outcomes (acquired knowledge):

The acquisition of knowledge in the areas of application and design of biomedical instrumentation.
The acquisition of knowledge in the field of diagnosis and therapy planning of diagnostic and therapeutic procedures, project development systems, devices and procedures, quality assurance and quality control.

3. Course content/structure:

Part I. Equilibrium and the action potential of cell-The physical size of importance for diagnosis in medicine (ionizing radiation are not included) electrodes to measure the electrophysiological signals - Biological signals (amplifiers, analog methods onedimensional biomedical signal processing, instruments for recording the signal) - Pressure in the medical measurements; electromyography, electroneurography, electrocardiography and electroencephalography;-MRI-ultrasound (diagnosis, therapy, ultrasound tomography, cardiosonography) - Measurement of pressure and flow of gases and liquids in the body, - measuring substances in blood and gases (spectrophotometry, flame photometry) in the medical-laser measurements and therapy. Thermography, Electrical Simulation (pacemaker, rehabilitation movement).
Part II – Medical devices: Radiological Diagnosis (X-ray, mammography, CT, Osteodenzitometar, DICOM standard); Nuclear medicine (gamma, SPECT, PET);-radiotherapy: radiotherapy devices (teletherapeutic, linear accelerator, Proton cyclotron, X-ray); planning radiotherapy-Monte Carlo techniques in medical - criteria: measurement and detection of ionizing radiation, types of detectors (TLD, scintilation counters, solid counters, GM counters, ionization chambers, neutron radiation detectors, radiation detectors energy protons)-Q in the radiological diagnosis and radiotherapy - metrology aspects of software packages (implementation, verification).
Part of the teaching activity on the subject is a self-study research in the field of biomedical instrumentation.

4. Teaching methods:

Lectures. Consultation. Study research.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Written part of the exam - tasks and theory	Yes	30.00
			Oral part of the exam	Yes	20.00

Literature

Ord.	Author	Title	Publisher	Year
1,	M.Tomašević, V.Spasić Jokić	Rendgensko zračenje i zaštita u mamografiji	Srpsko lekarsko društvo Beograd	2002
2,	V. Spasić Jokić	Protokol za dozimetriju protona	Institut za nuklearne nauke VINČA	1993
3,	P. Sovilj	Stohastičko dogitalno merenje EEG signala	FTN Novi Sad	2010
4,	P. Sovilj	Eksterno testiranje površinskih kalemova uređaja za magnetnu rezonancu	FTN Novi Sad	2006
5,	D. Popović, M. Popović	Biomedicinska instrumentacija i merenja	Nauka, Beograd	1997

Table 5.2 Course specification

Course:		Measurements in Telecommunications
Course id:	DE304	
Number of ECTS:	14	
Teacher:		Vujičić V. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The acquisition of knowledge in the field of measurement in telecommunications.

2. Educational outcomes (acquired knowledge):

Ability to use equipment that is used for measurement in telecommunications. Introduction to measurement and measurement systems in the field of telecommunications.

3. Course content/structure:

General measurements for measuring the signal conditioning • Digital Measuring Systems • Standards for linking • Oscilloscopes • Digital measuring frequency and time • Sources of measuring and test signal analyzers • Signal • Design measurement instruments and systems • Combined measurement methods (a combination of measurements and processing) • Adaptive measuring instruments • Parallel measurement • Measurement of high frequency (measuring voltage and harmonics) • Filters in the high frequency measurements • Measurement • Measurement of high-frequency modulation of the electromagnetic field. Part of the teaching activity on the subject is a self-study research in the field of measurement in telecommunications. Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with a topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Lectures. Consultation. Study research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Written part of the exam - tasks and theory	Yes	50.00
			Oral part of the exam	Yes	20.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Zoya Popovic and Edward F. Kuester	Principles of RF and Microwave Measurements	University of Colorado Boulder, Colorado	2001

Table 5.2 Course specification

Course:		Electrical Measurements in Power Systems
Course id:	DE305	
Number of ECTS:	14	
Teacher:		Milovančev S. Slobodan
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The acquisition of knowledge in the field measurements in power.

2. Educational outcomes (acquired knowledge):

Ability to use measuring devices and systems in power engineering. Introduction to measurement devices and methods used in the measurement of power.

3. Course content/structure:

Digital measuring systems • Stochastic A / D conversion and adaptive measuring systems • Electronic analog instrumentation measurement • Multi Channel Measurement of basic electrical quantities. Measurement in non-sinus regime • Superfast mode measurements • Measurement and Protection, Fault Detection Network • Instrument transformers • Voltage, current, for protection. Measuring converters - measuring non-electric values • Measuring very small and very large resistance • The method of partial discharge • Oscilloscope • Computers in measurement • Standards of measurements for connectivity, integration of the measuring system.
Part of the teaching activity on the subject is self-study research in the field of measurements in power engineering. Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with a topic close to the scientific and teaching area of the subject of doctoral dissertation.

4. Teaching methods:

Lectures. Consultation. Study research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Vladimir Vujičić i Slobodan Milovančev	Skripta za predmet Merenja u elektroenergetici	FTN, Novi Sad	2000

Table 5.2 Course specification

Course:		Load Management in PES
Course id:	DE306	
Number of ECTS:	14	
Teacher:		Popović N. Željko
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course objective is acquiring knowledge on the application of load management for the purpose of optimization of various processes in PES in regulated and deregulated (market) environment.

2. Educational outcomes (acquired knowledge):

Knowledge on load management strategies. Knowledge on approaches, tools and models for application of various programs (strategies) of load management in optimization of the following processes in PES: long term planning of system development, operation management and optimization of system operation in normal operation conditions, management and optimization of systems in pre disaster and disaster conditions. Knowledge on optimization techniques which are applied in optimization of business processes in PES with respect to the influence of load management.

3. Course content/structure:

Introductory part. Definition and classification of load management. Definition of goals of load management. Defining and quantification of load management benefit. Analysis and defining of resources in various categories of consumers (households, business sector, industry). Application of load management in long term planning of distribution system development. Application of load management for the purpose of reduction of (peak) system load (part of the system) and/or elements (transformers) of systems. Application of load management in the process of restoration of supply after failures in distribution systems. Application of load management in the energy market.. Systems and means for realization of load management (management centres, information and commands transmission systems, systems for installation for realization of load management).
Part of the course is conducted through individual research and study work in the field of decision-making and optimization.Study and research work includes active following of the primary scientific sources, organization and carrying out of experiment and statistical data processing, numeric simulations, scientific paper writing in the field of the doctoral thesis.

4. Teaching methods:

Lectures. Consultations. Study and research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	S. Talukdar, C. Gellings	Load management	IEEE Press	1986
2,	F. Schweppe, M. Caramanis, R. Tabors, R. Bohn	Pricing of Electricity	Kluwer Ac. Pub, London	1988

Table 5.2 Course specification

Course:		Planning and Optimization of Power System Plant
Course id:	DE307	
Number of ECTS:	14	
Teacher:		Sarić T. Andrija
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main goal of the course is to acquire knowledge about basic problems, algorithms for their definition, solving mathematical procedures and use ready-made software packages to solve the problem of optimal planning and exploitation of power system plants. Also, the goal is training to participate in teams to develop a system of management in the production and transmission and distribution networks.

2. Educational outcomes (acquired knowledge):

Knowing the problems that characterize the requirements for planning and optimum operation in modern power systems. Knowledge about the ways of solving certain problems. Ability to use ready-made software packages for solving certain problems. The ability to develop new features in the system of planning and optimal power system exploitation.

3. Course content/structure:

Reasonable annual charges in power system plants. Elements of the tariff system.
Forecast of electricity consumption. Long-term (annual) planning of power systems.
Short term (daily) planning of power systems. Artificial neural networks.
Part of the teaching activity on the subject is a self-study research in the field of facility planning and optimization of power systems.
Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with the topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Lectures. Consultation. Study research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	30.00
Term paper	Yes	30.00			
Test	Yes	30.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	V.A.Levi	Planiranje razvoja elektroenergetskih sistema pomoću računara	Stylos, Novi Sad	1988
2,	D.S.Kirschen and G.Strbac	Power System Economics	Wiley, New-York, NY, USA	2004
3,	N.S.Rau	Optimization Principles: Practical Applications to the Operation and Markets of the Electric Power Industry	Wiley, New-York, NY, USA	2003
4,	F. I.Denny and D. E. Dismukes	Power System Operations and Electricity Markets	CRC Press	2002
5,	K. Bhattacharya, M. Bollen and J. Daalder	Operation of Restructured Power Systems	Kluwer, Boston, MA, USA	2001
6,	A. Debs	Modern Power Systems Control and Operation	DSI, Atlanta, GA, USA	1996
7,	H. G. Stoll	Least-Cost Utility Planning	Wiley, New-York, NY, USA	1989
8,	X. Wang and J. R. McDonald	Modern Power System Planning	McGraw Hill, Birkshire, UK	1993
9,	M. S. Čalović, A. T. Sarić i P. Č. Stefanov	Eksploatacija elektroenergetskih sistema u uslovima slobodnog tržišta	Tehnički fakultet, Čačak	2005
10,	M. S. Ćalović i A. T. Sarić	Planiranje elektroenergetskih sistema; Prvi deo: Principi i metodologija planiranja; Drugi deo: Rešeni zadaci	Beopres, Beograd	2000

Table 5.2 Course specification

Course:		Facility Planning and Optimization of Distribution Networks
Course id:	DE308	
Number of ECTS:	14	
Teacher:		Popović S. Dragan
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main goal of the course is to gain knowledge about the optimal planning of distribution network drive on a daily, weekly, monthly and annual basis.

2. Educational outcomes (acquired knowledge):

Knowledge of plant distribution networks. Knowledge of mathematical optimization procedures applied in the processing of distribution networks.

3. Course content/structure:

Modern methods of forecasting consumption: Basic statistics. Regression analysis. Correlation theory. The analysis of time series. Methods of artificial intelligence. Forecast of spatial distribution of consumption. Rates and billing of electricity: Expense access. Tariff Classification. Applications in various countries. Trip distributed generators: micro / mini hydropower plants. Gas plant. Solar power. Wind turbine farms and others. Application of modern methods of distribution network planning facilities: Radial and complex Feeder. Influence of Var / Volt regulation. Distribution transformer station. Locating the source transformer station and expansion of distribution networks. Software packages for planning. Modern systems for distribution networks control (DMS): Design. Databases. Software environment. Interacting with the user. Network Management. Analytical energy functions. Application of modern optimization techniques to solve the basic energy function is a DMS: optimization techniques (linear and nonlinear programming, search methods, methods of artificial intelligence, convex programming, etc.). Energy function (forecast load, power flow, power restoration, reconfiguration of network control, load control, excess control, and other).
Part of the teaching activity on the subject is a self-study research in the field of facility planning and optimization of distribution networks. Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with the topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Lectures and mentoring (consultation). Study research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	45.00
Term paper	Yes	20.00			
Test	Yes	10.00			
Test	Yes	10.00			
Test	Yes	10.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	X. Wang and J. R. McDonald	Modern Power System Planning	McGraw Hill	1994
2,	V. A. Levi i D. D. Bekut	Primena računarskih metoda u elektroenergetici	Stylos, Novi Sad	1997
3,	H. L. Willis	Power Distribution Planning Reference Book	Marcel Dekker	1997
4,	M. E. El-Hawary	Electric Power Applications of Fuzzy Systems	IEEE Press	1998
5,	Y. H. Song	Modern Optimization Techniques in Power Systems	Kluwer Academic Publishers	1999
6,	H. L. Willis and W. G. Scott	Distributed Power Generation: Planning and Evaluation	Marcel Dekker	2000
7,	J. A. Momoh	Electric Power System Applications of Optimization	Marcel Dekker	2001
8,	K. Bhattacharya, M. Bollen and J. E. Daalder	Operation of Restructured Power Systems	Kluwer	2001
9,	P. Venkataraman	Applied Optimization with Matlab Programming	Wiley	2002
10,	* * *	Tutorial on Modern Heuristic Optimization Techniques with Applications to Power Systems	IEEE 02 TP160	2002
11,	W. H. Kersting	Distribution System Modeling and Analysis	CRC Press	2002

Literature

Ord.	Author	Title	Publisher	Year
12,	N. S. Rau	Optimization Principles: Practical Applications to the Operation and Markets of the Electric Power Industry	Wiley-Interscience	2003
13,	* * *	Kurs: Nove informatičke tehnologije u distribuciji električne energije – DISTRIUTIVNI MENADžMENT SISTEMI	DMS grupa, Fakultet tehničkih nauka, Novi Sad	2003
14,	Y. H. Song and X. F. Wang	Operation of Market-Oriented Power Systems	Springer	2004
15,	T. A. Short	Electric Power Distribution Handbook	CRC Press	2004
16,	D. S. Kirschen and G. Strbac	Power System Economics	Wiley	2004
17,	D. Popović, D. Bekut i V. Treskanica	Specijalizovani DMS algoritmi	DMS Group, Novi Sad	2004
18,	M. S. Ćalović, A. T. Sarić i P. Č. Stefanov	Eksploatacija elektroenergetskih sistema u uslovima slobodnog tržišta	Tehnički fakultet u Čačku	2005
19,	W. Li	Risk Assessment of Power Systems: Models, Methods, and Applications	McGraw Hill	2005
20,	A. S. Pabla	Electric Power Distribution	McGraw Hill	2005

Table 5.2 Course specification

Course:	Selected Chapters in Transient Phenomena in Electrical Machines
Course id: DE309	
Number of ECTS: 14	
Teacher:	Čelanović L. Nikola
Course status:	Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The acquisition of knowledge in the field of electrical machines as a dynamic system, the study of transitional processes in electric machines and simulation of transient processes using computers.

2. Educational outcomes (acquired knowledge):

- Understanding general mathematical models of electric machines, understanding energy flow patterns in the equivalent electrical machinery
- Understanding non-sinus supply of electrical machinery and dissymmetry
- Knowledge of electric machinery as a dynamic system
- Understanding the function of portable electric machines
- Acquiring knowledge of the transitional processes in electric machines
- Ability to study the transition process in electrical machines simulation on the computer.

3. Course content/structure:

Basics of the theory of electrical machines: general mathematical model of the machine as a dynamic system, general scheme of transformation. Plays of electric machines. Parks equation. Transformation. Equivalent scheme: General equivalent machine scheme. Equivalent scheme of a cylindrical rotor machine. Energy flows in equivalent schemes. Poliphaser diagrams: Polyphase system, rotating field, Nonsinus power and dissymmetry. Complete diagrams of the machine. Machine as a dynamical system: General equations of state electric machines. Equation of state of two-winding machine. Equation of state with unilateral salience. Function transfer of electrical machinery. Transitional processes in electric machinery: Transformers, One-way machines, Asynchronous machines, synchronous machines. Simulation of transient process of using computer: Unit system. Simulation by integration of equation of state. Simulation block through elaborate schemes. Part of the teaching activity on the subject is a self-study research in the field of transient phenomena in electrical machines.
Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with a topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Teaching is conducted through lectures and consultations. Study research.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project task	Yes	50.00	Oral part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	P.Vas	Electrical Machines and Drives	Oxford University Press	1992

Table 5.2 Course specification

Course:		Encoding and Signal Transmission Techniques
Course id:	DE310	
Number of ECTS:	14	
Teacher:		Šenk I. Vojin
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Understanding mathematical methods used in the protection encoding. Analysis of algorithms for decoding algebraic block codes, codes based on rear matrices and graphs, codes based on trees and trellises, as well as all other known protection codes.

2. Educational outcomes (acquired knowledge):

Ability to research in the domain of encoding techniques and signal transmission.

3. Course content/structure:

Algebraic block codes. Algorithms for decoding algebraic block codes. Codes based on rear matrices and graphs. Algorithms for decoding codes based on rear matrices and graphs. Codes based on trees and trellises. Algorithms for decoding codes based on trees and trellises. Partially teaching is realized through independent research and study work in the field of digital signal transmission techniques. Research and study work includes active following primary scientific sources, organization and conducting experiments and statistical data processing, numeric simulations, writing scientific paper in the field of doctoral thesis topics.

4. Teaching methods:

Lectures. Consultations. Homework. Research and study work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	50.00	Project defence	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	Shu Lin, Daniel Costello	Error Control Coding	Prentice Hall	2004

Table 5.2 Course specification

Course:		Selected Chapters in Pattern Recognition
Course id:	DE311	
Number of ECTS:	14	
Teachers:		Crnojević S. Vladimir, Petrović S. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Introduction to the advanced pattern recognition techniques.

2. Educational outcomes (acquired knowledge):

The acquisition of knowledge related to the latest techniques and algorithms used in artificial intelligence.

3. Course content/structure:

• Statistical pattern recognition: Bayes decision theory; estimation of parameters and their distribution; methods of the nearest neighbours, linear discriminant.
• Dimensionality Reduction: PCA analysis, Fisher`s discriminant, selection of a subset of features.
• Clustering, neural networks, Support Vector Machines, Hidden Markov models.
• Unified learning.
Part of the teaching activity on the subject is a self-study research in the field of speech recognition. Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with a topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Lectures, consultations, development of the project. Study research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	20.00	Oral part of the exam	Yes	60.00
Project defence	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Duda, Hart and Stork	Pattern Classification	2nd Ed.	2002

Table 5.2 Course specification

Course:		Electricity Markets and Regulation
Course id:	DE312	
Number of ECTS:	14	
Teacher:		Katić A. Nenad
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course Power Markets and Regulation is aimed at analyzing the environment which the company is facing and regulators in the new liberalized electricity market. The course includes analysis of relevant models used for the new structure of the energy system: the separation of integrated tariff system in order to create a new impartial system of regulation and regulatory approaches, nodal marginal price, equilibrium model for electricity pricing and investment analysis, the future of the market and use of real option pricing and evaluation of plants. An important goal of this course is to contribute to the development of student's autonomy, bibliographical research, to prepare written reports and orally present the matter.

2. Educational outcomes (acquired knowledge):

Knowledge and understanding: Identifying the main objectives of the electric market and regulation. The most relevant model analysis that was used to form a new structure of power systems. Discussion about the purpose of implementation of electricity markets and regulation. Understanding fundamental concepts, principles and theories of regulation and regulatory solutions. Notion of marginal cost and model for nodal price formation. Intellectual skills. The development of the models and structures that result from adjustments in market mechanism in the electricity sector. Discussion about the ways of "pay-as-you-offer" in relation to the uniform auction, simple offers compared to complex bids, bilateral physical and financial contracts, congestions and how to discover them. Understanding charging approach, with special attention to nodal pricing, calculation model and the congestion rent. Understanding the concept of regulation and historical development; Understanding quality of servic

3. Course content/structure:

Analysis of the models and structures that result from adjustments of market mechanisms in the electricity sector (2) Analysis of the EU Directive on the internal electricity market and the structure and results of their use in certain countries or geographical regions, such as Spain, Nordpool and Britain (2); Index charging a separate description of nodal pricing models and rent calculation congestion. Portugal grid will be used to illustrate these concepts, advantages and disadvantages of nodal pricing (2); Involvement of support services in the new structure. The discussion about the separation of support services from the active forces: basic concepts and problems. Application of certain auxiliary services in certain markets and analysis of the situation in individual countries. In this area, special attention will be paid to the regulation of voltage and reactive power (2) The concept of regulation and historical development. Regulatory Strategy: Cost of service / rate of return and incentivne methods, including limited cost, limited income and "Benchmark" regulation (2), Regulation of transmission and distribution services in certain countries. Portuguese tariff system will be used as an example of an impartial system. Regulated activities, the appropriate fee, the cost of custom strategies, structure of base rate to form the access tariffs and incentives to improve quality of service and greater efficiency and network management will be presented in this area (3) A regulated company for distribution and transmission of signals provided by the regulator, especially in the quality of service (2).

4. Teaching methods:

Lectures or mentor work. Consultation. Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance	Yes	30.00	Written part of the exam - tasks and theory	Yes	70.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Steven Stoft	Power System Economics	IEEE/Wiley	2002
2,	G. Tothwell, T. Gomez	Electricity Economics Regulation and Deregulation	IEEE Series on Power Engineering	2003
3,	Chris Harris	Electricity Markets: Pricing, Structures and Economics	John Wiley & Sons	2006
4,	Rafal Weron	Modelling and Forecasting Electricity Loads and Prices: A Statistical Approach	John Wiley & Sons	2006
5,	N.Katić, V.Borozan, A.Halilčević	Tržište električne energije i njegovo upravljanje	Tempus-JADES, FTN	2009

Table 5.2 Course specification

Course:		Selected Chapters in Power Engineering			
Course id:	DE313				
Number of ECTS:	14				
Teacher:		Strezoski C. Vladimir			
Course status:		Elective			
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
5	0	0	4	0	
Precondition courses		None			

1. Educational goal:

Course objective is to introduce students to new concepts of power engineering systems – production/transmission and distribution networks. The course will deepen the knowledge of not only European, but of all world-wide concepts of these networks, as well as of modelling, analysis, plant planning and their development. Special emphasis is placed on the management of these systems.

2. Educational outcomes (acquired knowledge):

The course outcome is the knowledge and skills of students for individual and team scientific work and research in the subject area.

3. Course content/structure:

The course is planned to cover the following areas:
1.Selected chapters in smart production/transmission networks,
2.Selected chapters in smart distribution networks,
3.Selected chapters in transmission/production and distribution management systems

It is also planned that part of the classes consists of active involvment of the colleagues in the independent study research work. Study research work includes active monitoring of primary scientific sources, as well as written paper in the subject area.

4. Teaching methods:

Within the course the following methods are applied:
1.Lectures-presentation of the theoretical part is followed by examples that contribute to a clarification of certain parts of the curriculum,
2. Consultations-in addition to regular lectures, consultations are held regularly
3.Study research work – studying the scientific journals and other literature, colleagues are able to independently deepen the lecture material.
By working with the course teacher, colleagues are trained to write their own scientific work..

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Vladimir Strezoski, Dragan Popović	Proračuni stacionarnih režima elektroenergetskih sistema	Fakultet tehničkih nauka, Novi Sad	2008
2,	Emil Levi, Vladan Vučković, Vladimir Strezoski	Osnovi elektroenergetike – energtski pretvarači	Fakultet tehničkih nauka, Novi Sad	1996
3,	Vladimir Strezoski	Analiza elektroenergetskih sistema - Skripta	Fakultet tehničkih nauka, Novi Sad	2010

Table 5.2 Course specification

Course:		Selected Chapters in System Management in Power Systems – EMC and DMS
Course id:	DE314	
Number of ECTS:	14	
Teacher:		Sarić T. Andrija
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main course objective is acquiring higher level of knowledge on advanced functionalities, algorithms for their definitions, mathematical solution procedures and application of individual functions in system management in production and transmission (EMS) and distribution networks (DMS). Also the objective is preparing for performing higher level of operations (defining functionality, creating algorithms and the alike) in teams for development of system management in production, transmission and distribution networks.

2. Educational outcomes (acquired knowledge):

Knowledge on higher levels of functionalities in system management in production, transmission and distribution networks, which are integral part of modern systems for optimal exploitation of PES. Knowledge on solving individual problems and ability for their improvement. Ability of using ready-made software packages for solving problems. Ability for leading development of new functions in EMS and DMS.

3. Course content/structure:

Contemporary SCADA systems and their integration with EMS and DMS. Architecture and functional structure of SCADA/EMS/DMS systems.
Selected chapters in EMS:
Selected generator functions: load management, load shedding, motor start and others.
Selected network functions: Bus Hourly Load Forecast, System based Short-Term Load Forecast, Fault Diagnosis, Fault Analysis, Equipment Outage Scheduling and Switching Sequence Management.
Selected market functions: maximal and available transmission capacities (Network Transfer Capacity – NTC ? Available Transfer Capacity - ATC), Network Congestion management, energy cost calculation and transaction (Energy and Transaction Evaluation), Energy Wheeling, optimization of American market types and Local Marginal Price and Transmission Capacity Auction and Energy Auction.
Selected chapters in DMS:
Volt/Var coordination, Demand Response, optimal network reconfiguration, optimal supply restoration, management of distributed new and renewable energy sources, Smart Grid and others.
Part of the course is conducted through individual research and study work in the field of decision-making and optimization.Study and research work includes active following of the primary scientific sources, organization and carrying out of experiment and statistical data processing, numeric simulations, scientific paper writing in the field of the doctoral thesis.

4. Teaching methods:

Lectures. Consultation. Study and research work

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	30.00
Term paper	Yes	30.00			
Test	Yes	30.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	A.J. Wood and B.F. Wollenberg	Power Generation, Operation and Control	John Wiley	1996
2,	J.A. Momoh	Electric Power System Applications of Optimization	Marcel Decker, Inc	2005
3,	M.S. Ćalović, A.T. Sarić i P.Č. Stefanov	Eksploatacija elektroenergetskih sistema u uslovima slobodnog tržišta	Tehnički fakultet, Čačak	2005
4,	Y.H. Song and X.F. Wang	Operation of Market-Oriented Power Systems	Springer	2005
5,	N. S. Rau	Optimization Principles: Practical Applications to the Operation and Markets of the Electric Power Industry	Wiley, New-York, NY, USA	2003
6,	F.I. Denny and D.E. Dismukes	Power System Operations and Electricity Markets	CRC Press	2002
7,	K. Bhattacharya, M. Bollen and J. Daalder	Operation of Restructured Power Systems	Kluwer, Boston, MA, USA	2001
8,	A. Debs	Modern Power Systems Control and Operation	DSI, Atlanta, GA, USA	1996

Literature

Ord.	Author	Title	Publisher	Year
9,	B. Droste-Franke et al.	Balancing Renewable Electricity: Energy Storage, Demand Side Management, and Network Extension from an Interdisplinary Perspective	Springer	2012
10,	F.P. Sioshansi	Smart Grid: Integrating Renewable, Distributed and Efficient Energy	Academic Press	2012
11,	J. Ekanayake et al.	Smart Grid: Technology and Applications	Wiley	202
12,	J. Momoh	Smart Grid: Fundamentals of Design and Analysis	IEEE Press and Wiley	2012
13,	A. Chakrabortty and M. Ilic	Control and Optimization Methods for Electric Smart Grids	Springer	2012
14,	S.A.-H. Soliman and A.-A.H. Mantawy	Modern Optimization Techniques with Applications in Electric Power Systems	Springer	2012
15,	P.G. Kini and R.S. Bansal (Editors)	Energy Management Systems	Intech	2011
16,	P.G. Kini and R.S. Bansal (Editors)	Energy Management Systems	Intech	2011
17,	N. Jenkins, J.B. Ekanayake and G. Strbac	Distributed Generation	IET	2010
18,	C.W. Gellings	The Smart Grid: Enabling Energy Efficiency and Demand Response	CRC Press	2009
19,	***	Izabrani radovi iz referentnih časopisa.		2013

Table 5.2 Course specification

Course:		Optoelectronics sensors systems-advanced course
Course id:	DE315	
Number of ECTS:	14	
Teachers:		Slankamenac P. Miloš, Tomić J. Josif
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Acquiring modern advanced theoretical and applied knowledge in the field of optoelectronic sensor systems, including modern optoelectronic components and optical fibers.

2. Educational outcomes (acquired knowledge):

- Ability to design of modern optoelectronic sensor systems with emphasis on advanced fiber-optic sensor systems
- Ability to work with modern optoelectronic systems
- Ability to follow modern scientific publications in the field of optoelectronic sensor systems.

3. Course content/structure:

Waveguide modulators. CWDM and DWDM systems. Fiber optic sensors. Miniature lasers. Ultrashort pulse lasers. Part of teaching the course is conducted through independent study research in the field of advanced optoelectronic sensor systems. Research work includes active monitoring of primary scientific sources, organizing and conducting numerical simulations and experiments, and statistical analysis of data and writing of scientific papers in the field close to the dissertation topic.

4. Teaching methods:

Classes, tutorials, study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Practical part of the exam - tasks	Yes	30.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	C.R, Plolock	Fundaments of Optoelectronics	Irwin, Chicago	1995
2,	S.O. Kasap	Optoelectronics and Photonics: Principles and Practices	Printece Hall	2001
3,	Jones, K. A.	Introduction to Optical Electronic	New York, John Wiley and Sons	1987
4,	Kressel, H.	Semiconductor Devices for Optical Communication	Berlin, Springer-Verlag	1987
5,	Živanov, M.	Optoelektronika za elektroničare (skripta)	FTN, Novi Sad	2007
6,	Živanov, M. i M. Slankamenac	Optoelektronika, praktikum za vežbe	FTN, Novi Sad	2007
7,	Miloš Slankamenac, Miloš Živanov, Nikola Stojanović	Optoelektronske komponente-skripta	FTN, Novi Sad	2012
8,	Shizhuo Yin, Paul B. Ruffin, Francis T.S. Yu	Fiber Optic Sensors	CRC press	2008
9,	Le Nguyen Binh	Digital Optical Communications	CRC press	2008

Table 5.2 Course specification

Course:		Selected Chapters in Industrial Robotics
Course id:	HDOK-1	
Number of ECTS:	14	
Teacher:		Borovac A. Branislav
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The goal of the course is that, in accordance with their prior knowledge and interests, students learn about traditional and new areas of industrial robotics and to introduce the research problem.

2. Educational outcomes (acquired knowledge):

The outcome of the course are the knowledge and ability of students to understand the issues, particularly the advanced field of industrial robotics and to get involved into research work in this field of study.

3. Course content/structure:

Basic concepts and definitions, homogeneous transformations, robot kinematics (direct and inverse problem), Denavit-Hartenbergova notation, Jacobians, synthesis trajectory, the dynamics of robots, robot control, robot programming, sensors in robotics and their application, the application of robots in industrial tasks. Part of the teaching activity on the subject is a self-study research in the field of industrial robotics. Study research includes active monitoring of the primary scientific sources, organization and execution of experiments and statistical data processing, numerical simulation, writing a paper with a topic close to the scientific and teaching area of the subject of student`s doctoral dissertation.

4. Teaching methods:

Depending on the number of students teaching activity may have a classic approach (lectures, consultations), or mentoring. Forms of teaching activity are adapted to the number of students and selected chapters. Study research.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	M. Vukobratović, D. Stokić	Control of Manipulation Robots	Springer, ISBN 3-540-11629-X, ISBN 0-387-11629-X	1982
2,	M. Vukobratović, M. Kirćanski	Kinematics and Trajectory Synthesis of Manipulation Robots,	Springer Verlag, ISBN 3-540-13071-3	1986
3,	M. Vukobratović, D. Stokić, N. Kirćanski	Non-adaptive and Adaptive Control of Manipulation Robots	Springer, ISBN 3-540-13073-X, ISBN 0-387-130	1985
4,	M. Spong, S. Hutchinson, M. Vidyasagar	Robot Modelling and Control	John Wiley & Sons, ISBN-10 0-471-64990-2, ISBN-13	2006
5,	L. Sciavicco, B. Sicilijano	Modelling and control of robot manipulators	Springer - Verlag, ISBN 1-85233-221-2	2000
6,	B. Borovac, G. Đorđević, M. Rašić, M. Raković	Industrijska robotika	(u pripremi)	2007
7,	B. Borovac, G. Đorđević, M. Rašić, M. Raković	Zbirka zadataka iz industrijske robotike	(u pripremi)	2007

Table 5.2 Course specification

Course:		Selected Chapters in Non-Industrial Robotics
Course id:	HDOK-2	
Number of ECTS:	14	
Teacher:		Borovac A. Branislav
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course goal is to make students, having in mind their previous knowledge and interests, familiar with the new topics in the field of Non-Industrial Robotics, which is a field that is becoming increasingly more important, and to introduce them to research study.

2. Educational outcomes (acquired knowledge):

The expected educational outcomes of this course are the student`s knowledge and ability to fully understand the topics and issues related to Non-Industrial Robotics and his/her involvement in research work in this field of study.

3. Course content/structure:

In accordance with the student`s interests, some of the following topics will be further studied: applications for service robots (in a household, on a building site, in a hazardous environment, inspection robots, life saving robots, etc.), autonomous robots, control and regulation in biological systems, the comparison of the `control architecture` of biological systems and autonomous robots, types of autonomous robots depending on the way in which they move (wheels and tracks, jumping robots, snake-like robots, flying robots, multiple-legged and two-legged robot locomotion, etc.), robot learning, “behaviour-based robotics” which represents a new way in which we control robots in an unstructured environment like ours, grasping and manipulation of objects, humanoid robots. A part of the course work is conducted through independent individual study and research work in the field of Non-Industrial Robotics.The research study requires the student`s active and constant interest in and reading of the primary scientific resources, the organization and conducting of experiments and statistical processing of data, numerical simulations, writing a paper in the specific scientific field relevant to the doctoral dissertation

4. Teaching methods:

Depending on the number of students the course can be carried out either through lectures, or by working with a mentor (tutorial work). Modes of teaching depend on the number of students and the chosen chapters (topics). Students are involved in the research study work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	George A. Bekey	Autonomous robots – From biological inspiration to implementation and control	The MIT Press, ISBN 0-262-02578-7	2005
2,	Rodney A. Brooks	Cambrian Intelligence – The Early History of the New AI	A Bradford Book, The MIT Press	1999
3,	Ronald Arkin	Behavior-based Robotics	The MIT Press, ISBN 0-262-01165-4	1998
4,	Vukobratović M., Borovac B., Surla D., Stokić D.	BIPED LOCOMOTION -Dynamics, Stability, Control and Application	Springer, ISBN 0-540-17456-7, ISBN 0-387-1745	1990

Table 5.2 Course specification

Course:		Preparation for the Application of Doctoral Dissertation Topic			
Course id:	SID05				
Number of ECTS:	2				
Teachers:					
Course status:		Mandatory			
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
0	0	0	2	0	
Precondition courses		None			

1. Educational goal:

Overview of situation in the area of the proposed topic for doctoral dissertation based on the scientific literature analysis – books, monographs, papers in referential journals, papers from conference proceedings, available documentation at websites, etc. The objective is to overview the possibilities of the thesis and scientific potential of the topic.

2. Educational outcomes (acquired knowledge):

Study on the potentials of the proposed doctoral dissertation topic, i.e. the systematized knowledge in the area of the research topic for doctoral dissertation, as well as clear directions in further research on the topic.

3. Course content/structure:

Defining the wider area of the doctoral dissertation topic and key motives for research. Overview of literature on the basis of available scientific books, monographs, papers in referential journals, papers from conference proceedings, available documentation at websites, etc. Study on the potentials of the proposed doctoral dissertation topic.

4. Teaching methods:

Teaching is performed as tutorials.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	70.00	Oral part of the exam	Yes	30.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Priznati naučnici i stručnjaci iz oblasti teme Dr teze	Razna naučna dela		sve

Table 5.2 Course specification

Course:		Complex Digital Systems and High Frequency Circuits
Course id:	DE400	
Number of ECTS:	14	
Teachers:		Nađ F. Laslo, Slankamenac P. Miloš
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Students acquire deep understanding of the field of modelling digital circuits for high frequency operation using transition lines and scattering parameters, crosspoint and procedures for lowering it, techniques for measuring digital signals at high frequencies, design of printed boards for high frequency operation, specification and design of cables for transmitting high frequency digital signals.

2. Educational outcomes (acquired knowledge):

Deep understanding of the problem of analysis and synthesis of digital electronic circuits and devices choosing from the wide area the problems related to the topic of future doctoral dissertation.

3. Course content/structure:

Detailed study of the problems of analysis and synthesis, the design of circuits and devices for high frequency operation with the choice of the most important elements in the field. (The wave concept and signal delay phenomenon, scattering parameters, lines, lines termination, modelling elements of digital circuit using lines, modelling printed board connections, modelling connectors, modelling cables. Coupled lines and procedures for reducing signal crosspoint, signal integrity. Techniques for measuring high frequency digital signals, problems in measuring, probe effect. Fundamentals of designing multilayer printed board, types of connections on a printed board, supply distribution, supply filtering using capacitors, global sync signal distribution, distribution topology, crosspoint control. Phase loops – PLL circuits. Electrostatic discharge at connectors, cables for high frequency operations, noise in cables, generic structure of cables. Radiation with high frequency circuits, electromagnetic compatibility, techniques for reducing radiation. Fundamentals of mixed fast digital-analogue circuits.)
The course is partially based on individual study and research work in the field of complex digital systems and high frequency circuits.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures, consultations, study and research work. Student have to finish a seminar work during the semester. A student is expected to do a project based on the part of the course chosen on the bases of interest and to compliment the work on the doctoral dissertation, in consultation with the future supervisor. The exam represents an oral defence of the project. If a student publishes a paper in a journal it is considered to be the final exam.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Oral part of the exam	Yes	50.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	H.Johnson	High-Speed Digital Design: A Handbook of Black Magic	Prentice Hall PTR, New Jersey	1993
2,	H.Johnson, M.Graham	High Speed Signal Propagation: Advanced Black Magic	Prentice Hall PTR, New Jersey	2003

Table 5.2 Course specification

Course:		ASIC Design
Course id:	DE401	
Number of ECTS:	14	
Teacher:		Malbaša D. Veljko
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The aim of the course is to qualify students for independent design of integrated digital electronic circuits on the basis of specified task.

2. Educational outcomes (acquired knowledge):

Students who have successfully finished this course will be able to independently design digital integrated circuits on the basis of specified task and to follow the latest trend in the literature in this field.

3. Course content/structure:

Specification of digital integrated circuits. Design and application of software tools in the design of ASIC.
Part of the course is based on the independent study and research work in the field of ASIC design.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures or mentor work (consultations). Study and research work. The course teacher will, in consultation with the student, determine the field in which the student will prepare and defend a seminar paper.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Theoretical part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	Razni	Novi članci i literatura iz ove oblasti		2007

Table 5.2 Course specification

Course:	Chosen areas of analogue, digital and RF integrated circuits design
Course id: DE402	
Number of ECTS: 14	
Teachers:	Damnjanović S. Mirjana, Videnović-Mišić S. Mirjana
Course status:	Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Chosen areas of analogue, digital and RF integrated circuits design

2. Educational outcomes (acquired knowledge):

- Ability to design an application-specific integrated circuits (ASICs)
- Ability to understand several versatile analog, digital, and RF circuit building blocks frequently utilized in VLSI chips
- Ability to design a layout of (advanced) analogue and RF circuits in the program package CADENCE
- Ability to design a layout of (advanced) digital circuits in the program package CADENCE

3. Course content/structure:

This course is intended to give a detailed knowledge and experience in design of advanced VLSI circuits and chips in today's and future nano-scale CMOS technologies. Major VLSI design challenges will be studied, followed by careful treatment of several versatile analog, digital, and RF circuit building blocks frequently utilized in VLSI chips. Simulation techniques in software package Cadence, specific for these kind of circuits, will be presented (PSS, Pnoise,…).

4. Teaching methods:

Lectures. Consultation. Small projects or seminar papers. Study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	50.00
Project	Yes	45.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Behzad Razavi	Design of Analog Cmos Integrated Circuits	McGraw-Hill Science Engineering	2000
2,	Thomas H. Lee	The Design of CMOS Radio-Frequency Integrated Circuits	Cambridge University Press; 2nd edition	2003
3,	Thomas H. Lee	Planar Microwave Engineering: A Practical Guide to Theory, Measurement, and Circuits	Cambridge University Press	2004
4,	Behzad Razavi	RF Microelectronics	Prentice Hall	1997
5,	Jan M. Rabaey, Anantha Chandrakasan, and Borivoje Nikolic	Digital Integrated Circuits, 2nd ed.	Prentice Hall	2003
6,	Jacob Baker	CMOS Circuit Design, Layout, and Simulation, Revised Second Edition	Wiley-IEEE Press	2007
7,	Christopher Saint, Judy Saint	IC Mask Design: Essential Layout Techniques	McGraw-Hill Professional	2002

Table 5.2 Course specification

Course:		Design and Fabrication of Passive Micro and Nano Components
Course id:	DE403	
Number of ECTS:	14	
Teacher:		Stojanović M. Goran
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Preparing students for research work in the field of design and fabrication of passive micro and nano electronic components.

2. Educational outcomes (acquired knowledge):

- the ability to successfully design integrated passive components in modern software
- the ability to apply the optimization procedure with the aim of obtaining optimal characteristics of the designed components
- the ability to successfully fabricate the designed components with a chosen procedure in accordance with the desired component performances

3. Course content/structure:

Designing integrated passive components (resistors, capacitors, inductors, filter, etc). Application of optimization procedures in design (geometric programming, response surface methodology, etc) Component redesign. Drawing masks using modern software (Autocad, Cadence, Expert). Overview of the most common procedures and technologies of fabrication (LTCC, MEMS, NEMS, monolithic,). Overview of literature in this field.
Part of the course is based on the independent study and research work in the field of design and fabrication of passive micro and nano electronic components.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures, consultations, study and research work. Part of the course is devoted to demonstration of work with modern measuring instruments with active student participation and their independent work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	50.00
Term paper	Yes	45.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Schaper and R. K. Ulrich	Integrated Passive Component Technology	1st ed., L. W., Eds. Piscataway, NJ: IEEE Press	2003
2,	Jaime Aguilera amd Roc Berenguer	Design and Test of Integrated Inductors for RF Applications	Kluwer Academic Publishers	2003

Table 5.2 Course specification

Course:		Intelligent Measurements
Course id:	DE404	
Number of ECTS:	14	
Teacher:		Vujičić V. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Gaining knowledge in the field of intelligent measurement

2. Educational outcomes (acquired knowledge):

Students will be able to design and use systems for intelligent measurement.

3. Course content/structure:

Remote measurement. Virtual laboratories. Data analysis methods. Result prediction.
Part of the course is based on the independent study and research work in the field of intelligent measurement .
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures, consultations. Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Written part of the exam - tasks and theory	Yes	50.00
			Oral part of the exam	Yes	20.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Susan Fox ed.	Measurement, Instrumentation, and Sensors Handbook	CRC Press LLC	1999

Table 5.2 Course specification

Course:		Smart Grid Networks			
Course id:	DE405				
Number of ECTS:	14				
Teacher:		Katić A. Nenad			
Course status:		Elective			
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
5	0	0	4	0	
Precondition courses		None			

1. Educational goal:

The main course objective is acquiring knowledge on modern management methods in power engineering networks. Advanced systems of automation, remote controlling and operation optimization and plant planning, together with smart systems for consumption and production management are the basis of “smart grids”. The objective is to obtain knowledge on models of the stated smart grid components.

2. Educational outcomes (acquired knowledge):

Knowledge on models of smart grid components. Knowledge on integrated management systems of power networks (SCADA, DMS, OMS, EMS), remote systems, systems o power consumption (Demand Response) and system for optimal management of distributed generators on renewable energy sources.

3. Course content/structure:

Integrated management systems (SCADA, DMS, OMS, EMS), remote systems, systems for consumption management (Demand response) and systems for optimal management of distributed generators for renewable energy sources (Distributed Generators). Business analysis, investment costs and smart grid using, benefits of using smart grids and technical and economic analysis.
Part of the course is based on the independent study and research work in the field of regulation of electric power industry in the free market economy.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures. Consultation. Study and research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Razni autori	pisani materijal koji se dobija od predavača		2013

Table 5.2 Course specification

Course:		Electric Power Industry in the Free Market Economy
Course id:	DE406	
Number of ECTS:	14	
Teacher:		Katić A. Nenad
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Familiarizing with the modern organization and functioning of electric power industry in the free market economy.

2. Educational outcomes (acquired knowledge):

Knowledge of the modern organization and functioning of deregulated electrical power industry and open market of electrical power throughout the world.
Knowledge of the organization and functioning of electric power industry in Serbia.

3. Course content/structure:

Principles of deregulation and restructuring of electric power industry, organization and participants in the open market, new technical and economic conditions of work. Electric power market – organization and market regulations. Regulation and calculation of rate for connection to and use of power grid. Regulatory agency, competence and organization, comparison of grid operation parameters. Deregulation processes worldwide, EU laws, South East Europe Energy Community. Restructuring and opening of electric power market in Serbia.
Part of the course is based on the independent study and research work in the field of regulation of electric power industry in the free market economy.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures. Consultation. Study and research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	50.00
Term paper	Yes	40.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	* * *	Zakon o energetici	Službeni glasnik Republike Srbije	2011
2,	* * *	Direktiva evropskog parlamenta i saveta o pravilima za unutrašnje tržište električne energije, br. 2003/54/EC	* * *	2003
3,	* * *	Ugovor o energetskoj zajednici jugoistočne Evrope		2003
4,	N.Katić	Ekonomija elektroenergetskih sistema	FTN, Novi Sad	2001
5,	D. Kirschen, G. Strbac	Power System Economics	John Wiley & Sons	2004
6,	N.Katić	Elektroprivreda u uslovima slobodnog tržišta	FTN	2012
7,	T.Saraiva, N.Katic, S.halilcevic, R.Taleski	Energy markets and Regulation	JADES, Tempus project	2010

Table 5.2 Course specification

Course:		Regulation and Control of Electric Power Systems
Course id:	DE407	
Number of ECTS:	14	
Teacher:		Sarić T. Andrija
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Primary aim of the subject is to acquire knowledge on the regulation and control of production and transmission electric power systems.

2. Educational outcomes (acquired knowledge):

Knowledge on production and transmission part of PES. Knowledge of two basic control loop in those systems: regulation of active power and frequency and regulation of voltage and reactive power. Knowledge on system management of production and transition power engineering systems (EMS).

3. Course content/structure:

General problems of power engineering systems management. Management automation. Types and equipping management centres. Roltage regulation and er engineering systems management. Management automation. Types and equipting oegulation of Voltage and Reactive Power. Voltage regulation by transformer with the change of relationship of transformation under load (description, modelling and application). Systems for regulation of synchronous machine actuation (types of systems, element modelling, actuation regulators, standardization of mathematical models of actuation systems). Static devices for regulation of voltage and reactive power (types, description, application and modelling). Regulation of frequency and active powers. Types, descriptions and ways of modelling of turbine regulators. Tachometric, acceleration and tachometric and regulators with linear control characteristic. Modelling of production plants (models of steam turbines and hydro power plants). Modelling of power plants in isolated operation. Modelling of mixed and related PES. Automated secondary regulation of frequencies and active powers. Part of the course is based on the independent study and research work in the field of regulation of electric power industry in the free market economy. Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures or mentor work .Consultations. Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	70.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	T.Gonnen	Electric Power Distribution System Enginering	McGraw-Hill Book Company; New York; NY; USA	1986
2,	E.Lakervi and E.Holmes	Electricity Distribution Network Design	Peter Peregrinus Ltd; London; U.K.	1989
3,	J.J.Burke	Power Distribution Enginering	Marcel Dekker; Inc.; New York; NY; USA	1986
4,	V.C.Strezoski, D.S.Janjić	Sistem regulacije napona distributivnih mreža	Institut za energetiku i elektroniku, FTN, Novi Sad	1996
5,	M. S. Ćalović	Regulacija elektroenergetskih sistema, Tom 1: Regulacija učestanosti i aktivnih snaga, i Tom 2: Regulacija napona i reaktivnih snaga	Elektrotehnički fakultet, Beograd	1997
6,	M. S. Ćalović i P. Č. Stefanov	Zbirka rešenih zadataka iz regulacije elektroenergetskih sistema	Beopres, Beograd	2000
7,	P. Kundur	Power System Stability and Control	McGraw-Hill	1994
8,	J. Machowski, J. W. Bialek, and J. R. Bumby	Power Systems Dynamics and Stability, Second edition	John Wiley & Sons	2008

Table 5.2 Course specification

Course:		Selected Chapters in Electromagnetics
Course id:	DE408	
Number of ECTS:	14	
Teachers:		Juhas T. Anamarija, Pekarić-Nađ M. Neda
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The aim of the course is to teach students to use some of the analytic and numerical methods and to become familiar with the existing software for solving practical EM related problems in the field of their doctoral studies.

2. Educational outcomes (acquired knowledge):

Students who have successfully completed this course are able to calculate electrical, magnetic, and electromagnetic field of the device they design and to estimate and measure the field in its vicinity. Student are able to improve the device performances, increase its compatibility with other devices and to improve its safety.

3. Course content/structure:

Some of the most frequently used analytical methods – method of separation of variables, using function of a complex variable (conformal mapping). Some of the most common approximation methods – finite difference method in time constant electromagnetic fields, finite element method, finite difference time domain method. Modern software for calculating parameters of electromagnetic fields. Part of the course is based on the independent study and research work in the field of electromagnetics. Study and research work may involve reading of scientific papers, organization and conduction of experiments as well as statistical analysis of data, numerical simulations and if desired, writing a paper on the subject of interest.

4. Teaching methods:

Induction method will be used. Students will gain knowledge on the basis of a set of examples which can later be generalizes and applied for solving a specific problem. Lectures. Counseling. Introduction to commercially available software. Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Oral part of the exam	Yes	70.00

Literature

Ord.	Author	Title	Publisher	Year
1,	S. S. Rao	Applied numerical methods for Engineers and Scientists	Prentice Hall NJ	2002

Table 5.2 Course specification

Course:		Modern Methods of Digital Control of Drives and Converters
Course id:	DE409	
Number of ECTS:	14	
Teacher:		Marčetić P. Darko
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Doctoral students gain knowledge of modern trends in the development of digitally controlled drives.

2. Educational outcomes (acquired knowledge):

Students who have successfully finished this course have learned about the trends in the development of digitally controlled drives. The course offers an overview of the large body of literature in this field as well as practical experiments on one of the chosen drives within the Chair. The students have learned to independently solve latest problems in the field of digitally controlled drives and converters.

3. Course content/structure:

1) Modern microcontrollers and digital signal processors for the use in microprocessor controller drives. Examples for Texas Instrument DSP TMS320F2812 or Freescale DSP 56F8013. The most important types of peripheral units used within a drive: A/D converters, D/A converters, programmable counters, U/f converters, programmable logic. 2) Modern control structures used in electromotor drives. 2?) practical realization of a vector controlled drive from asynchronous motor and position sensor 2b) practical realization of a vector controlled drive from synchronous motor and position sensor 3) state estimation and parameter estimation of a asynchronous motor in operation 4) modern methods of controlling asynchronous motor without position senor– IM shaft-sensorless 4?) application of methods based on asynchronous motor 4.a.1 open-loop method., 4.?.2 speed and position estimators and 4.?.3 observers of rotor speed and rotor flux position 4b) methods based on test signal injection method 5) modern method of control of synchronous motor with permanent magnets without position sensor – PM shaft-sensorless 5?) influence of configuration of synchronous motor rotor on the choice of sensorless method 5?) PM sensorless methods based on synchronous motor model 5c) PM sensorless methods based on test signal injection method.
Part of the course is based on the independent study and research work in the field of digitally controlled drives and converters.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Teaching is done through the presentation of the necessary literature, consultations and assistance in study and research work in the laboratory. .

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	Slobodan N. Vukosavić	Digitalno upravljanje električnim pogonima	Akademska misao	2003
2,	Darko Marčetić	Mikroprocesorsko upravljanje energetskim pretvaračima	FTN Novi Sad izdavaštvo	2012

Table 5.2 Course specification

Course:		Selected Topics in the Field of Automatic Control
Course id:	DE410	
Number of ECTS:	14	
Teacher:		Kulić J. Filip
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses

1. Educational goal:

Providing deeper knowledge (theoretical and practical) in the field of automatic system control (analogue and digital) .

2. Educational outcomes (acquired knowledge):

- the ability to successfully apply some of control algorithms on the concrete problem related to the topic of doctoral dissertation.

3. Course content/structure:

Mathematical description of continual linear and nonlinear systems. Determining the quality of control in stationary and transition regime. Analysis of the stability of the system using analytical methods. Choice and tuning of parameters of industrial regulators: PID regulator. Direct digital control, Z-transformation. Concept of digital system state. Analysis of digital systems. Stability of digital system. Design of digital control systems: regulators, PID regulators, servo regulators, cancelling of system dynamics, regulators in space state. Implementation of digital control algorithms. Part of the course is based on the independent study and research work in the field of automatic control. Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures, consultations, study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	30.00	Oral part of the exam	Yes	30.00
			Practical part of the exam - tasks	Yes	40.00

Literature

Ord.	Author	Title	Publisher	Year
1,	K. Astrom, B. Wittemark	Computer-Controlled Systems	Prentice Hall	1997
2,	R. Isermann	Digital Control Systems	Springer-Verlag	1999
3,	M. Stojić	Digitalni sistemi upravljanja	Nauka, Beograd	1990

Table 5.2 Course specification

Course:		Signal Processing in Medical Research
Course id:	DE411	
Number of ECTS:	14	
Teacher:		Bajić D. Dragana
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The aim of the course is to teach students about the latest trends and methods of signal processing used in top medical research.

2. Educational outcomes (acquired knowledge):

Students will be able to independently and creatively think in a different professional environment.

3. Course content/structure:

Depends on the current research projects to which it is closely related.
Part of the course is based on the independent study and research work in the field of signal processing in medical research.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures and presentations, visits to laboratories, active participation through projects and homework assignments. Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project defence	Yes	50.00	Written part of the exam - tasks and theory	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	Više autora	Odabrani radovi iz vodećih međunarodnih časopisa	IEEE	2007

Table 5.2 Course specification

Course:		Digital Image Processing Algorithms
Course id:	DE412	
Number of ECTS:	14	
Teachers:		Crnojević S. Vladimir, Trpovski V. Željen
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Knowledge about the algorithms which are used in digital image processing. Knowledge about the latest methods in this field through several projects.

2. Educational outcomes (acquired knowledge):

Students will be able to understand basic algorithms which are used in digital image processing and can expand their knowledge by working at a particular problem related to their doctoral dissertation.

3. Course content/structure:

Primitive tools for digital image processing.
Theorems of pre-processing of line and edge detection.
Image compression
Image restoration
Image matching
Parallel algorithms for digital image processing
Part of the course is based on the independent study and research work in the field of algorithms for digital image processing.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based

4. Teaching methods:

Lectures. Consultations. Study and research work..

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project defence	Yes	30.00	Written part of the exam - tasks and theory	Yes	70.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Rafael Gonzalez, Richard Woods	Digital Image Processing	Prentice Hall	2002

Table 5.2 Course specification

Course:		Integration of Distributed Energy Resources
Course id:	DE413	
Number of ECTS:	14	
Teachers:		Dialynas . Evangelos, Katić A. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Aim of the course it to educate students about the basic types of distributed sources, the possibilities of their connection to a distribution network or portable distribution network as well as about the methods used for this. In addition the students will be able to use software and techniques so that distributed and renewable generators can be integrated in a system.

2. Educational outcomes (acquired knowledge):

Students will be able to analyse, design and plan the operation of distribution and portable networks including distributed and renewable sources of energy as well as to optimize their organization in a network on the basis of various parameters including the quality of electrical energy.

3. Course content/structure:

Constant operation of network with distributed generators, voltage surge, losses, control of reactive energy. Asynchronous machines as generators in wind power stations, constant speed, double feed and velocity change. Short circuit current from distributed generators, short circuit current limiters and protection. Protection of distributed generators and attached distributive networks. Voltage and angle stability. Active distribution network. Contribution of distributed generation to the quality of electrical energy. Large wind power stations, main transmission routes, HVDC with current and voltage converters. Earthing of wing power stations.

4. Teaching methods:

Teaching is done through classroom lectures, computer simulations, and experimental work in Laboratory for renewable and distributed sources.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	70.00	Written part of the exam - tasks and theory	Yes	30.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Loi Lei Lai, Tze Fun Chan	Distributed Generation: Induction and Permanent Magnet Generators	John Wiley and Sons, Chichester	2007
2,	Leon Freris	Renewable Energy in Power Systems	John Wiley and Sons, Chichester	2008
3,	Gilbert Masters	Renewable and Efficient Electric Power Systems	Wiley-Interscience Press	2004
4,	Bent Sorensen	Renewable Energy Conversion, Transmission and Storage	Academic Press	2007

Table 5.2 Course specification

Course:		Modern Coding Theory
Course id:	DE414	
Number of ECTS:	14	
Teacher:		Vukobratović V. Dejan
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The aim of the course is to offer students an overview and understanding of the fundamental theories of modern coding with emphasis on the construction of codes on graphs and iterative decoding techniques and to highlight the problems and present solutions in the design of error-correction codes and iterative decoders reaching the limit in the amount of data that can be transferred over channels with noise.

2. Educational outcomes (acquired knowledge):

After the course the student should have the following skills: 1) Be familiar with the principles of probabilistic graphical model systems and algorithms on graphical models with emphasis on the Belief-Propagation (BP) algorithm, 2) Obtain an overview of iterative development solutions in the field of error correction coding with emphasis the Turbo and Low-Density Parity-Check (LDPC) codes and corresponding versions of iterative decoders 3) get a wider picture of the applicability of iterative processing techniques and the additional examples? domains of signal transmission such as iterative techniques of estimation, equalization, and so on. 4) Obtain an overview of new techniques of information protection at packet level based on iterative principles with emphasis on Digital Fountain (DF) codes 5) gain insight into the extension of the theory of reliable transmission of information to the scenario of a communication link to the network scenario with emphasis on network coding.

3. Course content/structure:

Course content includes the following topics: 1) Basics of probabilistic graphical modelling of the system and the Belief-Propagation (BP) algorithm 2) The introduction of turbo codes and turbo codes decoding algorithm 3) Introduction to LDPC codes and LDPC codes decoding algorithm 4) Extending the theory of iterative processing to other elements of the transmission signal processing 5) codes for packet communications based on iterative principles: LT and Raptor codes 6) Introduction to network coding.

4. Teaching methods:

Lectures: (Mentor with the student chooses one or more modules, depending on the scope of the module). The theoretical part is followed by examples which serve to clarify the theoretical part of the curriculum. In addition to lectures, tutorial classes (consultations) are held regularly. Through research study, student makes an overview of scientific journals and other literature, and deepens on its own the curriculum provided through lectures. In addition to working with the teacher, the student is trained to write its own scientific work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Practical part of the exam - tasks	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	T. Richardson, R. Urbanke	Modern Coding Theory	Cambridge University Press	2008
2,	S. Lin, D. Costello	Error Control Coding: Fundamentals and Applications	Pearson	2004
3,	E. Soljanin, C. Fragouli	Network Coding: Fundamentals and Applications	NOW Academic Publishers	2008

Table 5.2 Course specification

Course:		Investigation of electromagnetic fields
Course id:	DE416	
Number of ECTS:	14	
Teacher:		Đurić M. Nikola
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Investigations of electromagnetic (EM) fields are becoming more important and more necessary in an effort to assess the level of the EM field exposure of environment and population, in different situations. The objective of this curse is introduction and basic training of young colleagues in the field of investigation of the EM fields from a range of non-ionizing radiation. With presented overview and analysis of the EM field testing methodology, colleagues acquire new and deepen existing knowledge about testing methods, in order to expand the existing scientific knowledge about EM fields, about impact on nearby objects, about effects of exposure and potential unhealthy effects, as well as the necessity for prevention and protection from exposure to EM fields.

2. Educational outcomes (acquired knowledge):

The outcome of education of young colleagues is to acquire knowledge and skills, through independent and team work, to implement, improve and develop testing methodology in terms of modeling, calculation and measurement of the EM field level. The presented scientific and research activities in this area will help colleagues to expand the technological foundation of examination, collection and data processing. This raises the level of support to analysis and solution of problems in this area, and further open new opportunities for support to other experts, especially in the field of health care and epidemiological risk from potential unhealthy exposure to the EM fields. Through scientific and research work in this area, colleagues are able to make additional significant contribution to the future development and implementation of new technologies for continuous and systematic examination of the EM field.

3. Course content/structure:

This course is intended to present some existing knowledge in areas relevant to the investigation of electromagnetic fields. It is planned to cover the following areas: 1. selected chapters about theoretical analysis of EM fields, 2. calculation methodology, modeling and testing of EM fields • Analytical and numerical modeling methods and calculations • application of software tools for modeling and calculation (COMSOL, CST Studio ...), • measurement systems for measuring the levels of electromagnetic fields, • Information network for testing EM fields, 3. selected chapters about statistical analysis of test results, 4. normative acts and regulations in the field of testing of electromagnetic fields, 5. selected chapters about uncertainty assessment for EM field measurements and 6. requirements of the relevant standards for electromagnetic field testing. It is planned that part of course takes place by engaging colleagues in independent study and research work in the subject area. This work would include active monitoring of primary scientific sources, organization and conduct experiments, as well as writing a scientific paper on this issue.

4. Teaching methods:

During the course the following methods apply: 1 lectures - presentation of the theoretical part is followed by examples, contributing to a better understanding and eventual clarification of certain parts of the material, 2 Consultation - besides lectures consultation are held regularly, 3 assistance with laboratory work and 4 study research – by studying scientific journals and other literature colleagues will be able to deepen by self the presented lectures. Working with their teacher colleagues are preparing to write a scientific papers.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Branko Popović	Elektromagnetika	Građevinska knjiga	1990
2,	Jean G. Van Bladel	Electromagnetic Fields – Second Edition	Wiley-IEEE Press	2007
3,	JCGM	Evaluation of measurement data — Guide to the expression of uncertainty in measurement	JCGM 100:2008	2008

Table 5.2 Course specification

Course:		Web-based Measurement Systems
Course id:	DE417	
Number of ECTS:	14	
Teachers:		Milosavljević P. Branko, Sovilj M. Platon
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The aim of the course is to present the latest solutions and methods in the field of design and implementation of web-based measurement systems.

2. Educational outcomes (acquired knowledge):

Students will learn skills that enable active scientific research and the application of the latest solutions and methods in the field of web-based measurement systems.

3. Course content/structure:

The structure of web-based measurement and data acquisition system. Types of data acquisition module in distributed measurement and acquisition systems in different applications (industry, environmental protection, energy systems, appliances): smart sensors, RFID tagged objects, dedicated embedded measurement and data acquisition systems and computer measurement and data acquisition systems. Expansion of data acquisition modules with integrated web servers and web applications. The role and implementation of servers in distributed measurement and data acquisition systems. Client applications in distributed measurement and data acquisition systems. Stand-alone client applications and web client applications. Client devices: computers and general-purpose embedded systems dedicated to portable devices for general use. Cloud service integration in web-distributed measurement and acquisition systems. Programming and deployment of data acquisition modules. Programming and deployment of server modules. Programming and deployment of client modules. The acquisition of embedded web servers implemented in C programming language. Examples of DotNET, JAVA, PHP and Python embedded data acquisition web applications. Practical examples and servers in the middle tier web-distributed measurement and acquisition systems in different applications. Practical examples and client modules in web-based measurement acquisition systems in different applications. Subsystems for automatic calibration, testing and metrological support in web-based measurement acquisition systems.

4. Teaching methods:

Lectures and consultations.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	F. Davoli	Remote Instrumentation Services on the E-Infrastructure: Applications and Tools	Springer	2011
2,	F. Davoli	Remote Instrumentation and Virtual Laboratories : Service Architecture and Networking	Springer	2010
3,	V. R. Haasz	Advanced Distributed Measuring Systems - Exhibits of Application	River Publishers	2012
4,	B. Milosavljević, M. Vidaković	Java i Internet programiranje	Grupa za informacione tehnologije, Novi Sad	2002

Table 5.2 Course specification

Course:		Design of complex optoelectronics systems
Course id:	DE418	
Number of ECTS:	14	
Teachers:		Slankamenac P. Miloš, Tomić J. Josif
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Modern design of complex optoelectronic systems, which consist of modern electronic and optoelectronic components and various types of optical fibers.

2. Educational outcomes (acquired knowledge):

- Ability to design complex systems with optoelectronic LEDs, laser diodes and photodetectors.
- Ability to design complex optoelectronic communication systems.
- Ability to design complex optoelektroskih measurement systems.
- Ability to work with a more modern optoelectronic measuring devices.
- Ability to follow modern scientific publications in the field of optoelectronic systems.

3. Course content/structure:

Optoelectronic measurement systems. Excitation LED and laser diodes, and circuits with optical receivers. Applications of lasers in industry, nanotechnology, manufacturing integrated circuits, graphics, medicine, the military, research, etc. Part of teaching the course is conducted through independent study research in the field of optoelectronics and photonics. Research work includes active monitoring of primary scientific sources, organizing and conducting numerical simulations, experiments and practical design of complex optoelectronic systems, as well as writing a scientific paper in the area close to the dissertation topic.

4. Teaching methods:

Classes, tutorials, study research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Practical part of the exam - tasks	Yes	30.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	C.R, Plolock	Fundaments of Optoelectronics	Irwin, Chicago	1995
2,	S.O. Kasap	Optoelectronics and Photonics: Principles and Practices	Printece Hall	2001
3,	Jones, K. A.	Introduction to Optical Electronic	New York, John Wiley and Sons	1987
4,	Kressel, H.	Semiconductor Devices for Optical Communication	Berlin, Springer-Verlag	1987
5,	Živanov, M.	Optoelektronika za elektroničare (skripta)	FTN, Novi Sad	2007
6,	Živanov, M. i M. Slankamenac	Optoelektronika, praktikum za vežbe	FTN, Novi Sad	2007
7,	Shizhuo Yin, Paul B. Ruffin, Francis T.S. Yu	Fiber Optic Sensors	CRC press	2008
8,	Le Nguyen Binh	Digital Optical Communications	CRC press	2008
9,	Miloš Slankamenac, Miloš Živanov, Nikola Stojanović	Optoelektronske komponente-skripta	FTN, Novi Sad	2010

Table 5.2 Course specification

Course:		Microwave Technique 2
Course id:	DE500	
Number of ECTS:	14	
Teacher:		Crnojević-Bengin B. Vesna
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Students gain advanced knowledge about microwave technique which enables them to write doctoral dissertation in this field depending on previously acquired knowledge and dissertation topic.

2. Educational outcomes (acquired knowledge):

Students will be able to conduct independent research work and write a doctoral dissertation in the field of microwave technique.

3. Course content/structure:

Advanced microwave circuits (EBG, DGS, metamaterials). Advanced techniques of simulation and modelling of microwave circuits. Theoretical basis and principles on which modern microwave circuits operate (leaky waves, HIS, FFS, etc)
Part of the course is based on the independent study and research work in the field of microwave technique.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based

4. Teaching methods:

Lectures. Consultations. Study and research work.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	5.00	Oral part of the exam	Yes	60.00
Term paper	Yes	35.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Grupa autora	IEEE Trans. on Microwave Theory and Technique	IEEE	2007

Table 5.2 Course specification

Course:		Selected Chapters in Pulse and Analogue Electronics
Course id:	DE501	
Number of ECTS:	14	
Teacher:		Nađ F. Laslo
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Students acquire deep understanding of the field of analysis and sythesis of pulse and analogue electronic circuits and devices, with the choice from a wide area depending on the doctoral dissertation topic.

2. Educational outcomes (acquired knowledge):

- the ability to successfully design pulse and analogue circuits
- the ability to apply the designed circuits
- the ability to use simple circuits in complex systems

3. Course content/structure:

Detailed study of the problems of analysis and synthesis of pulse and analogue electronic circuits and devices with the choice of the most important elements in the field. Theory and application of pulse (broadband) amplifiers. Protection against pulse interference. Specialised semiconductor brake components (fast recovery diodes, tunnel diodes, single transistors, HEMT transistor, various MOSFET structures, special tyristor structures, IGBT, MCT and other components): operation, characteristics, modelling, optimal use. Special forming circuits. Fast comparators. Characteristics of logic circuits. New families of logic circuits (low voltage CMOS and BiCMOS circuits, ECL- large scale integration circuits, new GaAs circuits): basic gates, characteristics, application. Critical signal distribution in fast digital circuits. Digital signals over lines. Non standard application of modern logic circuits. Pulse integrated circuits for special purposes (switch drivers, electromagnetic actuators, laser diodes, etc) Measurement on pulse circuits.
The course is partially based on individual study and research work in the field of pulse and digital electronics.
Study and research work is based on the primary scientific sources, organization and conduction of experiments as well as statistical analysis of data, numerical simulations, and writing a paper on the narrow scientific area in which doctoral dissertation is based.

4. Teaching methods:

Lectures, consultations, study and research work. A student is expected to do a project based on the part of the course chosen on the bases of interest and to compliment the work on the doctoral dissertation, in consultation with the future supervisor. The exam represents an oral defence of the project. If a student publishes a paper in a journal it is considered to be the final exam.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	30.00	Oral part of the exam	Yes	50.00
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	H.Johnson	High-Speed Digital Design: A Handbook of Black Magic	Prentice Hall PTR, New Jersey	1993
2,	H.Johnson, M.Graham	High Speed Signal Propagation: Advanced Black Magic	Prentice Hall PTR, New Jersey	2003
3,	Adel S. Sedra, Kenneth C.Smith	Microelectronic Circuits	Saunders College Publishing	1991
4,	W.M.C.Sansen	Analog Design Essentials	Springer	2006

Table 5.2 Course specification

Course:		Micro-sensors and MEMS
Course id:	DE502	
Number of ECTS:	14	
Teachers:		Damnjanović S. Mirjana, Živanov D. Ljiljana
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

To prepare students to do the research in the field of micro-sensors and micro-electric-mechanic systems (MEMS).

2. Educational outcomes (acquired knowledge):

- Ability to design integrated pressure sensor
- Ability to design inductive and capacitive micro-sensor for different applications
- Fabrication capacity of sensors designed in modern microelectronic technology, especially in MEMS technology

3. Course content/structure:

The basic steps in the fabrication of components in MEMS technology. Types of MEMS technology and their applications. Design of inductive sensors. Capacitive sensors. Micro-sensors of pressure, displacement, position. Application of implanted micro-sensors in medicine (ocular implants, implants for recording activity of brain cortex). Examples of realized sensors in MEMS technology. The advantages and disadvantages compared to other technologies. A part of the course is being realized through individual research study in the area of micro-sensors application and technology for their fabrication.

.

The study research includes the review of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, the writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Lectures. Consultations . Overview of scientific papers. Research study.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	5.00	Written part of the exam - tasks and theory	Yes	70.00
Homework	Yes	5.00			
Term paper	Yes	20.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	M. Popović	Senzori i merenja	VEŠ, Beograd	1999
2,	Julian Gardner, Vijay Varadan, Osama Awadelkarim	Microsensors, MEMS and smart devices	John Wiley & Sons Ltd.	2007
3,	Sergey E. Lyshevski	MEMS and NEMS: Systems, Devices, and Structures	CRC press	2002
4,	Ljiljana Živanov	Primena senzora i aktuatora (deo senzori)	Skropta, Fakultet tehničkih nauka	2009
5,	Ljiljana Živanov	MEMS tehnologije	Skropta, Fakultet tehničkih nauka	2009

Table 5.2 Course specification

Course:		Industrial Electronics
Course id:	DE503	
Number of ECTS:	14	
Teachers:		Slankamenac P. Miloš, Tomić J. Josif, Živanov B. Miloš
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The acquisition of practical knowledge in applied electronics in the field of industry, modern equipment, robots, connecting with computers and optoelectronic components and so on. The main objective is to prepare students to solve some contemporary and very complex engineering problems.

2. Educational outcomes (acquired knowledge):

- The ability of designing and manufacturing systems with PIC and DSP, PLC, etc. - The ability of designing and manufacturing of electronic measuring devices. - The ability of designing and manufacturing devices for solving the practical problems of consumer electronics. - The ability of designing and manufacturing of robotized systems. - The ability of designing production systems with optoelectronic components and sensors. - The ability of designing ASIC circuits for practical application. - The ability of designing and practical implementation of the system that links computers and electronic systems.

3. Course content/structure:

The design and development of systems applied in industry, using the most modern hardware and software. Hardware includes PCs, network computers, microcontrollers, DSP`s, PIC`s, A / D and D / A converters, operational amplifiers, transistors, diodes, digital circuits, memory, sensors, video cameras, power supply, passive components, speakers, antennas, mobile phones, LC displays, optoelectronic components, thyristors and power transistors, modems and similar.The software includes C++, Delphi, Matlab, Visual Basic, Java, Visual C++, programs for PIC emulation, programs for DSP processing signal (FFT, etc.). Programs for designing integrated circuits; Cadence, Mentor Graphics.Elaboration of project documentation. Public presentation of the project and the presentation of the project on the Internet. A part of the course is being realized through individual research study in the field of industrial electronics.The research study includes the review of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of paper closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Lectures. Consultations .Research study

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Practical part of the exam - tasks	Yes	30.00
Term paper	Yes	20.00			

Literature				
Ord.	Author	Title	Publisher	Year
1,	Više autora	Industrial electronics	IEEE	2007
2,	Više autora	Power electronics	IEEE	2007

Table 5.2 Course specification

Course:		Contemporary Measuring Systems Design
Course id:	DE504	
Number of ECTS:	14	
Teacher:		Mitrović Lj. Zoran
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The theoretical and practical knowledge acquisition necessary for designing modern measuring systems.

2. Educational outcomes (acquired knowledge):

A student should be capable of individual designing and managing the team for the design of modern measuring systems.

3. Course content/structure:

The principles of design. Fundamentals of modern measurements systems. Protection of operators and equipment. Complex projects. Project Management.Tools for designing software and hardware.
A part of the course is being realized through individual research study in the field of contemporary measurement systems design.

The research study includes the review of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of paper closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Lectures. Consultations .Study and research work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Oral part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	R. John Hansman, Jr.	Characteristics of Instrumentation	CRC Press LRC	2000

Table 5.2 Course specification

Course:		Power Quality in Distribution Networks
Course id:	DE505	
Number of ECTS:	14	
Teacher:		Katić A. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course aims to acquire students with contemporary problems of power quality in distribution networks that are becoming one of the standards of EEC`s in the market conditions of electric power. The aim is to qualify students to apply and create the modern standards, recommendations and other technical literature, and to plan and implement complex measurements of quality parameters in the laboratory or facility.

2. Educational outcomes (acquired knowledge):

A student will be capable of analyzing, designing and exploring a wide range of issues relating to quality of electricity in modern distribution networks, to implement and create standards, recommendations and technical guidance, and to plan and implement complex measuring of quality parameters in the laboratory and facility.

3. Course content/structure:

The importance of electric power quality for distribution networks: basic terms and definitions, the importance and relevance, level of tolerance. The methods of measuring and monitoring parameters: advanced measurement systems. The application of systems for continuous monitoring of power quality parameters in distribution networks. Voltage variations in the steady state and flicker: definitions, sources and effects. Voltage sags: definitions, characteristics, causes, propagation, presentation, consequences and simulation. A comparison of performances. The sensitivity of the equipment to voltage sags. The assessment of financial losses. Harmonics: definitions, sources and effects. The methods of analysis. The propagation of harmonics: harmonic power flow calculation. The methods of mitigation. The design and calculation of the filter. The review of international regulations and standards.
A part of the course is being realized through individual research study in the field of power quality in distribution networks. The research study includes the overview of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

The method of theoretical explanation of problems will be applied , including mathematical modelling, solving problems with real situations and parameters, as well as laboratory measurements and operation with application of modern equipment and software. In addition, individual research study will be developed.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project defence	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	R. Dugan, M. McGranaghan, S. Santoso, W. Beaty	Electrical power systems quality	McGraw-Hill, New York	2003
2,	Vladimir Katić	Kvalitet električne energije - viši harmonici	UNS-Fakultet tehničkih nauka, Edicija Monografije, Br.6	2002
3,	M.Bollen	Understanding power quality problems: voltage sags and interruptions	IEEE Publishing	2000

Table 5.2 Course specification

Course:		Renewable Electrical Energy Sources
Course id:	DE506	
Number of ECTS:	14	
Teacher:		Katić A. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The main goal of the course is to spread knowledge about the types and principles of renewable energy: small hydroelectric power stations, small gas power plants using natural gas, wind turbine, solar power and biomass power plants, organic waste power plants.

2. Educational outcomes (acquired knowledge):

The knowledge of operation principles of all types of renewable energy sources. Being informed about the ways of their connections to electric power networks and the impact on the environment. The knowledge of the principles of their economic evaluation.

3. Course content/structure:

Introduction to renewable energy sources. Small hydro power plants: hydro-potential, types of turbines and generators, the ways of regulation. Wind power stations: the potential of wind and its determination, the types of windmills, generator types and connection of wind power stations into windmill parks. Solar power plants: solar radiation, solar-electric energy sources, and connection of solar sources. Gas power plants: potential gas resources, gas turbines, the use of gas power plants in combined and direct energy transformations. The influence of renewable energy on the environment. The principles of economic evaluation of renewable energy sources (investment, exploitation costs and profit).
A part of the course is being realized through individual research study in the field of renewable energy. The research study includes the overview of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Classes (lectures) or working with mentor (consultation). Research study.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	70.00	Written part of the exam - tasks and theory	Yes	30.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Mukund R. Patel	Wind and Solar Power Systems	CRC Press	1999
2,	P. Kulišić	Novi izvori energije	Školska knjiga, Zagreb	1991
3,	N. El Bassam, P. Maegaard	Integrated Renewable Energy for Rural Communities	Elsevier	2004
4,	Jenkins, Allan, P.Crossley, D.Kirschen, G.Strbac	Embedded Generation	INSPEC, Inc.	2000

Table 5.2 Course specification

Course:		Power System Economics
Course id:	DE508	
Number of ECTS:	14	
Teacher:		Katić A. Nenad
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Providing an introduction to basic economics of power systems, the modern organization and operation of the power industry in terms of free-markets, deregulation and privatization.

2. Educational outcomes (acquired knowledge):

Acquiring in-depth knowledge about the power systems economics, organization and functioning of power industry in the world and in Serbia.

3. Course content/structure:

The principles of restructuring and deregulation of power industry. EU Directive on electricity market and Energy Community of South East Europe. The process and regulation and deregulation in Serbia. Fundamentals of economic analysis. The organization and functioning of the electricity market. Regulation principles of monopoly and network operating costs. The experience of deregulation in the world, the regulations of the European Union related to electricity market. Energy Community of South East Europe. Up-to date examples of market simulation and energy balance of power distribution companies. A part of the course is being realized through individual research study in the field of power system economics. The research study includes the overview of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Lectures or consultation. Research study.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	10.00	Oral part of the exam	Yes	35.00
Term paper	Yes	20.00	Practical part of the exam - tasks	Yes	35.00

Literature

Ord.	Author	Title	Publisher	Year
1,	D. Kirschen, G. Strbac	Power System Economics	John Wiley & Sons	2004
2,	***	Zakon o energetici	Službeni glasnik Republike Srbije	2011
3,	D. Kirschen, G. Strbac	Power System Economics	John Wiley & Sons	2004
4,	N.Katić	Elektroprivreda u uslovima slobodnog tržišta	FTN	2012
5,	T.Saraiva, N.Katic, S.halilcevic, R.Taleski	Energy markets and Regulation	JADES, Tempus project	2010

Table 5.2 Course specification

Course:		Effects of Power Converters on Network and Environment
Course id:	DE509	
Number of ECTS:	14	
Teacher:		Katić A. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The goal of the course is to introduce the latest solutions, methods of management and implementation of power electronic converters in power systems in terms of their impact on the quality of electric power, EMI, system stability and proper operation of the connected consumer.

2. Educational outcomes (acquired knowledge):

The student will master the skills that allow active scientific research and application of modern mathematical tools and software in the area of influence of power converters on the environment and EMI.

3. Course content/structure:

Overview of energy converters, mathematical models, the influence on electric environment, electric energy quality, influence of system on energy converter operation, EMI, converters immune to interference, new methods of management. A part of the course is being realized through individual research study in the field of effects of power converters on network and environment. The research study includes the overview of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Teaching Methods are lectures for theoretical foundations, consultations and use of mathematical modelling and computer simulation as well as independent research study.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	70.00	Written part of the exam - tasks and theory	Yes	30.00

Literature

Ord.	Author	Title	Publisher	Year
1,	E.Acha, M.Madrgal	Power systems harmonics: computer modelling and analysis	John Wiley and Sons, Chichester	2001
2,	M.Bollen	Understanding power quality problems: voltage sags and interruptions	J.Wiley & Sons, New York	2000
3,	Vladimir Katić	Kvalitet električne energije - viši harmonici	UNS-Fakultet tehničkih nauka, Edicija Monografije, Br.6	2002

Table 5.2 Course specification

Course:		Algorithms of Signal Detection and Estimation
Course id:	DE510	
Number of ECTS:	14	
Teacher:		Šenk I. Vojin
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Mastering the techniques of signal detection and estimation.

2. Educational outcomes (acquired knowledge):

Knowledge acquisition related to algorithms for signal detection and estimation.

3. Course content/structure:

Detection of signals with known parameters. Signal detection with unknown parameters. White and coloured noise. Multiple observation. Signal parameter estimation. Non-parameter procedures.

A part of the course is being realized through individual research study in the field of algorithms of signal detection and estimation.The research study includes the overview of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Lectures and homework. Consultation. Research study.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	50.00	Project defence	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Anthony Whalen	Detection of Signals in Noise	Academic Press	1971
2,	Carl Wilhelm Helstrom	Elements of Signal Detection and Estimation	Prentice Hall	1994

Table 5.2 Course specification

Course:		Wireless Sensor Networks
Course id:	DE511	
Number of ECTS:	14	
Teacher:		Crnojević S. Vladimir
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Knowledge acquisition related to wireless sensor networks that have great application in different areas such as medicine, military applications, home applications, etc... In addition, there are a lot of current issues in this area, that researchers are trying to solve.

2. Educational outcomes (acquired knowledge):

- Ability to understand the protocol of modern sensor networks
- Ability to understand how wireless sensor networks operate
- Ability to research new ideas in this field through projects

3. Course content/structure:

The review of protocols and application of wireless sensor networks. Sensor nodes (hardware and operating systems). Localization (GPS, self-configuring localization technique). Time synchronization, protocols on the network level (Direct propagation, LEACH protocol, the rotation of the cluster). Topology management (ASCENT protocol). The data storage in sensor networks. Inquiries related to sensor networks (TinyDB). Programming languages to be used in sensor networks (nesC programming). Simulation and experimental environment (TOSSA, Emstar). The problem of security in sensor networks (SPINS protocol).

A part of the course is being realized through individual research study in the field of wireless sensor networks. The research study includes the overview of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Lectures. Consultation. Projects. Research study.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Homework	Yes	10.00	Oral part of the exam	Yes	50.00
Project defence	Yes	40.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	Feng Zhao, Leonidas	Wireless Sensor Networks: An Information Processing Approach	Morgan Kaufmann	2004

Table 5.2 Course specification

Course:	Human-Machine Speech Communication
Course id: DE512	
Number of ECTS: 14	
Teacher:	Delić D. Vlado
Course status:	Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses

1. Educational goal:

The aim is to expand and deepen the multidisciplinary knowledge of PhD students related to man-machine speech communication. In order to understand algorithms for speech signal processing, it is necessary to get introduced with features of speech signal and its acoustic and linguistic models. Firstly, to master the application of software tools for audio (speech) signals. Secondly, to understand the algorithms used in speech signal processing, in particular algorithms and techniques for automatic speech recognition and speech synthesis based on the given text. Expand knowledge on the speaker identification and verification, as well as the emotion recognition. Also introduce students to the basics of natural language processing, automatic control of the dialogue and the dialogue system. Finally, to learn about the practical applications based on man-machine speech communication by using speech technologies.

2. Educational outcomes (acquired knowledge):

During the course, the PhD students have to theoretically explore algorithms, used in automatic speech recognition (ASR), speaker identification and verification, as well as in synthesizing speech based on text (TTS). In addition, they will practically master most of the software tools and techniques for processing speech signals. In this way, they acquire all the necessary background for understanding algorithms for ASR and TTS. Hence, necessary knowledge is acquired for recording and processing of speech databases and working on development of multimodal systems where ASR and TTS are applicable. Learn about the basic elements of natural language processing and dialogue management. At the end of course they are familiar with the capabilities of automatic speech recognition and synthesis, as well as tools for developing applications and dialogue systems based on these new speech technologies and are willing to provide technical and scientific contributions in this field.

3. Course content/structure:

•Physiological acoustics and acoustic modelling of speech. •Psycho-acoustics and perception of sound. •Articulation and acoustic phonetics. •The Fundamentals of formal languages theory. •Linguistic modelling of speech. •Pre-processing of speech signal and extraction of relevant features. •Recording and processing of speech database for ASR and TTS. •The theory of finite automates and statistical models, hidden Markov models (HMM). •Viterbi algorithm, vector quantization, clustering, parsing techniques. •Algorithms based on the samples comparison and dynamic programming (DTW). •Statistical approach based on HMM. •Expert systems for automatic speech recognition. •Neural Network (ANN) and hybrid systems (ANN-HMM). •Algorithms for speaker`s identification and verification. •Morphological and syntactic analysis of text. •Concatenative approach to text-to speech synthesis. •Speech synthesis in the time domain. •Parametric synthesis of speech. •Natural language processing (NLP) and dialogue management (DM). •Telephone and Internet voice portals (CTI, IVR). •Automation of call centre (Call Centre). •Applications in the household, industry, cars. •Humane application of speech technology. •Learning Serbian as a foreign language by using voice machine. •Using standard software tools for working with audio (Sound Forge, Praat). •Implementation of algorithms for processing speech signals (Matlab, DSP, HTK). •Tools for development of applications with speech technologies (SAPI, VoiceXML). A part of the course is being realized through individual research study in the field of man-machine speech communication. The research study includes the overview of bibliography, organization and performance of experiments and statistical data processing, numerical simulation, writing of papers closely related to scientific and educational area of the doctoral dissertation topic.

4. Teaching methods:

Teaching involves a combination of lectures, working with a mentor and research study. The independent work of Ph.D student is supported through the Web portal. Students have Power Point presentations with lectures in .pdf format, as well as certain on-line exercises designed for individual work and accomplishing project tasks at their disposal. During the course they have audio and animation presentations in order to demonstrate and illustrate the key details. A part of teaching material is accompanied by a small project work, while the rest of the course is supported by exercises in the laboratory of acoustics and speech technology at FTN and in the voice studio of UNS. A part of the examination is related to the development of a practical project which is a pre-defence obligation and may be the basis for the doctoral thesis. The final examination checks the complete knowledge acquired during this course.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	T. Quatieri	“Discrete-Time Speech Signal Processing - Principles and Practice“	Prentice Hall	2002
2,	B. Gold and N. Morgan	“Speech and Audio Signal Processing - Processing and Perception of Speech and Music“	JW&S	2000
3,	L. Rabiner and B-H. Juang	“Fundamentals of Speech Recognition“	Prentice Hall	1993

Literature

Ord.	Author	Title	Publisher	Year
4,	T. Dutoit	“An Introduction to Text-to-Speech Synthesis“	Kluwer	1997
5,	Vlado Delić i dr.	”PPT prezentacije sa predavanja i on-line vežbe preko Web portala Katedre za telekomunikacije i obradu signala”		2007

Table 5.2 Course specification

Course:		Advanced Methods of Monitoring and Management
Course id:	DE513	
Number of ECTS:	14	
Teachers:		Milanović V. Jovica, Sarić T. Andrija
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

Discussing the main areas of implementation of the system of monitoring and management (SMU), including off-line and real-time applications. Acquiring knowledge and comprehension of the dynamics of power systems, the interaction between different elements of power systems and their individual and combined impact on different aspects of a power system stability. Encouraging students to use skills and knowledge acquired through the study of mathematics and the general theory of automatic management in solving engineering problems in power systems, and to promote a multidisciplinary approach to solving engineering problems.

2. Educational outcomes (acquired knowledge):

Knowledge and competencies: Identify the main components and characteristics of SMU and understanding of how to implement it in practice; Application of Phasor Measurement Units and communication technologies for the design of SMU's; Understanding the reasons and the need to implement a SMU, understanding the fundamental concepts, principles and theory of the dynamic behavior of the individual elements of the power system; proper understanding of the overall dynamic behavior of the power system, as well as the methods and techniques used to provide dynamic performance of power system capacity. Designing SMU's needed to repair the security, stability and reliability of the power system a; verification requirements for SMU in the optimization and improvement of security, stability and reliability of the power system, and develop a model of a small power system for the study of dynamic power system and perform simple dynamic studies of the power system.

3. Course content/structure:

Explaining the needs of power systems for introducing systematic monitoring and management (SMU) (2) Fundamentals of Synchronous Measurement Technology (2) Designing and planning of SMU (2); SMU application in off-line and real-time (2);Typical examples and standardization SMU (1); stability of a power system - a basic concept of stability (1): Types of stability of power systems, basic concepts and definitions of the stability of a power system, detailed modelling of synchronous machines and some associated regulatory systems (2): Modelling of synchronous generators, excitation system modelling, modelling of turbines and regulators. Requirements modelling and techniques for solving problems of small and large disorders (2): Providing and improving the stability of power system (1) Dynamic performance of isolated distribution networks for various types of distributed energy sources.

4. Teaching methods:

Nine hours of computer-based laboratory exercises. Before taking the exam, a report on the completed exercises has to be made.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance	Yes	30.00	Final exam - part one	Yes	35.00
			Final exam - part two	Yes	35.00

Literature

Ord.	Author	Title	Publisher	Year
1,	S. C. Savulescu	Real-Time Stability in Power Systems: Techniques for Early Detection of the Risk of Blackout	Springer-Verlag, New York Inc.	2005
2,	V. Ajjarapu	Computational Techniques for Voltage Stability Assessment and Control	Springer Science	2006
3,	M. Ilić and J. Zaborszky	Dynamics and Control of Large Electric Power Systems	John Wiley & Sons	2000
4,	J. Machowski, J. W. Bialek, and J. R. Bumby	Power System Dynamics and Stability	John Wiley & Sons	1997
5,	A. Sarić, V. Fuštić i A. Tokić	Napredne metode monitoringa i upravljanja	Tempus-JADES, FTN, Novi Sad	2009

Table 5.2 Course specification

Course:		Multimedia Processing and Communications
Course id:	DE514	
Number of ECTS:	14	
Teacher:		Vukobratović V. Dejan
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The aim of the course is to offer students an overview and fundamental understanding of the latest techniques of image and video compression and to highlight the problems and present solutions for the efficient transmission of multimedia content over modern packet data network with a focus on wireless technology.

2. Educational outcomes (acquired knowledge):

After the course, the student should have the following skills: 1) be familiar with a range of the latest standards for compression of image / video features and technical understanding of most of them, 2) basic support for independent use of software to compress images / videos, 3) basics of packetisation of image / video, packet transmission over modern network technologies and the impact of packet loss on the quality of the received image / video after reconstruction, 4) be aware of and understand the mechanisms that protect from the multimedia data transmission losses, 5) Obtain an overview of techniques for robust applications and efficient transfer of multimedia in wireless communications networks of the last generation.

3. Course content/structure:

Course content includes the following topics: 1) Basic standards for compression and image and video processing: information-theoretic basis of compression, 2) Basics of JPEG 2000 standard for Image compression and a H.264 AVC / SVC standard for video compression, 3) Packet Multimedia and resilience to packet losses, measures the quality of the reception facilities, 4) protection techniques against losses multimedia transmission over packet networks, codes with nonuniform data protection, 5) The transfer of multimedia over the Internet and wireless transmission network (DVB-H, SH, NGH) or wireless mobile systems (LTE, LTE-A) of the last generation.

4. Teaching methods:

Lectures: (Mentor with the student chooses one or more modules, depending on the scope of the module). The theoretical part is followed by examples which serve to clarify the theoretical part of the curriculum. In addition to lectures, tutorial classes (consultations) are held regularly. Through research study, student makes an overview of scientific journals and other literature, and deepens on its own the curriculum provided through lectures. In addition to working with the teacher, the student is trained to write its own scientific work.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Practical part of the exam - tasks	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Y. Wang, J. Ostermann, Y.-Q. Zhang	Video Processing and Communications	Prentice-Hall	2002

Table 5.2 Course specification

Course:		Design of Complex Digital Systems - Advanced Course
Course id:	DE515	
Number of ECTS:	14	
Teacher:		Struharik J. Rastislav
Course status:		Elective

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

This couse is a follow-up course of the "Design of Complex Digital Systems" course from the Bachelor studies. The main goal of this course is to introduce the students to the advanced approaches, trends and tools in the field of digital systems design.

2. Educational outcomes (acquired knowledge):

Students who successfuly complete this course should be able to follow the latest results, understand the latest technical and scientific literature and get involved into research work in this area. Beside theoretical knowledge, students will also gain experience in using contemporary design tools used to develop complex digital systems.

3. Course content/structure:

Design and verification at the ESL (Electronic System Level) level. Techniques for the hardware/software codesign. High-Level Synthesis (HLS). Basic HLS steps. Scheduling algorithms. Resource sharing and binding algorithms. HLS tools. HLS for the DSP systems. HLS for the Low Power systems.
ASIP (Application Specific Instruction Set Processor) design methodology. Processor description languages. LISA processor description language. Automatic C compiler generation based on the processor model specification. Tools for the ASIP design.
Design and verification of reconfigurable systems. Operating systems for reconfigurable hardware systems. Dynamically reconigurable systems. Partially reconfigurable systems. Compilers for reconfigurable systems.
Embryonic and evolvable hardware.

4. Teaching methods:

Lectures will be performed on an individual basis with each student. Teacher will, in cooperation with each student, select his/her's areas of interest and propose a scientific literature and topic that a student should prepare and present.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	B. Bailey, G. Martin, A. Piziali	ESL Design and Verification - A Prescription for Electronic System Level Methodology	Morgan Kaufmann	2007
2,	P. Schaumont	A Practical Introduction to Hardware-Software Codesign	Springer	2010
3,	P. Coussy, A. Morawiec	High-Level Synthesis - From Algorithm to Digital Circuit	Springer	2008
4,	O. Schliebusch, H. Meyr, R. Leupers	Optimized ASIP Synthesis from Architecture Description Language Models	Springer	2007
5,	S. Hauck, A. Dehon	Reconfigurable Computing - The Theory and Practice of FPGA-Based Computation	Morgan Kaufmann	2008
6,	T. Higuchi, Y. Liu, X. Yao	Evolvable Hardware	Springer	2010

Table 5.2 Course specification

Course:					
Course id:	DE516				
Number of ECTS:	14				
Teacher:		Dautović B. Staniša			
Course status:		Elective			
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
5	0	0	4	0	
Precondition courses		None			
1. Educational goal:					
2. Educational outcomes (acquired knowledge):					
3. Course content/structure:					
4. Teaching methods:					

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Behrooz Parhami	Introduction to Parallel Processing – Algorithms and Architectures	Springer	1999
2,	Nancy A. Lynch	Distributed Algorithms	Morgan Kaufmann Publ. Inc.	1996
3,	Maurice Herlihy, Nir Shavit	The Art of Multiprocessor Programming	Elsevier	2008

Table 5.2 Course specification

Course:		Technology of magnetic and optical data storage
Course id:	DE517	
Number of ECTS:	14	
Teacher:		Đurić M. Nikola
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The necessity that the growing amount of information and data have to be stored and preserved, has led to the development of technology of magnetic and optical data storage. The objective of this course is introduction and training of young colleagues for independent scientific and research work in the field and improvement of existing and development of new technologies for magnetic and optical data storage.

2. Educational outcomes (acquired knowledge):

The outcome of education of young colleagues is to enhance theirs knowledge and skills, through independent and team work, for development and improvement of techniques for channel modeling and equalization, error-correcting and modulation encoding/decoding in appropriate channels for magnetic and optical data storage. Through the scientific and research work in the field of construction of new storage media, then coding and detection techniques, colleagues will be able to make significant technological contribution in order to achieve high-density recording, and thus for further increase of capacity of memory devices for these two data storage technologies.

3. Course content/structure:

This course is intended to present some of existing knowledge in areas relevant to the technologies of magnetic and optical data storage. It is planned to cover the following areas: 1. Selected chapters on physical properties of magnetic and optical media, 2. Modeling and equalization of channels in information storage systems, 3. Selected chapters of the technologies of magnetic storage techniques • longitudinal and perpendicular magnetic recording, magnetic storage in systems with multiple tracks (multi-track systems), • HAMR technology • TDMR technology, 4. Selected chapters about modulation codes, 5. Selected chapters on error-correcting codes, 6. Iterative decoding techniques. It is planned that part of course takes place by engaging colleagues in independent study and research work in the subject area. This work would include active monitoring of primary scientific sources, organization and conduct experiments, as well as writing a scientific paper on this issue.

4. Teaching methods:

During the course the following methods apply: 1 lectures - presentation of the theoretical part is followed by examples, contributing to a better understanding and eventual clarification of certain parts of the material, 2 Consultation - besides lectures consultation are held regularly, 3 assistance with laboratory work and 4 study research – by studying scientific journals and other literature colleagues will be able to deepen by self the presented lectures.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	Bane Vasić i Erozan Kurtas	Coding and Signal Processing for Magnetic Recording Systems	CRC Press	2005
2,	Ivan Djordjevic, William Ryan i Bane Vasic	Coding for Optical Channel	Springer	2010

Table 5.2 Course specification

Course:		Brain Computer Interface Systems
Course id:	DE518	
Number of ECTS:	14	
Teachers:		Jorgovanović Đ. Nikola, Sovilj M. Platon
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The aim of the course is to present the latest solutions and methods in the field of Brain Computer Interface Systems.

2. Educational outcomes (acquired knowledge):

Students will learn skills that enable active scientific research and the application of the latest solutions and methods in the field of Brain Computer Interface Systems.

3. Course content/structure:

Origin of Brain Computer Interface (BCI) systems. Differences Brain Computer Interface systems and neural prostheses. Brain Computer Interface systems researches with animals. Brain Computer Interface systems researches with people. Invasive Brain Computer Interface systems. Improvement of visual features using Brain Computer Interface System. Improvement of movements using Brain Computer Interface System. Partly invasive Brain Computer Interface systems based electrocorticography (ECOG). Noninvasive Brain Computer Interface systems based on electroencephalography (EEG). Noninvasive Brain Computer Interface systems based on magnetoencephalography (MEG). Noninvasive Brain Computer Interface systems based devices with functional magnetic-resonance imaging. Researches of Brain Computer Interface systems based on receiver ELF / SLF / ULF frequencies. Commercial Brain Computer Interface systems for people with disabilities. Commercial Brain Computer Interface systems for entertainment and recreation.

4. Teaching methods:

Lectures and consultations.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Project	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	G. Schalk , J. Mellinger	A Practical Guide to Brain-Computer Interfacing with BCI2000	Springer	2010
2,	B. Graimann, B. Allison, G. Pfurtscheller	Brain-Computer Interfaces: Revolutionizing Human-Computer Interaction	Springer	2011
3,	J. Wolpaw , E. Winter Wolpaw	Brain-Computer Interfaces: Principles and Practice	Oxford University Press	2012
4,	D. S. Tan, A. Nijholt	Brain-Computer Interfaces: Applying our Minds to Human-Computer Interaction	Springer	2010
5,	J. Principe, J. C. Sanchez, J. Enderle	Brain-Machine Interface Engineering	Morgan & Claypool Publishers	2006

Table 5.2 Course specification

Course:		PES Planning
Course id:	DE519	
Number of ECTS:	14	
Teacher:		Sarić T. Andrija
Course status:		Elective

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
5	0	0	4	0

Precondition courses: None

1. Educational goal:

The course objective is to give insight to students on fundamental aspects of planning PES, and methodology and algorithms which are used for optimization of certain problems of development planning of production capacities and transmission networks. Apart from that, the objective is also to enable students for solving certain practical problems of expanding of transmission network (reconstruction of the existing and building of new lines) and planning of new production capacities, especially renewable ones – micro and mini hydro plants, wind power plants, photo voltage power plants and the like. Since most of the problems in PES planning are mathematically very demanding, one of the objectives is also to teach students to use available ready-made programming packages for PES planning (for example Retscreen). Also one of the objectives is consideration of impact of power market deregulation on the process of optimal planning of PES parts.

2. Educational outcomes (acquired knowledge):

During this course students can:
Model some physical effects which appear in some planning problems,
Formulate and solve basic planning problems, consumption planning (forecast), planning of development of production capacities and planning of development (expanding) transmission networks.
Use programme packages for planning real production and transmission networks
Reach conclusions on the basis of the obtained results for the purpose of optimization of PES expanding.

3. Course content/structure:

Investment and exploitation costs.
Role of planning in the entire PES development. Constant and variable exploitation costs of production capacities and transmission networks. Fuel costs. Investments.
Forecast of energy and power consumption.
Consumption forecast division. Qualitative methods. Exploitation (independent) methods. Dependable (correlation) methods. Dependable (correlation) model in the function of Gross Domestic Product. Programme packets for consumption forecast. Forecast of the peak (maximal) power. Planning of development curve of load duration.
PES planning and engineering economics.
Fundamentals of engineering economics. Principles of actualization of capital costs. Diagrams of money flow. Amortization and remaining values. Economic evaluation of investments. Equivalent value methods (current, future and annual). Methods of the shortest repaying period of the project. Methods of return rate. Methods of comparison of benefits and costs. Method of minimal costs.
Influence of new and renewable sources on PES planning.
Planning of wind plants and photo voltage power plants and their influence on global planning of production capacities development. Planning of small and middle hydro power plants.
Ecological aspects of PES planning.
Harmful influence of PES on environment. Effects of power plants on the environment. Limitation and reduction of harmful effects of PES on environment. Economic consequences of environment protection for PES planning.
Development planning of production capacities.
Power balance and its realization. Reliability index of production subsystem. Selection of production plants size. Study of expanding production capacities. Time plans development for introduction of new and shutting down of old plants. Plan for source location. Methods for global source development planning. Characteristic PES configuration: only thermo systems, mixed hydro-thermal systems. Influence of PES sector deregulation on production capacities planni

4. Teaching methods:

Lectures: Classic lectures, homework assignments
Knowledge testing: Seminar papers and final examination
Examination: Seminar paper and oral part of the examination.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Lecture attendance	Yes	10.00	Oral part of the exam	Yes	40.00
Term paper	Yes	50.00			

Literature

Ord.	Author	Title	Publisher	Year
1,	M. S. Čalović, A. T. Sarić, M. M. Mesarović i P. Č. Stefanov	Planiranje razvoja elektroenergetskih sistema u regulisanom i deregulisanom okruženju	Tehnički fakultet, Čačak	2012

Literature

Ord.	Author	Title	Publisher	Year
2,	V. A. Levi	Planiranje razvoja elektroenergetskih sistema pomoću računara	Stylos, Novi Sad	1988

Table 5.2 Course specification

Course:		Doctoral Dissertation (Theoretical Bases)
Course id:	SID01	
Number of ECTS:	30	
Teachers:		
Course status:	Mandatory	

Number of active teaching classes (weekly)				
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
0	0	0	20	0

Precondition courses: None

1. Educational goal:

The application of fundamental, theoretical and methodological, scientific and professional, and professional and applicative knowledge, methods and contemporary knowledge from the magazines from the SCI list in order to solve concrete problems within the courses at Doctoral studies.

2. Educational outcomes (acquired knowledge):

Enabling students to individually connect the contents from the courses at Doctoral studies, apply previously acquired as well as new knowledge for observing the structure of the set problems and its systematic analysis in order to elaborate conclusions on possible directions in its solving. Through individual usage of literature, students broaden their knowledge and utilizing new methods individually and creatively, they use new knowledge in solving the set problems.

3. Course content/structure:

It is formulated individually in accordance with further research. Students read scientific literature, and perform analyses in order to find solutions for a concrete task which is defined by setting the task on the side of the supervisor and other lecturers at Doctoral studies. Theoretical bases present a classification examinations. Students are prepared to take the classification examination.

4. Teaching methods:

Student`s co-supervisor sets the seminar paper task and delivers it to the student. The student has the obligation to elaborate the paper within the set theme defined by the paper task, utilizing the literature proposed by the co-supervisor. During the paper elaboration, the co-supervisor can provide additional instructions to the student direct them to certain literature and additionally direct them towards the elaboration of a quality paper. During the study research work, the student has tutorials with the co-supervisor and course lecturers, and if needed, with other lecturers dealing with the problems in the field of the set paper task. Within the set theme, the student can also perform certain measuring, research, calculations, surveys and other researches, statistic data processing, if it is necessary for the task. After the defence of the paper, the candidate has to pass the oral examination in the field of the passed examinations, in front of a committee. If the examination is

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	grupa autora	časopisi sa liste Kobsona		sve
2,	grupa autora	časopisi i doktorske disertacije iz date problematike		sve

Table 5.2 Course specification

Course:		Doctoral Dissertation – Study and Research			
Course id:	SID02				
Number of ECTS:	30				
Teachers:					
Course status:	Mandatory				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
0	0	0	30	0	
Precondition courses	None				

1. Educational goal:

The application of fundamental, theoretical and methodological, scientific and professional, and professional and applicative knowledge and methods in solving concrete problems within the selected field. In this segment of Doctoral dissertation, students investigate the problem, its structure and complexity and on the basis of the performed analyses draw conclusions on possible manner in its solving. Researching the literature, students are introduced to methods attended for creative solving of new tasks and the engineering practice in their solving. The objective of students` activity within this segment of research is to acquire necessary experience through solving complex problems and tasks and recognizing the possibility for applying previously acquired knowledge in practice.

2. Educational outcomes (acquired knowledge):

Enabling students to individually apply previously acquired knowledge from diverse areas already studied in order to observe the structure of the set problem and its systematic analysis for drawing conclusions on possible directions in its solving. Through individual usage of literature, students broaden their knowledge from the selected field and they investigate diverse methods and papers related to the similar fields. Thus, students develop the competence to perform analyses and identify problems within the set theme. Practical application of the acquired knowledge from diverse areas develops in students the ability to overview the place and the role of engineers in the selected field, the demand for cooperation with other professions and the team work.

3. Course content/structure:

It is formulated individually in accordance with the elaboration of the concrete Doctoral dissertation, its complexity and structure. Students read scientific literature, Doctoral dissertations by other students dealing with similar theme; they perform analyses in order to find solutions for a concrete task defined by the task of the Doctoral dissertation.

4. Teaching methods:

The supervisor of the Doctoral dissertation sets the dissertation task and delivers it to the student. The student has the obligation to elaborate the dissertation within the set theme defined by the Doctoral dissertation task, utilizing the literature proposed by the supervisor. During the elaboration of the Doctoral dissertation, the supervisor can provide additional instructions to the student direct them to certain literature and additionally direct them towards the elaboration of a quality Doctoral dissertation. During the study research work, the student has tutorials with the supervisor, and if needed, with other lecturers dealing with the problems in the field of the set dissertation task. Within the set theme, the student can also perform certain measuring, research, calculations, surveys and other researches, statistic data processing, if it is predicted by the task of the Doctoral dissertation.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature				
Ord.	Author	Title	Publisher	Year
1,	grupa autora	časopisi sa liste Kobson		sve
2,	grupa autora	časopisi i doktorske disertacije iz date problematike		sve

Table 5.2 Course specification

Course:		Doctoral Dissertation – Study and Research
Course id:	SID03	
Number of ECTS:	10	
Teachers:		
Course status:		Mandatory

Number of active teaching classes (weekly)

Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:
0	0	0	10	0

Precondition courses: None

1. Educational goal:

The continuation of study and research from previous semester. The application of fundamental, theoretical and methodological, scientific and professional, and professional and applicative knowledge and methods in solving concrete problems within the selected field. In this segment of Doctoral dissertation, students investigate the problem, its structure and complexity and on the basis of the performed analyses draw conclusions on possible manner in its solving. Researching the literature, students are introduced to methods attended for creative solving of new tasks and the engineering practice in their solving. The objective of students` activity within this segment of research is to acquire necessary experience through solving complex problems and tasks and recognizing the possibility for applying previously acquired knowledge in practice.

2. Educational outcomes (acquired knowledge):

Enabling students to individually apply previously acquired knowledge from diverse areas already studied in order to observe the structure of the set problem and its systematic analysis for drawing conclusions on possible directions in its solving. Through individual usage of literature, students broaden their knowledge from the selected field and they investigate diverse methods and papers related to the similar fields. Thus, students develop the competence to perform analyses and identify problems within the set theme. Practical application of the acquired knowledge from diverse areas develops in students the ability to overview the place and the role of engineers in the selected field, the demand for cooperation with other professions and the team work.

3. Course content/structure:

It is formulated individually in accordance with the elaboration of the concrete Doctoral dissertation, its complexity and structure. Students read scientific literature, Doctoral dissertations by other students dealing with similar theme; they perform analyses in order to find solutions for a concrete task defined by the task of the Doctoral dissertation.

4. Teaching methods:

The supervisor of the Doctoral dissertation sets the dissertation task and delivers it to the student. The student has the obligation to elaborate the dissertation within the set theme defined by the Doctoral dissertation task, utilizing the literature proposed by the supervisor. During the elaboration of the Doctoral dissertation, the supervisor can provide additional instructions to the student direct them to certain literature and additionally direct them towards the elaboration of a quality Doctoral dissertation. During the study research work, the student has tutorials with the supervisor, and if needed, with other lecturers dealing with the problems in the field of the set dissertation task. Within the set theme, the student can also perform certain measuring, research, calculations, surveys and other researches, statistic data processing, if it is predicted by the task of the Doctoral dissertation.

Knowledge evaluation (maximum 100 points)

Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Term paper	Yes	50.00	Oral part of the exam	Yes	50.00

Literature

Ord.	Author	Title	Publisher	Year
1,	grupa autora	časopisi sa liste Kobsona		sve
2,	grupa autora	časopisi i doktorske disertacije iz date problematike		sve

Table 5.2 Course specification

Course:		Doctoral Thesis - Realization and Defence of Thesis			
Course id:	DZR03				
Number of ECTS:	20				
Teachers:					
Course status:		Mandatory			
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
0	0	0	0	20	
Precondition courses		None			

1. Educational goal:

Acquiring knowledge about structure and form of writing the dissertation report after analysis, and other activities carried out within the assigned theme of Doctoral dissertation. By writing the Doctoral dissertation, students gain experience in writing papers within which it is necessary to describe the problem, implement methods and procedures and obtained results, as well as to give new scientific contribution to the science development and to the application of the scientific research in practice. In addition, the objective of writing and defense of the Doctoral dissertation is to develop student skills for independent paper preparation in a suitable form for the purpose of public presentation, as well as to respond to comments and questions related to the given topic.

2. Educational outcomes (acquired knowledge):

Training students for a systematic approach in solving the given problems, carrying out analyses, applying knowledge and accepting knowledge from other areas in order to find creative solutions for a given problem. Through independent studying and solving tasks in a given topic, they acquire the knowledge about the complexity of the problems in the field of their profession. Through elaboration of Doctoral dissertation, students gain certain experiences that can be applied in practice when solving problems in the field of their profession. The student acquires necessary experience on how to present the results of independent or team work in practice by preparing the results for public defense, by public defense, and by answering questions and complaints of the Commission.

3. Course content/structure:

It is individually formed in accordance with the needs and the field covered by a given Doctoral dissertation. In agreement with a mentor, a student makes the Doctoral dissertation in a written form in accordance with the rules provided by the Faculty of Technical Sciences. The student prepares and defends the written Doctoral dissertation in public, in agreement with the mentor and in accordance with the prescribed rules and procedures.

4. Teaching methods:

During the elaboration of the Doctoral dissertation, the student consults with his/her mentor, and if necessary with other teachers dealing within a sphere of the Doctoral dissertation. The student writes the Dcotoral dissertation, and submits the bound copies to the Commission upon the approval of the Commission for assessment and defense. The Defense of the Doctoral dissertation is performed in public, and after the presentation, the student is obliged to orally answer the questions and comments.

Knowledge evaluation (maximum 100 points)					
Pre-examination obligations	Mandatory	Points	Final exam	Mandatory	Points
Writing the PhD thesis	Yes	50.00	PhD thesis defence	Yes	50.00

Standard 06. Programme Quality, Contemporaneity and International Compliance

The Study Programme is consistent with modern world`s scientific development and the status of the profession, and comparable to similar programmes in the foreign higher education institutions.
Power, Electronic and Telecommunication Engineering Study Programme is designed as complete and comprehensive and offers students the latest scientific and technical knowledge in this area and follows the new achievements in science.
Power, Electronic and Telecommunication Engineering Study Programme is comparable to and in compliance with:
1. Vienna University of Technology, Vienna, Austria
(web site: www.tuwien.ac.at/tu_vienna/)
2. Faculty of Electrical Engineering and Information Technology, University of Hannover, Germany
(web site: http://www.et-inf.uni-hannover.de/index.php?id=english-information)
3. Faculty of Electrical Engineering, Graz University of Technology, Graz, Austria
(web site: http://portal.tugraz.at/portal/page?_pageid=75,2344042&_dad=portal&_schema=PORTAL)
The Study Programme is formally and structurally consistent with the adopted subject to specific standards for accreditation and conformity with European standards in terms of enrolment, length of study, conditions for the progress to the next year and method of study.

Standard 07. Student Enrollment

Each year, in accordance with the social needs and resources, Faculty of Technical Sciences (FTS) enrolls a number of students for the doctoral studies at the Department for Power, Electronic and Telecommunication Engineering, and it is defined by a separate decision and proposal of the founder and Scientific-Educational Council of the Faculty. Enrollment of the students in the doctoral studies is monitored by the Commission for Registration. The Commission for Registration consists of the Head of PhD studies at FTS and the Directors of the Ph.D. programme of study within the Faculty.
The first year of the doctoral studies can be attended by a person who has:

- completed appropriate undergraduate academic studies and graduated with at least 300 ECTS credits total and obtained the overall average score of at least 8,00 on the basic academic and graduate academic studies-master, or the equivalent rating from the other rating system, or if the student is one of the top 20% of all the students in his generation, or
- the academic title of Master of Sciences in appropriate scientific field and if the student did not obtain the title of Doctor of Philosophy in engineering by earlier legislation in force within the period established by the Law.

A person who has completed the study according to the regulations prior to adoption of the Law on Higher Education may enroll to the doctoral studies, under the same conditions as the person who has completed undergraduate academic degree - Master studies, provided that the diploma is equivalent to the Diploma with at least 300 ECTS, which is proved by the decision on recognized equivalence.

Appropriate Graduate academic studies - Master and scientific field are determined for each study programme separately. Exception registration may be granted to other candidates after taking differential exams. The decision on taking differential exams and their character has to be made by the Commission for registration of the Study programme. Candidates who successfully pass the differential exams may be registered at the doctoral studies as self-financed students, if the positions are not filled.
Commission for Registration consists of the executives from the Ph.D. Programme of study along with the Faculty Head of Ph.D. studies.
The Commission for Registration prepares a list of candidates based on the average scores, the length of the studies as well as on number of published scientific papers. Commission for Registration may decide to organize further evaluation of the knowledge of the candidates through the achievement test.
Candidates who obtained the title of the associates of the Faculty or the scholars of the Republic Ministry of Science and Provincial Secretariat for Science and Technology have gained the advantage of financed studies.
In addition, candidates are required to show the knowledge of the world languages and appropriate computing skills.
MA students or Master degree earlier acquired under applicable legislation can be accepted to recognize or acknowledge the partial amendment to the registration by the Commission, provided that the candidate has not spent more than four (4) years at postgraduate studies.
After the enrolment, an agreement has to be extablished between the students and the Faculty on the rights and obligations during the study.

Standard 08. Student Evaluation and Progress

The final grade in each course included in this programme is formed by continual monitoring of the students` accomplishments throughout the academic year and by passing the final examination.
Students master the study programme by taking examinations and thus obtaining a certain number of the ECTS credits, in accordance with the study programme. Each course within the programme is worth a certain number of the ECTS credits obtained upon successful completion the course examination.
The number of the ECTS credits is based on the quantity and quality of the student's work. The students are required to pass a certain course under the Faculty of Technical Sciences` unique methodology for all study programmes. Student's success in mastering a certain course is constantly monitored during classes and is expressed in points. Maximum number of the points per course is 100.
The students can obtain the points from a course through their work during the classes, completion of the prerequisites and by taking the examination. The minimal number of the points the student can obtain by fulfilling the course prerequisites during the classes is 30, the maximum is 70.
Each course of the study programme has a clear and transparent way of obtaining the points. There are several ways the students can obtain the points: by participating in different activities during the classes, by fulfilling the course prerequisites and by passing the course examination.
The final success of the student is presented with a grade between 5 (fail) and 10 (excellent). The student`s grade is based on the overall number of points obtained by fulfilling prerequisites and taking the examination, and in accordance with the quality of acquired knowledge and skills.
Studying at the study programme is carried out in the following way:
The Head of the Study Programme (the study group), upon admission, assigns to every student a co-mentor from the existing teaching stuff of the study programme. The co-mnthoro will be student's councillor until she/hs chooses a mentor. At the end of each semester, the co-mentor submits to the Head of the Study Programme a report on the student`s progress in the research and the achieved results.
Admission requirements into the next year of the programme (the third semester) are met by the student who obtains at least 30 ECTS credits during the first year of studying, with a relative average grade (R) being at least 8.00 (eight 00/100). The relative average grade (R) is calculated based on the course grades, relative to the number of the credits each course carries (the formula is specified amongst the Faculty of Technical Sciences` Rules of Study).
The right to take the qualifying exam in order to be able to write and defend the doctoral dissertation (a research study of the theoretical basis for the doctoral thesis) is granted to the students who have completed the second year of the studies and passed all the examinations within the study programme, 3 academic years after their admission into the programme at the most, and with a relative average grade no lower than 8.00 (eight 00/100).
The students who do not fulfil the requirements to take the doctoral thesis theoretical exam are given a chance, after accrediting all the previously passed exams, to continue the studies at the Specialist Academic Studies of the same Faculty.
The research study on the Theoretical Framework for the Doctoral Dissertation is a qualifying examination for the student who has to pass it before writing the doctoral dissertation. In the qualifying examination the student demonstrates the necessary theoretical knowledge in the field of interest. The Theoretical Framework exam is taken in written or oral form, in areas from at least three courses of the study programme. The list of the areas (questions) that have to be studied for the qualifying exam are sent to the student by the Head of the Study Programme of the Doctoral Studies within 14 days after the student submits a request. The qualifying examination is taken in front of a committee of at least three members, appointed by the Head of the Doctoral Studies and at the Study Programme Quality Committee`s suggestion. The Theoretical Framework examination cannot be taken sooner than 30 days, after the student`s request, or later than 12 months after the student has passed his last examination at the study programme. Exceptionally, if the student publishes an article (or the article is accepted for publication) in a SCI list journal (M21, M22 and M23), he/sne may be exempted from the explicit examination process and is awarded the highest grade 10.
Examinations at the Doctoral Studies cannot be taken more than twice.

Standard 09. Teaching Staff

For the realization of the study programme in Power Engineering, Electronics and Telecommunications there is teaching staff with necessary professional and scientific qualifications, verified by the list of scientific papers and data on participation in national and international scientific and research projects. At least half of the teachers participate in scientific and research projects. Teachers` competence is determined based on the number of scientific papers published in international publications, where at least one paper has been published or accepted to be published in a publication from the SCI list; scientific papers published in the national publicarions ; papers published in proceedings from international scientific conferences; monographs; patents; textbooks; new products or significant improvements on the existing products.

The thesis supervisor must have at least five scientific papers published or accepted to be published in the scientific journals in the given scientific field. It has been accepted that the thesis supervisor cannot have more than five Doctoral dissertation candidates simultaneously. The selection of a supervisor is determined in such a manner that each supervisor must have at least five papers published in the journals from the SCI list.

The number of teachers coincides with the demands of the study programme and depends on the number of the courses they teach, and the number of the course hours per week. Out of the total number of the necessary teachers, all 100% are full time employed. A minimal number of the teachers participating in the given study programme with full time employment is five.

Scientific and professional qualifications of the teaching staff relate to the educational and scientific field and the level of their participation. Each teacher has at least 10 references from the scientific or professional field in which they lecture on the study programme.

No teacher has more than 12 classes per week. All data on teachers (CV, selections, and references) are available to the public.

Science, arts and professional qualifications

Name and last name:	Dialynas . Evangelos
Academic title:	Guest Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2010		Electroenergetics
PhD thesis	1979		Electrical and Computer Engineering
Magister thesis	1976		Electrical and Computer Engineering
Bachelor's thesis	1975		Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	DE413S	Integration of Distributed Energy Resources	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
2.	EE562	Power System Exploitation	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
3.	DE413	Integration of Distributed Energy Resources	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	George J.Tsekouras, Nikos D.Hatziargyriou, Evangelos N.Dialynas, “An optimized adaption neural network for annual midterm energy forecasting,” “An annual midtem energy forecasting model using fuzzy logic,” IEEE Trans. Power Syst., vol.21, no.1, Feb. 2006.
2.	Tsekouras, G.J., Hatziargyriou, N.D., Dialynas, E.N.,An optimized adaptive neural network for annual midterm energy forecasting, IEEE Transactions on Power Systems, Volume: 21 , Issue: 1, Page(s): 385 – 391
3.	Dialynas, E.N.; Koskolos, N.C.; Agoris, D., Reliability assessment of autonomous power systems incorporating HVDC interconnection links, IEEE Transactions on Power Delivery, Volume: 11 , Issue: 1, Digital Object Identifier: 10.1109/61.484137, Publication Year: 1996 , Page(s): 519 – 525
4.	Thalassinakis, E.J.; Dialynas, E.N., A Method for Optimal Spinning Reserve Allocation in Isolated Power Systems Incorporating an Improved Speed Governor Model, IEEE Transactions on Power Systems, Volume: 22 , Issue: 4, Digital Object Identifier: 10.1109/TPWRS.2007.907953, Publication Year: 2007 , Page(s): 1629 – 1637
5.	Allan, R.N.; Dialynas, E.N.; Homer, I.R., Modelling and Evaluating the Reliability of Distribution Systems, IEEE Transactions on Power Apparatus and Systems, Volume: PAS-98 , Issue: 6, Digital Object Identifier: 10.1109/TPAS.1979.319417, Publication Year: 1979 , Page(s): 2181 – 2189
6.	Thalassinakis, E.J.; Dialynas, E.N.; Agoris, D., Method Combining ANNs and Monte Carlo Simulation for the Selection of the Load Shedding Protection Strategies in Autonomous Power Systems, IEEE Transactions on Power Systems, Volume: 21 , Issue: 4, Digital Object Identifier: 10.1109/TPWRS.2006.879293, Publication Year: 2006 , Page(s): 1574 - 1582
7.	Papakammenos, D.J.; Dialynas, E.N., Reliability and cost assessment of power transmission networks in the competitive electrical energy market, IEEE Transactions on Power Systems, Volume: 19 , Issue: 1, Digital Object Identifier: 10.1109/TPWRS.2003.821451, Publication Year: 2004 , Page(s): 390 – 398
8.	Dialynas, E.N., Impact of cogeneration and small power producing facilities on the power system reliability indices, IEEE Transactions on Energy Conversion, Volume: 4 , Issue: 3, Digital Object Identifier: 10.1109/60.43237 Publication Year: 1989 , Page(s): 368 - 374
9.	Dialynas, E.N.; Papakammenos, D.J.; Koskolos, N.C., Integration of nonutility generating facilities into the reliability assessment of composite generation and transmission power systems, IEEE Transactions on Power Systems, Volume: 12 , Issue: 1, Digital Object Identifier: 10.1109/59.575785, Publication Year: 1997 , Page(s): 464 - 470
10.	Tsekouras, G.J.; Hatziargyriou, N.D.; Dialynas, E.N., Two-Stage Pattern Recognition of Load Curves for Classification of Electricity Customers,IEEE Transactions on Power Systems, Volume: 22 , Issue: 3, Digital Object Identifier: 10.1109/TPWRS.2007.901287 Publication Year: 2007 , Page(s): 1120 - 1128

Summary data for teacher's scientific or art and professional activity:

Quotation total :				
Total of SCI(SSCI) list papers :				
Current projects :	Domestic :		International :	

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Adžić Z. Nevenka
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.09.1978
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2002	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	1990	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1986	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1976	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E121	Mathematical Analysis 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E221A	Mathematical Analysis 2	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
3.	GG10	Mathematical Methods 3	(G00) Civil Engineering, Undergraduate Academic Studies
4.	M106	Mathematics 2	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies
5.	S017	Mathematics 2	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
6.	S0213	Mathematical Statistics	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
7.	Z104	Mathematics 1	(Z01) Safety at Work, Undergraduate Academic Studies (ZC0) Clean Energy Technologies, Undergraduate Academic Studies (ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
8.	BMI91	Mathematics 1	(BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	BMI92	Mathematics 2	(BM0) Biomedical Engineering, Undergraduate Academic Studies
10.	E101A	Discrete Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	IM1012	Probability and Statistics	(I10) Industrial Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
12.	IM1523	Discrete Mathematics	(M30) Energy and Process Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
13.	P216	Numerical Analysis	(P00) Production Engineering, Undergraduate Academic Studies
14.	0M517	Numerical Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
15.	0ML517	Numerical Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
16.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
17.	D0M24	Numerical Solutions of Differential Equations	(OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
19.	AID06	Graph theory	(F20) Engineering Animation, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. N. Adzic, On the spectral solution for boundary value problem, ZAMM 70,(1990) 6, T647-T649.
2. V. Vrcelj, N. Adzic, Z. Uzelac: A numerical asymptotic solution for singular perturbation problems, International journal of computer mathematics, Vol.39, (1991) 229-238.
3. N. Adzic: Modified hermite polynomials in the spectral approximation for boundary layer problems, Bulletin of the Australian mathematical society, Vol.45, (1992) 267-276.<\eng>
4. N. Adzic: Spectral approximation for single turing point problem, ZAMM72(1992)6, T621-T624.
5. N. Adzic: Nonclassical orthogonal polynomials and singularly perturbed problems, ZAMM73(1993) 7/8, T868-T871.
6. N. Adzic: Spectral approximation and asymptotic behaviour of boundary layer problems, ZAMM74(1994)6, T-553-T555.
7. N. Adzic, Z. Uzelac: A combination of spline and spectral approximation for a class of singularly perturbed problems, ZAMM78 (1998), S853-S854
8. Z. Uzelac, N. Adzic: The Approximate Solution for Problems with Nonlocal Boundary Conditions, ZAMM79 (1999), S881-S882
9. N. Adzic, Z. Uzelac: On spectral approximation for some two-dimensional singularly perturbed problems, ZAMM79 (1999), S851-S852
10. N. Adzic: On the spectral approximation for singularly perturbed problems,ZAMM 71(1991)6,T773-T776.

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	5			
Total of SCI(SSCI) list papers :	10			
Current projects :	Domestic :	2	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Atanacković M. Teodor
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	18.03.1975
Scientific or art field:	Deformable Body Mechanics

Academic carieer	Year	Institution	Field
Academic title election:	1988	Faculty of Technical Sciences - Novi Sad	Deformable Body Mechanics
PhD thesis	1974	Faculty of Technical Sciences - Novi Sad	Deformable Body Mechanics
Magister thesis	1973	Faculty of Technical Sciences - Novi Sad	Deformable Body Mechanics
Bachelor's thesis	1969	Faculty of Technical Sciences - Novi Sad	Thermal Energetics and Thermotechnics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A237	Material Resistance	(A00) Architecture, Undergraduate Academic Studies
2.	H202	Strength of materials	(H00) Mechatronics, Undergraduate Academic Studies
3.	A002S	Scientific Research Method	(A00) Architecture, Specialised Academic Studies (E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (GI0) Geodesy and Geomatics, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
4.	DAU003	Selected Chapters in Mechanics	(E20) Computing and Control Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
5.	DZ001	Scientific Research Method	(A00) Architecture, Doctoral Academic Studies (AS0) Scenic Design, Doctoral Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
6.	SID04	Current State in the Field	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies
7.	SID04	Present State in the Field	(A00) Architecture, Doctoral Academic Studies (AS0) Scenic Design, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	T. M. Atanackovic, Stability Theory of Elastic Rods. World Scientific, 1997.
2.	T. M. Atanackovic, A. Guran, Theory of Elasticity for Scientists and Engineers. Birkhauser, 2000..
3.	B. D Vujanovic, T. M. Atanackovic, An Introduction to Modern Variational Techniques in Mechanics and Engineering. Birkhauser, Boston 2004..
4.	T.M. Atanackovic, Stability of a Compressible Elastic Rod with Imperfections. Acta Mechanica. 76, 203?222 (1989)..
5.	T.M. Atanackovic and M. Achenbach, Moment-curvature relations for a pseudoplastic beam. Continuum Mech. Thermodyn. 1, 73-80 (1989)...
6.	T.M. Atanackovic and I. Müller, A New form of ther Coherency Energy in Pseudoelasticity. Meccanica, 30, 467-474 (1995).
7.	T. M. Atanackovic, Optimal shape of column with own weight: bi and single modal optimization. Meccanica 41, 173-196 (2006).
8.	T. M. Atanackovic, S. Pilipovic, D. Zorica, Diffusion wave equation with two fractional derivatives of different order. J. Phys. A: Math. Theor. 40, 5319-5333 (2007).
9.	T. M. Atanackovic, Optimal shape of an elastic rod in flexural – torsional buckling. Z. Angew. Math. Mech.(ZAMM) 87, No. 6, 399 – 405 (2007).
10.	T. M. Atanackovic and B. N. Novakovic, Optimal Shape of an elastic column on elastic foundation. European J. Mechanics, A/Solids, 25, 154-165 (2006).

Summary data for teacher's scientific or art and professional activity:

Quotation total :	220			
Total of SCI(SSCI) list papers :	120			
Current projects :	Domestic :	1	International :	0

Science, arts and professional qualifications

Name and last name:	Bajić D. Dragana
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	22.09.2000
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2006	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1995	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Magister thesis	1989	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1984	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK313	Computer Communication	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	BMI105	Statistical basics, processing and modelling of biomedical signals	(BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	BMI123	Advanced biomedical signal analysis	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EK202	Communication networks - introduction	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK458	Telecommunication networks	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK460	Biomedical signal processing	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	ETI21	Communication Protocols	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	DE110S	Stochastic Processes in Telecommunications	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE411S	Signal processing in medical research	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	EK530	Nonlinear Biomedical Signal Processing	(OM1) Mathematics in Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	EK531	Multiuser Detection	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	SI029	Biomedical signal processing	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
13.	BMIM2B	Biomedical statistics	(BM0) Biomedical Engineering, Master Academic Studies
14.	BMIM2C	Multivariable analysis and complexity of physiological processes	(BM0) Biomedical Engineering, Master Academic Studies
15.	BMIM2D	Information theory in biosystems	(BM0) Biomedical Engineering, Master Academic Studies
16.	EK550	Speech Technologies	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	DE110	Stochastic Processes in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	DE411	Signal Processing in Medical Research	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

Representative refferences (minimum 5, not more than 10)

1.	Dragana Bajić: Search, Sequences, Synchronization and States: a different approach, Novi Sad, FTN, recenzenti: dr Werner Teich, University of Ulm, dr Tricia Willinks, CRC Otawa Canada, 2006. 242str., ISBN 86-7892-024-6.
2.	Reichman A., Tacada J., Bajić D., et al: Body Communications, in: Roberto Verdone; Alberto Zanella, (Eds.): Pervasive Mobile and Ambient Wireless Communications, Springer, 2012, Hardcover, pp 609-660, ISBN 978-1-4471-2314-9
3.	Bajić D.: Sequence synchronization technique, in: L. Correia (Ed) Towards Mobile Broadband Multimedia Networks,, Academic Press Elsevier Ltd, Oxford U.K, 2006,ppr. 77-79, ISBN 13: 978-0-12-369422-
4.	Bajić D., Drajić D.: Statistical Analysis of Digital Signals and Systems, in: Bane Vasić, Erozan Kurtas (ED): Coding and Signal Processing for Magnetic Recording Systems, , CRC Press LLC, New York, 2005,pp. 7-7, ISBN 0-8493-1524-7
5.	Stefanović Č., Bajić D.: On the Search for a Sequence from a Predefined Set of Sequences in Random and Framed Data Streams, IEEE Transactions on Communications, 2012, Vol. 60, No 1, pp. 189-197, ISSN 0090-6778
6.	Lončar-Turukalo T., Japundžić-Žigon N., Bajić D.: Temporal Sequence Parameters in Isodistributional Surrogate Data: Model and Exact Expressions, IEEE Transactions on Biomedical Engineering, 2011, Vol. 58, No 1, pp. 16-24, ISSN 0018-9294
7.	D. Drajić, D. Bajić: "Communication System Performances – Achieving the Ultimate Information-Theoretic Limits?", IEEE Communications Magazine, Vol. 40, No. 6, May 2002. pp 124-129 ISSN 0163-6804.
8.	D. Bajić: "New simple method for solving the first passage time problem", Electronics Letters, 1991, Vol. 27. No. 16, pp 1419-1421. ISSN 0013-5194.
9.	D. Bajić, D. Drajić: "Time-varying Viterbi decoding for correlated data", Electronics Letters, 1993, Vol. 29. No. 4, pp 335-337. ISSN 0013-5194.
10.	D. Bajić, D. Drajić: "Information theory approach to frame synchronisation problem", Electronics Letters, 1994, Vol. 30. No. 20, pp 1667-1668. ISSN 0013-5194.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	156			
Total of SCI(SSCI) list papers :	14			
Current projects :	Domestic :	1	International :	3

Science, arts and professional qualifications

Name and last name:	Bekut D. Duško
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2004	Faculty of Technical Sciences - Novi Sad	Electroenergetics
PhD thesis	1994	School of Electrical Engineering - Beograd	Electroenergetics
Magister thesis	1990	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1986	Faculty of Technical Sciences - Novi Sad	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E126	System Control, Modeling and Simulation	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE416	Relay Protection	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	ESI001	Software Tools in Power Engineering	(ES0) Power Software Engineering, Undergraduate Academic Studies
4.	ESI010	Basics of control in power systems	(ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	ESI016	Smart Grid Programming	(ES0) Power Software Engineering, Undergraduate Academic Studies
6.	DE206S	EPS Failure	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	EE508	Microprocessor Protection	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
8.	EE0514	Computer Application in Power Systems 2	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	DE206	PES Failures	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Strezoski V., Bekut D.: A Cannonical Model for the Study of Faults in Power Systems Naziv časopisa: IEEE Trans. on Power Systems , IEEE Trans. on Power Systems, 1991, Vol. 6, No 4, pp. 1493-1499
2.	Strezoski, V.C. Švenda, G.S. Bekut, D.D.: "Extension of the canonical model to grounding parts of power systems under fault conditions", INTERNATIONAL JOURNAL OF ELECTRICAL POWER & ENERGY SYSTEMS, (2003) vol.25 br.7 str. 567-575
3.	Bekut, DD Švenda, GS Strezoski, VC: "Dead zone phenomenon in distance relaying of overhead transmission lines", ELECTRIC POWER SYSTEMS RESEARCH, (2000) vol.56 br.1 str. 1-8
4.	Strezoski V., Popović D., Bekut D., Švenda G.: DMS – Basis for Increasing of Green Distributed Generation Penetration in Distribution Networks, Thermal Science, 2012, Vol. 1, No 16, pp. 189-203, ISSN 0354-9836
5.	Nahman J., Bekut D.: Probabilistic interrupting current rating of transmission line circuit breakers Naziv časopisa: Electrical Power System Research , Electrical Power System Research, 1994, No 28, pp. 165-170
6.	Đukanović M., Bekut D., Šobajić D., pao Y.: Neural network based calculation of short-circuit currents in three-phase systems Naziv časopisa: Electrical Power System Research , Electrical Power System Research, 1992, No 24, pp. 49-53
7.	V.Strezoski, G.Svenda, D.Bekut: Extension of the Canonical Model Application for Calculation on Power Systems Under Fault Conditions, Electrical Power & Energy Systems, ELSEVIER, 2003,+ No.25, pp. 567-575, ISSN 0142-0615.,
8.	V.Strezoski, D.S.Popovic, D.Bekut, G.Svenda: DMS – Basis For Increasing Of The Penetration Of Green Distributed Generation In Distribution Networks, Thermal Science, Society of Thermal Engineers of Serbia, 2012, Vol. 1, No.16, pp. 189 – 203, ISSN: 0354-9836,
9.	Popović D., Boškov E., Bekut D., Stefani I.: Impact of distributed generators in Hybrid MV and LV distribution networks, 4. European PV-Hybrid and Mini-Grid Conference, Glyfada, 29-30 Maj, 2008, pp. 49-54, ISBN 978-3-934681-72-9
10.	Brbaklić B., Bizumić L., Bekut D.: Alat za automatizovano testiranje DMS softvera Naziv skupa: INFOTEH-JAHORINA , 7. Infoteh, Jahorina, 26-28 Mart, 2008, pp. 685-689, ISBN 99938-624-2-8

Summary data for teacher's scientific or art and professional activity:

Quotation total :	17
Total of SCI(SSCI) list papers :	6

Current projects :	Domestic :	6	International :	14

Science, arts and professional qualifications

Name and last name:	Borovac A. Branislav
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1975
Scientific or art field:	Mechatronics, Robotics and Automation and Integral Systems

Academic carieer	Year	Institution	Field
Academic title election:	1998	Faculty of Technical Sciences - Novi Sad	Mechatronics, Robotics and Automation and Integral Systems
PhD thesis	1986	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Magister thesis	1982	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Bachelor's thesis	1975	Faculty of Technical Sciences - Novi Sad	Mechanical Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM436	Mechatronics	(M30) Energy and Process Engineering, Undergraduate Academic Studies
2.	H102	Fundamentals in Product Development	(H00) Mechatronics, Undergraduate Academic Studies
3.	H1404	Mechatronics	(H00) Mechatronics, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
4.	H308	Industrial Robotics	(H00) Mechatronics, Undergraduate Academic Studies
5.	I600	Industrial Robotics	(F10) Engineering Animation, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	BM116A	Basics of medical robotics	(BM0) Biomedical Engineering, Undergraduate Academic Studies
7.	EM436A	Mechatronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	II1035	Industrial robotics	(I10) Industrial Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
9.	H1503	Non Industrial Robotics and Automation in Buildings	(H00) Mechatronics, Master Academic Studies (I10) Industrial Engineering, Master Academic Studies
10.	HDOK1S	Selected topics in industrial robotics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	HDOK2S	Selected topics in non-industrial robotics	(I12) Industrial Engineering, Specialised Academic Studies
12.	IMDR0S	Selected chapters in enterprise's design, organization and control	(I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies
13.	NIT05	Advanced Technology for Material Handling	(NIT) Industrial Engineering - Advanced Engineering Technologies, Master Academic Studies
14.	AD0007	Interactive systems in architecture	(AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
15.	H828	Advanced robotics	(H00) Mechatronics, Master Academic Studies
16.	H829	Advanced robotics	(I10) Industrial Engineering, Master Academic Studies (M40) Technical Mechanics and Technical Design, Master Academic Studies
17.	IIDS6	Selected chapters in automation	(I12) Industrial Engineering, Specialised Academic Studies
18.	GD018	Automation and Robotics in Construction	(G00) Civil Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
19.	HDOK-1	Selected Chapters in Industrial Robotics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
20.	HDOK-2	Selected Chapters in Non-Industrial Robotics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	HDOKL1	Selected topics in non-industrial robotics	(H00) Mechatronics, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies
22.	HDOKL2	Selected topics in non-industrial robotics	(H00) Mechatronics, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies
23.	IMDR0	Science of Industrial Engineering and Management	(I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
24.	IMDR80	Selected chapters in automation	(I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	M. Vukobratović, V. Potkonjak, K. Babković, B. Borovac, Simulation model of general human and humanoid motion, Multibody System Dynamics, Volume 17, Number 1, (February, 2007), pp. 71-96 (ISSN 1384-5640 (Print) 1573-272X (Online))
2.	Vukobratović M., Borovac B., Potkonjak V., Towards a Unified Understanding of Basic Notions and Terms in Humanoid Robotics, Robotica (2007) Vol. 25, pp. 87-101
3.	Vukobratović M., Borovac B., Potkonjak V., ZMP: A Review of Some Basic Misunder-standings, Int. Jour. of Humanoid Robotics, Vol. 3, No. 2 (2006), pp. 153-176
4.	V. Potkonjak, M. Vukobratović, K. Babković, B. Borovac, General Model of Dynamics of Human and Humanoid Motion: Feasibility, Potentials and Verification, Int. Jour. of Humanoid Robotics, Vol. 3, No. 2 (2006), pp. 21-48
5.	Vukobratović M., Borovac B., Babković K., "Contribution to the Study of Anthropomorphism of Humanoid Robots", Int. Jour. of Humanoid Robotics, Vol. 2, No. 3 (2005), pp. 361-387
6.	Vukobratović M., Borovac B., Note on the Article "Zero-Moment Point- Thirty Five Years of its Life", Int. Jour. of Humanoid Robotics, Vol. 2, No.2, June 2005, pp. 225-227
7.	Vukobratović M., Borovac B., "Zero-Moment Point- Thirty Five Years of its Life", Int. Jour. of Humanoid Robotics, Vol. 1, No.1, March 2004, pp. 157-173
8.	M. Vukobratović, D. Andrić, B. Borovac, “How to Achieve Various Gait Patterns from Single Nominal “, International Journal of Advanced Robotic Systems, Vol. 1., No. 2, Page 99-108, 2004
9.	L. Juhas, A. Vujanić, N. Adamović, L. Nagy, B. Borovac "A Platform for Micro-Positioning Based on Piezo-Legs", The Journal of Mechatronics, Vol. 11, (2001), pp.869-897
10.	M. Vukobratović, D. Andrić, B. Borovac, “Humanoid Robot Motion in Unstructured Environment - Generation of Various Gait Patterns from a Single Nominal “, Cutting Edge Robotics, Edited by V. Kordic, A. Lazanica, M. Merdan, Published by pIV pro literatur Ver-lag Robert Mayer-Scholz, © 2005 Advanced Robotic Systems International, Page 577-598, 2005

Summary data for teacher's scientific or art and professional activity:

Quotation total :	1998			
Total of SCI(SSCI) list papers :	35			
Current projects :	Domestic :	2	International :	1

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Budinski-Petković M. Ljuba
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1989
Scientific or art field:	Physics

Academic carieer	Year	Institution	Field
Academic title election:	2009		Physics
PhD thesis	1998	Faculty of Sciences - Novi Sad	Physics
Magister thesis	1996	Faculty of Physics - Beograd	Physics
Bachelor's thesis	1988	Faculty of Sciences - Novi Sad	Physics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E215	Physics	(E20) Computing and Control Engineering, Undergraduate Academic Studies
2.	H101	Physics	(F10) Engineering Animation, Undergraduate Academic Studies (GI0) Geodesy and Geomatics, Undergraduate Academic Studies (H00) Mechatronics, Undergraduate Academic Studies
3.	IAFI01	Colors and Light	(F10) Engineering Animation, Undergraduate Academic Studies
4.	BMI93	Physics	(BM0) Biomedical Engineering, Undergraduate Academic Studies
5.	DZ01FS	Selected Chapters in Physics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
6.	DZ01F	Selected Chapters in Physics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Budinski-Petković Lj., Lončarević I., Petkovic M., Jaksic Z., Vrhovac S.: Percolation in random sequential adsorption of extended objects on a triangular lattice, Physical Review E, 2012, Vol. 85, No 061117, pp. 1-8
2. Šćepanović J., Lončarević I., Budinski-Petković Lj., Jakšić Z., Vrhovac S.: Relaxation properties in a diffusive model of k-mers with constrained movements on a triangular lattice, Physical Review E, 2011, Vol. 84, No 031109, pp. 1-13

Representative refferences (minimum 5, not more than 10)

3.	Budinski-Petković Lj., Lončarević I., Jakšić Z., Vrhovac S., Švrakić N.: Simulation study of anisotropic random sequential adsorption of extended objects on a triangular lattice, Physical Review E, 2011, Vol. 84, No 5, pp. 5160-1
4.	Lončarević I., Budinski-Petković Lj., Vrhovac S., Belić A.: Generalized random sequential adsorption of polydisperse mixtures on a one-dimensional lattice, Journal of Statistical Mechanics: Theory and Experiment, 2010, ISSN 1742-5468
5.	Lončarević I., Budinski-Petković Lj., Vrhovac Lj., Belić A.: Adsorption, desorption, and diffusion of k-mers on a one-dimensional lattice, Physical Review E, 2009, Vol. 80, No 2
6.	Budinski-Petković Lj., Vrhovac S., Lončarević I.: Random sequential adsorption of polydisperse mixtures on discrete substrates, Physical Review E, 2008, Vol. 78, No 061603, pp. 1-7
7.	Lončarević I., Budinski-Petković Lj., Vrhovac S.: Simulation study of random sequential adsorption of mixtures on a triangular lattice , The European Physical Journal E, 2007, Vol. 24, pp. 19-26, ISSN 1292-8941
8.	Lončarević I., Budinski-Petković Lj., Vrhovac S.: Reversible random sequential adsorption of mixtures on a triangular lattice, Physical Review E, 2007, Vol. 76, No 031104, pp. 1-9
9.	Arsenović D., Vrhovac S., Jakšić Z., Budinski-Petković Lj., Belić A.: Simulation study of granular compaction dynamics under vertical tapping, Physical Review E, 2006, Vol. 74
10.	Lj. Budinski-Petković and S. B. Vrhovac: Memory effects in vibrated granular systems: Response properties in the generalized random sequential adsorption model, The European Physical Journal E, 2005, Vol. 16, pp. 89-96, ISSN 1292-8941

Summary data for teacher's scientific or art and professional activity:

Quotation total :	75			
Total of SCI(SSCI) list papers :	30			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Crnojević S. Vladimir
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	10.11.1995
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2010		Telecommunications and Signal Processing
PhD thesis	2004	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	1999	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Bachelor's thesis	1995	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK412	Shape Recognition	(BM0) Biomedical Engineering, Undergraduate Academic Studies
2.	EK421	Digital Image Processing	(F10) Engineering Animation, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	URZP32	Systems for Detection, Alarm and Warning	(ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
4.	BM129A	Digital Image Processing	(BM0) Biomedical Engineering, Undergraduate Academic Studies
5.	E137	Basics of Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK463	Pattern Recognition	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	DE311S	Selected topics in Pattern Recognition	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DE412S	Digital image processing algorithms	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE511S	Wireless sensor networks	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	EK520	Medical Image Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	EK522	Computer Vision (Digital Image Processing 2)	(F20) Engineering Animation, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	H1420	Fundamentals in Mechanical Vision	(H00) Mechatronics, Master Academic Studies
13.	IMDS54	Computer Vision in Industrial Engineering and Management	(I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies
14.	ZP508	Design and Maintenance of the Fire Detection Systems	(ZP1) Disaster Risk Management and Fire Safety, Master Academic Studies
15.	DE311	Selected Chapters in Pattern Recognition	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
16.	DE412	Digital Image Processing Algorithms	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
17.	DE511	Wireless Sensor Networks	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
18.	IMDR54	Computer Vision in Industrial Engineering and Management	(I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

Representative refferences (minimum 5, not more than 10)

1.	Dejan Vukobratovic, Cedomir Stefanovic, Vladimir Crnojevic, Francesco Chiti, Romano Fantacci: "Rateless Packet Approach for Data Gathering in Wireless Sensor Networks", IEEE Journal on Selected Areas in Communications, Vol. 28, No. 7, pp. 1169-1179, September 2010.
2.	Petrovic, N.I.; Crnojevic, V.: Universal Impulse Noise Filter Based on Genetic Programming, IEEE Transactions on Image Processing, 2008, Vol. 17, No. 7, str. 1109- 1120, ISSN 1057-7149
3.	D. Culibrk, M. Mirkovic, V.Zlokolica, M. Pokric, V. crnojevic, D. Kukolj, "Salient Motion Features for Video Quality Assessment", IEEE Trans. on Image Processing, Volume: 20 Issue:4, pp(s): 948 - 958, ISSN: 1057-7149
4.	Cedomir Stefanovic, Dejan Vukobratovic, Francesco Chiti, Lorenzo Niccolai, Vladimir Crnojevic, Romano Fantacci: "Urban Infrastructure-to-Vehicle Traffic Data Dissemination Using UEP Rateless Codes", IEEE Journal on Selected Areas in Communications, Vol. 29, No. 1, pp. 94-102, January 2011.
5.	Vladimir Crnojević, Nemanja Petrović, „Impulse Noise Filtering Using Robust Pixel-Wise S-estimate of Variance“, EURASIP Journal on Advances in Signal Processing, vol. 2010, Article ID 830702, 10 pages, 2010,
6.	V. Crnojević, V. Šenk, Ž. Trpovski, “Advanced Impulse Detection Based on Pixel-Wise MAD”, IEEE Signal Processing Letters, vol.11, No. 7, 2004, str. 589-593. Crnojević, V. Šenk, Ž. Trpovski, “Advanced Impulse Detection Based on Pixel-Wise MAD”, IEEE Signal Processing Letters, vol.11, No. 7, 2004, str. 589-593.
7.	B. Antić, V. Crnojević, „Joint Domain-Range Modeling of Dynamic Scenes with Adaptive Kernel Bandwidth“, pp.777-788, LNCS 4678, Springer-Verlag, Berlin Heidelberg 2007.
8.	N. Petrović, V. Crnojević, „Evolutionary Tree-Structured Filter for Impulse Noise Removal“, pp.103-113, LNCS 4179, Springer-Verlag, Berlin Heidelberg 2006.
9.	N. Petrović, V. Crnojević, „Impulse Noise Detection Based on Robust Statistics and Genetic Programming“, pp.643-649, LNCS 3708, Springer-Verlag, Berlin Heidelberg 2005.
10.	V. Crnojević,„Impulse Noise Filter With Adaptive Mad-Based Threshold“, International Conference on Image Processing, Genoa, Italy, 11-14. September, 2005.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	135			
Total of SCI(SSCI) list papers :	10			
Current projects :	Domestic :	3	International :	10

Science, arts and professional qualifications

Name and last name:	Crnojević-Bengin B. Vesna
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.11.1998
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2011		Electronics
PhD thesis	2006	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	1997	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1994	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM440	Computer-Aided Electronic Circuit Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	URZP32	Systems for Detection, Alarm and Warning	(ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
3.	ASO	Introduction to engineering	(AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
4.	BMI107	Materials and fabrication technologies in medical devices	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	BMI108	RF and microwaves in medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	EK322	RF and microwave engineering 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EK454	RF and microwave engineering 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EM408A	RF and microwave electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EM420A	Modelling and simulation of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	ETI26	RF and microwave technique	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	M4001	Fundamentals of electronic systems	(M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
12.	DE102S	Microwave Technique 1	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE500S	Microwave Technique 2	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	EM515	Periodic Structures and Metamaterials	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	SI022	Selected topics from microwave engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	SI034	Application of metamaterials in the microwave engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
17.	ZP508	Design and Maintenance of the Fire Detection Systems	(ZP1) Disaster Risk Management and Fire Safety, Master Academic Studies
18.	EM518A	Advanced simulation techniques of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
19.	DE102	Microwave Technique 1	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies
20.	DE500	Microwave Technique 2	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

Representative refferences (minimum 5, not more than 10)	
1.	V. Crnojevic-Bengin, V. Radonic, and B. Jokanovic: Fractal Geometries of Split-Ring Resonators, IEEE Transactions of Microwave Theory and Techniques, Vol. 56, No. 10, pp. 2312-2321, October 2008.
2.	B. Jokanovic, V. Crnojevic-Bengin, O. Boric-Lubecke, Miniature High Selectivity Filters Using Grounded Spiral Resonators,Electronics Letters, Vol. 44, No. 17, 14th August 2008
3.	V. Radonić, V. Crnojević-Bengin, Super-compact stopband filter based on grounded patch resonator, Electronic letters, Vol. 46, No. 2, pp. 146-147, ISSN: 0013-5194, January 2010.
4.	V. Crnojević-Bengin, V. Radonić, B. Jokanović, "Left-handed microstrip lines with multiple complementary split-ring and spiral resonators", MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, (2007), vol. 49, no.6, pp. 1391-1395
5.	V. Crnojević-Bengin, "Compact 2D Hilbert microstrip resonators", MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, (2006) vol.48, no.2, pp. 270-273
6.	V. Crnojević-Bengin, Đ. Budimir, “Novel 3-D Hilbert Microstip Resonators”, MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, John Willey, vol. 46, no. 3, pp. 195-197, August 2005, ISSN: 0895-2477.
7.	B. Jokanović, V. Crnojević-Bengin, “Novel left-handed transmission lines based on grounded spirals,” Microwave and Optical Technology Letters, John Willey, Vol. 49, No. 10, oktobar 2007, pp. 2561-2567
8.	V. Radonic, K.Palmer, G. Stojanovic and V.Crnojevic-Bengin, Flexible Sierpinski Carpet Fractal Antenna on a Hilbert Slot Patterned Ground, International Journal of Antennas and Propagation, Vol. 2012, Article ID 980916, doi:10.1155/2012/980916
9.	Zemlyakov, Kirill; Crnojevic-Bengin, Vesna, Planar low-pass filters based on hilbert fractal, MICROWAVE AND OPTICAL TECHNOLOGY LETTERS 2012 54 (11):2577-2581
10.	V. Radonić, K.D. Palmer and V. Crnojević-Bengin: “A dipole antenna design incorporating both electromagnetic bandgap and zero-refractive index metamaterials,” METAMATERIALS, St. Petersburg, Russia, 17-22 September 2012

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	9			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	1	International :	3

Science, arts and professional qualifications

Name and last name:	Čelanović L. Nikola
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.12.2008
Scientific or art field:	Power Electronics, Machines and Facilities

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Power Electronics, Machines and Facilities
PhD thesis	2000	Virginia Polytechnic Institute and State University - Tennessee	Power Electronics, Machines and Facilities
Magister thesis	1996	Virginia Polytechnic Institute and State University - Tennessee	Mechatronics, Robotics and Automation and Intelligent Systems
Bachelor's thesis	1994	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE305	Power Electronics 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE308	Power Electronics 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EE425	Energy Converter Control	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EE520	Design of Electrical Machines and Converters	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EOS13	Electric Power Distribution System for Industrial Plants	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
6.	EOS16	Software tool is power systems	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
7.	EOS22	Electrical installations of residential buildings	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
8.	EOS30	Electrical Design Calculation Software	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
9.	EOS27	Power electronics converters control	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
10.	DE108S	FACTs devices and power quality	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	DE113S	Power Electronics Applications in Power Systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	DE309S	Selected chapters in electrical machines transients	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	E1SO01	Modern technologies in electrical engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
14.	EE520	Design of Electrical Machines and Converters	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
15.	EE545	Power Electronics with Distribution and Transmission Networks	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
16.	ZCM11	Modern software tools for clean energy technologies	(ZC0) Clean Energy Technologies, Master Academic Studies
17.	DE309	Selected Chapters in Transient Phenomena in Electrical Machines	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	S. Grabić, N. Celanović, V. Katić, “Permanent Magnet Synchronous Generator Cascade for Wind Turbine Application,” IEEE Transactions on Power Electronics, vol. 23, no. 3, pp. 1136-1142, May 2008.
2.	M. Vekić, S. Grabić, D. Majstorović, I. Celanović, N. Celanović, V. Katić, “Ultra Low Latency HIL Platform for Rapid Development of Complex Power Electronics Systems”, IEEE Transaction on Power Electronics, USA, ISSN 0885-8993,[Online]. Available: TPEL-Reg—2011-09-08.R1

Representative refferences (minimum 5, not more than 10)

3.	N. Celanović, I. Celanović, Z. Ivanović: Cyber Physical Systems: A New Approach to Power Electronics Simulation, Control and Testing, Advances in Electrical and Computer Engineering, Faculty of electrical engineering and computer sciences, University of Suceava, Romania, vol.12, Issue 1, pp. 33-38, Feb. 2012.
4.	D. Majstorović, I. Celanović, N. Teslić, N. Čelanović, V. A. Katić, „Ultra-Low Latency Hardware-in-the-Loop Platform for Rapid Validation of Power Electronics Designs”, IEEE Transactions on Industrial Electronics, USA, ISSN: 0278-0046, Vol. 58, No.10, pp.4708-4716, Oct.2011.
5.	Z. Ivanović, E. Adzić, M. Vekić, S. Grabić, N. Celanović, V. Katić, “HIL Evaluation of Power Flow Control Strategies for Energy Storage Connected to Smart Grid Under Unbalanced Conditions”, IEEE Transaction on Power Electronics, USA, ISSN 0885-8993, Available: 10.1109/TPEL.2012.2184772
6.	N. Čelanović, D. Boroyevic, "A fast space-vector modulation algorithm for multilevel three-phase converters", IEEE Transactioncs on Industry Applications, vol. 37, no. 2, March/April 2001.
7.	N. Čelanovic, D. Boroyevich, "A comprehensive sudy of neutral-point balancing problem in three-level neutral-point-clamped voltage source PWM inverters", IEEE Transactions on Power Electronics, vo. 5, no. 2, March 2000.
8.	M. Goldfarb, N. Čelanović, "A flexure-based gripper for small-scale manipulation", Robotica, Cambridge University Press, vol. 17, March 1999, pp. 181-187.
9.	M. Goldfarb, N. Čelanović, "A Lumped-Parameter electromechanical model for descibing the nonlinear behaviour of piezoelelctric actuators" ASME Journal of Dynamic Systems, Measurement and Control, vol. 119, no. 3, 1997, pp. 478-485.
10.	M. Goldfarb, N. Čelanović, "Modeling piezoelectric stack actuators for control of micromanipulation", IEEE Control systems magazine, vol. 17, no. 3, 1997, pp. 67-79.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	17			
Total of SCI(SSCI) list papers :	5			
Current projects :	Domestic :	0	International :	2

Science, arts and professional qualifications

Name and last name:	Damnjanović S. Mirjana
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1994
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2011		Electronics
PhD thesis	2006	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	2002	Faculty of Technical Sciences - Novi Sad	Electronics
Bachelor's thesis	1994	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	H206	Introduction to Electronics	(H00) Mechatronics, Undergraduate Academic Studies
2.	H209	Digital Electronics	(H00) Mechatronics, Undergraduate Academic Studies
3.	BMI99	Electronics	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	E138A	Digital Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM407A	Computer aided design of digital integrated circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	DE302S	Design and Characterization of Components for EMI Protection	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE502S	Micro-sensors and MEMS	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	EM423	EMI and EMC in Electronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	BMIM1B	EMI and EMC in medicine equipment	(BM0) Biomedical Engineering, Master Academic Studies
10.	DE402S	Chosen areas of analogue, digital and RF integrated circuits design	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EM510A	Advanced computer aided design of microelectronic circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	DE302	Design and Characterization of Components for EMI Protection	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE502	Micro-sensors and MEMS	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
14.	DE402	Chosen areas of analogue, digital and RF integrated circuits design	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Raghavendra R., Bellew P., Mcloughlin N., Stojanović G., Damnjanović M., Desnica V., Živanov Lj.: Characterization of Novel Varistor Inductor Integrated Passive Devices , IEEE Electron Devices Letters, 2004, Vol. 25, No 12, pp. 778-780, ISSN 0741-3106, UDK: 10.1109/LED.2004.838321
2. Menićanin A., Damnjanović M., Živanov Lj., Aleksić O.: Improved Model of T-Type LC EMI Chip Filters Using New Microstrip Test Fixture , IEEE Transactions on Magnetics, 2011, Vol. 47, No 10, pp. 3975-3978, ISSN 0018-9464, UDK: 10.1109/TMAG.2011.2150738
3. Damnjanović M., Živanov Lj., Stojanović G., Menićanin A.: Influence of Conductive Layer Geometry on Maximal Impedance Frequency Shift of Zig-zag Ferrite EMI Suppressor, IEEE Transactions on Magnetics, 2010, Vol. 46, No 6, pp. 1303-1306, ISSN 0018-9464
4. Menićanin A., Damnjanović M., Živanov Lj.: Parameters Extraction of Ferrite EMI Suppressors for PCB Applications Using Microstrip Test Fixture, IEEE Transactions on Magnetics, 2010, Vol. 46, No 6, pp. 1370-1373, ISSN 0018-9464
5. Stojanović G., Damnjanović M., Živanov Lj.: Temperature dependence of electrical parameters of SMD ferrite components for EMI suppression , Microelectronics Reliability, 2008, Vol. 48, No 7, pp. 1027-1032, ISSN 0026-2714, UDK: 10.1016/j.microrel.2008.03.020
6. Damnjanović M., Živanov Lj., Nađ L., Đurić S., Biberdžić B.: A Novel Approach to Extending the Linearity Range of Displacement Inductive Sensor , IEEE Transactions on Magnetics, 2008, Vol. 44, No 11, pp. 4123-4126, ISSN 0018-9464
7. Stojanović G., Damnjanović M., Desnica V., Živanov Lj., Raghavendra R., Bellew P., Mcloughlin N.: High performance zig-zag and meander inductors embedded in ferrite material , Journal of Magnetism and Magnetic Materials, 2006, Vol. 297, No 2, pp. 76-83, ISSN 0304-8853, UDK: 10.1016/j.jmmm.2005.02.058

Representative refferences (minimum 5, not more than 10)	
8.	Damnjanović M., Stojanović G., Desnica V., Živanov Lj., Ramesh R., Pat B., Neil M.: Analysis, design and characterization of ferrite EMI suppressors, IEEE Transactions on Magnetics, 2006, Vol. 42, No 2, pp. 270-277, ISSN 0018-9464, UDK: 10.1109/TMAG.2005.860485
9.	Damnjanović M., Živanov Lj., Đurić S., Marić A., Menićanin A., Radosavljević G., Blaž N.: Characterization and modelling of miniature ferrite transformer for high frequency applications, Microelectronics International, 2012, Vol. 29, No 2, pp. 83-89, ISSN 1356-5362
10.	Đurić S., Nađ L., Damnjanović M., Đurić N., Živanov Lj.: A novel application of planar-type meander sensors, Microelectronics International, 2011, Vol. 28, No 1, pp. 41-49, ISSN 1356-5362

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	77			
Total of SCI(SSCI) list papers :	15			
Current projects :	Domestic :	2	International :	2

Science, arts and professional qualifications

Name and last name:	Dautović B. Staniša
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.01.1993
Scientific or art field:	Theoretical Electrotechnics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics
Magister thesis	1997	Faculty of Sciences - Novi Sad	Mathematics
Bachelor's thesis	1991	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E128F	Electrical Circuit Theory	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E128A	Electrical Circuit Theory	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EM408A	RF and microwave electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EM420A	Modelling and simulation of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM458	System Level Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	DE200S	Algorithms and Complexity-an Advanced Course	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE300S	Randomised Approximation Algorithms	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DE516S	Algoritmi za multiprocesorske sisteme	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	EM503	Algorithm Heuristics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	BMIM1C	Bioinformatics Algorithms	(BM0) Biomedical Engineering, Master Academic Studies
11.	EM405A	Formalne metode projektovanja i verifikacije hardvera	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	EM415A	Algorithms for VLSI Physical Design Automation	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	EM518A	Advanced simulation techniques of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	DE200	Algorithms and Complexity-an Advanced Course	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
15.	DE300	Randomised Approximation Algorithms	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
16.	DE516	Algoritmi za multiprocesorske sisteme	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. DAUTOVIĆ,S., NOVAK,L., A Comment on “Boolean Functions Classification via Fixed Polarity Reed-Muller Form”. IEEE Trans. on Computers, Vol. 55, No. 8, (2006), 1067-1069.
2. SEŠIĆ,A., DAUTOVIĆ,S., MALBAŠA,V., Dynamic Power Management of a System with a Two-Priority Request Queue Using Probabilistic Model Checking. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 27(2). Feb 2008.
3. Tosic,M., Cirilovic,M., Ikovic,O., Kesler,D., Dautovic,S. Boscovic,D., Impact of Different Content Placement and Delivery Strategies on Content Delivery Capacity of the Wireless Mesh Networks, in Xiang-Yang Li, Symeon Papavassiliou, Stefan Rührup (Eds.): Ad-hoc, Mobile, and Wireless Networks - 11th International Conference, ADHOC-NOW 2012, Belgrade, Serbia, July 9-11, 2012. Proceedings. Lecture Notes in Computer Science 7363 Springer 2012, ISBN 978-3-642-31637-1 pp. 302-315
4. Kesler D., Dautović S., Struharik R.: Design and Verification of Dynamically Reconfigurable Architecture, 10. SISY - International Symposium on Intelligent systems and Informatics, Subotica, 20-22 Septembar, 2012
5. Dautović S., Vranjković V., Vukobratović B.: Boolean Function Minimization for Memristive Logic Circuits, 16. International Symposium on Power Electronics – Ee, Novi Sad, 26-28 Oktobar, 2011, ISBN 978-86-7892-355-5

Representative refferences (minimum 5, not more than 10)

6.	Struharik R., Vranjković V., Teodorović P., Dautović S.: A Survey of Nanoelectronic Computing Architectures, 16. International Symposium on Power Electronics – Ee, Novi Sad, 26-28 Oktobar, 2011, ISBN 978-86-7892-355-5
7.	Bošković D., Faramak V., Tošić M., Dautović S.: Pervasive wireless CDN for greening video streaming to mobile devices, 34. MIPRO - International convention on information and communication technology, electronics and microelectronics - Savjetovanje o mikroračunalima u telekomunikacijama, Opatija, 23-27 Maj, 2011
8.	Vukobratović B., Dautović S.: Probabilistic Model Checking of Resistive Electrical Circuits, 16. Telekomunikacioni forum TELFOR, Beograd, 25-27 Novembar, 2008
9.	DAUTOVIĆ,S., NOVAK,L., Evolutionary Design of Combinational Circuits using Boolean Function Signatures. WSEAS Trans. on Circuits and Systems, Issue 11, Volume 5, (2006), 1677-1681.
10.	Dautović S., Acketa D., Mudrinski V.: Non-isomorphic 4-(48,5,lambda) designs from PSL(2,47) Naziv časopisa: Univ.Beograd.Publ.Elektrotehn.Fak. , Univ.Beograd.Publ.Elektrotehn.Fak., 1999, No 10, pp. 41-46

Summary data for teacher's scientific or art and professional activity:

Quotation total :	10			
Total of SCI(SSCI) list papers :	2			
Current projects :	Domestic :	1	International :	2

Science, arts and professional qualifications

Name and last name:	Delić D. Vlado
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1989
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1997	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	1993	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1989	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK411	Digital Filters	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	Z413A	Acoustics and Noise Protection	(Z20) Environmental Engineering, Undergraduate Academic Studies
3.	BM118B	Acoustics and Audio Engineering in Medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EK312	Acoustics and Audio Engineering	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK312L	Acoustics and Audio Engineering in Multimedia	(F10) Engineering Animation, Undergraduate Academic Studies
6.	EK422	Digital Audio Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EK451	Audio and Video Technologies	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EK452	Monitoring and Noise Protection	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	ETI27	Audio Engineering	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
10.	ETI29	Monitoring and Noise Protection	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	ETI35	Digital Sound Processing	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
12.	DE111S	Algorithms for Digital Signal Processing	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE212S	Selected Chapters in Acoustics and Audio Engineering	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	DE512S	Human-Machine Speech Communication	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	S0151	Application of Digital Signal Processing in Telecommunications	(S01) Postal Traffic and Telecommunications, Master Academic Studies
16.	SI037	Telecommunication Infrastructure of E-Business	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
17.	BMIM2A	Assistive Information and Communications Technologies	(BM0) Biomedical Engineering, Master Academic Studies
18.	EK422L	Digital Audio Signal Processing	(F20) Engineering Animation, Master Academic Studies
19.	EK550	Speech Technologies	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20.	S1596	Acoustics and Audio Engineering in Traffic	(S01) Postal Traffic and Telecommunications, Master Academic Studies
21.	DE111	Algorithms for Digital Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
22.	DE212	Selected Chapters in Acoustics and Audio Engineering	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
23.	DE512	Human-Machine Speech Communication	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	"Zbirka zadataka iz digitalnih telekomunikacija", V. Milošević, V. Delić, FTN&Stylos, 1996, p.189 i FTN, 2005, p.282
2.	"Zbirka zadataka iz digitalne obrade signala", V. Delić, M. Sečujski, I. Radić, FTN, 2007, str. 176, (ISBN 978-86-7892-082-0)
3.	”A New Speech Scrambling Concept Based on Hadamard Matrices”, V. Šenk, V. Delić, V. Milošević, IEEE Signal Processing Letters, June 1997, vol. 4, pp. 161-163
4.	“Postupak za smanjenje verovatnoće greške kod produženog telefonskog biranja niza cifara”, V. Delić, V. Šenk; Patent u Srbiji 48734 (P-434/97), 2009
5.	"anReader - govorni softver za slepe i slabovide korisnike računara", M. Sečujski, D. Pekar, R. Obradović, V. Delić, Najbolji informatički proizvod u Srbiji 2004. godine (www.dis.org.yu)
6.	"Advertising Monitor - praćenje reklama na osnovu ASR", V. Delić u grupi autora, Novi proizvod, 1. mesto na takmičenju za najbolju tehnološku inovaciju u Srbiji 2006. god.
7.	"Govorni portal za slepe i slabovide osobe - KONTAKT", V. Delić u grupi autora, Jedinstven proizvod u regionu baziran na dijalogu čovek-mašina, rezultat inovacionog projekta kod Ministarstva nauke (PTR-2078) 2005/2006
8.	”Speech Signal Processing in ASR&TTS Algorithms”, V. Delić, D. Pekar, R. Obradović, M. Sečujski, Facta Universitatis (Niš), Series: Electronics and Energetics, vol. 16, no. 3, (2003), pp. 355-364
9.	“A Review of R&D of Speech Technologies in Serbian and their Applications in Western Balcan Countries”, V. Delić, pp. 64-83, Keynote lecture at XII international conference “Speech and Computer” (SPECOM), Moskva, 15-18.10.2007.
10.	“Buka iz klubova i koncertnih prostora – analiza merodavnosti pobudnih muzičkih signala", M. Stojiljković, V. Delić, XX konferencija Buka i Vibracije, Tara, 11.-13.10.2006.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	52			
Total of SCI(SSCI) list papers :	14			
Current projects :	Domestic :	4	International :	0

Science, arts and professional qualifications

Name and last name:	Doroslovački D. Rade
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1978
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2000	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	1989	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1984	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1976	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E213	Discrete Mathematics and Linear Algebra	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	E101	Discrete Mathematics	(ES0) Power Software Engineering, Undergraduate Academic Studies
3.	E101A	Discrete Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	IM1523	Discrete Mathematics	(M30) Energy and Process Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
5.	IM1706	Actuerial Mathematics	(I20) Engineering Management, Undergraduate Academic Studies
6.	SE0009	Discrete Mathematics	(SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7.	0M503	Combinatorics and Graph Theory	(OM1) Mathematics in Engineering, Master Academic Studies
8.	0M509	Applied Abstract Algebra	(OM1) Mathematics in Engineering, Master Academic Studies
9.	0M511	Geometry	(OM1) Mathematics in Engineering, Master Academic Studies
10.	0ML503	Combinatorics and Graph Theory	(OM1) Mathematics in Engineering, Master Academic Studies
11.	0ML509	Applaid Abstract Algebra	(OM1) Mathematics in Engineering, Master Academic Studies
12.	0ML511	Geometry	(OM1) Mathematics in Engineering, Master Academic Studies
13.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
14.	OM519	Actuerial Mathematics	(OM1) Mathematics in Engineering, Master Academic Studies
15.	OML519	Actuerial Mathematics	(OM1) Mathematics in Engineering, Master Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
16.	D0M08	Applied Abstract Algebra	(OM1) Mathematics in Engineering, Doctoral Academic Studies
17.	D0M17	Combinatorics	(OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	D0M20	Graph Theory	(OM1) Mathematics in Engineering, Doctoral Academic Studies
19.	D0M34	Actuarial Mathematics	(OM1) Mathematics in Engineering, Doctoral Academic Studies
20.	DOM31	Combinatorial Matrix Theory	(OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	R. Doroslovački, R. Tošić and I. Stojmenović: Generating and counting triangular system, BIT: 27(1987) 18-24, Kobenhavn, R 54
2.	R. Doroslovački , R . Tošić i J. Gutman: Topological properties of benzenoid systems, XXXVIII, the boundary code, Match in mathematical chemistry (19) (219-228) Max- Plank-Institut fur Stranhlenchemije, Mulheim (1986)
3.	Rade Doroslovački: Binary Sequences without 01...10, Matematički vesnik, Mathematical Society of Serbia, 46 (1994), 93-98.
4.	Rade Doroslovački: On binary n-words with forbidden 4-subwords, (1997/01) Novi Sad Juornal of Mathematics.
5.	R. Doroslovački, J. Pantović, G.Vojvodić: Note on Itersection of Maximal Clones, (1998/02) Novi Sad, Journal of Mathematics.
6.	R. Doroslovački, J. Pantović, G. Vojvodić: Classification of Maps by their Membership in Maximal Clones that contain Minimum and Complement, Matematički vesnik,, Mathematical Society of Serbia, 51, (1999), 21-28
7.	Rade Doroslovački, Jovanka Pantović and Gradimir Vojvodić: One Interval in the Lattice of Partial Hyperclones, Czechoslovaka Mathematical Journal, 55 (130),2005, 719-724, (R52)
8.	O. Bodroža-Pantić, R. Doroslovački, K. Doroslovački, AN ELEMENTARY PROOF OF A THEOREM CONCERNING THE DIVISION OF A REGION INTO TWO," in Rocky Mountain Journal of Mathematics, Vol. 37, No.5, 2007, R 52
9.	O. Bodroža-Pantić, R. Doroslovački, The Gutman formulas for algebraic structure count, Journal of Mathematical Chemistrz Vol.35,No.2, Februar 2004, R 51.
10.	Ratko Tošić, Gradimir Vojvodić, Dragan Mašulović, Rade Doroslovački, Jovanka Rosić: Two examples of relative completeness, Multiple Valued Logic, An International Journal (Journal of Multiple-Valued Logic and Soft Computing), (1996), Vol. 2, pp. 67-78.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	60			
Total of SCI(SSCI) list papers :	5			
Current projects :	Domestic :	0	International :	0

Science, arts and professional qualifications

Name and last name:	Đurić M. Nikola
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1997
Scientific or art field:	Theoretical Electrotechnics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	2003	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E216	Fundamentals of Electrical Engineering	(E20) Computing and Control Engineering, Undergraduate Academic Studies (ES0) Power Software Engineering, Undergraduate Academic Studies
2.	EE300	Electromagnetics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	H104	Fundamentals of Electrical Engineering 1	(H00) Mechatronics, Undergraduate Academic Studies
4.	H108	Fundamentals of Electrical Engineering 2	(H00) Mechatronics, Undergraduate Academic Studies
5.	M112	Electrical Engineering and Electric Machines	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies (S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
6.	E105	Fundamentals of Electrical Engineering 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
7.	E110	Fundamentals of Electrical Engineering 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
8.	BMI94	Fundamentals of Electrical Engineering	(BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	DE416S	Investigation of electromagnetic fields	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	DE517S	Technology of magnetic and optical data storage	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EE543	Electro Magnetic Energy	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	E1IEP	Investigation of electromagnetic fields	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	H799	Fieldbuses and protocols	(H00) Mechatronics, Master Academic Studies
14.	H845	Motion control	(H00) Mechatronics, Master Academic Studies (I10) Industrial Engineering, Master Academic Studies
15.	DE416	Investigation of electromagnetic fields	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
16.	DE517	Technology of magnetic and optical data storage	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Đurić N., Despotović M. : Application of MTR soft-decision decoding in multiple-head magnetic recording systems, Sadhana - Academy Proceedings in Engineering Science, 2009, Vol. 34, Broj 3, str. 381-392, ISSN 0256-2499
2.	Đurić S., Nađ L., Damnjanović M., Đurić N., Živanov Lj.: A novel application of planar-type meander sensors, Microelectronics International, 2011, Vol. 28, No 1, pp. 41-49, ISSN 1356-5362
3.	Đurić N., Kavecan N.: Internet Portal of the SEMONT Information Network for the EM Field Monitoring, 4. International Conference on Advances in Future Internet - AFIN, Rim, 19-24 Avgust, 2012, pp. 55-59, ISBN 978-1-61208-211-0 (Best paper award)
4.	Đurić N., Kavečan N., Kljajić D.: The EM Field Register of the SEMONT Broadband Monitoring Network, 10. SISY - International Symposium on Intelligent systems and Informatics, Subotica, 20-22 Septembar, 2012, pp. 27-30, ISBN 978-1-4673-4748-8
5.	Đurić N., Šenk V.: The MAP Implementation in Logic Circuits for Soft-decision Decoding of MTR Codes, 6. European Modeling Symposium - EMS, Malta, 14-16 Novembar, 2012, pp. 201-206, ISBN 978-0-7695-4926-2/12
6.	Đurić N., Prša M., Kasaš-Lažetić K.: Information Network for Continuous Electromagnetic Fields Monitoring, International Journal of Emerging Sciences - IJES, 2011, Vol. 1, No 4, pp. 516-525, ISSN 2222-4254
7.	Vukobratović B., Đurić N.: Monitoring of EMF with SEMONT system, 6. International PhD Seminar on Computational electromagnetics and bioeffects of electromagnetic fields – CEMBEF, Novi Sad, 28-30 Jun, 2012, pp. 63-66, ISBN 978-86-7892-410-1
8.	Bajović V., Đurić N., Herceg D.: Serbian Laws and Regulations as Foundation for Electromagnetic Field Monitoring Information Network, 10. International Conference on Applied Electromagnetics, Niš, 25-29 Septembar, 2011, ISBN ISBN: 978-86-6125-04
9.	Đurić N., Prša M., Kasaš-Lažetić K., Bajović V.: Serbian Remote Monitoring System for Electromagnetic Environmental Pollution, 10. International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services - TELSIKS, Niš, 5-8 Oktobar, 2011, pp. 701-704, ISBN 978-1-4577-2016-1
10.	Đurić N., Šenk V., Vasić B.: MAP Decoding of MTR Codes in Multiple-Head Magnetic Recording Systems, 10. International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services - TELSIKS, Niš, 5-8 Oktobar, 2011, pp. 164-167, ISBN 978-1-4577-2018-5

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	2			
Current projects :	Domestic :	3	International :	2

Science, arts and professional qualifications

Name and last name:	Folić J. Radomir
Academic title:	Emeritus Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.03.1980
Scientific or art field:	Constructions in Civil Engineering

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Constructions in Civil Engineering
PhD thesis	1983	Faculty of Civil Engineering - Beograd	Theory of Construction
Magister thesis	1974	Faculty of Civil Engineering - Zagreb	Theory of Construction
Bachelor's thesis	1963	Faculty of Civil Engineering - Beograd	Constructions in Civil Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A002S	Scientific Research Method	(A00) Architecture, Specialised Academic Studies (E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (GI0) Geodesy and Geomatics, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
2.	GG505	Concrete Bridges	(G00) Civil Engineering, Master Academic Studies
3.	GS015	Scientific Research Method	(G10) Energy Efficiency in Buildings, Specialised Academic Studies
4.	A120S	Proces, principi i tehnike naučnog istraživanja-odabrana poglavlja	(A00) Architecture, Specialised Academic Studies
5.	GG531	Odabrana poglavlja zidanih konstrukcija	(G00) Civil Engineering, Master Academic Studies
6.	DGI002	Selected Chapters in Engineering Geodesy	(GI0) Geodesy and Geomatics, Doctoral Academic Studies
7.	DZ001	Scientific Research Method	(A00) Architecture, Doctoral Academic Studies (AS0) Scenic Design, Doctoral Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
8.	A120	Proces, principi i tehnike naučnog istraživanja - odabrana poglavlja(uneti naziv na engleskom)	(A00) Architecture, Doctoral Academic Studies
9.	GD027	Process, principles and techniques of scientific research - selected chapters	(G00) Civil Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Folić, R. (1983): Spojevi i veze montažnih betonskih zgrada. U knjizi Montažni građevinski objekti, (Ed. B. Žeželj, A.Flašar) Ekonomika, Beograd, str. 117-167. (9 autorskih tabaka)
2.	Folić, R. (1983): Statika konstrukcija - Zbirka rešenih zadataka. FTN IIG, Novi Sad, str. 1-486. II izdanje (1987). III izdanje Građevinska knjiga, Beograd (1991).
3.	Folić, R., Tatomirović, M. (1999): Spregnute betonske konstrukcije-I deo. Građevinski kalendar, 1999. str. 289-386; II deo, Građevinski kalendar, 2001, str. 217-290
4.	Folić, R. (1991): Classification of damage and its causes as applied to precast concrete buildings. Material and Structures. RILEM - Journal, Chapman & Hall, Vol. 24, pp. 276-285.
5.	Folić, R., Ivanov, D. (1991): In situ behaviour of concrete structures deterioration of concrete, influence of earthquake and a fire in Diagnosis of Concrete Structures - State of the Art Report, Ed. by T. Javor, Expertcentrum, Bratislava, pp. 135-146.
6.	Folić, R. (1985): Analiza aktivne širine ploče i graničnih stanja kod elemenata od armiranog i prethodno napregnutog betona. FTN IIG Posebno izdanje 7, Novi Sad, str. 1-193.
7.	Folić, R., Radonjanin, V. (1998): Experimental research on polymer modified concrete, Materials Journal, ACI, VOL. 95 No. 4, July/August 1998, pp.463-470.
8.	Folić, R. (1991): A classification of damage to concrete buildings in earthquakes, illustrated by examples. Material and Structures, RILEM - Journal, Chapman & Hall, Vol. 24, pp. 286-292.
9.	Javor, T., Naus, D.J., Folić, R., Zakić, B.: (1992): Diagnosis of Concrete Structures. RILEM - Journal Materials and Structures, Chapman & Hall, Vol. 25, pp. 437-440.
10.	Folić, R., Radonjanin, V. (1998): Experimental research on polymer modified concrete, Materials Journal, ACI, VOL. 95 No. 4, July/August 1998, pp.463-470.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	11			
Total of SCI(SSCI) list papers :	8			
Current projects :	Domestic :	2	International :	1

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Gilezan K. Silvia
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.04.1984
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2005	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	1993	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1988	Faculty of Mathematics - Beograd	Mathematical Sciences
Bachelor's thesis	1981	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	GH404	Mathematical Statistics	(G00) Civil Engineering, Master Academic Studies (G00) Civil Engineering, Undergraduate Academic Studies
2.	GI303B	Probability and Mathematical Statistics	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
3.	IAM003	Formal Mathematical Models	(F10) Engineering Animation, Undergraduate Academic Studies
4.	S011	Mathematics 1	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
5.	Z203	Statistical Methods	(Z01) Safety at Work, Undergraduate Academic Studies (ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
6.	IM1012	Probability and Statistics	(I10) Industrial Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies
7.	0M506	Semantics of Programming Languages	(OM1) Mathematics in Engineering, Master Academic Studies
8.	0M507	Logic in Computer Science	(OM1) Mathematics in Engineering, Master Academic Studies
9.	0M513	Introduction to Functional Programming Languages	(OM1) Mathematics in Engineering, Master Academic Studies
10.	0ML506	Semantics of programming languages	(OM1) Mathematics in Engineering, Master Academic Studies
11.	0ML507	Logic in computer science	(OM1) Mathematics in Engineering, Master Academic Studies
12.	0ML513	Introduction to Functional Programming Languages	(OM1) Mathematics in Engineering, Master Academic Studies
13.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
14.	GH404	Mathematical Statistics	(G00) Civil Engineering, Master Academic Studies (G00) Civil Engineering, Undergraduate Academic Studies
15.	SD0M06	Logic in Computer Science	(GI0) Geodesy and Geomatics, Specialised Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
16.	MPK001	Statistical and Numerical Methods	(MPK) Inženjerstvo tretmana i zaštite voda - TEMPUS(uneti naziv na engledskom), Master Academic Studies
17.	D0M05	Semantics of Programming Languages	(OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	D0M06	Logic in Computer Science	(OM1) Mathematics in Engineering, Doctoral Academic Studies
19.	D0M11	Models of Computation	(OM1) Mathematics in Engineering, Doctoral Academic Studies
20.	D0M12	Introduction to Functional Programming Languages	(OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	D0M13	Theory of Mobile Processes	(OM1) Mathematics in Engineering, Doctoral Academic Studies
22.	D0M14	Process Algebra	(OM1) Mathematics in Engineering, Doctoral Academic Studies
23.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
24.	AID05	Theory of Mobile Processes	(F20) Engineering Animation, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	"Inhabitation in lambda calculus with intersection and union types", Journal of Logic and Computation 6 (1993) 671-685, Oxford University Press
2.	"Characterizing strong normalization in the Curien-Herbelin symmetric lambda calculus: extending the Coppo-Dezani heritage, (sa D.Dougherty, P.Lescanne) Theoretical Computer Science 2007
3.	"Separating Points by Parallel Hyperplanes " (sa J. Pantovic, J. Zunic), IEEE Transactions of Neural Networks 18(5) (2007) 1356-1363
4.	"Lambda terms for natural deduction, sequent calculus and cut elimination" (sa H.P.Barendregt), Journal of Functional Programming, 10 (2000) 121-134.
5.	"Confluence of untyped lambda calculus via simple types" (with V.Kuncak), ICTCS"01, Lecture Notes in Computer Science 2201, 38-49.
6.	"Full intersection types and topologies in lambda calculus", Journal of Computer and System Sciences, 62 (2001) 1-14.
7.	"Behavioural inverse limit lambda models" (sa M. Dezani-Ciancaglini, S. Likavec), Theoretical Computer Science Vol 316/1-3 (2004) 49-74.
8.	"Strong normalization of the classical sequent calculus" (sa D. Dougherty, P. Lescanne, S.Likavec), Lecture Notes in Computer Science 3835 (2005) 169-183.
9.	"Security types for dynamic web data" (sa M.Dezani-Ciancaglini, J. Pantovic), Trustworthy Global Computing, TGC"06, Lecture Notes in Computer Science 4661 (2007) 263-280.
10.	Zbirka rešenih zadataka iz statistike (sa Z.Lužanin, Z.Ovcin, Lj.Nedović, T.Grbić, B.Mihailović) 2005

Summary data for teacher's scientific or art and professional activity:

Quotation total :	325

Total of SCI(SSCI) list papers :	17			
Current projects :	Domestic :	2	International :	4

Science, arts and professional qualifications

Name and last name:	Grbić P. Tatjana
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.12.1995
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	2008	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1999	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1993	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E135	Probability, Statistics and Stochastic Processes	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E212	Mathematical Analysis 1	(E20) Computing and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	GI303B	Probability and Mathematical Statistics	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
4.	Z104	Mathematics 1	(Z01) Safety at Work, Undergraduate Academic Studies (ZC0) Clean Energy Technologies, Undergraduate Academic Studies (ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
5.	Z203	Statistical Methods	(Z01) Safety at Work, Undergraduate Academic Studies (ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
6.	BMI91	Mathematics 1	(BM0) Biomedical Engineering, Undergraduate Academic Studies
7.	BMI92	Mathematics 2	(BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	IA001	Algebra	(F10) Engineering Animation, Undergraduate Academic Studies
9.	IA002	Mathematical Analysis	(F10) Engineering Animation, Undergraduate Academic Studies
10.	P216	Numerical Analysis	(P00) Production Engineering, Undergraduate Academic Studies
11.	S01361	Business decision making	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
12.	0M505	Stochastic Processes	(OM1) Mathematics in Engineering, Master Academic Studies
13.	0ML505	Stochastic Processes	(OM1) Mathematics in Engineering, Master Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
14.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
15.	ZR503	Statistical Advanced Models	(Z01) Safety at Work, Master Academic Studies
16.	MPK001	Statistical and Numerical Methods	(MPK) Inženjerstvo tretmana i zaštite voda - TEMPUS(uneti naziv na engledskom), Master Academic Studies
17.	SDOM30	Probability, Statistics and Theory of Engineering Experiment	(Z00) Environmental Engineering, Specialised Academic Studies
18.	D0M01	Functional Analysis 1	(OM1) Mathematics in Engineering, Doctoral Academic Studies
19.	D0M07	Mathematical Foundations of Fuzzy Systems	(OM1) Mathematics in Engineering, Doctoral Academic Studies
20.	D0M19	Functional Analysis 2	(OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	D0M21	Fuzzy Systems and Their Applications	(OM1) Mathematics in Engineering, Doctoral Academic Studies
22.	D0M50	Fuzzy Measures and Integrals	(OM1) Mathematics in Engineering, Doctoral Academic Studies
23.	D0M51	Large Deviations Principles	(OM1) Mathematics in Engineering, Doctoral Academic Studies
24.	D0M52	Random Sets	(OM1) Mathematics in Engineering, Doctoral Academic Studies
25.	D0M53	Statistical Processing of Fuzzy Data	(OM1) Mathematics in Engineering, Doctoral Academic Studies
26.	DOM30	Probability, Statistics and Theory of Engineering Experiment	(M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
27.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Ralević, N.M., Nedović, Lj., Grbić, T., :"The pseudo-linear superposition principle for nonlinear partial differential equations and representation of their solution by the pseudo-integral", Fuzzy sets and systems, 2005, No.155, 89-101

Representative refferences (minimum 5, not more than 10)

2.	Nedović, Lj., Ralević, N. M., Grbić, T.,: " Large deviation principle with generated pseudo measures", Fuzzy sets and systems, 2005, No. 105, 65-76
3.	Štajner-Papuga, I., Grbić, T., Dankova, M., "Pseud-Riemann-Stieltjes integral ", Information Sciences 179, 2009, 2923-2933
4.	M. Štrboja, T. Grbić, I. Štajner-Papuga, G. Grujić, S. Medić, Jensen and Chebyshev inequalities for pseudo-integrals of set-valued functions, FSS, doi:10.101016/j.fss.2012.07.011
5.	Grbić, T., Pap, E., : "Generalization Of Portamnteau theorem with respect to the pseudo-weak convergence of random closed sets", Theory of Probability and its Applications, 2009, 97-115
6.	T. Grbić, I. Štajner-Papuga, M. Štrboja, an approach to pseudo-integration of set-valued functions, Information Sciences 181 (2011), 2278-2292
7.	T. Grbić, S. Medić, I. Štajner-Papuga, T. Došenović, Inequalities of Jensen and Chebyshev type for interval-valued measures based on pseudo-integrals. In: Intelligent Systems: Models and Applications, E. Pap, Ed., Springer-Verlag, pp 23-41, DOI:10.1007/978-3-642-33959-2_2
8.	Štajner-Papuga, I., Grbić, T., Dankova, M., "Riemann-Stieltjes type integral based on generated pseudo-operations", NS J. Mathe., Vol. 36, No. 2, 111-124
9.	Nedović, Lj., Grbić, T., "The pseudo-probability", Journal of Electrical Engineering, 2002, Vol. 53, No. 12/s, 27-30
10.	Mihailović, B., Nedović, T., Grbić, T., "The induced Sugeno integral-based operator w.r.t. bi-fuzzy measures", Journal of Electrical engineering, Vol. 54, No. 12/s, 76-79

Summary data for teacher's scientific or art and professional activity:

Quotation total :	17			
Total of SCI(SSCI) list papers :	6			
Current projects :	Domestic :	2	International :	0

Science, arts and professional qualifications

Name and last name:	Jorgovanović Đ. Nikola
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.11.1999
Scientific or art field:	Automatic Control and System Engineering

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	1996	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1992	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	AU42	Technical Equipment for Control Systems	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	AU43	Fundamentals of Biomedical Engineering	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E20) Computing and Control Engineering, Undergraduate Academic Studies
3.	AU47	DSP Applications in Control Systems	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	AU49	Methods of Medical Image Forming and Analysis	(E20) Computing and Control Engineering, Undergraduate Academic Studies
5.	AUN43	Biomedical Engineering Technologies	(E20) Computing and Control Engineering, Undergraduate Academic Studies
6.	GI006	Satellite Navigation and Navigation Service	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
7.	GI206	Systems and Signals in Geomatics	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
8.	Z411	Fundamentals of Instrumentation and Control	(Z20) Environmental Engineering, Undergraduate Academic Studies
9.	BM119A	The application of geoinformation technologies and systems in medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
10.	BMI112	Biomedical engineering in sport physiology	(BM0) Biomedical Engineering, Undergraduate Academic Studies
11.	BMI114	Neural Prosthesis	(BM0) Biomedical Engineering, Undergraduate Academic Studies
12.	BMI120	Equipment and systems for helping the elderly, ill and disabled	(BM0) Biomedical Engineering, Undergraduate Academic Studies
13.	BMI122	Neurorehabilitation	(BM0) Biomedical Engineering, Undergraduate Academic Studies
14.	BMI124	System Modeling and Simulation	(BM0) Biomedical Engineering, Undergraduate Academic Studies
15.	E2314	Microprocessor Based Control Devices	(E20) Computing and Control Engineering, Undergraduate Academic Studies
16.	SEAU05	DSP Applications in Control Systems	(SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
17.	SEAU08	Microprocessor Based Control Devices	(SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
18.	AU504	Movement Control	(E20) Computing and Control Engineering, Master Academic Studies
19.	AU505	Neural Prostheses	(E20) Computing and Control Engineering, Master Academic Studies
20.	AU507	Principles of Biomedical Engineering	(E20) Computing and Control Engineering, Master Academic Studies
21.	BMIM3B	Soft Sensors	(BM0) Biomedical Engineering, Master Academic Studies
22.	BMIM3C	Functional Electrical Therapy	(BM0) Biomedical Engineering, Master Academic Studies
23.	BMIM5C	Brain Computer Interface	(BM0) Biomedical Engineering, Master Academic Studies
24.	E2532	Automatic Control Systems Project Management	(E20) Computing and Control Engineering, Master Academic Studies
25.	SEAM04	Soft Sensors	(SE0) Software Engineering and Information Technologies, Master Academic Studies
26.	DAU008	Selected Chapters in Signal Processing in Biomedical Engineering	(E20) Computing and Control Engineering, Doctoral Academic Studies
27.	DE518	Brain Computer Interface Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
28.	DGI016	Selected Chapters in Systems and Signals	(GI0) Geodesy and Geomatics, Doctoral Academic Studies
29.	DAU009	Selected Chapters in Biomedical Instrumentation and Telemetry	(E20) Computing and Control Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Popović Maneski L., Jorgovanović N., Ilić V., Došen S., Keller T., Popović B. M., Popović B. D.: Electrical stimulation for the suppression of pathological tremor, MED BIOL ENG COMPUT, 2011, Vol. 49, No 10, pp. 1187-1193, ISSN 0140-0118
2. Popović-Bijelić A., Bijelić G., Jorgovanović N., Bojanić D., Popović M., Popović D.: Multi-field surface electrode for selective electrical stimulation , Artificial Organs, 2005, Vol. 29, No 6, pp. 448-452, ISSN 0160-564X
3. Malešević N., Popović Maneski L., Ilić V., Jorgovanović N., Bijelić V., Keller T., Popović D.: A multi-pad electrode based functional electrical stimulation system for restoration of grasp, J NEUROENG REHABIL, 2012, Vol. 9, No 66, ISSN 1743-0003
4. Čongradac V., Jorgovanović N., Stanišić D.: Assessing the energy consumption for heating and cooling in hospitals, Energy and Buildings, 2012, Vol. 48, pp. 146-154, ISSN 0378-7788
5. Bojanić D., Petrovački-Balj B., Jorgovanović N., Ilić V.: Quantification of dynamic EMG patterns during gait in children with cerebral palsy, Journal of Neuroscience Methods, 2011, No 198, pp. 325-331, ISSN 0165-0270
6. Krasnik R., Mikov A., Ilić V., Jorgovanović N., Demeši Drljan Č.: The use of Dynamic Electromyography in Gait Analysis, HealthMED, 2011, Vol. 5, No 4, pp. 888-893, ISSN 1840-2291
7. Jorgovanović N., Došen S., Petrović R.: Novel Electronic Stimulator for Functional Electrical Therapy, Journal of Automatic Control, 2005, Vol. 15, No 5, pp. 27-30, UDK: 621.3-52
8. Jorgovanović N.: Upravljanje funkcionalnom električnom stimulacijom za neurorehabilitaciju pokreta, Novi Sad, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, 2003
9. Jorgovanović N.: NEURON - neuronski računarski sistem, Novi Sad, Univerzitet u Novom Sadu, Fakultet tehničkih nauka, 1996
10. Govedarica M., Petrovački D., Ristić A., Jovanović D., Popov S., Ristić A., Pajić V., Sladić D., Vrtunski M., Badnjarević I., Alargić I., Jorgovanović N., Tepić Ž., Bojanić D., Stanišić D., Ilić V., Pržulj Đ.: Geografski informacioni sistem za potrebe Ministarstva zaštite životne sredine, 2010

Summary data for teacher's scientific or art and professional activity:

Quotation total :	81			
Total of SCI(SSCI) list papers :	6			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Juhas T. Anamarija
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.11.1990
Scientific or art field:	Theoretical Electrotechnics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	1994	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Bachelor's thesis	1990	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE300	Electromagnetics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EOS01	Fundamental electrical engineering	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
3.	I087	Electrical Engineering in Industrial Engineering	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
4.	M112	Electrical Engineering and Electric Machines	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies (S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
5.	Z107	Electrical Engineering, Environment and Protection	(Z01) Safety at Work, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
6.	II1007	Fundamental electrical engineering	(I10) Industrial Engineering, Undergraduate Academic Studies (ZC0) Clean Energy Technologies, Undergraduate Academic Studies
7.	URZP12	Introduction to electrical engineering	(ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
8.	DE208S	Selected Chapters on Electromagnetic Compatibility	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE408S	Selected chapters inl electromagnetics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	EE543	Electro Magnetic Energy	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	H799	Fieldbuses and protocols	(H00) Mechatronics, Master Academic Studies
12.	DE208	Selected Chapters on Electromagnetic Compatibility	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE408	Selected Chapters in Electromagnetics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. A. Juhas, L. A. Novak, “Comments on “Class-E, Class-C, and Class-F power amplifier based upon a finite number of harmonics”,” IEEE Transactions of Microwave Theory and Techniques, vol. 57, no. 6, pp. 1623-1625, June 2009. ISSN 0018-9480.
2. A. Juhas, L. A. Novak,S Kostić, ”Signals with Flattened Extrema in Balance Power Analysis of HFHPTA: Theory and Applications”, IEEE Transactions on Broadcasting, vol. 47, no. 1, pp.38-45, 2001. ISSN 0018-9316
3. S. Kostić, L. A. Novak, A. Juhas, ”Increasing Efficiency and Output Power of HFHPTA by Injection of Two Harmonics”, IEEE Transactions on Broadcasting, vol. 47, no. 1, pp.32-37, 2001. ISSN 0018-9316

Representative refferences (minimum 5, not more than 10)	
4.	D. Herceg, A. Juhas, M. Milutinov,." A design of a four square coil system for a biomagnetic experiment," Facta universitatis - series: Electronics and Energetics, 2009, Vol. 22, No 3, pp. 285-292. ISSN 0353-3670
5.	L. A. Novak, A. Juhas, "O broju maksimuma u dvočlanim složenoperiodičnim funkcijama: krive katastrofa", Elektrotehnika, br. 1-2, pp. E7-E10, 1994.
6.	A. Juhas, M. Milutinov, M. Prša, "Magnetic field of multi-line power system", Scientific bulletin of the "Politehnica" University of Timisoara, Proceedings of the 7th Int. Power Systems Conf., Timisoara, Romania, 22-23 Nov. 2007, Tom 52, pp. 319-328. ISSN 1582-7194.
7.	M. Milutinov, A. Juhas, M. Prša, "Electric and magnetic field in vicinity of overhead multi-line power system", Acta Electrotehnica, Proceedings of the 2nd Int.l Conf. on Modern Power Systems MPS 2008, Cluj-Napoca, Romania, 12-14 Nov.r 2008, pp. 313-316. ISSN 1841-3323.
8.	A. Juhas, M. Milutinov, N. Pekarić-Nađ, "Iskustva u primeni nacionalnih pravilnika o nejonizujućim zračenjima", Telekomunikacije, No 7, pp. 70-77, 2011. ISSN 1820-7782
9.	A. Juhas, M. Milutinov, D. Herceg, M. Prša, N. Pekarić-Nađ, "Uređaj za generisanje homogenog magnetskog polja kontrolisanog intenziteta za potrebe biomagnetskih ekspreimenata",Tehničko rešenje, decembar 2010.
10.	A. Juhas, N. Pekarić-Nađ, D. Herceg, " Estimation of Human Exposure to Combined RF EM Field of Multiple Antennas," Proceedings of International PhD Seminar on computational electromagnetics and optimization in electrical engineering – CEMOEE 2010, Sofia, Bulgaria, 10-13 Sep., 2010, pp. 27-31, ISBN 978-954-438-856-0

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	5			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	1	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Katić A. Vladimir
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1978
Scientific or art field:	Power Electronics, Machines and Facilities

Academic carieer	Year	Institution	Field
Academic title election:	2002	Faculty of Technical Sciences - Novi Sad	Power Electronics, Machines and Facilities
PhD thesis	1991	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Magister thesis	1981	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Bachelor's thesis	1978	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE305	Power Electronics 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE308	Power Electronics 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	Z107	Electrical Engineering, Environment and Protection	(Z01) Safety at Work, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
4.	EE0406	Electric Power Quality	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EE431	Renewable Sources and Small Power Plants	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EZ300	Clean Electrical Energy Sources	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies
7.	EZ400	Clean Energy Sources Design	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies
8.	DE209S	Energy Converters in Renewable Energy Sources	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE413S	Integration of Distributed Energy Resources	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	DE505S	Power Quality in Distribution Networks	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	DE506S	Renewable Electrical Energy Sources	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	DE509S	Effects of Power Converters on Network and Environment	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	EE406	Electric Power Quality	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	EE509	Market and Deregulation in Electric Power Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	S0I51Ž	Electrical Substation and Electric Traction	(S00) Traffic and Transport Engineering, Master Academic Studies
16.	EE544	Renewable energy sources	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	EE564	Distributed Energy Resources	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
18.	ZCM02	Clean technologies for electrical vehicles	(ZC0) Clean Energy Technologies, Master Academic Studies
19.	ZCM08	Renewable and Distributed Electrical Energy Sources	(ZC0) Clean Energy Technologies, Master Academic Studies
20.	DE108	FACTS Devices and Electric Power Quality	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
21.	DE113	Application of Power Electronics in Power Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
22.	DE209	Energy Converters in Renewable Power Sources	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
23.	DE413	Integration of Distributed Energy Resources	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
24.	DE505	Power Quality in Distribution Networks	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
25.	DE506	Renewable Electrical Energy Sources	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
26.	DE509	Effects of Power Converters on Network and Environment	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
27.	SID04	Current State in the Field	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies
28.	MSID04	Present State in the Field	(M40) Technical Mechanics, Doctoral Academic Studies
29.	SID04	Present State in the Field	(A00) Architecture, Doctoral Academic Studies (AS0) Scenic Design, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Vladimir Katić: "Kvalitet električne energije – viši harmonici", Univerzitet u Novom Sadu - Fakultet tehničkih nauka, Edicija Tehničke nauke - Monografije, Br. 6, Novi Sad, 2002., ISBN 86-80249-57-2.
2. Vladimir Katić: "Energetska elektronika - Zbirka rešenih zadataka", Univerzitet u Novom Sadu-Fakultet tehničkih nauka, Edicija Univerzitetski udžbenik, Broj 66, Novi Sad, 1998, tiraž 500 primeraka, strana 430, Pomoćni udžbenik, ISBN 86-499-0017-8.
3. Vladimir Katić, Darko Marčetić, Dušan Graovac: "Energetska elektronika – Praktikum laboratorijskih vežbi", Univerzitet u Novom Sadu-Fakultet tehničkih nauka, Edicija Univerzitetski udžbenik, Broj 124, Novi Sad, 2000, tiraž 300 primeraka, strana 85, Pomoćni udžbenik, ISBN 86-499-0081-X.
4. Vladimir Katić, Vlado Porobić, Darko Marčetić: “Primena mikroprocesora u energetici – Praktikum laboratorijskih vežbi“, Univerzitet u Novom Sadu-Fakultet tehničkih nauka, Edicija: Tehničke nauke - Udžbenici, Broj 149, Novi Sad, Dec. 2006, tiraž 300 primeraka, strana 122, Pomoćni udžbenik, ISBN 86-7892-013-0.
5. Vladimir Katić: „Upravljanje energetskim pretvaračima“, Fakultet tehničkih nauka – WUS, Novi Sad, 2006, tiraž 20 primeraka, str.175, Skripta.
6. Dušan Graovac, Vladimir Katić, Alfred Rufer: "Power Quality Problems Compensation with Universal Power Quality Conditioning System", IEEE Transaction on Power Delivery, USA, ISSN 0885-8977, Vol.22, No.2, April 2007, pp.968-976.
7. Vladimir Katić, Jovan Knežević, Dušan Graovac: "Application-Oriented Comparison of the Methods for AC/DC Converter Harmonics Analysis", IEEE Transaction on Industrial Electronics, USA, ISSN 0278-0046, Vol.50, No.6, December 2003, pp.1100-1108.
8. Vladimir Katić, Dušan Graovac: “A Method for PWM Rectifier Line Side Filter Optimization in Transient and Steady States”, IEEE Transaction on Power Electronics, USA, ISSN 0885-8993, Vol.17, No.3, May 2002, pp.342-352.
9. Dušan Graovac, Vladimir Katić: “On-Line Control Of Current Source Type Active Rectifier Using Transfer Function Approach”, IEEE Transaction on Industrial Electronics, USA, ISSN 0278-0046, Vol.48, No.3, June 2001, pp.526-535.
10. Vladimir Katić: ”Modern Power Electronics Technologies for Wind Power Plants”, Invited Paper, Electronics/Elektronika, Banja Luka (BIH-R.Srpska), Vol.10, No.2, Dec.2006, YU ISSN 1450-5843, pp.3-9.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	122
Total of SCI(SSCI) list papers :	19

Current projects :	Domestic :	5	International :	1

Science, arts and professional qualifications

Name and last name:	Katić A. Nenad
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Electroenergetics
PhD thesis	2002	Faculty of Technical Sciences - Novi Sad	Electroenergetics
Magister thesis	1991	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1982	Faculty of Technical Sciences - Novi Sad	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EOS35	Tržište električne energije	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
2.	EE0406	Electric Power Quality	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	ESI006	Introduction to critical mission software for power grids	(ES0) Power Software Engineering, Undergraduate Academic Studies
4.	ESI012	Smart Grid Networks	(ES0) Power Software Engineering, Undergraduate Academic Studies
5.	EZ301	Cost-effective and energy-efficient electrical systems	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies
6.	DE107S	Decision-Making Optimization	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE312S	Power Market and Regulation	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DE405S	Smart Grid Networks	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE406S	Electric Power Industry in the Free Market Economy	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	DE508S	Power System Economics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EE406	Electric Power Quality	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	EE509	Market and Deregulation in Electric Power Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	EE510	Economic Methods in Electric Power Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	EE544	Renewable energy sources	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	ZCM02	Clean technologies for electrical vehicles	(ZC0) Clean Energy Technologies, Master Academic Studies
16.	ZCM05	Electric Power Market	(ZC0) Clean Energy Technologies, Master Academic Studies
17.	ZCM08	Renewable and Distributed Electrical Energy Sources	(ZC0) Clean Energy Technologies, Master Academic Studies
18.	DE107	Decision-Making and Optimization	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
19.	DE312	Electricity Markets and Regulation	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
20.	DE405	Smart Grid Networks	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
21.	DE406	Electric Power Industry in the Free Market Economy	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
22.	DE508	Power System Economics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Katić N., Savić M.: Autori: Nenad Katic, Milan Savic Naziv: Technical and economical optimisation of overhead power distribution line lightning protection , IEE Proc.-Gener.Transm.Distrib, 1998, No 3, pp. 239-244
2.	Katić V., Dumnić B., Katić N., Milićević D., Grabić S.: Potentials and Market Prospective of Wind Energy in Vojvodina, Thermal Science - International Scientific Journal, 2012, Vol. 16, ISSN 0354-9836, UDK: 621
3.	Strezoski V., Katić N., Janjić D.: Voltage Control Integrated in Distribution Management System, Electrical Power System Research, 2001, No 60, pp. 85-97
4.	Katić N.: Yugoslavia Develops a New Distribution Management System , Utility Automation, USA, a PennWell Publication, 1996, pp. 30-35
5.	Katić V., Dumnić B., Čorba Z., Milićević D., Katić N.: Potentials of Renewable Energy Market in Serbia – Case of Wind and Solar Energy, 8. IEEE International Conference on European Energy Market – EEM, Zagreb, 25-27 Maj, 2011, pp. 785-790, ISBN 978-1-61284-284-4
6.	Katić N., Marijanović V., Stefani I.: Smart Grid Solutions in Distribution Networks - Cost Benefit Analysis, 4. China International Conference on Electricity Distribution ICED, Nanjing, 12-16 Septembar, 2010, pp. 1-6
7.	Katić N.: PROFITABILITY OF SMART GRID SOLUTION APPLICATION IN DISTRIBUTION NETWORK, 7. Mediterranean Conference and Exibition on Power Generation, Transmission, Distribution and Energy Conversion, Agia Napa, 7-10 Novembar, 2010, pp. 1-6
8.	Katić N., Strezoski V., Popović D.: Business Benefits of DMS Software Application in Competitive Distribution, 17th International Conference on Electricity Distribution CIRED
9.	Katić N., Strezoski V., Popović D.: DMS Software Applications a Powerful Tool for the New Challenges in Deregulated Power Distribution, Balkan Power Conference
10.	Katić N., Strezoski V., Katić V.: Introducing the Management and ECTS in Electrical Power Engineering Education, ISIRR

Summary data for teacher's scientific or art and professional activity:

Quotation total :	16			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	3	International :	14

Science, arts and professional qualifications

Name and last name:	Kostić Z. Marko
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.10.1999
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	2004	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	2001	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1999	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E121	Mathematical Analysis 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E135B	Mathematical Analysis 2	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
3.	E212	Mathematical Analysis 1	(E20) Computing and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	EOS07	Mathematics 2	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
5.	F101	Mathematics	(F00) Graphic Engineering and Design, Undergraduate Academic Studies
6.	GI107	Mathematical Analysis 1	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
7.	M106	Mathematics 2	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies
8.	M4202	Applied Mathematical Analysis	(M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
9.	ISIT06	Matematika 2	(SII) Software and Information Technologies (Inđija), Undergraduate Professional Studies
10.	0M501	Functional Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
11.	0ML501	Functional Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
12.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
13.	Z506	20BAdvanced Course in Mathematics 1	(ZP1) Disaster Risk Management and Fire Safety, Master Academic Studies (Z20) Environmental Engineering, Master Academic Studies
14.	Z506	Viši kurs matematike 1(uneti naziv na engleskom)	(Z20) Environmental Engineering, Master Academic Studies
15.	D0M01	Functional Analysis 1	(OM1) Mathematics in Engineering, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
16.	D0M19	Functional Analysis 2	(OM1) Mathematics in Engineering, Doctoral Academic Studies
17.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Kostić, Marko, Distribution cosine functions. Taiwanese J. Math. 10 (2006), no. 3, 739--775.
2. Kostić Marko,On analytic integrated semigroups. Novi Sad J. Math. 35 (2005), no. 1, 127--135.
3. Kostić Marko,Convoluted C-cosine functions and convoluted C-semigroups. Bull. Cl. Sci. Math. Nat. Sci. Math. No. 28 (2003), 75--92.
4. Kostić Marko, On a class of quasi-distribution semigroups, Novi Sad J. Math 36 (2), 137-152
5. M. Kostić, P. J. Miana, Relations between distribution cosine functions and almost-distribution cosine functions, Taiwanese Journal of Mathematics 11 (2007), 531--543.
6. M. Kostić, S. Pilipović, Global convoluted semigroups, accepted in Math. Nachr.
7. M. Kostić, S. Pilipović: Convoluted C-cosine functions and semigroups. Relations with ultradistribution and hyperfunction sines, accepted in J. Math. Anal. Appl.
8. M. Kostić: Complex powers of operators, accepted in Publications De"l Institute Mathematique
9. M. Kostić: C-Distribution semigroups, Studia Math. 185 (2008), 201--217.
10. M. Kostić: Convoluted operator families and abstract Cauchy problems, accepted in Kragujevac Journal of Mathematics

Summary data for teacher's scientific or art and professional activity:

Quotation total :	32			
Total of SCI(SSCI) list papers :	15			
Current projects :	Domestic :	1	International :	0

Science, arts and professional qualifications

Name and last name:	Kovačević M. Ilija
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1972
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	1990	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	1979	Faculty of Mathematics - Beograd	Mathematical Sciences
Magister thesis	1975	Faculty of Mathematics - Beograd	Mathematical Sciences
Bachelor's thesis	1971	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E212	Mathematical Analysis 1	(E20) Computing and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	EE204	Selected Chapters in Mathematics	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	E102	Mathematical Analysis 1	(ES0) Power Software Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	E102A	Mathematical Analysis 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	IM1423	Financial Mathematics	(I20) Engineering Management, Undergraduate Academic Studies
6.	0M501	Functional Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
7.	0ML501	Functional Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
8.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
9.	I004/S	Statistical Quantitative Methods	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
10.	GS012	Selected Chapters in Mathematics	(G10) Energy Efficiency in Buildings, Specialised Academic Studies
11.	MPK001	Statistical and Numerical Methods	(MPK) Inženjerstvo tretmana i zaštite voda - TEMPUS(uneti naziv na engledskom), Master Academic Studies
12.	SDOM30	Probability, Statistics and Theory of Engineering Experiment	(Z00) Environmental Engineering, Specialised Academic Studies
13.	D0M01	Functional Analysis 1	(OM1) Mathematics in Engineering, Doctoral Academic Studies
14.	D0M19	Functional Analysis 2	(OM1) Mathematics in Engineering, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
15.	DOM30	Probability, Statistics and Theory of Engineering Experiment	(M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
16.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	I.Kovačević, Some properties of Mn subsets and almost closed mappings, Indian J.pure appl. Math., 27(9), 1996., 875-881.
2.	I.Kovačević, On almost closed mapping, paracompactness and partial equivalence relatuions, Indian Journal of Pure and Applied mathematics,25(9), 1994., 949-954.
3.	I.Kovačević, On alfa-Hausdorff subsets, almost closed mappings and almost upper semicontinuous decomposition, Indian Jurnal of Pure and Applied mathematics 20 (4) 1989., 334-340.
4.	Kiurski J., Oros I., Ralević N., Kovačević I., Adamović (Majkić) S., Krstić J., Čomić L.: Cluster and principal component analysis in the assessment of fountain solution quality, Carpathian Journal of Earth and Environmental Sciences, 2013, Vol. 8, No 1, pp. 19-23, ISSN 1842-4090
5.	N. Adžić, I. Kovačević, V. Marić, V. Ungar, Matematička analiza 2, FTN (Edicija tehničke nauke-udžbenici), Novi Sad, 1996., 1-299.
6.	I. Kovačević, N. Ralević, Funkcionalna analiza,FTN (Edicija tehničke nauke-udžbenici), Novi Sad, (Ponovljeno i dopunjeno izdanje)2004., 1-203.
7.	I. Kovačević, N. Ralević, B.Carić,V.Marić,M.Novković,S.Medić,Matematička analiza 1- uvodni pojmovi i granični procesi ,(Ponovljeno i dopunjeno izdanje), FTN (Edicija tehničke nauke-udžbenici) Novi Sad, 2012,1-155.
8.	I.Kovačević, V.Marić, M.Novković, B.Carić, N.Ralević,S.Medić, Matematička analiza 1 - diferencijalni i integralni račun, obične diferencijalne jednačine (Ponovljeno i dopunjeno izdanje),FTN (Edicija tehničke nauke-udžbenici), Novi Sad,2012., 1-280.
9.	I. Kovačević, Algebra, Naučna knjiga, Beograd, 1990., 1-116.
10.	M.Novković,B.Carić,I.Kovačević, Zbirka rešenih zadataka iz verovatnoće i statistike, FTN (Edicija tehničke nauke-udžbenici), Novi Sad, (Ponovljeno i dopunjeno izdanje) 2012., 1-169.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	28			
Total of SCI(SSCI) list papers :	7			
Current projects :	Domestic :	3	International :	2

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Kozmidis-Luburić F. Uranija
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1975
Scientific or art field:	Physics

Academic carieer	Year	Institution	Field
Academic title election:	2000	Faculty of Technical Sciences - Novi Sad	Physics
PhD thesis	1988	Faculty of Sciences - Novi Sad	Physical Science
Magister thesis	1986	Faculty of Physics - Beograd	Physical Science
Bachelor's thesis	1974	Faculty of Sciences - Novi Sad	Physical Science

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E103	Physics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	EOS06	Physics	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
3.	S014	Physics	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	A401	Architectural Physics	(A00) Architecture, Undergraduate Academic Studies
5.	DZ01FS	Selected Chapters in Physics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
6.	DZ01F	Selected Chapters in Physics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	U.F.Kozmidis-Luburić and B.S.Tošić, "NON-LINEAR OPTICAL EFFECTS AND THE DIELECTRIC PROPERTIES OF CRYSTALS", Physica B 112, 331(1982)
2.	D.Mirjanić, U.F.Kozmidis-Luburić, M.M.Marinković and B.S.Tosić, "COMBINED EFFECT OF EXCITION-EXCITION AND EXCITION-PHONON INTERACTION ON CRYSTALS DIELECTIC PROPERTIES", Can. J. Phys. 60, 1838(1982)

Representative refferences (minimum 5, not more than 10)	
3.	U.F. Kozmidis-Luburić and B.S. Tošić, "KINEMATICAL INTERACTION OF OPTICAL EXCITATION AND CONSEQUENCES", Physica A 153, 266(1988)
4.	LJ. Budinski-Petković and U.Kozmidis-Luburić, "J AMING CONFIGURATIONS FOR IRREVERSIBLE DEPOSITION ON A SQUARE LATTICE", Psysica A 236, 211(1997)
5.	Lj. Budinski-Petković and U. Kozmidis-Luburić, "RANDOM SEQUENTIAL ADSORPTION ON A TRIANGULAR LATTICE", Psysical Review E 56, 6904(1997)
6.	V.Sajfert,B.S.Tošić,M.Marinković and U.F.KOZMIDIS-LUBURIĆ,"SURFACE DEFORMATION IN FILMS AND EXCITON CONCETRATION", Physica A 166, 430(1990)
7.	B.S.Tošić, Lj.Mašković, U. F. KOZMIDIS-LUBURIĆ, V.Jovovic and G. Davidovic, "Transition FROM THE DEFORMED STRUCTURE TO THE STATISTICALLY EQUIVALENT IDEAL STRUCTURE AND AN ESTIMATE OF THE BASIS PHYSICAL CHARACTERISTICS OF THE DEFORMED STRUCTURE", Physica A 216, 478(1995)
8.	V.Jovović, G.Davidović, B.S.Tošić,Lj.Mašković, U.F.KOZMIDIS-LUBURIĆ and D.Ćirić,"MASS DISTRIBUTION IN HETEROGENEOUS STRUCTURES", Physica A 223,263(1996)
9.	Lj. Budinski-Petković and U. KOZMIDIS-LUBURIĆ, "IRREVERSIBLE DEPOSITION ON DISORDERED SUBSTRATES: LINE SEGMENTS ON A SQUARE LATTICE", Physica A 245,261(1997)
10.	Lj. Budinski-Petković and U. KOZMIDIS-LUBURIĆ, "IRREVERSIBLE DEPOSITION OF DIRECTED SELF-AVOIDING RANDOM WALKS ON A SQUARE LATTICE", Physica A 262,388(1999)

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	68			
Total of SCI(SSCI) list papers :	23			
Current projects :	Domestic :	1	International :	0

Science, arts and professional qualifications

Name and last name:	Kozmidis-Petrović F. Ana
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1975
Scientific or art field:	Physics

Academic carieer	Year	Institution	Field
Academic title election:	1997	Faculty of Technical Sciences - Novi Sad	Physics
PhD thesis	1984	Faculty of Sciences - Novi Sad	Physics
Magister thesis	1980	Faculty of Mathematics - Beograd	Physical Science
Bachelor's thesis	1972	Faculty of Sciences - Novi Sad	Physical Science

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E103	Physics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	GG06	Civil Engineering Physics	(G00) Civil Engineering, Undergraduate Academic Studies
3.	M101	Technical Physics	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies (ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
4.	ZR440	Influence of radiation on health and occupational safety	(Z01) Safety at Work, Undergraduate Academic Studies
5.	ZC008	Technical physics	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies
6.	DZ01FS	Selected Chapters in Physics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
7.	SZD017	Solid Materials in the Environment	(Z00) Environmental Engineering, Specialised Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
8.	DZ01F	Selected Chapters in Physics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
9.	FDS141	Selected Chapters in Colour Management	(F00) Graphic Engineering and Design, Doctoral Academic Studies
10.	ZD017	Solid Materials in the Environment	(Z00) Environmental Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	D. M. Petrović, A. F. Petrović, V. M. Leovac, S. R. Lukić: Thermal decomposition of Cu(II) complexes with salicyladehyde S-methylthiosemicarbazone, Journal of Thermal Analysis, 42, 1165-1170, 1994.
2.	S.R. Lukić, D. M. Petrović, A. F. Petrović, F. Skuban, I.I. Turyanitsa: Tendency towards crystallization of Ge-As-Te system glasses, Journal of Materials Science Lett., 15,.
3.	A. F. Petrović, S. R. Lukić, D. M. Petrović, E. Z. Ivegeš, V. M. Leovac: Metal complex with pyrazole derived ligands. Part IV. Thermal decomposition of Cobalt(II) complexes with 3(5)-amino-4-acetyl 5(3) mathylpyrazole, Journal of Thermal Analysis, 47, 879-886,
4.	S. R. Lukić, D. M. Petrović, A. F. Petrović: Effect of copper on conductivity of amorphous AsSeyIz, Journal of Non-Crystalline Solids, 241, 74-77, 1998.
5.	S. R. Lukić, V. M. Leovac, A. F. Petrović, S. J. Skuban, V. I. Češljević, M. M.Garić: Metal Complexes with Pyrazole-derived Ligands. XIII. Synthesis and Thermal Studies of Zn(II) Complexes with 3-amino-4-acetyl-5-methylpyrazole, Synth.React.Inorg. Met.-Org.Chem.,2002
6.	S. R. Lukić, S. J. Skuban, D. M. Petrović, A. F. Petrović, M. Garić, Characteristics of complex non-crystalline chalcogenides from the Ge-As-S-Se-I system, Journal of Optoelectronics & Advanced Materials, 6(3), 755-768, 2004.
7.	A. F. Petrović, S.R. Lukić, D.D. Štrbac: Critical rate of cooling glassy melts under conditions of continuous nucleation.The application to some chalcogenide glasses, Journal of Optoelectronics & Advanced Materials, 6(4) 1167-1177, 2004.
8.	S. R. Lukić, D. M. Petrović, Ž. N. Cvejić,.A F. Petrović, F. Skuban: Thermally-induced Structural Changes in Copper-containing Chalcogenide Thin Films, Journal of Optoelectronics & Advanced Materials, 3(2), 337-340, 2001.
9.	S.R. Lukić, D.M. Petrović, G.R.Štrbac, A.F.Petrović, M Šiljegović : Effect of sulfur atom substitute with selenium on stability of glassy Ge20As14SxSe52-xI14, Journal of Physics and Chemistry of Solids 66, 1683-1686 (2005)
10.	A.F.Kozmidis-Petrovic, G.R.Strbac, D.D.Strbac, Kinetics of non-isothermal crystallization of chalcogenide, J.Non-Cyst.Solids, 2014–2019, 353(2007)2014

Summary data for teacher's scientific or art and professional activity:

Quotation total :	153			
Total of SCI(SSCI) list papers :	25			
Current projects :	Domestic :	1	International :	0

Science, arts and professional qualifications

Name and last name:	Kulić J. Filip
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1994
Scientific or art field:	Automatic Control and System Engineering

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Magister thesis	1999	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1994	Faculty of Technical Sciences - Novi Sad	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	AU44	Control Systems Design	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	E226	Automatic Control Systems	(E20) Computing and Control Engineering, Undergraduate Academic Studies (H00) Mechatronics, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	E238A	Control Systems Technology	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	EEI302	Systems of Automatic Control in Power Engineering	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	H1405	Optimization Methods	(H00) Mechatronics, Undergraduate Academic Studies
6.	H302	Control Systems 2	(H00) Mechatronics, Undergraduate Academic Studies
7.	M325	Automatic Control Systems	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies
8.	BMI125	Biological Control Systems	(BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	E2315	Electrical Machines in Automatic Control Systems	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EMSAU 1	Automatic Control Systems in Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	SEAU01	Nonlinear programming and evolutionary computations	(SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
12.	SEAU03	Real-time control algorithms	(SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
13.	DE410S	Selected Topics in the Field of Automatic Control	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
14.	E2515	Intelligent Control Systems	(E20) Computing and Control Engineering, Master Academic Studies (MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	M2550	Automatic Control Systems in Motor Vehicles	(M22) Mechanization and Construction Engineering, Master Academic Studies
16.	E2532	Automatic Control Systems Project Management	(E20) Computing and Control Engineering, Master Academic Studies
17.	SEAM01	Intelligent Control Systems	(SE0) Software Engineering and Information Technologies, Master Academic Studies
18.	DAU007	Selected Topics in Artificial Intelligence in Control and Signal Processing	(E20) Computing and Control Engineering, Doctoral Academic Studies
19.	DE410	Selected Topics in the Field of Automatic Control	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
20.	SID04	Current State in the Field	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies
21.	DAU017	Selected Topics from Totally Integrated Automatic Control Systems	(E20) Computing and Control Engineering, Doctoral Academic Studies
22.	SID04	Present State in the Field	(A00) Architecture, Doctoral Academic Studies (AS0) Scenic Design, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Dragan Kukolj, Vesna Bengin, Filip Kulić: Osnovi klasične teorije automatskog upravljanja kroz rešene probleme, Sombor, Somel, 1995. 241str., UDK: 681.5(075.8),
2.	Dragan Kukolj, Filip Kulić: Projektovanje sistema automatskog upravljanja u prostoru stanja, Novi Sad, Fakulet tehničkih nauka, 1995. 232str., UDK: 681.5(075.8),
3.	D.Kukolj, F.Kulić, E.Levi: Design Of The Speed Controller For Sensorless Electric Drives Based On AI Techniques: A Comparative Study, Artificial Intelligence in Engineering, 2000, Vol. 14, str. 165- 174
4.	D.Kukolj, S.Kuzmanović, E.Levi, F.Kulić: Design of Near Optimal, Wide Range Fuzzy Logic Controller, Fuzzy Sets and Systems, 2001, Vol. 120, No. 1, str. 17- 34
5.	D.Kukolj, F.Kulić, D.Popović, Z.Gorečan: Determining Topological Changes and Critical Load Levels of a Power System by Means of Artificial Neural Network, Electric Machines and Power Systems, 1997, Vol. 25, No. 8, str. 917- 926, ISSN 0731-356x.
6.	D.Kukolj, D.Popović, F.Kulić, Z.Gorečan: Fast Dynamic Stability Analysis of a Power System Using Artificial Neural Networks, European Transactions on Electrical Power (ETEP), 1998, Vol. 8, No. 3, str. 207- 212, ISSN 1430-144X.
7.	D.Popović, D.Kukolj, F.Kulić: Monitoring and Assessment of Voltage Stability Margins Using Artificial Neural Networks with a Reduced Input Set, IEE Proc. -Gener. Transm. Distrib, 1998, Vol. 145, No. 4, str. 355- 362, ISSN 1350-2360.

Representative refferences (minimum 5, not more than 10)	
8.	Matić Dragan, Kulić Filip, Pineda-Sanchez Manuel, Kamenko Ilija: “Support vector machine classifier for diagnosis in electrical machines: Application to broken bar”, Expert Systems With Applications, vol.39 br.10, str. 8681-8689, 2012.
9.	Čongradac Velimir, Kulić Filip: “Recognition of the importance of using artificial neural networks and genetic algorithms to optimize chiller operation”, Energy and Buildings, vol. 47, str. 651-658; April 2012.
10.	Ilić Slobodan; Vukmirović Srđan; Erdeljan Aleksandar; Kulić Filip: “Hybrid Artificial Neural Network System for Short-Term Load Forecasting, Thermal Science, vol.16, br. , str. S215-S224, 2012

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	32			
Total of SCI(SSCI) list papers :	12			
Current projects :	Domestic :	2	International :	0

Science, arts and professional qualifications

Name and last name:	Malbaša D. Veljko
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.11.1979
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	1995	Faculty of Technical Sciences "Mihajlo Pupin" in Zrenjanin - Zrenjanin	Electronics
PhD thesis	1985	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	1981	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Bachelor's thesis	1975	School of Electrical Engineering - Beograd	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E136	Introduction to Microcomputer Electronics	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E136d	Introduction to Digital and Microcomputer Electronics	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	E222A	Electronics	(E20) Computing and Control Engineering, Undergraduate Academic Studies
4.	EM401	Real-Time Microcomputer Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	BMI103	Microprocessor Systems in Medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	EM300A	Microprocessor Electronics	(H00) Mechatronics, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EM305A	Digital Microcontrollers	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EM404A	Computer Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	ETI16	Microcomputer Electronics	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
10.	ETI24	Real Time Embedded Systems	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	DE100S	Selected Topics in Formal Methods of Harware Desing and Verification	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	DE401S	Design of Application Specific Integrated Circuits	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	SI012	Microprocessor Electronics	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
14.	SI025	Selected Topics in Computer Electronics	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
15.	EM508	Design and Development of Embedded Software	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
16.	DE100	Selected Chapters in Formal Methods for Hardware Design and Verification	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
17.	DE401	ASIC Design	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

Representative refferences (minimum 5, not more than 10)

1.	Mezei I., Lukić M., Malbaša V., Stojmenović I.: Auctions and iMesh Based Task Assignment in Wireless Sensor and Actuator Networks, COMPUT COMMUN, 2012, ISSN 0140-3664. rad prihvaćen za štampanje
2.	Mezei I., Malbaša V., Stojmenović I.: Greedy Extension of Localized Auction Based Protocols for Wireless Actuator Task Assignment, Ad Hoc & Sensor WirelessNetworks: An International Journal, 2012, rad prihvaćen za štampanje.
3.	Mezei I., Malbaša V., Stojmenović I.: Robot to Robot: Communication Aspects of Coordination in Robot Wireless Networks , IEEE Robotics and Automation Magazine, 2010, Vol. 17, No 4, pp. 63-69, ISSN 1070-9932
4.	Zoranović A., Stojanović G., Malbaša V.: Development of an MP3 player using an MP3 hardware decoder, International Journal of Electrical Engineering Education, 2010, Vol. 47, No 3, pp. 329-342, ISSN 0020-7209
5.	Sešić A., Dautović S., Malbaša V.: Dynamic Power Management of a System with a Two-Priority Request Queue Using Probabilistic Model Checking , IEEE Trans. on CAD, 2008, 2008, Vol. 27, No 2, pp. 403-407, UDK: 10.1109/TCAD.2007.911342
6.	Liu H., Malbaša V., Mezei I., Nayak A., Stojmenović I.: “Coordination in Sensor, Actuator and Robot Networks”, In: Wireless Sensor and Actuator Networks: Algorithms and Protocols for Scalable Coordination and Data Communication, Wiley Blackwell, 2010, str. 233-262, ISBN 978-0-470-17082-3
7.	V. Malbaša, "Mikroprocesori i mikroračunari", udžbenik, Fakultet tehničkih nauka, Novi Sad, 1992.
8.	M. Manwaring, V. Malbaša, “An Architecture for Parallel Interpretation of Abstract Machine Languages”, Facta Universitatis, Ser. Math. Inform. 17 (2002), 97-128.
9.	V. Malbaša, M. Manwaring, “Pipelined Processor Architecture for Parallel Interpretation”, Facta Universitatis, Series: Electronics and Energetics, Vol. 13, No.3, December 2000, 297-315.
10.	V. Malbaša, "A Multimicroprocessor System for Dynamic System Simulation," Int. Journal for Computer Simulation, Vol. 56, No.1, Jan. 1991, 31-40.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	4			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	2	International :	1

Science, arts and professional qualifications

Name and last name:	Marčetić P. Darko
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.04.2007
Scientific or art field:	Power Electronics, Machines and Facilities

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Power Electronics, Machines and Facilities
PhD thesis	2006	School of Electrical Engineering - Beograd	Power Electronics, Machines and Facilities
Magister thesis	1998	School of Electrical Engineering - Beograd	Power Electronics, Machines and Facilities
Bachelor's thesis	1992	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E133	Power Converters	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (ZC0) Clean Energy Technologies, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE308	Power Electronics 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EOS14	Laboratory from electrical machines	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
4.	EOS25	Solar and hybrid electric plants	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
5.	F203	Electrical Machines	(F00) Graphic Engineering and Design, Undergraduate Academic Studies
6.	HE2465	Mechatronics of Transport and Construction Machines	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies
7.	EE408A	Application of microprocessors in power engineering	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EEI310	Industrial systems and protocols	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	DE109S	Selected Chapters in Electromotive Drives	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	DE409S	Modern Methods of Digital Control of Drives and Converters	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EE524	Methods of Regulation of Power Converters with Microconrollers	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	EE534	Special Electric Motor Drives	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	EE537	Special Electrical Machines	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	DE109	Selected Chapters in Electromotive Drives	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies
15.	DE409	Modern Methods of Digital Control of Drives and Converters	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Marčetić D., Adžić E.: Improved Three-Phase Current Reconstruction for Induction Motor Drives With DC-Link Shunt, IEEE Transaction on Industrial Electronics, 2010, Vol. 57, No 7, pp. 1-9, ISSN 0278-0046
2.	Marčetić D., Vukosavic S.: Speed Sensorless AC Drives with the Rotor Time Constant Parameter Update, IEEE Transaction on Industrial Electronics, 2007, Vol. 54, No 5, pp. 2618-2625 , ISSN <SPAN class=skype_pnh_

Representative refferences (minimum 5, not more than 10)

3.	Marčetić D., Krcmar I., Matic P.: Discrete Rotor Flux Estimator for High Performance Induction Motor Drives with Low Sampling to Fundamental Frequency Ratio, International Review of Electrical Engineering IREE, 2012, Vol. 7, No 2, pp. 3804-3813.
4.	Porobić V., Adžić E., Marčetić D.: High Speed Shaft Sensorless DFOC Induction Motor Drive with Field Angle Correction, International Review of Electrical Engineering IREE, 2011, Vol. 6, No 4, ISSN 1827-6660
5.	Tomić J., Kušljević M., Marčetić D.: An Adaptive Resonator Based Method for Power Measurements According to the IEEE Trial-Use Standard 1459-2000 , IEEE Transactions on Instrumentation
6.	Vasić V., Marčetić D., Jeftenić B., Vladan J.: Speed-Sensorless Control of Induction Motor Based on Reactive Power with Rotor Time Constant Identification, IET ELECTR POWER APP, 2010, Vol. 4, No 6, ISSN 1751-8660
7.	Vasić V., Marčetić D., Oros Đ.: Prediction of Local Instabilities in Open-loop Induction Motor Drives, COMPEL - The international journal for computation and mathematics in electrical engineering, 2010, Vol. 29, No 3, ISSN 0332-1649
8.	Oros Đ., Vasić V., Marčetić D., Kulić F.: Influence of parameters detuning on induction motor NFO shaft-sensorless scheme, Journal of Advances in Electrical and Computer Engineering, 2010, Vol. 10, No 4, pp. 121-124, ISSN 1582-7445.
9.	Oros Đ., Vasić V., Marčetić D.: NFO sensorless induction motor drive with on-line stator resistance parameter update, Electric Power Components
10.	Kušljević M., Tomić J., Marčetić D.: Active power measurement algorithm for power system signals under non-sinusoidal conditions and wide-range frequency deviations, IET Generation, Transmission

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	10			
Current projects :	Domestic :	1	International :	0

Science, arts and professional qualifications

Name and last name:	Mihailović P. Biljana
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.03.1999
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	2009	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	2003	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1998	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E135	Probability, Statistics and Stochastic Processes	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E212	Mathematical Analysis 1	(E20) Computing and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	E213	Discrete Mathematics and Linear Algebra	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
4.	E224A	Probability and Stochastic Processes	(E20) Computing and Control Engineering, Undergraduate Academic Studies (ES0) Power Software Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5.	EOS07	Mathematics 2	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
6.	M102	Mathematics 1	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies
7.	E102	Mathematical Analysis 1	(ES0) Power Software Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
8.	BMI91	Mathematics 1	(BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	BMI92	Mathematics 2	(BM0) Biomedical Engineering, Undergraduate Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
10.	E102A	Mathematical Analysis 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	IM1423	Financial Mathematics	(I20) Engineering Management, Undergraduate Academic Studies
12.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
13.	I004/S	Statistical Quantitative Methods	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
14.	OIR009	Primenjena aktuarska matematika	(I20) Engineering Management, Specialised Professional Studies
15.	ZR503	Statistical Advanced Models	(Z01) Safety at Work, Master Academic Studies
16.	D0M07	Mathematical Foundations of Fuzzy Systems	(OM1) Mathematics in Engineering, Doctoral Academic Studies
17.	D0M21	Fuzzy Systems and Their Applications	(OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	D0M49	Aggregation Functions	(OM1) Mathematics in Engineering, Doctoral Academic Studies
19.	D0M50	Fuzzy Measures and Integrals	(OM1) Mathematics in Engineering, Doctoral Academic Studies
20.	D0M51	Large Deviations Principles	(OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. E. Pap, B. Mihailović: A representatation of a comonotone-v-additive and monotone functional by two Sugeno integrals, Fuzzy Sets and Systems 155, (2005) 77-88
2. B. Mihailović, E. Pap: Sugeno integral based on absolutely monotone real set functions, Fuzzy Sets and Systems, Vol 161, Issue 22, (2010) 2857-2869
3. B. Mihailović, E. Pap: Asymmetric integral as a limit of generated Choquet integrals based on absolutely monotone real set functions, Fuzzy Sets and Systems 181, (2011) 39-49.
4. B. Mihailović, E. Pap: Asymmetric general Choquet integrals, Acta Polytechnica Hungarica, Volume 6, Issue Number 1, (2009) 161-173.

Representative refferences (minimum 5, not more than 10)

5.	Kalina M., Manzi M., Mihailović B.: Choquet integrals and T-supermodularity, E. Pap (Ed.): Intelligent Systems: Models and Applications, TIEI 3, DOI: 10.1007/978-3-642-33959-2 4 c Springer-Verlag Berlin Heidelberg , (2013) 61-75.
6.	B. Mihailović, Lj. Nedović, T. Grbić : The induced Sugeno integral-based operator w.r.t bi-fuzzy measures, Journal of Electrical Engineering, Vol.54, No. 12/s, (2003) 76-79.
7.	B. Mihailović, E. Pap: Non-monotonic set functions and general fuzzy integrals, Proceedings of SISY 2008, Subotica, (2008) 371-374.
8.	B. Mihailović: On the class of symmetric S-separable aggregation functions Proceedings of AGOP 2007, Ghent, Belgium, (2007) 187-191.
9.	B. Mihailović, E. Pap: Decomposable signed fuzzy measures, Proceedings of EUSFLAT 2007, Ostrava, Czech Republic, (2007) 265-269.
10.	B. Mihailović, M. Manzi: On the asymmetric Shilket-like integral, Proceedings of AGOP2011, Benevento, Italy, (2011) 73-77.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	10			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	2	International :	0

Science, arts and professional qualifications

Name and last name:	Milanović V. Jovica
Academic title:	Guest Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Electroenergetics
PhD thesis	1996		Electrical and Computer Engineering
Magister thesis	1991		Electrical and Computer Engineering
Bachelor's thesis	1987		Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE0406	Electric Power Quality	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE406	Electric Power Quality	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
3.	DE513	Advanced Methods of Monitoring and Management	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Jasna Dragosavac, Zarko Janda and J.V.Milanovic. Coordinated Reactive Power – Voltage Controller for Multi Machine Power Plant. IEEE Transactions on Power Systems. 2012; 27(3): 1540-1549.
2.	J.M.Avendano-Mora and J.V.Milanovic. Monitor Placement for Reliable Estimation of Voltage Sags in Power Networks. IEEE Transactions on Power Delivery. 2012; 27(2): 936-944
3.	F.B.Alhasawi and J.V.Milanovic. Ranking the Importance of Synchronous Generators for Integration of Wind Generation. IEEE Transactions on Power Systems. 2012 February; 27(1): 416-423
4.	N.C.Woolley, J.V.Milanovic. Statistical Estimation of the Source and Level of Voltage Unbalance in Distribution Networks. IEEE Transactions on Power Delivery. 2012 August; 27(3): 1450-1460
5.	F.B.Alhasawi and J.V.Milanovc. Techno-Economic Contribution of FACTS Devices to Operation of Power Systems with High Level of Wind Power Integration. IEEE Transactions on Power Systems. 2012; 27(3): 1414-1421
6.	S.K.Yee, J.V.Milanovic and F.M.Hughes. Validated Models of Gas Turbines for Power System Dynamic Studies Based on Thermodynamic Relationships. IEEE Transactions on Power Systems. 2011; TPWRS-00411-2009
7.	J. V. Milanovic and Y.Zhang. Gobal minimisation of financial losses due to voltage sags with FACTS based devices. IEEE Transactions on Power Delivery. 2010 January; 25(1): 298-306
8.	J. V. Milanovic and Y.Zhang. Modelling of FACTS Devices for Voltage Sag Mitigation Studies in Large Power Systems. IEEE Transactions on Power Delivery. 2010 November; 25(4): 3044-3052
9.	M.Kayikci and J.V.Milanovic. Dynamic contribution of DFIG based wind plants to system frequency disturbances. IEEE Transactions on Power Systems. 2009 May; 24(2): 859-867
10.	J.Y.Chan, J.V.Milanovic and A.Delahunty. Generic Failure Risk Assessment of Industrial Processes due to Voltage Sags. IEEE Transactions on Power Delivery. 2009 November; 24(4): 2405-2414

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	0			
Current projects :	Domestic :	0	International :	0

Science, arts and professional qualifications

Name and last name:	Milosavljević P. Branko
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1998
Scientific or art field:	Applied Computer Science and Informatics

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	1999	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E2E40	XML and WEB Services	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
2.	E2E41	E-Business Systems Security	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	F209	Multimedia	(F00) Graphic Engineering and Design, Undergraduate Academic Studies
4.	F214I2	Raster Graphics	(F00) Graphic Engineering and Design, Undergraduate Academic Studies
5.	GI100	Computer Practicum	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
6.	RI41	Internet Software Architectures	(E20) Computing and Control Engineering, Undergraduate Academic Studies
7.	SEI41	Internet Software Architectures	(SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8.	ISIT03	Introduction to Programming	(SII) Software and Information Technologies (Inđija), Undergraduate Professional Studies
9.	ISIT08	Object oriented programming fundamentals	(SII) Software and Information Technologies (Inđija), Undergraduate Professional Studies
10.	ISIT22	Osnove baza podataka	(SII) Software and Information Technologies (Inđija), Undergraduate Professional Studies
11.	ISIT28	Informaciona bezbednost	(SII) Software and Information Technologies (Inđija), Undergraduate Professional Studies
12.	ISIT29	XML Technologies	(SII) Software and Information Technologies (Inđija), Undergraduate Professional Studies
13.	BMI95	Introduction to Computer Science	(BM0) Biomedical Engineering, Undergraduate Academic Studies
14.	EIWDS	Web-based Measurement and Data Acquisition Systems	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
15.	SE0001	Introduction to Programming	(F00) Graphic Engineering and Design, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
16.	E2506	Advanced Internet Infrastructure	(E20) Computing and Control Engineering, Master Academic Studies (SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	F402	Electronic Publishing	(F00) Graphic Engineering and Design, Master Academic Studies
18.	E2521	Business Process Management	(E20) Computing and Control Engineering, Master Academic Studies (MR0) Measurement and Control Engineering, Master Academic Studies (SE0) Software Engineering and Information Technologies, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
19.	E2526	Service Oriented Architectures	(E20) Computing and Control Engineering, Master Academic Studies (SE0) Software Engineering and Information Technologies, Master Academic Studies
20.	DE417	Web-based Measurement Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
21.	DRNI02	Selected Topics in Advanced Software Architecture	(E20) Computing and Control Engineering, Doctoral Academic Studies
22.	DRNI03	Selected Topics in Internet-Based Systems	(E20) Computing and Control Engineering, Doctoral Academic Studies
23.	DRNI06	Selected Topics in Digital Archives	(E20) Computing and Control Engineering, Doctoral Academic Studies
24.	FDS151	Selected Chapters in Multimedia	(F00) Graphic Engineering and Design, Doctoral Academic Studies
25.	FDS152	Selected Topics in Computer Graphics	(F00) Graphic Engineering and Design, Doctoral Academic Studies
26.	FDS224	Selected Chapters in Programming	(F00) Graphic Engineering and Design, Doctoral Academic Studies
27.	DRNI19	Selected Topics in Information Security	(E20) Computing and Control Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Branko Milosavljević. Models for Extensible Multimedia Document Retrieval. In IEEE 6th International Symposium on Multimedia Software Engineering, Miami, FL, 2004.
2. Branko Milosavljević, Milan Vidaković, Srđan Komazec, and Gordana Milosavljević. User Interface Code Generation for Data-Intensive Applications with EJB-Based Data Models. In Software Engineering Research and Practice (SERP"03), Las Vegas, NV 2003.
3. Branko Milosavljević and Zora Konjović. Design of an XML-Based Extensible Multimedia Information Retrieval System. In IEEE Multimedia Software Engineering (MSE2002), Newport Beach, CA, 2002. pp. 114-121.
4. G. Sladić, B. Milosavljević, Z. Konjović. Extensible Access Control Model for XML Document Collections, Intl. Conf. on Security and Cryptography ICETE-SECRYPT"07, Barcelona, Spain, 2007.
5. Branko Milosavljević, Milan Vidaković, and Zora Konjović. Automatic code generation for database-oriented web applications. In James Power and John Waldron, editors, Recent Advances in Java Technology: Theory, Application, Implementation, pages 89-98. Trinity College Dublin, 2003.

Representative refferences (minimum 5, not more than 10)	
6.	Danijela Tešendić, Branko Milosavljević, and Dušan Surla. A library circulation system for city and special libraries. The Electronic Library, 27(1):162-186, 2009. ISSN: 0264-0473, DOI: 10.1108/02640470910934669.
7.	Jelena Radjenović, Branko Milosavljević, and Dušan Surla. Modelling and implementation of catalogue cards using FreeMarker. Program: electronic library and information systems, 43(1):62-76, 2009. ISSN: 0033-0337, DOI: 10.1108/00330330910934110.
8.	Milan Vidaković, Branko Milosavljević, Zora Konjović, and Goran Sladić. Extensible Java EE-based agent framework and its application on distributed library catalogues. Computer Science and Information Systems (ComSIS), 6(2):1-28, 2009. ISSN: 1820-0214, DOI: 10.2298/csis0902001V.
9.	Aleksandar Kovačević, Branko Milosavljević, Zora Konjović, and Milan Vidaković. Adaptive content-based music retrieval system. Multimedia Tools and Applications, 47(3):525-544, 2010. ISSN: 1380-7501, DOI: 10.1007/s11042-009-0336-2.
10.	Bojana Dimić, Branko Milosavljević, and Dušan Surla. XML schema for UNIMARC and MARC 21. The Electronic Library, 28(2):245-262, 2010. ISSN: 0264-0473, DOI: 10.1108/02640471011033611.

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	0			
Total of SCI(SSCI) list papers :	15			
Current projects :	Domestic :	2	International :	1

Science, arts and professional qualifications

Name and last name:	Milošević S. Vladimir
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	20.10.1976
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	1997	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1984	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Magister thesis	1980	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Bachelor's thesis	1976	School of Electrical Engineering - Beograd	Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK300	Digital Modulations	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK430	Fundamentals of Radio and Mobile Communications	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	SK300	Principles of Digital Communications	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	E137	Basics of Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK320	Principles of digital communications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK453	SCADA Systems Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EK457	Principles of radio communication	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EK461	Design of Radio Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	S1328P	Principles of digital modulations	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
10.	DE211S	Savremene tehnike prenosa digitalnih signala	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EK536	Coding Techniques	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	EK541	Mobile Communications	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	SI045	Pristupne tehnologije - DSL, KDS	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
14.	DE211	Contemporary Techniques of Digital Signal Transmission	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	V.Milošević, B.Ristić, “Effect of impulse noise rejection with median filter on binary digital receiver performance", IEE Electronic Letters, 1989, Vol.25 No.6, p.392-394
2.	V.Šenk, V.Delić, V.Milošević, “A new speech scrembling concept based on Hadamard matrices”, IEEE Signal Processing Letters, vol. 4, No. 6, june 1997, p.161-163;
3.	S.Kostić, V.Milošević, " Analysis of Increasing HFHPTA Efficiency using Composite Signals", IEEE Transaction CAS1, 2003.
4.	V.Milošević, S.Krčo, V.Delić, “Effect on combined impulse and gaussian noise rejection with median filter on binary digital receiver performance”, “Facta Universitatis”,series :Electronic and energetics, Niš 1996.; vol. 9, No. 2, p.219-227
5.	V.Milošević, V.Crnojević, V.Radenković, V.Šenk, “PIP- a new adaptive filter for noise supression in still images”, Facta Universitatis, series: Electronic and energetics, Niš 1997.; vol.10, No.1, p. 139-152
6.	Monografija :Milorad Obradović, Vladimir Milošević i dr. "Digitalna obrada govornog signala", Novi Sad 1996. (recenzenti: Akademik prof. dr Dragoš Cvetković, prof. dr Dušan Drajić)
7.	V.Milošević, A.Marinčić, “The influence of intersymbol interference and aditive noise on the transmission of M-ary data signal through a modelled telephone channel" IEEE Melecon" 83 Athens, 1983, Vol. I B10.2
8.	B.Ristić, V.Milošević, “Impulse noise rejection in binary receiver using median filter", ISSPA 90, Gold Coast Australia 1990

Representative refferences (minimum 5, not more than 10)	
9.	V.Milošević,V.D.Delić, V.Šenk, "Hadamard transform application in speech scrambling "IEEE DSP97 - 13th International conference on digital signal processing, 2-4 July 1997., Santorini Greece
10.	V.Delić, V.Šenk, V.Milošević, "A new speech scrambling method: comparative analysis and a fast algorithm", EUSIPCO -96 VIII

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	1			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	0	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Milovančev S. Slobodan
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1975
Scientific or art field:	Electrical Measurements

Academic carieer	Year	Institution	Field
Academic title election:	2001	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	1996	Faculty of Technical Sciences - Novi Sad	Cutting Processing Tools and Tribology
Magister thesis	1983	School of Electrical Engineering - Beograd	Electrical Measurements
Bachelor's thesis	1973	School of Electrical Engineering - Beograd	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E142	Measuring Instruments	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	H210	Measurements in Technical Engineering	(H00) Mechatronics, Undergraduate Academic Studies
3.	BM119E	Technical standards and regulations for medical devices and systems	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EI411	Measurements in robotics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EIEEM	Electrical and electronic measurements	(BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	EIEEMI	Electrical and electronic measurements in industry	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
7.	EIEKI	Electronic Components in Instrumentation	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIEMER	Electronic measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EIMMBM	Methods of measurement and measurement-acquisition systems in biomedicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EIMNV	Measurements of non-electrical quantities	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	EIPMS2	Design and development of industrial devices and measurement systems 2	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
12.	EIPR1	Laboratory practicum	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
13.	EISMP	Sensors and transducers	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
14.	MR0ULR	Introduction to laboratory practice	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
15.	DE305S	Electrical Measurements in Power Systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
16.	EIMIO	Measurement systems in industrial environment	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
17.	DE305	Electrical Measurements in Power Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	S.Milovančev, G.Pavkov, "Additional Losses in Massive Copper Conductor Due to Eddy-Currents", IEEE Power Engineering Society 2001 Winter Meeting, Columbus, Ohio, Jan-Feb. 2001.
2.	D.Cvetinov, G.Pavkov, S.Milovančev, "Fault Location Algorithm in MV Networks with a Resistive Grounded Neutral", DistribuTECH EUROPE 2001, Berlin, Germany, November 2001.
3.	G.Pavkov, D.Cvetinov, S.Milovančev:"The Real Value of a Grounding Grid Impedance in High Voltage Substations", IEEE Power Engineering Society T&D 2002, Sao Paulo, Brasil, March 2002.
4.	G.Pavkov, S.Milovančev, D.Cvetinov:"An Analitical Evaluation of Current Distribution Over Grounding Conductor", IEEE GROUND "2002 and 3th WAE", Rio de Janeiro, Brasil, November 2002.
5.	S.S.Milovančev, V.V.Vujičić, V.A.Katić: "Improvements of On-Line Measurement in Distribution System Using a New Adding A/D Converter", IEEE T Power Delivery, Vol. 10, No. 4, pp. 1750-1756, October 1995.
6.	I.Župunski, L.Hodolič, V.Vujučić, S.Milovančev:"Power Factor Calibrator", IEEE Trans. Instrumentation and Measurement, vol. IM-46, No. 2, pp. 408-411, April 1997.
7.	V.Vujičić, I.Župunski, S.Milovančev:"Predetermination of the Quantization Error in Digital Measurement Systems", IEEE Trans. Instrum.Meas., vol. IM-46, No. 2, pp. 439-441, April 1997.
8.	V.Vujičić, S.Milovančev, M.Pešaljević, D.Pejić, I.Župunski: "Low Frequency Stochastic True RMS Instrument", IEEE Trans.Instrum.Meas., vol. 48, No.2, pp. 467-470, April 1999.
9.	S. Milovančev, V. Vujičić, V. Katić, D. Dapčević: "Monitoring of PWM Regulated Drives - An Accuracy Improvement", International Conference on Electrical Drives and Power Electronics - EDPE"94, Stara Lesna-High Tatras (Slovakia), Oct.1994, pp.502-506.
10.	V. Vujičić, S. Milovančev, I. Župunski, D. Pejić: "Proposal of a new measurement technology", 3rd International Syimposium Interdisciplinary Regional Research (Hungary, Romania, Yugoslavia), pp. 95-97. Part I, September 1997.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	8			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	1	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Mitrović Lj. Zoran
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	20.04.1994
Scientific or art field:	Electrical Measurements

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	2004	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	1992	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Bachelor's thesis	1984	School of Electrical Engineering - Beograd	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E142	Measuring Instruments	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EI411	Measurements in robotics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EIDMS1	Microprocessor based measurement and data acquisition systems 1	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EIDMS2	Microprocessor based measurement and data acquisition systems 2	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EIPDMS	Programming of Measurement and Data Acquisition Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIPMS1	Design and development of industrial devices and measurement systems 1	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIPMS2	Design and development of industrial devices and measurement systems 2	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIPR1	Laboratory practicum	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EISMP	Sensors and transducers	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EIWDS	Web-based Measurement and Data Acquisition Systems	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	EZ302	Measurement systems in clean power sources	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies
12.	MR0ULR	Introduction to laboratory practice	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
13.	DE504S	Contemporary Measuring Systems Design	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	E1SO01	Modern technologies in electrical engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
15.	EIDNU	Supervisory Control and Data Acquisition Systems Design	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
16.	EIMIO	Measurement systems in industrial environment	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	EIMRV1	Real Time Measurements	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
18.	DE504	Contemporary Measuring Systems Design	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Antić B., Mitrović Z., Vujičić V.: Method for Harmonic Measurement of Real Power Grid Signals with Frequency Drift using Instruments with InternallyGenerated Reference Frequency, Measurement Science Review, 2012, Vol. 12, No 6, pp. 277-285, ISSN 1335-8871
2.	Zoran Mitrović: "A Phase Angle Standard", Measurement Science and Technology No. 15. Institute of Physics , January 2004, 559-564.
3.	Mitrović Z., Milovančev S., Župunski I.: A Precision Power Amplifier for Calibration Systems, Measurement Science and Technology, 2009, Vol. 20, No 6, pp. 1-3
4.	Santrač B., Sokola M., Mitrović Z., Župunski I., Vujičić V.: A Novel Method for Stochastic Measurement of Harmonics at Low Signal-to-Noise Ratio, IEEE Transactions on Instrumentation and Measurement, 2009, Vol. 58, No 10, pp. 3434-3441, ISSN 0018-9456
5.	Trkuljić N., Babić Z., Marković R., Peruničić G., Sarić M., Spasić Jokić V., Mitrović Z.: Implementation of the Modern PACS System at the Institute of Oncology and Radiology of Serbia, Medical Data, 2011, No 1, pp. 69-72, ISSN 1821-1585, UDK: 616-07:621.39(497.11)
6.	Mitrović Z., Spasić Jokić V.: Introduction in Picture Archiving and Communication System (PACS) in Medicine: DICOM (Digital Imaging and Communications in Medicine) , Medical Data, 2010, No 2, pp. 123-126, ISSN 1821-1585, UDK: 61:004
7.	Zoran Mitrović, Ivan Župunski:"Stable Source of AC Voltage and Current", IMTC Conference, Como, Italy, 2004.
8.	Nagy K., Vujičić V., Mitrović Z., Takacs M.: Fuzzyfication and measurement using stochastic approach, 7. SISY - International Symposium on Intelligent systems and Informatics, Subotica, 25-26 Septembar, 2009, pp. 47-49, ISBN 978-1-4244-1442-0
9.	Zoran Mitrović: "Prilog razvoju etalona faznog ugla", doktorska disertacija, Fakultet tehničkih nauka, Novi Sad, 1985.
10.	P. Miljanić Z. Mitrović, I. Župunski, V. Vujičić: "Ka novom etalonu naizmeničnog napona, struje, električne snage i energije i faktora snage - rezultati ispitivanja", Kongres metrologa 2003, Beograd, Plenarni rad po pozivu

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	3	International :	0

Science, arts and professional qualifications

Name and last name:	Nađ F. Laslo
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.05.1977
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1992	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	1983	Faculty of Electronic Engineering - Niš	Electronics
Bachelor's thesis	1977	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM304	Impulse and Digital Electronic Circuits	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EM436	Mechatronics	(M30) Energy and Process Engineering, Undergraduate Academic Studies
3.	EM440	Computer-Aided Electronic Circuit Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	H305	Analougue Electronics	(H00) Mechatronics, Undergraduate Academic Studies
5.	H309	Impuls Electronics	(H00) Mechatronics, Undergraduate Academic Studies
6.	H311	Application of Sensors and Actuators	(H00) Mechatronics, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	BMI110	Sensors and actuators in medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	BMI99	Electronics	(BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	E138A	Digital Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EM301A	Analog Microelectronic Circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	EM436A	Mechatronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
12.	DE400S	Complex Digital Systems and High Frequency Circuits	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE501S	Selected Chapters in Pulse and Analogue Electronics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	EM530	Selected Chapters in Impulse Electronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	SI032	Selected Chapters in Mechatronics	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	BMIM1B	EMI and EMC in medicine equipment	(BM0) Biomedical Engineering, Master Academic Studies
17.	EM406A	High-Frequency Digital Systems and Circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
18.	DE400	Complex Digital Systems and High Frequency Circuits	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
19.	DE501	Selected Chapters in Pulse and Analogue Electronics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Radosavljević G., Živanov Lj., Smetana W., Marić A., Unger M., Nađ L.: A Wireless Embedded Resonant Pressure Sensor Fabricated in the Standard LTCC Technology, IEEE Sensor Journal, 2009, Vol. 9, No 12, pp. 1956-1962, ISSN 1530-437X
2. L. Juhas, A. Vujanić, N. Adamović, L. Nagy, B. Borovac, “A Platform for Micro-Positioning Based on Piezo-Legs”, The Journal of Mechatronics, Vol. 11 (2001), pp.869-897.

Representative refferences (minimum 5, not more than 10)

3.	Damnjanović M., Živanov Lj., Nađ L., Đurić S., Biberdžić B.: A Novel Approach to Extending the Linearity Range of Displacement Inductive Sensor , IEEE Transactions on Magnetics, 2008, Vol. 44, No 11, pp. 4123-4126, ISSN 0018-9464
4.	Nađ L., Radić J., Đugova A., Videnović-Mišić M.: Ultra Low-Power Low-Complexity Tunable 3-10 GHz IR-UWB Pulse Generator, Informacije MIDEM - Journal of microelectronics, electronic components and materials, 2012, Vol. 3, ISSN 0352-9045
5.	Đurić S., Nađ L., Damnjanović M., Đurić N., Živanov Lj.: A novel application of planar-type meander sensors, Microelectronics International, 2011, Vol. 28, No 1, pp. 41-49, ISSN 1356-5362
6.	Radić J., Đugova A., Nađ L., Videnović-Mišić M.: Feedback Influence on Performance of Ring Oscillator for IR-UWB Pulse Generator in 0.18μm CMOS technology, 28. International Conference on Microelectronics – MIEL, Niš: IEEE, 13-16 Maj, 2012, pp. 357-360, ISBN 978-1-4673-0235-7 , UDK: 10.1109/MIEL.2012.6222873
7.	Nađ L., Babković K., Krklješ D., Borovac B.: Elastic Foot Contact Force Sensor System — Pendulum Application Example, 14. International Power Electronics and Motion Control Conference EPE-PEMC, Ohrid, 6-9 Septembar, 2010, pp. 38-38, ISBN 978-1-4244-7856-9
8.	Babković K., Nađ L., Krklješ D.: Optical Sensor for Vibration Monitoring with Automatic Operating Point Adjustment, 28. International Conference on Microelectronics – MIEL, Niš, 13-16 Maj, 2012, pp. 189-192, ISBN 978-1-4673-0235-7
9.	Radić J., Đugova A., Nađ L., Videnović-Mišić M.: Body Bias Influence on Ring Oscillator Performance for IR-UWB Pulse Generator in 0.18μm CMOS technology , 47. International Scientific Conference on Information, Communication and Energy Systems and Tehnologies - ICEST, Veliko Trnovo, 28-30 Jun, 2012, pp. 82-85
10.	Krklješ D., Babković K., Nađ L.: Specific Conductance Characteristic of Force Sensing Resistor (FSR) with Custom Made Single-gap Conductive Contacts, 2. ICMAST-International Conference on Materials and Applications for Sensors and Transducers, Budapest, 24-28 Maj, 2012

Summary data for teacher's scientific or art and professional activity:

Quotation total :	6			
Total of SCI(SSCI) list papers :	5			
Current projects :	Domestic :	3	International :	1

Science, arts and professional qualifications

Name and last name:	Nimrihter D. Miroslav
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.06.1976
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2009		Electroenergetics
PhD thesis	1994	School of Electrical Engineering - Beograd	Electroenergetics
Magister thesis	1984	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1975	School of Electrical Engineering - Beograd	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE309	Power Distribution Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE409	High Voltage Engineering	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EE413	Power System Reliability	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EE309	Power Distribution Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	ESI020	Data structures and algorithms in power systems	(ES0) Power Software Engineering, Undergraduate Academic Studies
6.	DE106S	Reliability of Power Systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE112S	Non-deterministic Modelling	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	EE560	Planiranje elektroenergetskih sistema	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	EE409M	High Voltage Engineering	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	EM435A	Electronic Systems in Oil Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	EM437A	The application of electronic systems in clean and renewable energy	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	ESI022	Quality control and assurance of electric power software	(ES0) Power Software Engineering, Master Academic Studies
13.	ESI024	Applied algorithms in power systems	(ES0) Power Software Engineering, Master Academic Studies
14.	ESI025	Simulation of Power Greed critical mission systems	(ES0) Power Software Engineering, Master Academic Studies
15.	ESI027	Advanced cloud computing in power systems	(ES0) Power Software Engineering, Master Academic Studies
16.	ESI030	Distributed Software Architectures for Smart Energy Grids	(ES0) Power Software Engineering, Master Academic Studies
17.	ESI031	Business Intelligence and Data Warehouse Systems in Power Systems	(ES0) Power Software Engineering, Master Academic Studies
18.	ESI035	Computer graphic algorithms for smart grid systems	(ES0) Power Software Engineering, Master Academic Studies
19.	ESI038	Service oriented architectures in Smart Grid	(ES0) Power Software Engineering, Master Academic Studies
20.	DE106	Reliability of Power Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	DE112	Non-deterministic Modelling	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

Representative refferences (minimum 5, not more than 10)

1.	Gušavac S., Nimrihter M., Gerić Lj.: ESTIMATION OF OVERHEAD LINE CONDITION, , Electric Power System Research, 2008, Vol. 78, pp. 566-583
2.	Desnica V., Živanov Lj., Aleksić S., Nimrihter M.: Comparative Characteristics of Thick-Film Integrated LC Filters, IEEE Transactions on Instrumentation and Measurement, 2002, Vol. 51, No 4, pp. 570-576, ISSN 0018-9456
3.	Nimrihter M.: Comparative Analysis of Security Concepts for Urban Meddium Voltage Cable Distribution Networks, Electric Power System Research, 1994, No 29, pp. 43-50, ISSN 0378-7796
4.	Popović D., Glamočić Lj., Nimrihter M.: The Optimal Automation Level of Medium Voltage Distribution Networks, International Journal of Electrical Power
5.	Nimrihter M.: Comparative Analysis of Security Concepts for Urban Medium Voltage Cable Distribution Networks, Electric Power Research, 1994, No 29, pp. 43-50
6.	Nimrihter M., Živanov M., Gušavac S.: FUEL CELLS – ECOLOGICAL COGENERATIVE ENERGY SOURCES, 9th INTERNATIONAL SYMPOSIUM INTERDISCIPLINARY REGIONAL RESEARCH – ISIRR 2007, , Novi Sad, 21-22 Jun, 2007
7.	*****Živanov M., Nimrihter M., Živanov Lj.: Energetska efikasnost sistema sa gorivnim ćelijama Naziv skupa: Međunarodno savetovanje ENERGETIKA 2007 , UDK: UDC 621.311.29.001.5/.004:620.92
8.	*****Živanov M., Nimrihter M., Živanov Lj.: Efekti primene gorivnih ćelija Naziv skupa: Međunarodno savetovanje ENERGETIKA 2007 , UDK: 621.311.29.001.5/.004:620.92
9.	*****Nimrihter M., Gušavac S., Lukić J., Kuljić R.: Uticaj distribuiranih generatora na rizik u SN DEM, edukativni softver za potrebe CEFES magistarski studija Naziv skupa: 14th International Symposium on Power Electronics - Ee 2007 , UDK: 621.38; 620.9(082)
10.	*****Nimrihter M., Gušavac S., Lukić J.: Uticaj distribuiranih protočnih elektrana na rizik napajanja potrošača Naziv skupa: 14. International Symposium on Power Electronics-Ee2007 , UDK: 621.38; 620.9(082)

Summary data for teacher's scientific or art and professional activity:

Quotation total :	22			
Total of SCI(SSCI) list papers :	5			
Current projects :	Domestic :	3	International :	12

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Novak O. Ladislav
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1976
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	1994	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1982	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Magister thesis	1978	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Bachelor's thesis	1975	School of Electrical Engineering - Beograd	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E128F	Electrical Circuit Theory	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	e141	Systems and Signals	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EM402	Algorithms and Complexity	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	E128A	Electrical Circuit Theory	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM302A	Discrete-time systems and signals	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EM420A	Modelling and simulation of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	DE200S	Algorithms and Complexity-an Advanced Course	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DE300S	Randomised Approximation Algorithms	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	EM518A	Advanced simulation techniques of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	DE200	Algorithms and Complexity-an Advanced Course	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
11.	DE300	Randomised Approximation Algorithms	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Novak L., Gibbons A.: Hybrid Graph Theory and Network Analysis, Cambridge Univerity Press, Series: Cambridge Tracts in Theoretical Computer Science (No. 49), 1999, str. 1-188, ISBN 0521461170
2. Juhas A., Novak L.: Comments on “Class-E, Class-C, and Class-F power amplifier based upon a finite number of harmonics”, IEEE Transactions on Microwave Theory and Technique, 2009, Vol. 57, No 6, pp. 1623-1625, ISSN 0018-9840
3. Struharik R., Novak L.: Intellectual property core implementation of decision trees, IET Computers and Digital Techniques, 2009, Vol. 3, No 3, pp. 259-269, ISSN pp.1751 - 8601
4. Struharik R., Novak L.: Evolving Decision Trees in Hardware, Journal of Circuits Systems and Computers, 2009, Vol. 18, No 6, pp. 1033-1060, ISSN 0218-1266
5. Dautović S., Novak L.: A Comment on “Boolean Functions Classification via Fixed Polarity Reed-Muller Form” , IEEE Trans. on Computers, 2006, Vol. 55, No 8, pp. 1067-1069
6. Novak L.: On Goetschel and Voxman fuzzy matroid , Fuzzy Sets and Systems, 2001, Vol. 117, pp. 407-412
7. Kostić S., Novak L., Juhas A.: Increasing efficiency and output power of HFHPTA by injection of two harmonics, IEEE Transaction on Broadcasting, 2001, Vol. 47, No 1, pp. 32-37
8. Juhas A., Novak L., Kostić S.: Signals with Flattened Extrema in Balance Power Analysis of HFHPTA: Theory and Applications, IEEE Transaction on Broadcasting, 2001, Vol. 47, No 1, pp. 38-45
9. Kostić S., Novak L.: General balance power analysis of HFHPTA with (M,N)-composite signals, IEEE Transaction on Broadcasting, 1998, Vol. 44, No 4, pp. 547-552
10. Novak L.: On Fuzzy Independence Set Systems, Fuzzy Sets and Systems, Elsevier, 1997, Vol. 91, No 2, pp. 365-374

Summary data for teacher's scientific or art and professional activity:

Quotation total :	23
Total of SCI(SSCI) list papers :	17

Current projects :	Domestic :	0	International :	3

Science, arts and professional qualifications

Name and last name:	Pantović B. Jovanka
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	13.06.1993
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2010		Mathematics
PhD thesis	2000	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1996	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1991	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E145	Operations Research	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E213	Discrete Mathematics and Linear Algebra	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	E221A	Mathematical Analysis 2	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	GI101	Algebra	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
5.	H203	Mathematics 3	(H00) Mechatronics, Undergraduate Academic Studies
6.	IAM002	Discrete and Combinatorial Methods for Computer Graphics	(F10) Engineering Animation, Undergraduate Academic Studies
7.	S053N	Operations research	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
8.	0M512	Models of Computation	(OM1) Mathematics in Engineering, Master Academic Studies
9.	0ML512	Models of Computation	(OM1) Mathematics in Engineering, Master Academic Studies
10.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
11.	D0M08	Applied Abstract Algebra	(OM1) Mathematics in Engineering, Doctoral Academic Studies
12.	D0M13	Theory of Mobile Processes	(OM1) Mathematics in Engineering, Doctoral Academic Studies
13.	D0M14	Process Algebra	(OM1) Mathematics in Engineering, Doctoral Academic Studies
14.	D0M22	Multiple-Valued Logic	(OM1) Mathematics in Engineering, Doctoral Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
15.	D0M23	Clone Theory	(OM1) Mathematics in Engineering, Doctoral Academic Studies
16.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
17.	AID05	Theory of Mobile Processes	(F20) Engineering Animation, Doctoral Academic Studies
18.	AID06	Graph theory	(F20) Engineering Animation, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Gilezan S., Pantović J., Žunić J.: Partitioning Finite d-Dimensional Integer Grids with Applications, chapter in: Approximation Algorithms and Metaheuristics (editor: T. F. Gonzalez)., Chapman
2.	Ghilezan S., Pantović J., Žunić J.,Separating points by parallel hyperplanes - characteization problem, IEEE Transactions on Neural Networks, 2007, Vol. 18, No. 5, 1356-1363.
3.	Mariangiola Dezani-Ciancaglini, Silvia Ghilezan, Jovanka Pantovic, Daniele Varacca: Security types for dynamic web data. Theor. Comput. Sci, 2008, 402(2-3): 156-171
4.	Pantović J., Vojvodić D., On the cardinality of nonfinitely based functionally complete algebras, Algebra Universalis, Vol. 43, No. 4, 2000, 369-374.
5.	Pantović J., Tošić R., Vojvodić G., The cardinality of functionally complete algebras on a three element set, Algebra Universalis, Vol. 38, No.2, 1997, 136-140.
6.	Pantović J., Machida H., Rosenberg I.: Regular sets of operations, Journal of Multiple Valued Logic and Soft Computing, 2012, Vol. 19, No 1-3, pp. 149-162, ISSN 1542-3980
7.	Machida H., Pantović J.: Three classes of maximal hyperclones, Journal of Multiple Valued Logic and Soft Computing, 2012, Vol. 18, No 2, pp. 201-210, ISSN 1542-3980
8.	Pantović J., Machida H.: Maximal hyperclones on E2 as hypercores , Journal of Multiple Valued Logic and Soft Computing, 2009, pp. 1-13, ISSN 1542-3980
9.	Pantović J., Tošić R., Vojvodić G., Relative completeness with respect to two unary functions, Discrete Applied Mathematics, Vol.113 (2-3), 2001, 337-342.
10.	Marinagiola Dezani-Ciancaglini, Silvia Ghilezan, Jovanka Pantović, Security types for dynamic web data, Proceedings of Trustworthy Global Computing, Lecture Notes in Computer Science, 2007, Vol. 4661, str. 263-280.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	30			
Total of SCI(SSCI) list papers :	13			
Current projects :	Domestic :	2	International :	3

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Pekarić-Nađ M. Neda
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.07.1978
Scientific or art field:	Theoretical Electrotechnics

Academic carieer	Year	Institution	Field
Academic title election:	2001	Faculty of Technical Sciences - Novi Sad	Theoretical Electrotechnics
PhD thesis	1984	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Magister thesis	1981	School of Electrical Engineering - Beograd	Electrical and Computer Engineering
Bachelor's thesis	1978	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E216	Fundamentals of Electrical Engineering	(E20) Computing and Control Engineering, Undergraduate Academic Studies (ES0) Power Software Engineering, Undergraduate Academic Studies
2.	I087	Electrical Engineering in Industrial Engineering	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
3.	E105	Fundamentals of Electrical Engineering 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	E110	Fundamentals of Electrical Engineering 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
5.	II1007	Fundamental electrical engineering	(I10) Industrial Engineering, Undergraduate Academic Studies (ZC0) Clean Energy Technologies, Undergraduate Academic Studies
6.	II1010	Control of technical systems	(I10) Industrial Engineering, Undergraduate Academic Studies
7.	IM1022	Fundamentals of technical systems control	(I20) Engineering Management, Undergraduate Academic Studies (M20) Mechanization and Construction Engineering, Undergraduate Academic Studies
8.	URZP12	Introduction to electrical engineering	(ZP0) Disaster Risk Management and Fire Safety, Undergraduate Academic Studies
9.	DE208S	Selected Chapters on Electromagnetic Compatibility	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	DE408S	Selected chapters inl electromagnetics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	URZP55	Fire and Explosion Protection due to Electricity	(ZP1) Disaster Risk Management and Fire Safety, Master Academic Studies
12.	DE208	Selected Chapters on Electromagnetic Compatibility	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE408	Selected Chapters in Electromagnetics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Neda Pekarić-Nadj, Vera Bajović, “Izbor rešenih problema iz Osnova elektrotehnike”, Gradjevinska knjiga, Beograd, 2007
2. Neda Pekarić-Nadj, Dejana Herceg, “Osnovi elektrotehnike za studente Računarskog odseka” edicja FTN, Novi Sad, 2005
3. Nikolajević S, Pekarić-Nadj N, Dimitrijević R, "Optimization of cable terminations", IEEE Trans. PWRD,Vol.12, No 2, 1997 p.p. 527-532
4. Nikolajević S, Pekarić-Nadj N, Dimitrijević R, "A new concept in construction of cable terminations for medium voltages", IEEE Trans. Power Delivery, Volume 13, No. 3, July 1998, p.p. 712-718

Representative refferences (minimum 5, not more than 10)

5.	Šećerov Sokolović R., Sokolović S., Mihajlović Đ., Gelei T., Pekarić Nađ N., Šević S.: Effect of pulsed electromagnetic field on crude oil rheology, Industrial and Engineering Chemistry Research, 1998, Vol. 37, No 12, pp 4828-4834, ISSN 0888-5885
6.	Buranj N., Milutinov M., Pekarić Nađ N.: Uređaj za izlaganje malih tečnih uzoraka magnetskom polju, 2011
7.	Juhas A., Pekarić Nađ N., Herceg D.: Estimation of Human Exposure to Combined RF EM Field of Multiple Antennas, 5. International PhD Seminar on Computational Electromegnetics and Optimization inElectrical Engineering CEMOEE, Sofija: Proceedings of International PhD Seminar on Computational electromagnetics and optimization in electrical engineering – CEMOEE 2010, Sofia, Bulgaria, 10-13 September, 2010, 10-13 Septembar, 2010, pp. 27-31, ISBN 978-954-438-856-0
8.	Herceg D., Pekarić Nađ N., Juhas A.: Shield shape influence on a coreless probe inductance, 5. International PhD Seminar on Computational Electromegnetics and Optimization inElectrical Engineering CEMOEE, Sofija: Proceedings of International PhD Seminar on Computational electromagnetics and optimization in electrical engineering – CEMOEE 2010, Sofia, Bulgaria, 10-13 September, 2010, 10-13 Septembar, 2010, pp. 18-21, ISBN 978-954-438-856
9.	Milutinov M., Juhas A., Pekarić Nađ N.: Power line currents data extraction from magnetic field measurements, 17. International Symposium on Electrical Apparatus and Technologies – SIELA, Bourgas, 28-30 Maj, 2012, pp. 226-231, ISBN 1314-6297
10.	Dimitrijević R., Tasić D., Raičević N., Aleksić S., Pekarić Nađ N.: Analysis of a MV XLPE Cable Termination Design with Embedded Electrodes, Facta universitatis - series: Electronics and Energetics, 2010, Vol. 23, No 1, pp. 99-117, ISSN 0353-3670

Summary data for teacher's scientific or art and professional activity:

Quotation total :	16			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	2	International :	1

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Petrović S. Vladimir
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	2001	University of Manchester - Padej	Telecommunications and Signal Processing
Bachelor's thesis	-		Telecommunications and Signal Processing
Magister thesis	-		Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK300	Digital Modulations	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK412	Shape Recognition	(BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	BMI121	Image processing and Computer Vision in Medical Imaging	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EK463	Pattern Recognition	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK464	Communication Systems Design	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EK520	Medical Image Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	EK521	Information and Communication Theory	(S01) Postal Traffic and Telecommunications, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
8.	H1420	Fundamentals in Mechanical Vision	(H00) Mechatronics, Master Academic Studies
9.	DE311	Selected Chapters in Pattern Recognition	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Petrović V., Babalola K., Cootes T., Twining C., Taylor C.: Computing Accurate Correspondences across Groups of Images, IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, Vol. 32, No 11, pp. 1994-2005, ISSN 0162-8828
2.	Petrović V., Cootes T.: Objectively Adaptive Image Fusion, INFORM FUSION, 2007, Vol. 8, No 2, pp. 168-176, ISSN 1566-2535
3.	Petrović V.: Subjective tests for image fusion evaluation and objective metric validation, INFORM FUSION, 2007, Vol. 8, No 2, pp. 208-216, ISSN 1566-2535
4.	Petrović V., Xydeas C.: Sensor noise effects on signal-level image fusion performance, IEEE Transactions on Image Processing, 2004, Vol. 13, No 2, pp. 228-237, ISSN 1057-7149
5.	Petrović V., Xydeas C.: Sensor noise effects on signal-level image fusion performance, INFORM FUSION, 2003, Vol. 4, pp. 167-183, ISSN 1566-2535
6.	Petrović V., Xydeas C.: Objective Evaluation of Signal-level Image Fusion Performance, OPT ENG, 2005, Vol. 44, No 8, ISSN 0091-3286
7.	V Petrović, T Cootes, C Twining, C Taylor, “Simultaneous Registration, Segmentation and Modelling of Structure in Groups of Images”, International Symposium on Biomedical Imaging: From Nano to Macro, ISBI2007, pp.1-4; Print ISBN: 1-4244-0672-2; DOI: 10.1109/ISBI.2007.356773 Arlington,USA, 12-15 April 2007
8.	V Petrović, T Cootes, A Mills, C Taylor, „Simultaneous Segmentation of Groups of Medical Images”, Medical Image Understanding and Analysis, MIUA2007, pp. 1-5; ISBN 1 901725 33 2; editors: Reyer Zwiggelaar, Frédéric Labrosse; University of Wales, Aberystwyth,GB;17-18.07. 2007
9.	V Petrović, T Cootes, R Pavlović, "Dynamic Image Fusion Performance Evaluation", Proceedings of 10th International Conference on Information Fusion 2007, pp.1-7; Print ISBN: 978-0-662-45804-3; DOI: 10.1109/ICIF.2007.4408120; Quebec, 9-12 July 2007
10.	V Petrović, T Cootes, C Twining, A Mills, C Taylor, „Automated Analysis of Deformable Structure in Groups of Images”, 18th British Machine Vision ConferenceBMVC2007, organised by the British Machine Vision Association;; Conference Chairs: Abhir Bhalerao and Nasir Rajpoot; Warwick, GB September 10-13, 2007

Summary data for teacher's scientific or art and professional activity:

Quotation total :	1359			
Total of SCI(SSCI) list papers :	7			
Current projects :	Domestic :	2	International :	1

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Pilipović R. Stevan
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Sciences - Novi Sad
	01.01.1973
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	1987	Faculty of Sciences - Novi Sad	Mathematics
PhD thesis	1979	Faculty of Sciences - Novi Sad	Mathematics
Magister thesis	1977	Faculty of Mathematics - Beograd	Mathematics
Bachelor's thesis	1973	Faculty of Sciences - Novi Sad	Mathematics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	DAU004	Selected Chapters in Mathematics 2	(E20) Computing and Control Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies
2.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Atanacković TM, Oparnica L, Pilipović S: On a model of viscoelastic rod in unilateral contact with a rigid wall, IMA JOURNAL OF APPLIED MATHEMATICS, (2006) vol.71 br.1 str. 1-13.
2.	Atanackovic, TM Pilipovic, S Zorica, D: A diffusion wave equation with two fractional derivatives of different order, JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, (2007) vol.40 br.20 str. 5319-5333
3.	Pilipovic, S. Teofanov, N. : Multiresolution expansion, approximation order and quasiasymptotic behavior of tempered distributions, JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, (2007) vol.331 br.1 str. 455-471
4.	Oberguggenberger, M. Pilipovic, S. Scarpalezos, D. : Positivity and positive definiteness in generalized function algebras, JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, (2007) vol.328 br.2 str. 1321-1335
5.	Oberguggenberger, M. Pilipovic, S. Valmorin, V. : Global representatives of Colombeau holomorphic generalized functions, MONATSHEFTE FUR MATHEMATIK, (2007) vol.151 br.1 str. 67-74
6.	Pilipovic, S Scarpalezos, D : Divergent type quasilinear Dirichlet problem with singularities, ACTA APPLICANDAE MATHEMATICAE, (2006) vol.94 br.1 str. 67-82
7.	Pilipovic, Stevan Vuletic, Mirjana : Characterization of wave front sets by wavelet transforms, TOHOKU MATHEMATICAL JOURNAL, (2006) vol.58 br.3 str. 369-391
8.	Hormann, G Oberguggenberger, M Pilipovic, S : Microlocal hypoellipticity of linear partial differential operators with generalized functions as coefficients, TRANSACTIONS OF THE AMERICAN MATHEMATICAL SOCIETY, (2006) vol.358 br.8 str. 3363-3383
9.	Mitrovic, D Pilipovic, S : Approximations of linear Dirichlet problems with singularities, JOURNAL OF MATHEMATICAL ANALYSIS AND APPLICATIONS, (2006) vol.313 br.1 str. 98-119

Representative refferences (minimum 5, not more than 10)	
10.	Pilipovic, Stevan Scarpalezos, Dimitris Valmorin, Vincent : Equalities in algebras of generalized functions, FORUM MATHEMATICUM, (2006) vol.18 br.5 str. 789-801

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	250			
Total of SCI(SSCI) list papers :	258			
Current projects :	Domestic :	0	International :	0

Science, arts and professional qualifications

Name and last name:	Popović S. Dragan
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2004	Faculty of Technical Sciences - Novi Sad	Electroenergetics
PhD thesis	1995	School of Electrical Engineering - Beograd	Electroenergetics
Magister thesis	1990	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1985	Faculty of Technical Sciences - Novi Sad	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE415A	Distribution Network Analysis and Management	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE420	Exploitation of Distribution Systems / Networks	(ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	ESI011	Software security and safety in power engineering	(ES0) Power Software Engineering, Undergraduate Academic Studies
4.	ESI014	Integration of power systems	(ES0) Power Software Engineering, Undergraduate Academic Studies
5.	DE104S	Regulation and Distribution Network Management	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	DE205S	Distribution networks development pllanning	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE308S	Facility Planning and Optimization of Distribution Networks	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	EE500	Modelling in Power Systems	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	EE504	Management Systems in Power Engineering – EMS and DMS	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	EE562	Power System Exploitation	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	DE217S	PES Analysis 4	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	DE217	PES Analysis 4	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE308	Facility Planning and Optimization of Distribution Networks	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Lendak I., Erdeljan A., Popović D.: Algorithm for cataloguing topologies in the Common Information Model (CIM), Computers
2. Janjić A., Popović D.: Selective Maintenance Schedule of Distribution Networks Based On Risk Management Approach, IEEE Trans. on Power Systems, 2007, Vol. 22, No 2, pp. 597-604
3. Popović D., Varga E., Perlić Z.: Extension of the Common Information Model With a Catalog of Topologies, IEEE Transactions on Power Systems, 2007, Vol. 22, No 2, pp. 770-777
4. Popović D., Popović Z.: A Risk management Procedure for Supply Restoration in Distribution Networks, IEEE Transactions on Power Systems , IEEE Transactions on Power Systems, 2004, Vol. 19, No 1, pp. 221-229
5. Popović D., Ćirić R.: A Multi-Objective Algorithm for Distribution Networks Restoration, IEEE Trans. on Power Delivery, 1999, Vol. 14, No 3, pp. 1134-1141
6. Popović D., Levi V., Gorečan Z.: Coordination of Emergency Secondary Voltage Control and Load Shedding to Prevent Voltage Instability, Transmission and Distribution , IEE Proceedings -Generation, Transmission and Distribution, 1997, No 3, pp. 293-300
7. Levi V., Popović D.: Integrated Methodology for Transmission and Reactive Power Planning , IEEE Trans. on Power Systems, 1996, Vol. 6, No 4, pp. 1493-1499
8. Popović D., Ćalović M., Levi V.: Voltage/Reactive Security Analysis in Power Systems with Automatic Secondary Voltage Control, IEE Proceedings -Generation, Transmission and Distribution, 1994, No 3, pp. 177-183

Representative refferences (minimum 5, not more than 10)	
9.	Strezoski V., Popović D., Bekut D., Švenda G.: DMS – Basis for Increasing of Green Distributed Generation Penetration in Distribution Networks, Thermal Science, 2012, Vol. 1, No 16, pp. 189-203, ISSN 0354-9836
10.	Popović D., Glamočić Lj., Nimrihter M.: The Optimal Automation Level of Medium Voltage Distribution Networks, International Journal of Electrical Power

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	185			
Total of SCI(SSCI) list papers :	15			
Current projects :	Domestic :	0	International :	0

Science, arts and professional qualifications

Name and last name:	Popović N. Željko
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.2012
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Electroenergetics
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Electroenergetics
Magister thesis	1999	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1988	Faculty of Technical Sciences - Novi Sad	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE420	Exploitation of Distribution Systems / Networks	(ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	DE205S	Distribution networks development pllanning	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
3.	DE205	Planning the Distribution Networks Development	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
4.	DE306	Load Management in PES	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. D. S. Popović, Ž. N. Popović, "A Risk management Procedure for Supply Restoration in Distribution Networks", IEEE Trans. on Power Systems, Vol. 19, No.1, pp. 221-228, February 2004.
2. Ž. N. Popović, D. S. Popović, “Graph theory based formulation of multi-period distribution expansion problems”, Electric Power Systems Research, Vol. 80, No. 10 , pp. 1256-1266, October 2010.
3. Ž. Popovic, V. Kerleta, , "Expansion planning of distribution networks using simulated annealing technique", in Proceedings of the 21th conference on electricity distribution CIRED, June 2011.
4. Ž. Popovic, D. S. Popovic, , "A Graph Theory Based Formulation of Multi-Period Distribution Expansion Planning Problems", in Proceedings of the 20th conference on electricity distribution CIRED, June 2009.
5. Ž. Popovic, D. S. Popovic, V. Dj. Kerleta, "Risk Management Based Procedure for Multi-Stage Expansion Planning of Distribution Networks Under Uncertainty", in Proceedings of the 19th conference on electricity distribution CIRED, May 2007.
6. Ž. Popovic, D. S. Popovic, Vojin Dj. Kerleta "A Novel Methodology for Multi-Year Planning of Large-Scale Distribution Networks", in Proceedinfs of the 18th conference on electricity distribution CIRED, May 2005.
7. Ž. Popovic, D. S. Popovic "A Dynamic Programming Based Procedure for Distribution Network Planning", in Proceedings of the 1th regional conference on electricity distribution JUKO CIRED, Octobar 2004.
8. Ž. Popovic, D. S. Popovic, "Direct Load Control as a Market-Based Program in Deregulated Power Industries", in Proceedings of the IEEE Bologna Power Tech’03, June 2003
9. Ž. Popovic, D. S. Popovic, "A Novel Decomposition Procedure for Distribution Network Planning", in Proceedings of the 38th Universities Power Engineering Conference UPEC 2003, pp. 609-612, September 2003..
10. D. S. Popovic, Ž. Popovic, "Distribution Network Restoration Supply Based on Fuzzy Risk Management", in Proceedings of the 17th conference on electricity distribution CIRED, May 2003.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	26			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	0	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Rajković R. Milan
Academic title:	Senior Science Associate
Name of the institution where the teacher works full time and starting date:	Vinča Institute of Nuclear Sciences - Vinča
	01.01.2000
Scientific or art field:	Physical Science

Academic carieer	Year	Institution	Field
Academic title election:	2005	Vinča Institute of Nuclear Sciences - Vinča	Physical Science
PhD thesis	1997	University of Belgrade - Beograd	Physics
Magister thesis	1983	University of Pennsylvania - Tennessee	Physics
Bachelor's thesis	1982	University of Pennsylvania - Tennessee	Physics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	D. Horak, S. Maletić, M. Rajković, Persistent Homology of Complex Networks, Journal of Statistical Mechanics and Applications (2009) P03034.
2.	Milan Rajković, M.M. Škorić, K. Sølna and G. Antar, Characetrization of Local Turbulence in Magnetic Confinement Devices, Nuclear Fusion 48 (2008) 1-13.
3.	Mladen Nikolić and Milan Rajković, A group theoretic approach to a class of third-order differential equations with two parameter symmetry group solvable by quadratures, Nonlinear Dynamics 48 (2007) 17-27.
4.	Mladen Nikolić and Milan Rajković, Bifurcations in Nonlinear Models of Fluid Conveying Pipes, Journal of Fluids and Structures, 22 (2006),
5.	Z. Mihailović and M. Rajković, Cooperative Parrondo's games on a two-dimensional lattice, Physica A 365 (2006) 244-251
6.	Milan Rajković, Tomo-hiko Watanabe and M.M. Škorić, Level crossing function in the Analysis of Confined Plasma Turbulence, Nuclear Fusion 49 (2009) 095016i
7.	Milan Rajković and M.M. Škorić, Characterization of Intermittency in Plasma Edge Turbulence; Contributions to Plasma Physics 48 (2008) L31-L35.
8.	M. Rajković, Nonextensive entropy as a measure of time series complexity, Physica A 340 (2004) 327-333
9.	M. Rajković and Z. Mihailović, Quantifying Complexity in the Minority Game, Physica A 325 (2003) 40 - 47
10.	Z. Mihailović and M. Rajković, One-dimensional Asynchronous Cooperative Parrondo's Games, Fluctuation and Noise Letters 3 (2003) L389 - 398

Summary data for teacher's scientific or art and professional activity:

Quotation total :	100			
Total of SCI(SSCI) list papers :	22			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Ralević M. Nebojša
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1990
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	1997	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1994	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1990	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	H103	Mathematics 1	(H00) Mechatronics, Undergraduate Academic Studies
2.	H107	Mathematics 2	(H00) Mechatronics, Undergraduate Academic Studies
3.	M4201	Mathematics 3	(M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
4.	M4202	Applied Mathematical Analysis	(M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
5.	P216	Numerical Analysis	(P00) Production Engineering, Undergraduate Academic Studies
6.	0M502	Partial Differential Equations	(OM1) Mathematics in Engineering, Master Academic Studies
7.	0M508	Mathematical Foundations of Fuzzy Systems	(OM1) Mathematics in Engineering, Master Academic Studies
8.	0M517	Numerical Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
9.	0ML502	Partial Differential Equations	(OM1) Mathematics in Engineering, Master Academic Studies
10.	0ML508	Mathematical Foundations of Fuzzy Systems	(OM1) Mathematics in Engineering, Master Academic Studies
11.	0ML517	Numerical Analysis	(OM1) Mathematics in Engineering, Master Academic Studies
12.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
13.	Z506	20BAdvanced Course in Mathematics 1	(ZP1) Disaster Risk Management and Fire Safety, Master Academic Studies (Z20) Environmental Engineering, Master Academic Studies
14.	Z506	Viši kurs matematike 1(uneti naziv na engleskom)	(Z20) Environmental Engineering, Master Academic Studies
15.	D0M02	Partial Differential Equations	(OM1) Mathematics in Engineering, Doctoral Academic Studies
16.	D0M07	Mathematical Foundations of Fuzzy Systems	(OM1) Mathematics in Engineering, Doctoral Academic Studies
17.	D0M21	Fuzzy Systems and Their Applications	(OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	D0M38	Non-linear Equations and Their Applications	(OM1) Mathematics in Engineering, Doctoral Academic Studies
19.	D0M39	Optimization Methods and Mathematical Modelling	(OM1) Mathematics in Engineering, Doctoral Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
20.	DOM54	Computational geometry	(F20) Engineering Animation, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	DOM55	Pattern Recognition	(F20) Engineering Animation, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
22.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	E. Pap, N. Ralević, Pseudo-Laplace transform, Nonlinear Analysis: Theory Methods and Applications, 33 (1998), 533-550.
2.	N. M. Ralević, Lj. M. Nedović, T. Grbić, The pseudo-linear superposition principle for nonlinear partial differential equations and representation of their solution by the pseudo-integral, Fuzzy Sets and Systems 155 (2005) 89-101.
3.	Lj. M. Nedović, N. M. Ralević, T. Grbić,Large deviation principle with generated pseudo measures,Fuzzy Sets and Systems 155 (2005) 65-76.
4.	T. Lukić, N. M. Ralević, Geometric Mean Newton"s Method for Simple and Multiple Roots, Applied Mathematics Letters (accepted).
5.	N. M. Ralević,One characterization of Navier-Stokes equation, Acta Mechanica Slovaca, Košice, ročnik 8., č. 4/2004, str. 97-102.
6.	N. Ralević, Some new properties of g-calculus, Univ. u Novom Sadu Zb. Rad. Prirod.-Mat. Fak. Ser. Mat. 24, 1 (1994), 139-157.
7.	E. Pap, N. Ralević, Pseudo operations on finite intervals, Novi Sad J. Math. Vol. 29, No. 1, 1999, 1-6
8.	N. M. Ralević, A generalization of the Pseudo-Laplace transform, Novi Sad J. Math. Vol. (accepted).
9.	I. Kovačević, N. Ralević, Funkcionalna analiza, Edicija tehničke nauke, Novi Sad (2004), 203 str.
10.	I. Kovačević, N. Ralević, Matematička analiza I (uvodni pojmovi i granični procesi), Novi Sad (2000), 155 str.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	28			
Total of SCI(SSCI) list papers :	10			
Current projects :	Domestic :	2	International :	0

Science, arts and professional qualifications

Name and last name:	Salamon D. Dragutin
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	School of Electrical Engineering - Beograd
	01.10.1973
Scientific or art field:	Electroenergetic Systems

Academic carieer	Year	Institution	Field
Academic title election:	2011		Electroenergetic Systems
PhD thesis	1992		Electroenergetic Systems
Magister thesis	1978		Electroenergetic Systems
Bachelor's thesis	1973		Electroenergetic Systems

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE0400	Electrical Substations 1	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	DE116S	Electrical Substations 2	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
3.	EE400	Electrical Substations	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
4.	DE116	Electrical Substations 2	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	J. Nahman, D. Salamon, “Safety Analysis at Overhead Line Towers in Close Proximity to the Substation”, IEEE Transaction on Power Delivery (ISSN 0885-8977), Vol. 25, No. 3, July 2010., pp. 1508-1515. (IF 1.289)
2.	Nahman J., Salamon D., “Analytical Expressions for The Resistance of Grounding Grids in Nonuniform Soil”, IEEE Transactions on Power Apparatus and Systems (ISSN 0018-9510), Vol. PAS-103, April 1984., pp. 880-885, (IF 0.390); (časopis izlazio do 1986., posle se podelio na 3 časopisa)
3.	Nahman J., Salamon D., “Analytical Expressions for The Resistance of Rodbeds and of Combined Grounding Systems in Nonuniform Soil”, IEEE Transactions on Power Delivery (ISSN 0885-8977), Vol. PWRD-1, July 1986., pp. 90-96. (IF 0.081)
4.	Nahman J., Salamon D., “A Practical Method for The Interpretation of Earth Resistivity Data Obtained From Driven Rod Tests”, IEEE Transactions on Power Delivery (ISSN 0885-8977), Vol. PWRD-3, Oct. 1988., pp. 1375-1379. (IF 0.145)
5.	Nahman J., Salamon D., “Effects of The Metal Sheathed Cables Upon ThePerformance of The Distribution Substations Grounding Systems”, IEEE Transactions on Power Delivery (ISSN 0885-8977), Vol. PWRD-7, No.3, oct. 1992., pp. 1179 – 1187 (IF 0.247)
6.	Nahman J., Djordjević V., Salamon D., “Nonuniformity Correction Factors for Maximum Mesh-voltages of Combined Grid-multiple Rods Electrodes”, IEEE Transactions on Power Delivery (ISSN 0885-8977), PWRD-11, No. 3, July 1996. pp. 1343-1348, (IF 0.334)
7.	Stojković Z., Savić M. S., Nahman J., Salamon D., Bukorović B., “Sensitivity Analysis of Experimental Determined Grounding Grid Impulse Characteristics”, IEEE Transactions on Power Delivery (ISSN 0885-8977), Vol. 13, No. 4, Oct. 1998., pp. 1136-1142. (IF 0.334)
8.	Stojković Z., Savić M. S., Nahman J., Salamon D., Bukorović B., “Experimental Investigation of Grounding Grid Impulse Characteristics”, European Transactions on Electrical Power (ETEP) (ISSN 1430-144X), Vol. 8, Nov./Dec. 1998., pp. 417-421. (IF 0.352)
9.	J. Nahman, V. Djordjevic, D. Salamon, ”Grounding Effects of HV and MV Underground Cables Associated With Urban Distribution Substations”, IEEE Transactions on Power Delivery (ISSN 0885-8977), Vol. 17, No. 1, January 2002. pp. 111-116, (IF 0.317)
10.	J. Nahman, D. Salamon, Z. Stojkovic, J. Mikulovic, “Rationalization of operation of an industrial network”, Electric Power System Research (ISSN 0378-7796), 78(2008), pp. 1664-1671, (IF 0.952)

Summary data for teacher's scientific or art and professional activity:

Quotation total :	70			
Total of SCI(SSCI) list papers :	1			
Current projects :	Domestic :	0	International :	0

Science, arts and professional qualifications

Name and last name:	Sarić T. Andrija
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2012		Electroenergetics
PhD thesis	1997	School of Electrical Engineering - Beograd	Electroenergetics
Magister thesis	1992	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1988	School of Electrical Engineering - Beograd	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE411B	Exploitation of PES	(ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	ESI018	GIS in power systems	(ES0) Power Software Engineering, Undergraduate Academic Studies
3.	ESI019	Critical mission software for power grids	(ES0) Power Software Engineering, Undergraduate Academic Studies
4.	DE307S	Planning and Optimization of Power System Plant	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
5.	DE407S	Regulation and Distribution Network Management	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	DE513S	Advanced Methods of Monitoring and Management	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE314S	Selected Chapters in System Management in Power Systems – EMC and DMS	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DE519S	PES Planning	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE307	Planning and Optimization of Power System Plant	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
10.	DE407	Regulation and Control of Electric Power Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
11.	DE513	Advanced Methods of Monitoring and Management	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
12.	DE314	Selected Chapters in System Management in Power Systems – EMC and DMS	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE519	PES Planning	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. M. S. Ćalović, A. T. Sarić, "Planiranje elektroenergetskih sistema; Prvi deo: Principi i metodologija planiranja elektroenergetskih sistema", Beopres, Beograd, 2000, 342 strane, ISBN 86-7418-010-8, CIP 621.311:65.012(075.8).
2. M. S. Ćalović, A. T. Sarić, "Osnovi analize elektroenergetskih mreža i sistema", Akademska misao i Tehnički fakultet u Čačku, Beograd, 2004, 778 strana, ISBN 86-7466-134-3, CIP 621.311(075.8).
3. M. S. Ćalović, A. T. Sarić, P. Č. Stefanov, "Eksploatacija elektroenergetskih sistema u uslovima slobodnog tržišta", Tehnički fakultet, Čačak, 2005, 420 strana, ISBN 86-7776-006-7, CIP 621.311(075.8).
4. Sarić A., Murphy F., Soyster A., Stanković A.: Two-Stage Stochastic Programming Model for Market Clearing with Contingencies , IEEE Trans. on Power Systems, 2009, Vol. 24, No 3, pp. 1266-1278
5. Sarić A., Stanković A.: Applications of Ellipsoidal Approximations to Polyhedral Sets in Power System Optimization, IEEE Transaction on Power Systems, 2008, Vol. 23, No 3, pp. 956-965
6. Sarić A., Stanković A., Stanković A.: An Application of Interval Analysis and Optimization to Electric Energy Markets, IEEE Transaction on Power Systems, 2006, Vol. 21, No 2, pp. 515-523
7. Sarić A., Stanković A.: Integration of Equation and Signal-based Models in Transient Analysis of Electric Energy Systems, IEEE Transactions on Circuits and Systems I, 2006, Vol. 53, No 7, pp. 1589-1596
8. Sarić A., Stanković A.: Model Uncertainty in Security Assessment of Power Systems, IEEE Transaction on Power Systems, 2005, Vol. 20, No 3, pp. 1398-1405

Representative refferences (minimum 5, not more than 10)	
9.	Stanković A., Sarić A.: Transient Power System Analysis with Measurement-Based Gray Box and Hybrid Dynamic Equivalents, IEEE Trans. on Power Systems, 2004, Vol. 19, No 1, pp. 455-462
10.	Sarić A., Ćirić R.: Integrated Fuzzy State Estimation and Load Flow Analysis in Distribution Networks, IEEE Trans. on Power Delivery, 2003, Vol. 18, No 2, pp. 571-578

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	140			
Total of SCI(SSCI) list papers :	21			
Current projects :	Domestic :	2	International :	0

Science, arts and professional qualifications

Name and last name:	Satarić V. Miljko
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	03.01.1973
Scientific or art field:	Physics

Academic carieer	Year	Institution	Field
Academic title election:	1995	Faculty of Technical Sciences - Novi Sad	Physics
PhD thesis	1984	School of Electrical Engineering - Beograd	Physics
Magister thesis	1979	School of Electrical Engineering - Beograd	Physics
Bachelor's thesis	1972	Faculty of Sciences - Novi Sad	Physics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E103	Physics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	E215	Physics	(E20) Computing and Control Engineering, Undergraduate Academic Studies
3.	Z103	Selected Chapters in Physics 1	(Z01) Safety at Work, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
4.	Z110	Selected Chapters in Physics 2	(Z01) Safety at Work, Undergraduate Academic Studies (Z20) Environmental Engineering, Undergraduate Academic Studies
5.	EI410	Biophysics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	DE203S	Odabrana poglavlja iz kvantne elektronike	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE301S	Molekularna elektronika(uneti naziv na engleskom)	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DZ01FS	Selected Chapters in Physics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
9.	EM511	Quantum and Organic Electronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	SI028	Biophysics	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
11.	DE203	Selected Chapters in Quantum Electronics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
12.	DE301	Molecular Electronics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
13.	DZ01F	Selected Chapters in Physics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	S. Zdravković, M.V. Satarić, “Single-Molecule Unzipping Experiments on DNA Peyrard-Bishop-Dauxois Model”,Phys.Rev.E73,021905-11,2006.
2.	J. A. Tuszynski, J. A. Brown, E. Crawford, E. J. Carpenter, M. L. A. Nip, J. M. Dixon, M. Satarić, “Molecular dynamics simulations of tubulin structure and calculations of electrostatic properties of microtubules”, Mathematical and Computer Modelling, vol. 41, no.10, pp. 1055-1070, 2005.
3.	M. Satarić, B. Satarić, J. A. Tuszynski, “Nonlinear model of microtubule dynamics”, Electromagnetic Biology and Medicine, vol.24, no. 3, pp. 255-264, 2005.
4.	S. Zdravković J. A. Tuszynski, M. Satarić “Peyrard-Bishop-Dauxois model of DNA dynamics and impact of viscosity”, Journal of Computational and Theoretical Nanoscience, vol. 2, no. 2, pp. 263-271, 2005.
5.	S. Zdravković, M. Satarić, “Optical and Acoustical Frequencies in a Nonlinear Helicoidal Model of DNA Molecule”, Chinese Physics Letters 22, pp. 850-853, 2005.
6.	S. Portet, J. A. Tuszynski, J. M. Dixon, M. Satarić, “Models of spatial and orientational self-organization of microtubules under the influence of gravitational fields”, Physical Review E, vol. 68, no. 2, 2003.
7.	M. Satarić, J. A. Tuszynski, “Relationship between the nonlinear ferroelectric and liquid crystal models for microtubules”, Physical Review E, vol. 67, no. 1, 2003.
8.	S. Zdravković, M. Satarić, “DNA dynamics and big viscosity”, International Journal of Modern Physics B, vol.17, no. 31-32, pp. 5911-5923, 2003.
9.	M. Satarić, J. A. Tuszynski, “Impact of regulatory proteins on the nonlinear dynamics of DNA”, Physical Review E, vol. 65, no. 5, 2002.
10.	G. Keković, D. Raković, M. Satarić, D. Koruga, “A kink-soliton model of charge transport through microtabular cytoskeleton”, Current Research in Advanced Materials and Processes, vol. 494, pp. 507-512, 2005.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	295			
Total of SCI(SSCI) list papers :	67			
Current projects :	Domestic :	1	International :	2

Science, arts and professional qualifications

Name and last name:	Sladoje Matić I. Nataša
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	14.03.1994
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2011		Mathematics
PhD thesis	2005	University of Novi Sad - Novi Sad	Mathematical Sciences
Magister thesis	1998	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1992	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A101	Mathematics	(A00) Architecture, Undergraduate Academic Studies
2.	E135B	Mathematical Analysis 2	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
3.	GI107	Mathematical Analysis 1	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
4.	IAM001	Mathematical Shape Modeling for Computer Animation	(F10) Engineering Animation, Undergraduate Academic Studies
5.	IAM004	Geometry of Discrete Space	(F10) Engineering Animation, Undergraduate Academic Studies
6.	IGA008	Mathematics for Engineering Graphics	(F10) Engineering Animation, Undergraduate Academic Studies
7.	BMI91	Mathematics 1	(BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	BMI92	Mathematics 2	(BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	E101A	Discrete Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
11.	Z506	20BAdvanced Course in Mathematics 1	(ZP1) Disaster Risk Management and Fire Safety, Master Academic Studies (Z20) Environmental Engineering, Master Academic Studies
12.	IA018	Computer Geometry	(F20) Engineering Animation, Master Academic Studies
13.	D0M28	Digital Geometry	(OM1) Mathematics in Engineering, Doctoral Academic Studies
14.	D0M29	Image Processing 1	(OM1) Mathematics in Engineering, Doctoral Academic Studies
15.	D0M30	Image Processing 2	(OM1) Mathematics in Engineering, Doctoral Academic Studies
16.	D0M31	Applied Algorithms	(OM1) Mathematics in Engineering, Doctoral Academic Studies
17.	D0M32	Combinatorial and Geometric Algorithms	(OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	D0M33	Positional Games	(OM1) Mathematics in Engineering, Doctoral Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
19.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies
20.	AID07	Digital geometry	(F20) Engineering Animation, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Sladoje N., Lindblad J., Nystrom I.: Defuzzification of spatial fuzzy sets by feature distance minimization. , Image and Vision Computing, 2011, Vol. 29, No 2-3, pp. 127-141, ISSN 0262-8856
2.	Lukić T., Lindblad J., Sladoje N.: Regularized Image Denoising Based on Spectral Gradient Optimization, Inverse Problems, 2011, Vol. 27, No 8, pp. 8501-1, ISSN 0266-5611
3.	Sladoje N., Lindblad J.: High precision boundary length estimation by utilizing grey-level information , IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, Vol. 31, No 2, pp. 357-363, ISSN 0162-8828
4.	N. Sladoje and J. Lindblad, "Representation and Reconstruction of Fuzzy Disks by Moments", Fuzzy Sets and Systems, Vol. 158, No. 5, pp. 517-534, 2007.<\eng>
5.	N. Sladoje, I. Nyström, and P.K. Saha, "Measurements of digitized objects with fuzzy borders in 2D and 3D", Image and Vision Computing, vol. 23, pp 123-132, 2005.<\eng>
6.	J. Zunic and N. Sladoje, "Efficiency of Characterizing Ellipses and Ellipsoids by Discrete Moments", IEEE Trans. Pattern Analysis and Machine Intelligence, vol.22, No.4, pp 407-414, 2000.<\eng>
7.	J. Chanussot, I. Nyström and N. Sladoje, "Shape signatures of fuzzy star-shaped sets based on distance from the centroid", Pattern Recognition Letters, vol. 26(6), pp. 735-746, 2005.<\eng>
8.	Ćurić,V., Lindblad, J., Sladoje, N., Sarve, H., Borgefors, B. A new set distance and its application to shape registration. Accepted for Pattern Analysis and Applications, 2012.
9.	Lindblad L., Sladoje N. Coverage Segmentation based on Linear Unmixing and Minimization of Perimeter and Boundary Thickness. Pattern Recognition Letters, Vol. 33, No.6, pp. 728-738, 2012.
10.	Malmberg F., Lindblad J., Sladoje N., Nystrom I.: A graph-based framework for sub-pixel image segmentation, Theoretical Computer Science, 2011, Vol. 412, No 15, pp. 1338-1349

Summary data for teacher's scientific or art and professional activity:

Quotation total :	71			
Total of SCI(SSCI) list papers :	21			
Current projects :	Domestic :	2	International :	3

Science, arts and professional qualifications

Name and last name:	Slankamenac P. Miloš
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.02.2002
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	2004	Faculty of Technical Sciences - Novi Sad	Electronics
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM414	Optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	F207	Electronics and Optoelectronics	(F00) Graphic Engineering and Design, Undergraduate Academic Studies
3.	EM430A	Control and process electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EM444B	Applied electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM455	Electronic multimedia systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EM456	Computers in the supervisory and control systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	ETI02	Electronics and Telecommunication Development Tools 1	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	ETI09	Electronics	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
9.	ETI14	Digital Electronics	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
10.	ETI22	Sensors and Actuators	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	ETI28	Industrial Electronics	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
12.	ETI38	Optoelectronics for communication and sensors	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
13.	DE201S	Selected Chapters in Optoelectronics and Photonics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	DE503S	Industrial Electronics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	SI013	Applied electronics in industry	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	SI035	Electronic Systems in Oil Industry	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
17.	SI042	Optoelectronics components	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
18.	BMIM1A	Applications of lasers in medicine	(BM0) Biomedical Engineering, Master Academic Studies
19.	DE117S	Selected chapters from optoelectronics sensors systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
20.	DE315S	Optoelectronics sensors systems-advanced course	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
21.	DE418S	Design of complex optoelectronics systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
22.	EM435A	Electronic Systems in Oil Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
23.	EM437A	The application of electronic systems in clean and renewable energy	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
24.	EM439A	Electronics in veichles	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
25.	EM520	Industrial networks and protocols	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
26.	EM521	Applied optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
27.	EM523	Applied electronics in industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
28.	EM532	Design of electronic devices.	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
29.	F510E1	Electronic multimedia systems	(F00) Graphic Engineering and Design, Master Academic Studies
30.	DE201	Selected Chapters in Optoelectronics and Photonics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
31.	DE400	Complex Digital Systems and High Frequency Circuits	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
32.	DE503	Industrial Electronics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies
33.	DE117	Selected chapters from optoelectronics sensors systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
34.	DE315	Optoelectronics sensors systems-advanced course	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
35.	DE418	Design of complex optoelectronics systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Miloš P. Slankamenac, Miloš B. Živanov, Nikola Stojanović "Optoelektronske komponente -skripta", Fakultet tehničkih nauka u Novom Sadu, 281 str., 2010.
2.	Miloš Slankamenac, Kalman Babković, Ivan Mezei: Mikrokontroler 8051/8052 - praktikum laboratorijskih vežbi, Fakultet tehničkih nauka u Novom Sadu, Edicija: Tehničke nauke – udžbenici, 115 str. ISBN: 978-86-7892-045-5, Novi Sad, 2007.
3.	Miloš B. Živanov, Miloš P. Slankamenac, Optoelektronika, praktikum za laboratorijske vežbe, Fakultet tehničkih nauka u Novom Sadu, Edicija: Univerzitetski udžbenik, 110 str. ISBN: 978-86-7892-085-1, UDK: 621.38:535(075.8)(076), Novi Sad, 2008.
4.	Slankamenac M., Lukić-Petrović S., Živanov M., Čajko K.: Electrical switching behavior of bulk Cux(AsSe1.4I0.2)100−x glasses: Composition dependence and topological effects, SOLID STATE COMMUN, 2012, Vol. 152, No 13, pp. 1160-1163, ISSN 0038-1098
5.	Bajić J., Stupar D., Manojlović L., Slankamenac M., Živanov M.: A simple, low-cost, high-sensitivity fiber-optic tilt sensor, Sensors and Actuators A: Physical, 2012, Vol. 185, pp. 33-38, ISSN 0924-4247
6.	Stupar D., Bajić J., Manojlović L., Slankamenac M., Joža A., Živanov M.: A Wearable Low-Cost System for Human Joint Movements Monitoring Based on Fiber-Optic Curvature Sensor, IEEE Sensors Journal, 2012, ISSN 10.1109/JSEN.2007.90
7.	Manojlović L., Živanov M., Slankamenac M., Bajić J., Stupar D.: High-speed and high-sensitivity displacement measurement with phase-locked low-coherence interferometry, APPL OPTICS, 2012, Vol. 51, pp. 4333-4342
8.	Lukić-Petrović S., Skuban F., Petrović D., Slankamenac M.: Effect of copper on DC and AC conductivity of (As2Se3)(AsI3) glassy semiconductors, Journal of Non-Crystalline Solids, 2010, Vol. 40, No 10, pp. 108-112, UDK: doi:10.1016/j.jnoncrysol.2010.05.009
9.	Slankamenac M., Lukić-Petrović S., Živanov M.: Electrical switching in the bulk metal chalcogenide glassy semiconductor Cu10(AsSe1.4I0.2)90, Semicond. Sci. Technol., 2009, Vol. 24, No 8, pp. 1-7, ISSN 0268-1242, UDK: 10.1088/0268-
10.	Bajić J., Stupar D., Joža A., Slankamenac M., Jelić M., Živanov M.: A simple fiber optic inclination sensor based on the refraction of light, Physica scripta, 2012, Vol. 149, pp. 1-4, ISSN 0031-8949, UDK: doi:10.1088/0031-8949/2012/T149/014024

Summary data for teacher's scientific or art and professional activity:

Quotation total :	26			
Total of SCI(SSCI) list papers :	18			
Current projects :	Domestic :	3	International :	2

Science, arts and professional qualifications

Name and last name:	Sovilj M. Platon
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.2007
Scientific or art field:	Electrical Measurements

Academic carieer	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Biomedical Engineering
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	BM119E	Technical standards and regulations for medical devices and systems	(BM0) Biomedical Engineering, Undergraduate Academic Studies
2.	BMI115	Biomedical Engineering in Cognitive Neuroscience	(BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	EI408	Project Management	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EIDMS1	Microprocessor based measurement and data acquisition systems 1	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EIDMS2	Microprocessor based measurement and data acquisition systems 2	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIMMBM	Methods of measurement and measurement-acquisition systems in biomedicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIPDMS	Programming of Measurement and Data Acquisition Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIVI	Virtual measurement systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EIWDS	Web-based Measurement and Data Acquisition Systems	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	BMIM5A	Virtual measurement instrumentation in biomedicine	(BM0) Biomedical Engineering, Master Academic Studies
11.	BMIM5B	Design and development of medical devices and systems	(BM0) Biomedical Engineering, Master Academic Studies
12.	BMIM5C	Brain Computer Interface	(BM0) Biomedical Engineering, Master Academic Studies
13.	BMIM5D	Magnetic-Resonance Devices in Biomedicine	(BM0) Biomedical Engineering, Master Academic Studies
14.	BMIM5E	Distributed measurement and acquisition systems in biomedicine	(BM0) Biomedical Engineering, Master Academic Studies
15.	EIIKL	Engineering communication, logistics and intellectual property	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
16.	EIMRV1	Real Time Measurements	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
17.	DE303	Biomedical Instrumentation	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies
18.	DE417	Web-based Measurement Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
19.	DE518	Brain Computer Interface Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Sovilj P.: Stohastičko digitalno merenje EEG signala, Novi Sad, Fakultet tehničkih nauka, 2010
2.	Sovilj P.: Eksterno testiranje površinskih kalemova uređaja za magnetsku rezonancu, FTN Novi Sad, 2006
3.	Sovilj P., Milovančev S., Vujičić V.: Digital Stochastic Measurement of a Nonstationary Signal With an Example of EEG Signal Measurement, IEEE Transactions on Instrumentation and Measurement, 2011, Vol. 60, No 9, pp. 3230-3232, ISSN 0018-9456
4.	Sovilj P., Pjevalica N.: FPGA based model of processing EEG signal, 17. Telekomunikacioni forum TELFOR, Beograd: Telecommunications society, Belgrade, 24-26 Novembar, 2009, pp. 677-680, ISBN 978-86-7466-375-2
5.	Sovilj P., Čabrilo N., Vujičić V., Župunski I.: Remote measurements by ZigBit wireless module, 10. International Conference on Accomplishments in Electrical and Mechanical Engineering and Information Technology - DEMI, Banja Luka: Mašinski fakultet Banja Luka, 26-28 Maj, 2011, pp. 885-891, ISBN 978-99938-39-36-1, UDK: 621(082);621.3(082)
6.	Sovilj P., Davidović D., Beljić Ž., Ković V.: Measurement and processing of event-related brain potential records, 19. Telekomunikacioni forum TELFOR, Beograd: TELFOR, 22-24 Novembar, 2011, pp. 683-686, ISBN 978-1-4577-1498-6
7.	Pjevalica N., Pjevalica V., Sovilj P.: Tehničko rešenje: Unapređeni algoritam upravljanja memorijom, Razvijeno: u okviru projekta tehnološkog razvoja TR-11005, 2011
8.	Ivanović M., Sovilj P.: Developing Expert System for assessment of quality management level, International Journal Total Quality Management
9.	M. Bobrek, Z. Tanasić, P. Sovilj: Upravljanje projektima, udžbenik, MFBL, Banja Luka, 2006
10.	M. Bobrek, M. Soković, P. Sovilj, Z. Tanasić: Upravljanje kvalitetom, udžbenik, MFBL, Banaj Luka 2006, COBISS.SI-ID 982249

Summary data for teacher's scientific or art and professional activity:

Quotation total :	5			
Total of SCI(SSCI) list papers :	1			
Current projects :	Domestic :	2	International :	1

Science, arts and professional qualifications

Name and last name:	Spasić-Jokić M. Vesna
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.12.2006
Scientific or art field:	Electrical Measurements

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	1994	School of Electrical Engineering - Beograd	Electrical Measurements
Magister thesis	1986	School of Electrical Engineering - Beograd	Electrical Measurements
Bachelor's thesis	1978	School of Electrical Engineering - Beograd	Electrical Measurements

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EI410	Biophysics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EIJNZZ	Ionizing and Non-Ionizing Radiation and Protection	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EIMET	Metrology	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EISIK	Standardization and quality	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	DE303S	Biomedical Instrumentation	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	EI522	Introduction to knowledge management	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	SI018	Ionizing and Non-Ionizing Radiation and Protection	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
8.	SI019	Quality in Biomedicine	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
9.	SI039	Metrology	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
10.	EIIKL	Engineering communication, logistics and intellectual property	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	DE303	Biomedical Instrumentation	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. M.Tomašević, V.Spasić Jokić: "Rendgensko zračenje i zaštita u mamografiji", izdavač Srpsko lekarsko društvo, 2002, 348 strana.
2. Radovan Ilić, Vesna Spasić-Jokić. Petar Beličev, Miloš Dragović: "The Monte Carlo SRNA-VOX code for 3D proton dose distribution in voxelized geometry using CT data", Phys. Med. Biol. 50 (2005), 1011–1017.
3. D. Popović, D.Todorovic, V.Spasic Jokic i G.Djuric (2008) Air Radioactivity Monitoring In Serbia, chapter 10 In: Environmental Technologies: New Developments"Environment Technologies, I-Tech Education and Publishing, ARS Journal Vienna, ISBN 978-3-902613-10-3Ed. B.O Güngür 147-166, 268 stranica
4. V.Spasić Jokić (2008) Positron emission tomography (PET) in Medical Imaging, Chapter 2 In: Environmental, Health and Humanity Issues in the Down Danubian Region: Multidisciplinary Approach. Ed.Dragutin Mihailovic, Mirjana Vojinovic Miloradov, World Scientific Publishing Company, decembar 2008, ISBN: 978-981-283-439-3 i 978-981-283-439-7, strane 15-24, ukupno 392 strane
5. D. Popovic, D. Todorovic, V. Spasic Jokic, J. Nikolic and J. Ajtic, Contents of Radionuclides in Soils in Serbia: Dose Calculations and Environmental Risk Assessment, Chapter 3 In: Advances in Environmental Research. Volume 6, Ed. Justin A. Daniels, ISBN: 978-1-61728-737-4, (2012) strane 91-134
6. V. Spasic Jokic. Health Risks Associated with Low Dose Ionizing Radiation, In: Risk Assessment and Management, Ed. Zhang Zhiyong, Academy Publish (2012) strane 499- 528

Representative refferences (minimum 5, not more than 10)	
7.	D.Popović, T.Božić, J.Stevanović. M.Frontasyeva, D.Todorovic, V.Spasić Jokić. (2010) Concentration of trace elements in blood and feed of homebred animals in Southern Serbia. Environmental Science and Pollution Research, Vol 17 (5), ISSN 0944-1344, strane 1119-1128
8.	A.Milatovic, O. Ciraj Bjelac, S. Ivanovic, S. Jovanovic, V.Spasic Jokic, Patient dose measurements in diagnostic radiology procedures in Montenegro, Radiation Protection Dosimetry, Radiation Protection Dosimetry, 149 (4):454-463. (2012)
9.	Župunski Lj., Spasić Jokić V., Trobok M., Gordanić V.: Cancer Risk Assessment after Exposure From Natural Radionuclides In Soil Using Monte Carlo Techniques DOI: 10.1007/s11356-010-0344-9, Environmental Science and Pollution Research, 2010, Vol. 17, No 9, pp. 1574-1580, ISSN 0944-1344
10.	Spasić Jokić V., Župunski Lj., Janković Lj., Gordanić V.: Effective dose estimation and lifetime cancer mortality risk assessment from exposure to Chernobyl 137Cs on the territory of Belgrade City and the region of Vojvodina, Serbia, Environmental Science and Pollution Research, 2011, Vol. 18, pp. 708-715, ISSN 0944-1344

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	23			
Total of SCI(SSCI) list papers :	13			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Stojaković M. Mila
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.12.1975
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	1993	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	1980	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1978	Faculty of Mathematics - Beograd	Mathematical Sciences
Bachelor's thesis	1975	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E121	Mathematical Analysis 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	E135	Probability, Statistics and Stochastic Processes	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	E221A	Mathematical Analysis 2	(E20) Computing and Control Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	E224A	Probability and Stochastic Processes	(E20) Computing and Control Engineering, Undergraduate Academic Studies (ES0) Power Software Engineering, Undergraduate Academic Studies (SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
5.	ZC006	Probability, Statistics and Random Processes	(ZC0) Clean Energy Technologies, Undergraduate Academic Studies
6.	0M504	Operational Research	(OM1) Mathematics in Engineering, Master Academic Studies
7.	0M505	Stochastic Processes	(OM1) Mathematics in Engineering, Master Academic Studies
8.	0ML504	Operational Research	(OM1) Mathematics in Engineering, Master Academic Studies
9.	0ML505	Stochastic Processes	(OM1) Mathematics in Engineering, Master Academic Studies
10.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
11.	IAM005	Mathematical Game Theory	(F20) Engineering Animation, Master Academic Studies (OM1) Mathematics in Engineering, Master Academic Studies
12.	SD0M03	Operational Research	(GI0) Geodesy and Geomatics, Specialised Academic Studies
13.	SD0M15	Statistics	(GI0) Geodesy and Geomatics, Specialised Academic Studies
14.	ZR503	Statistical Advanced Models	(Z01) Safety at Work, Master Academic Studies
15.	D0M03	Operational Research	(OM1) Mathematics in Engineering, Doctoral Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
16.	D0M04	Random Processes	(OM1) Mathematics in Engineering, Doctoral Academic Studies
17.	D0M15	Statistics	(OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	D0M27	StatisticsApplied in Engineering	(OM1) Mathematics in Engineering, Doctoral Academic Studies
19.	DAU004	Selected Chapters in Mathematics 2	(E20) Computing and Control Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies
20.	DOM59	Fixed point theory	(OM1) Mathematics in Engineering, Doctoral Academic Studies
21.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Mila Stojaković, Decomposition and representation of fuzzy valued measure, Fuzzy Sets and Systems, 112(2000) 251-256
2. Mila Stojaković, Fuzzy conditional expectation, Fuzzy Sets and Systems, 52(1992) 49-54
3. Mila Stojaković, Fuzzy random variable, expectation, martingales, J.Math.Anal.Appl., 184(1994) 594-606.
4. Mila Stojaković, Fuzzy martingales, Stochastic Analysis and Applications, 14(1996), 355-368.
5. Mila Stojaković, Zoran Stojaković, Support function for fuzzy set, Proceedings of Royal Society, London A, 452(1996), 421-438.
6. Mila Stojaković, Zoran Stojaković, Addition and series of fuzzy sets, Fuzzy Sets and Systems, 83(1996) 341-346.
7. Mila Stojaković, Representation of fuzzy valued mappings, Fuzzy Sets and Systems, 98(1998) 375-381.
8. Mila Stojaković, Fuzzy valued measure, Fuzzy Sets and Systems,65(1994) 95-104 .
9. Mila Stojaković, Common fixed point theorems in complete metric and probabilistic spaces,Bull. Australian Math. Soc.,36(1987)73-88.
10. Mila Stojaković, Zoran Ovcin,Fixed point theorems and variational principle..., Fuzzy Sets and Systems, 66(1994)353-356.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	71			
Total of SCI(SSCI) list papers :	16			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Stojanović M. Goran
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1998
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	2005	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	2003	Faculty of Technical Sciences - Novi Sad	Electronics
Bachelor's thesis	1996	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E122	Introduction to Electronics	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EM421	Characterization and Testing of Microelectronic Circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	BM117A	Medical electronics	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	BM117B	Flexible electronics	(BM0) Biomedical Engineering, Undergraduate Academic Studies
5.	BM118D	Modelling and simulation of biophysical proceses	(BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	BMI107	Materials and fabrication technologies in medical devices	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EM457	Nanoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	P322	Introduction to Precision Engineering	(P00) Production Engineering, Undergraduate Academic Studies
9.	DE202S	Advanced characterization techniques of electronic materials and components	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	DE403S	Design and fabrication of passive micro and nano electronic components	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	E1SO01	Modern technologies in electrical engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
12.	EM512	Nanodevices and Nanomaterials	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	SI033	Electronics in medicine	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
14.	I903	Application of microelectromechanical systems	(I10) Industrial Engineering, Master Academic Studies
15.	DE202	Advanced Techniques in Electronic Component and Material Characterization	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
16.	DE403	Design and Fabrication of Passive Micro and Nano Components	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Jeranče N., Vasiljević D., Samardžić N., Stojanović G.: A Compact Inductive Position Sensor Made by Inkjet Printing Technology on a Flexible Substrate, Sensors, 2012, Vol. 12, pp. 1288-1298, ISSN 1424-8220, UDK: 10.3390/s120201288
2.	Maksimović M., Stojanović G., Radovanović M., Malešev M., Radonjanin V., Radosavljević G., Smetana W.: Application of a LTCC sensor for measuring moisture content of building materials, Construction and Buildings Materials, 2012, Vol. 26, No 1, pp. 327-333, ISSN 0950-0618(02)00045-4, UDK: 10.1016/j.conbuildmat.2011.06.029
3.	Radonić V., Palmer K., Stojanović G., Crnojević-Bengin V.: Flexible Sierpinski Carpet Fractal Antenna on a Hilbert Slot Patterned Ground, International Journal of Antennas and Propagation, 2012, Vol. 2012, No 980916, pp. 1-7, ISSN 1687-5869, UDK: 10.1155/2012/980916

Representative refferences (minimum 5, not more than 10)

4.	Milanović M., Stojanović G., Nikolić Lj., Radovanović M., Škorić B., Miletić A.: Electrical and structural characterisation of nanostructured titania coatings deposited on interdigitated electrode system, Materials chemistry and physics, 2011, Vol. 130, No 1-2, pp. 769-774, ISSN 0254-0584, UDK: 10.1016/j.matchemphys.2011.07.061
5.	Savić S., Mančić L., Vojisavljević K., Stojanović G., Branković Z., Aleksić O., Branković G.: Microstructural and electrical changes in nickel manganite powder induced by mechanical activation, Materials Research Bulletin, 2011, Vol. 46, No 7, pp. 1065-1071, UDK: 10.1016/j.materresbull.2011.03.008
6.	Stojanović G., Lečić N., Damnjanović M., Živanov Lj.: Electrical and temperature characterization of NiZn ferrites, INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS, 2011, Vol. 35, No 3, pp. 165-176, ISSN 1383-5416, UDK: 10.3233/JAE-2011-1329
7.	Goran Stojanović, Slavica Savić, Ljiljana Živanov, "Important Role of the Hall Effect Measurement System in a Modified Course of Materials in Electrical Engineering", IEEE Transaction on Education, vol. 52, no. 3, pp. 297- 304, 2009.
8.	R. Raghavendra, P. Bellew, N. Mcloughlin, G. Stojanović, M. Damnjanović, V. Desnica, Lj. Živanov, “Characterization of Novel Varistor+Inductor Integrated Passive Devices,” IEEE Electron Devices Letters, vol. 25, no. 12, pp. 778-780, December 2004.
9.	G. Stojanović, "Nanoelektronika i primena nanomaterijala", Edicija tehničke nauke - Udžbenici, FTN Izdavaštvo (338), Novi Sad, 2012.
10.	G. Stojanović, Lj. Živanov, "Materijali u elektrotehnici", Edicija Tehničke Nauke - Udžbenici, FTN izdavaštvo, Novi Sad, 2007.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	78			
Total of SCI(SSCI) list papers :	22			
Current projects :	Domestic :	2	International :	2

Science, arts and professional qualifications

Name and last name:	Stojmenović D. Ivan
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1986		Electronics
Magister thesis	1979		Electronics
Bachelor's thesis	-		Mathematics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	DE117	Selected chapters from optoelectronics sensors systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Ivan Stojmenović, Dandan Liu, and Xiaohua Jia, A scalable quorum based location service in ad hoc and sensor networks, International Journal of Communication Networks and Distributed Systems, invited paper, Vol. 1, No. 1, 2008, 71-94.
2.	David Simplot-Ryl, Ivan Stojmenovic, Aleksandar Micic, Amiya Nayak, A hybrid randomized protocol for RFID tag identification, Sensor Review, 26(2), 2006, 147-154.
3.	F. Ingelrest, D. Simplot-Ryl, I. Stojmenovic, Optimal transmission radius for energy efficient broadcasting protocols in ad hoc and sensor networks, IEEE Transactions on Parallel and Distributed Systems, Volume 17, Issue 6, June 2006, 536 – 547.
4.	Stojmenovic I., A.P. Ruhil, D.K. Lobiyal, Voronoi diagram and convex hull based geocasting and routing in wireless networks, Wireless Communications and Mobile Computing (Wiley), 6, 2, February 2006, 247-258.
5.	Yu Wang, Ivan Stojmenovic and Xiang-Yang Li, Bluetooth Scatternet Formation for Single-hop Ad Hoc Networks Based on Virtual Positions, Journal of Internet Technology, Vol. 6, No. 1, 2005, 89-99.
6.	F.J. Ovalle-Martinez, I. Stojmenovic, F. Garcia-Nocetti, J. Solano-Gonzalez, Finding minimum transmission radii and constructing minimal spanning trees in ad hoc and sensor networks, Journal of Parallel and Distributed Computing, Vol. 65, No. 2, February 2005, 132-141.
7.	Stojmenovic I., Geocasting with guaranteed delivery in sensor networks, IEEE Wireless Communications, Vol. 11, No.6, December 2004, 29-37.
8.	Xiang-Yang Li, Ivan Stojmenovic, and Yu Wang, Partial Delaunay triangulation and degree limited localized Bluetooth multihop scatternet formation, IEEE Transactions on Parallel and Distributed Systems, Vol. 15, No. 4, April 2004, 350-361.
9.	I. Stojmenovic and S. Datta, Power and cost aware localized routing with guaranteed delivery in unit graph based ad hoc networks, Wireless Communications and Mobile Computing, 4, 2, March 2004, 175-188.
10.	I. Stojmenovic, M. Russell, and B. Vukojevic, Depth first search and location based localized routing and QoS routing in wireless networks, Computing and Informatics, Vol. 21, No. 2, 2002, 149-165.

Summary data for teacher's scientific or art and professional activity:

Quotation total :				
Total of SCI(SSCI) list papers :				
Current projects :	Domestic :		International :	

Science, arts and professional qualifications

Name and last name:	Strezoski C. Vladimir
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	1995	Faculty of Technical Sciences - Novi Sad	Electroenergetics
PhD thesis	1985	School of Electrical Engineering - Beograd	Electroenergetics
Magister thesis	1978	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1973	School of Electrical Engineering - Beograd	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E129A	Power Engineering Systems	(ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE0306	Analysis of PES 2	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EE303	Analysis of PES 1	(ES0) Power Software Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	ESI013	Multi-tier applications development in power systems	(ES0) Power Software Engineering, Undergraduate Academic Studies
5.	DE115S	Selected Chapters in Power Engineering System Analysis	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	DE306S	Load Management in PES	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	DE313S	Selected Chapters in Power Engineering	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
8.	DE114S	Selected Chapters in Distribution Network Analysis	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE104	Regulation and Operation Management of Distribution Networks	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
10.	DE115	Selected Chapters in Power Engineering System Analysis	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
11.	DE313	Selected Chapters in Power Engineering	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
12.	DE114	Selected Chapters in Distribution Network Analysis	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Švenda G., Simendić Z., Strezoski V.: Advanced Voltage Control Integrated in DMS, INT J ELEC POWER, 2012, Vol. 43, pp. 333-343, ISSN 0142-0615
2.	Strezoski V.: A New Skaling Concept in Power System Analysis Naziv časopisa: IEE Proceedings (Generation, Transmission, Distribution) , IEE Proceedings (Generation, Transmission, Distribution), 2000
3.	Strezoski V., Bekut D.: A Canonical Model for the Study of Faults in Power Systems Naziv časopisa: IEEE Trans. On Power Systems , IEEE Trans. on Power Systems, 1991, Vol. 6, No 4, pp. 1493-1499
4.	Bekut D., Švenda G., Strezoski V.: Compound Algorithm for Distance Relay Setting
5.	Strezoski V., Popović D., Bekut D., Švenda G.: DMS – Basis for Increasing of Green Distributed Generation Penetration in Distribution Networks, Thermal Science, 2012, Vol. 1, No 16, pp. 189-203, ISSN 0354-9836
6.	Strezoski V.: Advanced symmetrical components method, IET GENER TRANSM DIS, 2011, Vol. 5, No 8, pp. 833-841, ISSN 1751-8687
7.	Strezoski V., Švenda G., Bekut D.: Extension of the Canonical Model Application for Calculation on Power Systems Under Fault Conditions Electrical Power
8.	Sarić A., Ćalović M., Strezoski V.: Fuzzy Multi-Objective Algorithm for Multiple Solution of Distribution Systems Voltage Control, Electrical Power

Representative refferences (minimum 5, not more than 10)	
9.	Strezoski V., Katić N., Janjić D.: Voltage Control Integrated in Distribution Management System, Electrical Power System Research , Electrical Power System Research, 2001, No 60, pp. 85-97
10.	Strezoski V., Trpezanovski Lj.: Three-Phase Asymmetrical Load-Flow Naziv časopisa: Electrical Power

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	46			
Total of SCI(SSCI) list papers :	12			
Current projects :	Domestic :	6	International :	14

Science, arts and professional qualifications

Name and last name:	Struharik J. Rastislav
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	17.06.2002
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	2009		Electronics
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	2005	Faculty of Technical Sciences - Novi Sad	Electronics
Bachelor's thesis	1999	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM400A	Complex Digital System Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EM408A	RF and microwave electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EM420A	Modelling and simulation of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EM458	System Level Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EM459	Functional Verification of Hardware	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	ETI17	Complex Digital System Design	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
7.	ETI32	Functional Verification of Digital Electronic Systems	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	DE200S	Algorithms and Complexity-an Advanced Course	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE300S	Randomised Approximation Algorithms	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	DE515S	Design of Complex Digital Systems - Advanced Course	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EM504	Failure Resistant Digital Systems	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	EM507	Application-Specific Integrated Circuit Design (ASIC)	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	SI043	Complex Digital System Design	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
14.	EM518A	Advanced simulation techniques of RF and microwave circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	DE200	Algorithms and Complexity-an Advanced Course	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
16.	DE300	Randomised Approximation Algorithms	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
17.	DE515	Design of Complex Digital Systems - Advanced Course	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Rastislav J.R. Struharik, Ladislav A. Novak "Intellectual property core implementation of decision trees", IET Computers&Digital Techniques, Vol. 3, Issue 3, May 2009, pp. 259-269 (M23)
2. Rastislav J.R. Struharik, Ladislav A. Novak "Evolving Decision Trees in Hardware", Journal of Circuits, System and Computers, Vol. 18, Issue 6, October 2009, pp. 1003-1060
3. Rastislav Struharik, Ladislav Novak, Alessandra Fanni, "Finding an Optimal Neural Network Structure Using Decision Trees", WSEAS Transactions on Systems, Vol. 3, Issue 2, April 2004, pp. 438-442
4. Ivan Mezei, Rastislav Struharik, "Design of Huffman Decoder FPGA Core", ICEST 07, Ohrid, Macedonia, June 25-27 2007
5. Rastislav Struharik, Ivan Mezei, "FPGA Implementation of the 2D-DCT/IDCT Core for the Motion Picture Compression", ICEST 07, Ohrid, Macedonia, June 25-27 2007

Representative refferences (minimum 5, not more than 10)	
6.	Vuk Vranković, Rastislav Struharik, "Dizajn i verifikacija DLX procesora", Naučno-stručni simpozijum "Informacione tehnologije - Jahorina 2007", Jahorina, Bosna i Hercegovina, Mart 28-30 2007
7.	Rastislav Struharik, Ladislav Novak, Alessandra Fanni, "Finding an Optimal Neural Network Structure Using Decision Trees", WSEAS NNA, FSFS, EC 2004 Conferences in Udine, Italy, March 25-27 2004
8.	Rastislav Struharik, Ivan Mezei, "8051 IP Core for FPGA Applications", TELFOR 08, Beograd, Srbija, November 25-27 2008
9.	Ivan Mezei, Rastislav Struharik, "Sistem za prenos slike za potrebe u bušotinama", TELFOR 08, Beograd, Srbija, November 25-27 2008
10.	Ivan Mezei, Rastislav Struharik, "Sistem za prenos video signala baziran na korišćenju FPGA tehnologije", Tehnika, Beograd, Srbija

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	0			
Total of SCI(SSCI) list papers :	2			
Current projects :	Domestic :	1	International :	1

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Šećerov E. Emil
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1987
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009		Telecommunications and Signal Processing
PhD thesis	1998	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Magister thesis	1993	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering
Bachelor's thesis	1987	Faculty of Technical Sciences - Novi Sad	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK458	Telecommunication networks	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	S1329P	Introduction to Communication Networks	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	S1437P	Telekomunikacione mreže i saobraćaj	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	DE111S	Algorithms for Digital Signal Processing	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
5.	EK532	Telecommunication System Software	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
6.	EK535	Computer Telephone Integration	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	S0152	Next Generation Telecommunication Networks	(S01) Postal Traffic and Telecommunications, Master Academic Studies
8.	DE111	Algorithms for Digital Signal Processing	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Kovačević V., Popović M., Šećerov E., “Requirements for Operating Systems included in Virtual Machine System“, System Science Journal, Vol 17, No. 1, 1991, pp 61-65.
2. Kovačević V., Popović M., Šećerov E., “Requirements for Operating Systems included in Virtual Machine System“, International Conference on System Science Abstract of Papewrs, Wroclaw, 1989, pp. 108.
3. Šećerov E., Teslić N., Popović M., “Efficient kernel for real-time systems operating in non-deterministic enviroment”, Procedeengs of the 12th International Conference on Systems Science, Volume 3, Wroclaw, Poland, 1995, pp 104-111.
4. Šećerov E., Popović M., Svirčević S., “Middle Level of Control for Call Processing Protocol in Telephone Exchanges”, Procedeengs of the 12th International Conference on Systems Science, Volume 3, Wroclaw, Poland, 1995, pp 112-119.
5. Šećerov E., Popović M., Kovačević V., “Heuristic Method for Dimensining Processing Elements in Strored Program Telephone Exchange”, Relectronic, 1995, 9th Symposium on Quality and Reliability in Electronics, Budapest, 1995, pp 263-268.
6. Kovačević V., Popović M., Šećerov E., Manojlović Z., Škrbić M., “Software Concept apllied in subscriber digital concentrator ACK 2000 for Russian Telephone Network”, ICT ’98 International Conference on Telecommunications, Vol. IV, 1998, Porto Carras, pp 212-215.
7. Bender M. , Šećerov E. , Šenk V., Popov S.: "Application Gateway between Open and Legacy Systems", Eurocon 2005, The International Conference on “Computer as a tool”, IEEE Region 8, November 2005, Belgrade, pp 1072-1076.
8. Popović M., Kovačević V., Šećerov E., “Merenje apsolutnog vremena u VMS“, XIII Simpozijum o informacionim tehnologijama, Sarajevo-Jahorina, 1989, str. 114-1 – 114-4.
9. Šećerov E., Petković M., Jurca Ž., Djordjević S., “Pristup definisanju uslova za uključivanje OS u VMS“, XXXIII Jugoslovenska konferencija ETAN, Knjiga VIII, Novi Sad, 1989, str. 1999-2005.
10. Petković M., Popović M., Šeđerov E., “Segmentiranje magnetnog medijuma sa direktnim pristupom kap podrška sistemu virtuelnih mašina“, XXXIII Jugoslovenska konferencija ETAN, Knjiga VIII, Novi Sad, 1989, str. 207-213.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	0			
Total of SCI(SSCI) list papers :	1			
Current projects :	Domestic :	0	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Šenk I. Vojin
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.01.1987
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2003	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1992	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Magister thesis	1989	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1981	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK310	Introduction to Information Theory	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK462	Entrepreneurship in ICT	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EK464	Communication Systems Design	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	DE310S	Encoding and Signal Transmission Techniques	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
5.	DE510S	Algorithms of Signal Detection and Estimation	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	EK521	Information and Communication Theory	(S01) Postal Traffic and Telecommunications, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
7.	EK533	Detection and Estimation	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
8.	EK534	Cryptography System for Data Protection	(OM1) Mathematics in Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	EK536	Coding Techniques	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	RPR004	Entrepreneurship, Innovation, Knowledge Regions - Role of Universities	(RPR) Regional Development Planning and Management, Master Academic Studies
11.	DAU001	Selected Chapters in Telecommunications and Signal Processing	(E20) Computing and Control Engineering, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
12.	DE310	Encoding and Signal Transmission Techniques	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DE510	Algorithms of Signal Detection and Estimation	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Vukobratović D., Šenk V.: Design and Evaluation of Irregular LDPC Codes Using ACE Spectrum, IEEE Transactions on Communications, 2009, Vol. 57, No 8,, pp. 2272-2279, ISSN 0090-6778, UDK: 10.1109/TCOMM.2009.08.070548
2. Sejdinović D., Vukobratović D., Doufexi A., Šenk V., Piechocki R.: Expanding Window Fountain Codes for Unequal Error Protection, IEEE Transactions on Communications, 2009, Vol. 57, No 9, pp. 2510-2516, UDK: 10.1109/TCOMM.2009.09.070616
3. Vukobratović D., Šenk V.: Generalized ACE Constrained Progressive Edge-Growth LDPC Code Design , IEEE Communications Letters, 2008, Vol. 12, No 1, pp. 32-34, ISSN 1089-7798, UDK: 10.1109/LCOMM.2008.071457

Representative refferences (minimum 5, not more than 10)

4.	V. Crnojević, V. Šenk, Ž. Trpovski, “Advanced Impulse Detection Based on Pixel-Wise MAD”, IEEE Signal Processing Letters, vol.11, no. 7, 2004, pp. 589-593.
5.	D. Bajić, V. Šenk, M. Despotović, “Subsets of the STM-1 frame-alignment signal: a monitoring analysis”, IEE Proc. Commun., vol. 149, no. 5, Oct. 2002. pp. 242-248.
6.	Miroslav Despotović, Vojin Šenk, Bartolomeu F. Uchôa Filho,”DISTANCE SPECTRA OF CONVOLUTIONAL CODES OVER PARTIAL-RESPONSE CHANNELS”, IEEE Transactions on Communications, vol. 49, no.7, pp. 1121-1124, July 2001.
7.	Kovačević M., Šenk V.: On Possible Dependence Structures of a Set of Random Variables, Acta Mathematica Hungarica, 2012, Vol. 135, No 3, pp. 286-296
8.	Bojović Ž., Perić Z., Delić V., Šećerov E., Sečujski M., Šenk V.: “Comparative Analysis of the Performance of Different Codecs in a live VoIP network using SIP protocol”, Electronics and electrical engineering, 2012, Vol. 117, No 1, pp. 37-42, ISSN 1392-1215
9.	Bojović Ž., Šećerov E., Dobromirov D., Šenk V.: Maximizing the Profit of Telecom Telcos by a Novel Traffic Scheduling Policy , Electronics and electrical engineering, 2011, Vol. 7, No 113, pp. 67-73, ISSN 1392-1215
10.	Bojović ž., Šenk V., Dobromirov D., Bojović P.: Intervendor working of VOIP networks , Journal of the Institute of Telecommunications Professionals, 2011, Vol. 5, No 3, pp. 26-32, ISSN 1755-9278

Summary data for teacher's scientific or art and professional activity:

Quotation total :	141			
Total of SCI(SSCI) list papers :	18			
Current projects :	Domestic :	3	International :	3

Science, arts and professional qualifications

Name and last name:	Švenda S. Goran
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	-
Scientific or art field:	Electroenergetics

Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Electroenergetics
PhD thesis	2001	School of Electrical Engineering - Beograd	Electroenergetics
Magister thesis	1994	School of Electrical Engineering - Beograd	Electroenergetics
Bachelor's thesis	1988	Faculty of Technical Sciences - Novi Sad	Electroenergetics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EE401	Application of Computers in Power Systems 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	ESI003	Electric power software development	(ES0) Power Software Engineering, Undergraduate Academic Studies
3.	ESI043	Optimization Methods in Power Engineering	(ES0) Power Software Engineering, Undergraduate Academic Studies
4.	SEI002	Architecture of Distributed Systems in Power Systems	(ES0) Power Software Engineering, Undergraduate Academic Studies
5.	DE207S	Prelazni procesi i stabilnost u EES	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	DE216S	Computational Intelligence in Power Systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	EE501	Numerika i algoritmi	(M30) Energy and Process Engineering, Master Academic Studies
8.	EE506	Analysis of PES 3	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	EE560	Planiranje elektroenergetskih sistema	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
10.	DE105S	Optimization Methods in Power Engineering - II	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	DE217S	PES Analysis 4	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	EE0501	Optimization Methods in Power Systems - 1	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	EE0516	Specialized Software in Power Systems	(ES0) Power Software Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	DE216	Computational Intelligence in Power Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
15.	DE105	Optimization Methods in Power Engineering - II	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Čapko D., Erdeljan A., Popović M., Švenda G.: An Optimal Relationship-Based Partitioning of Large Datasets, LNCS, Springer Verlag, 2010, str. 555-558, ISBN 978-3-642-15575-8
2. Švenda G., Simendić Z., Strezoski V.: Advanced Voltage Control Integrated in DMS, INT J ELEC POWER, 2012, Vol. 43, pp. 333-343, ISSN 0142-0615
3. Švenda G., Nahman J.: Transformer Phase Coordinate Models Extended for Grounding System Analysis, IEEE Trans. on Power Delivery, 2002, Vol. 17, No 4, pp. 1023-1029
4. Čapko D., Erdeljan A., Švenda G., Popović M.: A Dynamic Repartitioning of Large Data Model in Distribution Management Systems, Electronics and electrical engineering, 2012, Vol. 5, No 121, pp. 1392-1215, ISSN 1392-1215
5. Strezoski V., Popović D., Bekut D., Švenda G.: DMS – Basis for Increasing of Green Distributed Generation Penetration in Distribution Networks, Thermal Science, 2012, Vol. 1, No 16, pp. 189-203, ISSN 0354-9836
6. Čapko D., Erdeljan A., Popović M., Švenda G.: An Optimal Initial Partitioning of Large Datasets in Utility Management Systems, Journal of Advances in Electrical and Computer Engineering, 2011, Vol. 11, No 4, pp. 41-46, ISSN 1582-7445

Representative refferences (minimum 5, not more than 10)	
7.	Strezoski V., Švenda G., Bekut D.: Extension of the Canonical Model Application for Calculation on Power Systems Under Fault Conditions, Electrical Power
8.	Nahman J., Švenda G.: Power and Earthing System Modeling in Natural Coordinates, Electrical Power
9.	Bekut D., Švenda G., Strezoski V.: Dead Zone Phenomenon in Distance Relaying of Overhead Transmission Lines, Electrical Power System Research, 2000, No 56, pp. 1-8
10.	Nahman J., G. Svenda: Power and Earthing System Modeling in Natural Coordinates, Electrical Power And Energy Systems, ELSEVIER, 2002, No.24, pp. 541-549, ISSN 0142-0615.,

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	5			
Total of SCI(SSCI) list papers :	8			
Current projects :	Domestic :	6	International :	14

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Teofanov Đ. Ljiljana
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	18.12.1995
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	2008	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	2000	Faculty of Sciences - Novi Sad	Mathematical Sciences
Bachelor's thesis	1994	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A101	Mathematics	(A00) Architecture, Undergraduate Academic Studies
2.	EE204	Selected Chapters in Mathematics	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	GG00	Mathematical Methods 1	(G00) Civil Engineering, Undergraduate Academic Studies
4.	GI101	Algebra	(GI0) Geodesy and Geomatics, Undergraduate Academic Studies
5.	IAM001	Mathematical Shape Modeling for Computer Animation	(F10) Engineering Animation, Undergraduate Academic Studies
6.	M102	Mathematics 1	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies
7.	M106	Mathematics 2	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M30) Energy and Process Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies (P00) Production Engineering, Undergraduate Academic Studies
8.	E101A	Discrete Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	IM1523	Discrete Mathematics	(M30) Energy and Process Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
10.	P216	Numerical Analysis	(P00) Production Engineering, Undergraduate Academic Studies
11.	SE0009	Discrete Mathematics	(SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies (SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
12.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
13.	IA022	Numerical Optimization	(F20) Engineering Animation, Master Academic Studies
14.	D0M48	Numerical Methods for Solving Differential Equations	(OM1) Mathematics in Engineering, Doctoral Academic Studies
15.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Surla, K., Teofanov, Lj., Uzelac, A Robust Layer-Resolving Spline Collocation Method for a Convection-Diffusion Problem, Applied Mathematics and Computation,(2009), 208(1): 76-89
2.	Teofanov, Lj., Roos, H. -G, An elliptic singularly perturbed problem with two parameters II: robust finite element solution, J. Comput. Appl. Math. Vol. 212, 2008, 374-389
3.	Teofanov, Lj., Roos, H. -G, An elliptic singularly perturbed problem with two parameters I: solution decomposition, J. Comput. Appl. Math. Vol. 206, 2007, 1082-1097
4.	Surla, K., Uzelac, Z., Teofanov, Lj., The discrete minimum principle for quadratic spline discretization of a singularly perturbed problem, Math. Comput. Simul. 2009, Vol. 79, No 8, pp.2490-2505
5.	Teofanov, Lj., Zarin, H., Superconvergence for two-parameter singularly perturbed problem, BIT Numerical Mathematics, Vol. 49, No. 4, 2009, 743-765
6.	Vulanović, R., Teofanov, Lj., A uniform numerical method for semilinear reaction-difusion problems with a boundary turning point, Numer. Algor. 54, 2010, 431-444
7.	Teofanov, Lj., Uzelac, Z., Family of Quadratic Spline Difference Schemes for a Convection-Diffusion Problem, Int. J. Comput. Math., Vol. 84, No. 1, 2007, 33-50
8.	Surla, K., Uzelac, Z., Teofanov, Lj., On collocation methods for singular perturbation problems of convection-diffusion type, Novi Sad J. Math, Vol. 31, No. 1, 2001, 125-132
9.	Surla, K., Uzelac, Z., Pavlović, Lj., On collocation methods for singular perturbation problems, Novi Sad J. Math., Vol. 30, No. 3, 2000, 173-183
10.	Čomić, I., Pavlović, Lj., Funkcije više promenljivih, Fakultet tehničkih nauka, Novi Sad, 2000, 95 str.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	12			
Total of SCI(SSCI) list papers :	7			
Current projects :	Domestic :	1	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Tomić J. Josif
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1995
Scientific or art field:	Electrical Measurements

Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	2007	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	2004	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Bachelor's thesis	1990	Faculty of Technical Sciences - Novi Sad	Electrical Measurements

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E130A	Electrical Measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK301	Measurement Systems in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EOS10	Laboratory of electrical measurement	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
4.	EIEEM	Electrical and electronic measurements	(BM0) Biomedical Engineering, Undergraduate Academic Studies
5.	EIEEMI	Electrical and electronic measurements in industry	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
6.	EIEKI	Electronic Components in Instrumentation	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIPR1	Laboratory practicum	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIVI	Virtual measurement systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EM456	Computers in the supervisory and control systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	ETI28	Industrial Electronics	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
11.	ETI38	Optoelectronics for communication and sensors	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
12.	MR0ULR	Introduction to laboratory practice	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
13.	DE503S	Industrial Electronics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	SI048	Measurement Systems in the Field of Biomedicine	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
15.	BMIM5A	Virtual measurement instrumentation in biomedicine	(BM0) Biomedical Engineering, Master Academic Studies
16.	DE117S	Selected chapters from optoelectronics sensors systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
17.	DE315S	Optoelectronics sensors systems-advanced course	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
18.	DE418S	Design of complex optoelectronics systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
19.	EIDNU	Supervisory Control and Data Acquisition Systems Design	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20.	EIMRV1	Real Time Measurements	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
21.	EIORM	Measurement and Data Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
22.	EM520	Industrial networks and protocols	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
23.	EM532	Design of electronic devices.	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
24.	DE503	Industrial Electronics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies
25.	DE117	Selected chapters from optoelectronics sensors systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
26.	DE315	Optoelectronics sensors systems-advanced course	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
27.	DE418	Design of complex optoelectronics systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Poljak P., Kušljević M., Tomić J.: Power Components Estimation According to IEEE Standard 1459-2010 Under Wide-Range Frequency Deviations, IEEE Transactions on Instrumentation and Measurement, 2012, Vol. 61, No 3, pp. 636-644, ISSN 0018-9456
2.	J. Tomić, M. Kušljević, D. Marčetić, An Adaptive Resonator Based Method for Power Measurements According to the IEEE Trial-Use Standard 1459-2000, IEEE Transactions on Instrumentation & Measurement, Vol. 59, No. 2, pp. 250-258, February 2010.
3.	M. Kušljević, J. Tomić, Lj. Jovanović, Frequency Estimation of Three-Phase Power System Using Weighted-Least-Square Algorithm and Adaptive FIR Filtering, IEEE Transactions on Instrumentation & Measurement, Vol. 59, No. 2, pp. 322-329, February 2010.
4.	Tomić J., Kušljević M., Vujičić V.: A New Power System Digital Harmonic Analyzer , IEEE Transactions on Power Delivery, 2007, Vol. 22, No 2, pp. 772-780
5.	M. Kušljevič, J. Tomić, D. Marčetić, Active power measurement algorithm for power system signals under non-sinusoidal conditions and wide-range frequency deviations, IET Generation, Transmission & Distribution, Vol. 3, No. 1, pp. 57–65, September 2008.
6.	D. Marčetić, J. Tomić, M. Kušljević, Unbalanced 3-Phase Distribution System Frequency Estimation Using LMS Method and Positive Voltage Sequence, IET Science, Measurement & Technology, 2013. rad prihvacen za objavljivanje
7.	Bajić J., Stupar D., Tomić J., Slankamenac M., Joža A., Živanov M.: Implementation of the Optical Beam Profiler System Using LabVIEW Software Package and Low-Cost Web Camera, 35. MIPRO - International convention on information and communication technology, electronics and microelectronics - Savjetovanje o mikroračunalima u telekomunikacijama, Opatija: MIPRO Croatian Society, 21-25 Maj, 2012, pp. 173-178, ISBN 978-953-233-069-4
8.	Tomić J., Slankamenac M., Kušljević M., Živanov M.: A Virtual Laboratory for Teaching Frequency Estimation Techniques, 15. International Power Electronics
9.	Stupar D., Bajić J., Slankamenac M., Živanov M., Jelić M., Joža A., Tomić J.: Influence of fiber diameter on fiber optic displacement sensor, 16. International Symposium on Power Electronics – Ee, Novi Sad, 26-28 Oktobar, 2011, pp. 1-5, ISBN 978-86-7892-355-5
10.	Stupar D., Bajić J., Slankamenac M., Tomić J., Živanov M., Jelić M., Manojlović L.: Optoelectronics system for measuring light-wave attenuation in liquids, 3. Research People and Actual Tasks on Multidisciplinary Sciences, Lozenec: Printing house "Angel Kunchev" Univeristy of Rousse 8, Studentska Street, 7016 Rouse, Bulgaria, 8-10 Jun, 2011, pp. 184-188, ISBN 1313-7735

Summary data for teacher's scientific or art and professional activity:

Quotation total :	46			
Total of SCI(SSCI) list papers :	6			
Current projects :	Domestic :	2	International :	0

Science, arts and professional qualifications

Name and last name:	Trpovski V. Željen
Academic title:	Associate Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.02.1985
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	1998	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Magister thesis	1991	School of Electrical Engineering - Beograd	Telecommunications and Signal Processing
Bachelor's thesis	1981	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EK310	Introduction to Information Theory	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK435	Optical Communications	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
3.	EK201	Signals and Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EK451	Audio and Video Technologies	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	ETI08	Telecommunication systems and signals	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
6.	S1215P	Analysis of Telecommunication signals	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
7.	S1220P	Analysis of Telecommunication Systems	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
8.	DE110S	Stochastic Processes in Telecommunications	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE412S	Digital image processing algorithms	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	E1SO01	Modern technologies in electrical engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
11.	EK521	Information and Communication Theory	(S01) Postal Traffic and Telecommunications, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
12.	DE110	Stochastic Processes in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies
13.	DE412	Digital Image Processing Algorithms	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Ispitivanje statističkih osobina digitalnog prenosa u UKT FM radio difuziji primenom sistema RDS
2.	Uniformne i neuniformne filtar banke i njihova primena u kompresiji signala slike
3.	Ž.Trpovski, "Reliability Testing Method for RDS Based on the PI Code Statistics", IEEE Trans. on Consumer Electronics, Vol.37, No.4, November 1991., pp. 884-891.
4.	Ž.Trpovski, "Contribution to window design for modulated lapped transforms", Electronics Letters, Vo.33, No. 24, November 1997, pp.2013-2014.
5.	Vesna Zeljković, A. Dorado, Ž. Trpovski, E. Izquierdo, "Classification of Building Images in Video Sequences", IEE Electronics Letters, Vol. 40, No. 3, 5th February 2004, pp. 169-170.

Representative refferences (minimum 5, not more than 10)	
6.	V. Crnojević, V. Šenk, Ž. Trpovski, "Advanced Impulse Detection Based on Pixel-Wise MAD", IEEE Signal Processing Letters, Vol.11, No. 7, July 2004, pp.589-592.
7.	M.Temerinac, A.Kozarev, Z.Trpovski, B.Šimšić, An Efficient Image Compression Algorithm Based on Filter Bank Analysis and Fractal Theory, Proc. of EUSIPCO-92, Sixth European Signal Processing Conference, Brussels, Vol.III, pp.1373-1376.
8.	J.Knezevic, V.Katic, Z.Trpovski, D.Graovac: "Modulated Lapped Transforms Filter Bank Technique Application For AC/DC Converter Power Quality Analysis", Power Quality Conference - PCIM-PQ 2000, Nuremberg (Germany), June 2000, published on CD-ROM.
9.	T.Lončar-Turukalo, V.Crnojević, Ž.Trpovski, Image Compression by Decomposition into Bit Planes, 5th International Conference on Telecommunications in Modern Satelite, Cable and Broadcasting Services, TELSIKS 2001, Niš.
10.	V.Zeljković, Ž.Trpovski, V.Šenk, Improved Illumination Independent Moving Object Detection in Real World Video Sequences, 4th International Conference on Video-Image Processing and Multimedia Communications, Zagreb, Croatia, July 2003.

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	14			
Total of SCI(SSCI) list papers :	4			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Uzelac S. Zorica
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.10.1975
Scientific or art field:	Mathematics

Academic carieer	Year	Institution	Field
Academic title election:	2000	Faculty of Technical Sciences - Novi Sad	Mathematics
PhD thesis	1989	Faculty of Sciences - Novi Sad	Mathematical Sciences
Magister thesis	1980	Faculty of Mathematics - Beograd	Mathematical Sciences
Bachelor's thesis	1974	Faculty of Sciences - Novi Sad	Mathematical Sciences

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	GG00	Mathematical Methods 1	(G00) Civil Engineering, Undergraduate Academic Studies
2.	GG05	Mathematical Methods 2	(G00) Civil Engineering, Undergraduate Academic Studies
3.	II1052	Mathematics 2	(I10) Industrial Engineering, Undergraduate Academic Studies
4.	IM1002	Mathematics 1	(I10) Industrial Engineering, Undergraduate Academic Studies (I20) Engineering Management, Undergraduate Academic Studies
5.	IM1006	Mathematics 2	(I20) Engineering Management, Undergraduate Academic Studies
6.	IM1120	Knowledge management	(I20) Engineering Management, Undergraduate Academic Studies
7.	0M518	Numerical Solutions of Differential Equations	(OM1) Mathematics in Engineering, Master Academic Studies
8.	0ML518	Numerical Solution of Differential Equations	(OM1) Mathematics in Engineering, Master Academic Studies
9.	DZ01MS	Selected Chapters in Mathematics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
10.	HR013	Knowledge Economy	(I20) Engineering Management, Specialised Professional Studies (IB0) Engineering Management - MBA, Specialised Professional Studies
11.	MBA309	Human Resource Management in Knowledge Economy	(IB0) Engineering Management - MBA, Specialised Professional Studies
12.	OIR010	Mathematics for Business and Finance	(I20) Engineering Management, Specialised Professional Studies
13.	IA022	Numerical Optimization	(F20) Engineering Animation, Master Academic Studies
14.	D0M16	Differential Equations	(OM1) Mathematics in Engineering, Doctoral Academic Studies
15.	D0M18	Numerical Analysis	(OM1) Mathematics in Engineering, Doctoral Academic Studies
16.	DM322	Numeric Methods in Power Machines and Plants	(M00) Mechanical Engineering, Doctoral Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
17.	DZ01M	Selected Chapters in Mathematics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Surla K., Teofanov Lj., Uzelac Z.: A robust layer-resolving spline collocation method for a convection-diffusion problem, Applied Mathematics and Computation, 2009, Vol. 208, No 1, pp. 76-89, ISSN 0096-3003
2.	Surla K., Uzelac Z., Teofanov Lj.: The discrete minimum principle for quadratic spline discretization of a singularly perturbed problem, Math. Comput. Simul, 2009, Vol. 79, No 8, pp. 2490-2505, ISSN 0378-4754
3.	Surla, K., Uzelac, Z., Some uniformly convergent spline difference schemes for singularly perturbed boundary value problems, IMA J. Numer. Anal.10(1990) 209-222
4.	Sekulić, D., Edeskuty, F.J.,Uzelac, Z., Heat Transfer Through a High Temperature Superconducting Current Lead at Criogenic temperatures, Int.J. Heat Mass Transfer, Vol. 40,No 16, 1997, 3917-3926,
5.	Uzelac, Z., Surla, K., Discretization of the Semilinear Singularly Perturbed Problem, Nonlinear Analysis: Theory, Methods and Applications, Vol.30, No.8, (1997), 4741-4747
6.	Sekulic, D., Uzelac, Z., Edeskuty, F., J., Entropy generation in a high temperaturesuperconducting current lead, Cryogenics, Vol 32(1992) 1154-1161
7.	Cvetićanin, L., Uzelac, Z., Longitudinal Vibration of Rod with Non-Linear Constitutive Equation, Journal of Vibration and Control,5, (1999), 827-849
8.	Teofanov, Lj., Uzelac, Z., Family of Quadratic Spline Difference Schemes for a Convection-Diffusion Problem, International Journal of Computer Mathematics, Vol. 84, No. 1, 2007, 33-50
9.	Z. Uzelac, L. Nešić, D. Hristić, A Contribution to Research the Caracteristics of Women Managers and a New Style of Leadedrship, Proceedings of IC-Congress, Haarlem, The Netherlands, 3-4. May 2007
10.	Dj. Ćelić, Z. Uzelac, Vrednosne mreže, Zborniki radova XIII Medjunarodna konferncija industrijski sistemi-IS05, Herceg Novi, 07-09. septembar, 2005, 921-931

Summary data for teacher's scientific or art and professional activity:

Quotation total :	52			
Total of SCI(SSCI) list papers :	26			
Current projects :	Domestic :	1	International :	0

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Vasić V. Veran
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.04.1995
Scientific or art field:	Power Electronics, Machines and Facilities

Academic carieer	Year	Institution	Field
Academic title election:	2011		Power Electronics, Machines and Facilities
PhD thesis	2001	School of Electrical Engineering - Beograd	Power Electronics, Machines and Facilities
Magister thesis	1996	School of Electrical Engineering - Beograd	Power Electronics, Machines and Facilities
Bachelor's thesis	1994	Faculty of Technical Sciences - Novi Sad	Power Electronics, Machines and Facilities

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E133	Power Converters	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (ZC0) Clean Energy Technologies, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EE304	Electric Machines 1	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EE307	Electric Machines 2	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EE401	Electric Machines 3	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EE520	Design of Electrical Machines and Converters	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EOS18	Industrial Protocols and Network	(E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
7.	F203	Electrical Machines	(F00) Graphic Engineering and Design, Undergraduate Academic Studies
8.	H351	Electrical Machines	(H00) Mechatronics, Undergraduate Academic Studies
9.	EE424A	Power Electronic in Drive and Industry	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	DE210S	Selected topics in electrical machines	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	EE520	Design of Electrical Machines and Converters	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
12.	DE210	Selected Chapters in Electric Machinery	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
13.	DOM28	Modeling and Simulation of Driving Systems	(M00) Mechanical Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. Dumnić B., Katić V., Vasić V., Milićević D., Delimar M.: An Improved MRAS Based Sensorless Vector Control Method for Wind Power Generator" Journal of Applied Research and Technology – JART, October 2012, Center for Applied Sciences and Technological Development, National Autonomous University of Mexico (UNAM), ISSN: 1665-6423, [Online]. Available: http://www.jart.ccadet.unam.mx/volumen10_5.htm
2. Kulić F., Matić D., Dumnić B., Vasić V.: Optimal fuzzy controller tuned by TV-PSO for induction motor speed control, Journal of Advances in Electrical and Computer Engineering, 2011, Vol. 11, No 1, pp. 49-54, ISSN 1582-7445
3. Vasić V., Marčetić D., Jeftenić B., Vladan J.: Speed-Sensorless Control of Induction Motor Based on Reactive Power with Rotor Time Constant Identification, IET ELECTR POWER APP, 2010, Vol. 4, No 6, ISSN 1751-8660
4. Vasić V., Marčetić D., Oros Đ.: Prediction of Local Instabilities in Open-loop Induction Motor Drives, COMPEL - The international journal for computation and mathematics in electrical engineering, 2010, Vol. 29, No 3, ISSN 0332-1649

Representative refferences (minimum 5, not more than 10)	
5.	Oros Đ., Vasić V., Marčetić D., Kulić F.: Influence of parameters detuning on induction motor NFO shaft-sensorless scheme, Journal of Advances in Electrical and Computer Engineering, 2010, Vol. 10, No 4, pp. 121-124, ISSN 1582-7445
6.	Oros Đ., Vasić V., Marčetić D.: NFO sensorless induction motor drive with on-line stator resistance parameter update, Electric Power Components&Systems, 2008,Vol.36.No.12,pp.1318-1336.
7.	Reljić D., Vasić V., Ostojić D., Dumnić B.: A Comparision of PI Current Controllers in Field Oriented Induction Motor Drive, Journal of Advances in Electrical and Computer Engineering, 2006, Vol. 6, No 2, pp. 46-51, ISSN 1582-7445
8.	V. Vasić, S. Vukosavić, E. Levi, “A stator resistance estimation scheme for speed sensorless rotor flux oriented induction motor drives”, IEEE Transaction on Energy conversion, vol. 18 no.4, pp. 476-483, december 2003.
9.	V. Vasić, S. Vukosavić, “Sensorless MRAS Based Induction Motor Control with Paralelle Speed And Stator Resistance Estimation”, European Transactions on Electrical Power – ETEP, Vol. 12 no.2 pp. 135-139. March/April 2002.
10.	V. Vasić, S. Vukosavić, “Robust MRAS based algorithm for stator resistance and rotor speed identification”, IEEE Power Engineering Review, vol. 21 no.11, November 2001.

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	73			
Total of SCI(SSCI) list papers :	9			
Current projects :	Domestic :	3	International :	1

Science, arts and professional qualifications

Name and last name:	Videnović-Mišić S. Mirjana
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.08.1998
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	2009	Faculty of Technical Sciences - Novi Sad	Electronics
Magister thesis	2003	Faculty of Technical Sciences - Novi Sad	Electronics
Bachelor's thesis	1997	Faculty of Technical Sciences - Novi Sad	Electronics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM440	Computer-Aided Electronic Circuit Design	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EM411A	Telecommunication electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EM424A	Computer aided design of analogue integrated circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	ETI09	Electronics	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
5.	ETI30	Computer-Aided Electronic Circuit Design	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
6.	ETI36	Telecommunication electronics	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
7.	EM516	Noise in Electronic Circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
8.	EM517	Modeling and Simulation of Semiconductor Components	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
9.	SI013	Applied electronics in industry	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
10.	SI035	Electronic Systems in Oil Industry	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
11.	SI043	Complex Digital System Design	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
12.	SI044	Computer-Aided Electronic Circuit Design	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
13.	DE402S	Chosen areas of analogue, digital and RF integrated circuits design	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	EM510A	Advanced computer aided design of microelectronic circuits	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	DE402	Chosen areas of analogue, digital and RF integrated circuits design	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Emil V Jelenković, G S Ristić, M M Pejović, Milan M Jevtić, Shrawan K Jha, Mirjana Videnović-Mišić, M Pejović and K Y Tong: Effect of fluorination and hydrogenation by ion implantation on reliability of poly-Si TFTs under gamma irradiation , Journal of Physics D: Applied Physics, 2011, Vol. 44, No 1
2.	Videnović-Mišić M., Jevtić M.: Impact of bias condition on 1/f noise of dual-gate depletion type MOSFET in linear region and consequences for noise diagnostic application and modelling , Microelectronics Reliability, 2008, Vol. 48, No 7, pp. 1008-1014, ISSN 0026-2714
3.	Nađ L., Radić J., Đugova A., Videnović-Mišić M.: Ultra Low-Power Low-Complexity Tunable 3-10 GHz IR-UWB Pulse Generator, Informacije MIDEM - Journal of microelectronics, electronic components and materials, 2012, Vol. 42, No 3, pp. 185-191, ISSN 0352-9045
4.	Mišić, M., Jevtić, M., Nađ, L., "Low-frequency noise of a dual-gate MOSFET in linear region", Journal of Automatic Control, Vol. 16, pp.: 37- 40, 2006, UDK: 621.3-52, ISSN 0354-124X, M52
5.	Jelena Radic, Alena Djugova, Laszlo Nagy, Mirjana Videnovic–Misic, "A Low Power 3.1-7.5 GHz Tunable Pulse Generator for Impulse Radio UWB", IEEE International Symposium on Intelligent Systems and Informatics − SISY, 20 – 22 September, 2012, Subotica, Serbia, pp. 425 – 428, ISBN: 978-1-4673-4749-5 (pendrive); 978-1-4673-4748-8 (printed)

Representative refferences (minimum 5, not more than 10)	
6.	Jelena Radic, Alena Djugova, Laszlo Nagy, Kalman Babkovic, Mirjana Videnovic–Misic, “Feedback Influence on Ring Oscillator Performance for IR-UWB Pulse Generator in 0.13μm CMOS technology”, IEEE International Symposium – ELMAR-2012, 12 – 14 September, 2012, Zadar, Croatia, pp. 101 – 103, ISBN 978-953-7044-13-8 (ISSN 1334-2630)
7.	Videnović-Mišić, M., Jevtić, M. M.,, “Modelling of dual-gate MOSFET 1/f noise in linear region“,The International Conference on "Computer as a Tool" EUROCON 2007., pp.: 1987 – 1993, September 2007, ISBN:1-4244-0813-X
8.	Jelena Radic, Alena Djugova, Laslo Nadj, Mirjana Videnovic–Misic, “Feedback Influence on Performance of Ring Oscillator for IR-UWB Pulse Generator in 0.18μm CMOS technology”, IEEE 28th International Conference on Microelectronics − MIEL, 13 − 16 May, 2012, Niš, Serbia, pp. 357 – 360, ISBN 978-1-4673-0235-7 (Proceedings), 978-1-4673-0236-4
9.	Alena Djugova, Jelena Radic, Mirjana Videnovic–Misic, “A 0.18μm CMOS Low Power LNA for 6–8.5 GHz UWB Receiver”, IEEE International Semiconductor Conference − CAS, 17 − 19 October, 2011, Sinaia, Romania, Vol. 1, pp. 215 – 218, ISBN 978-1-61284-171-7
10.	Videnović-Mišić, M., Jevtić, M. M., “Influence of inner transistors working modes on DGMOSFET 1/f noise“, 26th International Conference on Microelectronics, MIEL 2008., pp.: 557 – 560, May 2008, ISBN: 978-1-4244-1882-4

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	0			
Total of SCI(SSCI) list papers :	3			
Current projects :	Domestic :	2	International :	1

Science, arts and professional qualifications

Name and last name:	Vilotić Ž. Dragiša
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.01.1975
Scientific or art field:	Plastic Deformation Technology, Rapid Prototyping, Virtual

Academic carieer	Year	Institution	Field
Academic title election:	1998	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
PhD thesis	1986	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
Magister thesis	1981	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual
Bachelor's thesis	1974	Faculty of Technical Sciences - Novi Sad	Plastic Deformation Technology, Rapid Prototyping, Virtual

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	P207	Metal forming	(P00) Production Engineering, Undergraduate Academic Studies
2.	P2401	Advanced Methods in Metal Forming	(P00) Production Engineering, Undergraduate Academic Studies
3.	P2413	Computer Aided Design of Tools and Dies for Metal Forming	(P00) Production Engineering, Undergraduate Academic Studies
4.	P303	Machines for Processing by Deforming	(P00) Production Engineering, Undergraduate Academic Studies
5.	P3403	Technology of Plastic Forming - Shaping of plastic material	(P00) Production Engineering, Undergraduate Academic Studies
6.	P3503	Machines and Devices for Plastic Processing	(P00) Production Engineering, Undergraduate Academic Studies
7.	M2062	Mechanical engineering technologies 2	(M20) Mechanization and Construction Engineering, Undergraduate Academic Studies (M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
8.	M3203	Technology of machinery	(M30) Energy and Process Engineering, Undergraduate Academic Studies
9.	P3402	Physical and Phase States of Polymers	(P00) Production Engineering, Undergraduate Academic Studies
10.	ZR408A	Safety at work on the machines for processing	(Z01) Safety at Work, Undergraduate Academic Studies
11.	P2407	Rapid Prototyping and Rapid Tooling	(PM0) Production Engineering, Master Academic Studies
12.	P3501	Tool Designing for Plastic	(PM0) Production Engineering, Master Academic Studies
13.	P3503A	Contemporary Process Systems for Plastic Treatment	(PM0) Production Engineering, Master Academic Studies
14.	BMIM4B	Technologies of shaping biomedical materials	(BM0) Biomedical Engineering, Master Academic Studies (PM0) Production Engineering, Master Academic Studies
15.	PMISP1	Modelling and Simulation of Metal Forming Processes	(PM0) Production Engineering, Master Academic Studies
16.	PTS01	Technology of sintering	(PM0) Production Engineering, Master Academic Studies
17.	DP001	Design and Research Methods in Production Engineering	(M00) Mechanical Engineering, Doctoral Academic Studies
18.	DP005	State and Tendencies in Development of Metrology, Quality and Equipment	(M00) Mechanical Engineering, Doctoral Academic Studies
19.	DP008	Contemporary Methods and TPD Systems	(M00) Mechanical Engineering, Doctoral Academic Studies
20.	DP012	Physical Modelling and TPD Simulation by Computers	(M00) Mechanical Engineering, Doctoral Academic Studies
21.	DP015	Nonconventional Procedures of Forming in TPD	(M00) Mechanical Engineering, Doctoral Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES — Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
22.	SID04	Current State in the Field	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (F20) Engineering Animation, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies
23.	DP026	Modern methods for polymers investigation	(M00) Mechanical Engineering, Doctoral Academic Studies
24.	DP028	Theoretical basis for forming polymer technology	(M00) Mechanical Engineering, Doctoral Academic Studies
25.	SID04	Present State in the Field	(A00) Architecture, Doctoral Academic Studies (AS0) Scenic Design, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Essa K., Kačmarčik I., Hartley P., Plančak M., Vilotić D.: Upsetting of bi-metallic ring billets, Journal of Materials Processing Technology, 2012, Vol. 212, No 4, pp. 817-824, ISSN 0924-0136
2.	Alexandrov S., Vilotić D., Konjovoć Z., Vilotić M.: An Improved Experimental Method for Detrmining the Workability Diagram, Experimental Mechanics, 2012, Vol. 52, No 11340, ISSN 0014-4851
3.	Alexandrov S., Vilotić D.: A study on an effect of geometric singularities on ductile fracture , Engineering Fracture Mechanics, 2009, Vol. 76, No 14, pp. 2309-2315, ISSN 0013-7944
4.	Vilotić D., Plančak M., Čupković Đ., Aleksandrov S., Aleksandrov N.: Free Surface Fracture in Three Upsetting Tests , Experimental Mechanics, 2006, Vol. 46, pp. 115-120, ISSN 0014-4851
5.	Plančak M., Hartley P., Esssa K., Vilotić D., Movrin D., Lužanin O.: Deformation analysis during bi-metallic coining operations, Steel Research International, 2012, pp. 1247-1250, ISSN 1611-3683
6.	Vilotić D., Alexandrov S., Plančak M., Vilotić M., Ivanišević A., Kačmarčik I.: Material Formability at Upsetting by Cylindrical and Flat Dies, Steel Research International, 2012, pp. 1175-1178, ISSN 1611-3683
7.	Vilotić D., Alexandrov S., Plančak M., Movrin D., Ivanišević A., Vilotić M.: Material Formability of Upsetting by V-Shape Dies , Steel Research International, 2011, pp. 923-928, ISSN 1611-3683
8.	Lyamina E., Alexandrov S., Vilotić D., Movrin D.: Effect of Shape of Samples on Ductile Fracture Initiation in Upsetting, Steel Research International, 2010, Vol. 9, No 81, pp. 306-3090, ISSN 1611-3683
9.	D. Vilotić, D. Milikić, M. Plančak, M. Milutinović: Obrazovanje inženjera proizvodnog mašinstva iz oblasti oblikovanja plastike na Fakultetu tehničkih nauka u Novom Sadu, 4. kongres inženjera plastičara i gumara K – IPG 2006., zbornik na CDu, ppt 100 slajdova, Vršac, 13-16. juni 2006.
10.	Obradović R., Vilotić D.: Prikaz tehnologije i opreme za za ultrazvučno zavarivanje termoplastičnih komponenata, Zbornik radova MMA 2006, strana 27-28, FTN, Novi Sad, juni 2006.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	17			
Total of SCI(SSCI) list papers :	15			
Current projects :	Domestic :	1	International :	1

Science, arts and professional qualifications

Name and last name:	Vučinić-Vasić T. Milica
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.04.2000
Scientific or art field:	Physics

Academic carieer	Year	Institution	Field
Academic title election:	2007	Faculty of Technical Sciences - Novi Sad	Physics
PhD thesis	2007	Faculty of Sciences - Novi Sad	Physics
Magister thesis	2000	Faculty of Sciences - Novi Sad	Physics
Bachelor's thesis	1996	Faculty of Sciences - Novi Sad	Physics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	F102	Physics	(F00) Graphic Engineering and Design, Undergraduate Academic Studies
2.	GG06	Civil Engineering Physics	(G00) Civil Engineering, Undergraduate Academic Studies
3.	S014	Physics	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4.	DZ01FS	Selected Chapters in Physics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies (I12) Industrial Engineering, Specialised Academic Studies (I22) Engineering Management, Specialised Academic Studies (Z00) Environmental Engineering, Specialised Academic Studies
5.	DZ01F	Selected Chapters in Physics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (E20) Computing and Control Engineering, Doctoral Academic Studies (F00) Graphic Engineering and Design, Doctoral Academic Studies (G00) Civil Engineering, Doctoral Academic Studies (GI0) Geodesy and Geomatics, Doctoral Academic Studies (H00) Mechatronics, Doctoral Academic Studies (I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies (M00) Mechanical Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies (OM1) Mathematics in Engineering, Doctoral Academic Studies (S00) Traffic Engineering, Doctoral Academic Studies (Z00) Environmental Engineering, Doctoral Academic Studies (Z01) Safety at Work, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Milica Vučinić-Vasić, Divko Ćirić, Tatjana Škrbić, Miroljub Đurić, Zbirka zadataka iz fizike, FTN Izdavaštvo, Novi Sad 2005.
2.	Ljuba Budinski-Petković, Milica Vučinić, Dušan Ilić, Praktikum eksperimentalnih vežbi iz fizike – odsek za računarstvo i automatiku, S PRINT, Novi Sad, 2003
3.	Ljuba Budinski-Petković, Milica Vučinić-Vasić, Dušan Ilić, Praktikum eksperimentalnih vežbi iz fizike – odsek za mašinstvo – odsek za grafičko inženjerstvo – odsek za mehatroniku, Delta press, Novi Sad, 2003.
4.	Vučinić-Vasić M.: Exchange-Bias and Grain-Surface Relaxations in Nanostructured NiO/Ni Induced by a Particle Size Reduction, Journal of Physical Chemistry C, 2012, Vol. 116, pp. 4356-4364, ISSN 1932-7447

Representative refferences (minimum 5, not more than 10)

5.	Vučinić-Vasić M., Mihailović A., Kozmidis-Luburić U., Nemeš T., Ninkov J., Zeremski T., Antić B.: Metal contamination of short-term snow cover near urban crossroads: Correlation analysis of metal content and fine particles didtribution, Chemosphere, 2012, Vol. 6, No 86, pp. 585-592
6.	Kremenović A., Jančar B., Ristić M., Vučinić-Vasić M., Rogan J., Pacevski A., Antić B.: Exchange-Bias and Grain-Surface Relaxations in Nanostructured NiO/Ni Induced by a Particle Size Reduction, Journal of Physical Chemistry C, 2012, Vol. 116, pp. 4356-4364, ISSN 1932-7447
7.	Antić B., Kremenović A., Vučinić-Vasić M., Dohcević-Mitrović Z., Nikoloć A., Gruden-Pavlović M., Jančar B., Meden A.: Composition related properties of (Yb,Y)(2)O-3 nanoparticles synthesized by controlled thermal degradation of AA complexes, Materials chemistry and physics, 2010, Vol. 122, No 2-3, pp. 386-391, ISSN 0254-0584
8.	Antić B., Rogan J., Kremenović A., Nikoloć A., Vučinić-Vasić M., Božanić D., Goya G., Colomban P.: Optimization of photoluminescence of Y2O3:Eu and Gd2O3:Eu phosphors synthesized by thermolysis of 2,4-pentanedione complexes, NANOTECHNOLOGY, 2010, Vol. 21, No 24, pp. 2457-2457, ISSN 0957-4484
9.	Jović N., Vučinić-Vasić M., Kremenović A., Antić B., Jovalekić Č., Vulić P., Kahlenberg V., Kaindl R.: HEBM synthesis of nanocrystalline LiZn0.5Ti1.5O4 spinel and thermally induced order-disorder phase transition (P4332-Fd3m), Materials chemistry and physics, 2009, No 2-3, pp. 542-549, ISSN 0254-0584
10.	Vučinić-Vasić M., Antić B., Blanuša J., Rakić S., Kremenović A., Nikolić A., Kapor A.: Formation of nanosize Li-ferrites from acetylacetonato complexes and their crystal structure, microstructure and order-disorder phase transition , Applied Physics A, 2006, Vol. 82, No 1, pp. 49-54, ISSN 0947-8396

Summary data for teacher's scientific or art and professional activity:

Quotation total :	53			
Total of SCI(SSCI) list papers :	17			
Current projects :	Domestic :	2	International :	1

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Vujičić V. Vladimir
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.09.1975
Scientific or art field:	Electrical Measurements

Academic carieer	Year	Institution	Field
Academic title election:	2002	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	1992	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	1983	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1974	School of Electrical Engineering - Beograd	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E142	Measuring Instruments	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EK301	Measurement Systems in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EIEEM	Electrical and electronic measurements	(BM0) Biomedical Engineering, Undergraduate Academic Studies
4.	EIEEMI	Electrical and electronic measurements in industry	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
5.	EIEMER	Electronic measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIMMBM	Methods of measurement and measurement-acquisition systems in biomedicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	EIMNV	Measurements of non-electrical quantities	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	EIPDMS	Programming of Measurement and Data Acquisition Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	EIPMS1	Design and development of industrial devices and measurement systems 1	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
10.	EIPR1	Laboratory practicum	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
11.	EISMP	Sensors and transducers	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
12.	EIVI	Virtual measurement systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
13.	MR0ULR	Introduction to laboratory practice	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
14.	DE103S	Measurement Systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	DE304S	Measurements in Telecommunications	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
16.	DE404S	Intelligent Measurements	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
17.	SI018	Ionizing and Non-Ionizing Radiation and Protection	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
18.	BMIM5D	Magnetic-Resonance Devices in Biomedicine	(BM0) Biomedical Engineering, Master Academic Studies
19.	EIDNU	Supervisory Control and Data Acquisition Systems Design	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20.	EIORM	Measurement and Data Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
21.	DE103	Measurement Systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
22.	DE304	Measurements in Telecommunications	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
23.	DE404	Intelligent Measurements	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Sovilj P., Milovančev S., Vujičić V.: Digital Stochastic Measurement of a Nonstationary Signal With an Example of EEG Signal Measurement, IEEE Transactions on Instrumentation and Measurement, 2011, Vol. 60, No 9, pp. 3230-3232, ISSN 0018-9456
2.	Santrač B., Sokola M., Mitrović Z., Župunski I., Vujičić V.: A Novel Method for Stochastic Measurement of Harmonics at Low Signal-to-Noise Ratio, IEEE Transactions on Instrumentation and Measurement, 2009, Vol. 58, No 10, pp. 3434-3441, ISSN 0018-9456
3.	Antić B., Mitrović Z., Vujičić V.: Method for Harmonic Measurement of Real Power Grid Signals with Frequency Drift using Instruments with InternallyGenerated Reference Frequency, Measurement Science Review, 2012, Vol. 12, No 6, pp. 277-285, ISSN 1335-8871
4.	J.J.Tomić, M.D.Kušljević, V.V.Vujičić: "A New Power System Digital Harmonic Analyzer", IEEE Trans. on Power Delivery, Vol. 22, No. 2, pp.772-780, April 2007.
5.	Radonjić A., Vujičić V.: Integer Codes Correcting Burst Errors Within A Byte, IEEE Transactions on Computers, 2011
6.	Radonjić A., Vujičić V.: Integer SEC-DED Codes for Low Power Communications, Information Processing Letters, 2009, Vol. 110, No 12-13, pp. 518-520, ISSN 0020-0190
7.	V.Vujičić: "GENERALIZED LOW FREQUENCY STOCHASTIC TRUE RMS INSTRUMENT", IEEE Trans.Instrum.Meas., Vol. 50,No. 5, pp.1089-1092, October 2001.
8.	S. S. Milovančev, V. V. Vujičić, V. A. Katić: "Improvements of On-Line Measurement in Distribution System Using a New Adding A/D Converter", IEEE Trans. on Power Delivery, Vol. 10, No. 4, pp. 1750-1756, October 1995.
9.	I. Župunski, L. Holiček, V. Vujičić, S. Milovančev: "POWER FACTOR CALIBRATOR", IEEE Trans. Instrum. Meas., vol. IM-46, No.2, pp. 408-411, Apr. 1997.
10.	V. Vujičić, I. Župunski, S. Milovančev: "PREDETERMINATION OF THE QUANTIZATION ERROR IN DIGITAL MEASUREMENT SYSTEMS, IEEE Trans. Instrum. Meas., vol. IM-46, No.2, pp. 439-441, Apr. 1997.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	9			
Total of SCI(SSCI) list papers :	18			
Current projects :	Domestic :	1	International :	0

Science, arts and professional qualifications

Name and last name:	Vukobratović V. Dejan
Academic title:	Assistant Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.11.2003
Scientific or art field:	Telecommunications and Signal Processing

Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
PhD thesis	2008	University of Novi Sad - Novi Sad	Telecommunications and Signal Processing
Magister thesis	2005	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Telecommunications and Signal Processing

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	BM119B	Wireless sensor networks	(BM0) Biomedical Engineering, Undergraduate Academic Studies
2.	BMI102	Communication Systems	(BM0) Biomedical Engineering, Undergraduate Academic Studies
3.	EK200	Development Tools for Communications and Signal Processing 2	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EK203	Modelling and Simulation of Communication Systems	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EK321	IP technology	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	ETI21	Communication Protocols	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
7.	ETI23	Wireless Communications	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
8.	ETI31	Video Technology	(E02) Electronics and Telecommunications, Undergraduate Professional Studies
9.	S1329P	Introduction to Communication Networks	(S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
10.	DE414S	Modern Coding Theory	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	DE514S	Multimedia Processing and Communications	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
12.	S0152	Next Generation Telecommunication Networks	(S01) Postal Traffic and Telecommunications, Master Academic Studies
13.	SI015	Integrated Services Digital Network (ISDN)	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
14.	SI016	Advanced ISDN Networks	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
15.	SI027	Advanced IP Communications	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
16.	BMIM2D	Information theory in biosystems	(BM0) Biomedical Engineering, Master Academic Studies
17.	DE414	Modern Coding Theory	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
18.	DE514	Multimedia Processing and Communications	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	Vukobratović D., Stanković V., Sejdinović D., Fagoonee-Stankovic L., Xiong Z.: Scalable Video Multicast Using Expanding Window Fountain Codes, IEEE Transactions on Multimedia, 2009, Vol. 11, No 6, pp. 1094-1104, ISSN 1520-9210, UDK: 10.1109/TMM.2009.2026087
2.	Stefanović Č., Vukobratović D., Stanković V., Fantacci R.: Packet-centric approach for distributed sparse-graph coding in wireless ad-hoc networks, Ad Hoc Networks, 2012, ISSN 1570-8705

Representative refferences (minimum 5, not more than 10)	
3.	Stefanović Č., Vukobratović D., Chiti F., Niccolai L., Crnojević V., Fantacci R.: Urban Infrastructure-to-Vehicle Traffic Data Dissemination Using UEP Rateless Codes, IEEE Journal on Selected Areas in Communications, 2011, Vol. 29, No 1, pp. 94-102, ISSN 0733-8716, UDK: 10.1109/JSAC.2011.110110
4.	Vukobratović D., Stefanović Č., Chiti F., Crnojević V., Fantacci R.: Rateless Packet Approach for Data Gathering in Wireless Sensor Networks, IEEE Journal on Selected Areas in Communications, 2010, Vol. 28, No 7, pp. 1169-1179, ISSN 0733-8716, UDK: 10.1109/JSAC.2010.100921
5.	Sejdinović D., Vukobratović D., Doufexi A., Šenk V., Piechocki R.: Expanding Window Fountain Codes for Unequal Error Protection, IEEE Transactions on Communications, 2009, Vol. 57, No 9, pp. 2510-2516, UDK: 10.1109/TCOMM.2009.09.070616
6.	Vukobratović D., Šenk V.: Design and Evaluation of Irregular LDPC Codes Using ACE Spectrum, IEEE Transactions on Communications, 2009, Vol. 57, No 8,, pp. 2272-2279, ISSN 0090-6778, UDK: 10.1109/TCOMM.2009.08.070548
7.	Dejan Vukobratovic, Vojin Senk: “Generalized ACE Constrained Progressive-Edge-Growth LDPC Code Design”, IEEE Communications Letters, Vol.12, No.1, pp. 32-34, January 2008.
8.	Stefanović Č., Vukobratović D., Stanković V., Fantacci R.: Packet-centric approach for distributed sparse-graph coding in wireless ad-hoc networks, Ad Hoc Networks, 2012, ISSN 1570-8705
9.	Vukobratović D., Vladimir S.: Unequal Error Protection Random Linear Coding Strategies for Erasure Channels, IEEE Transactions on Communications, 2012, Vol. 60, No 5, pp. 1243-1252
10.	Vukobratović D., Clavier L., Matthias W., Werner T., Andreas C., Kimmo K.: Adaptive Coding, Modulation and Signal Processing - in Pervasive Mobile and Ambient Wireless Communications, Heidelberg, Springer, 2012

Summary data for teacher's scientific or art and professional activity:				
Quotation total :	0			
Total of SCI(SSCI) list papers :	9			
Current projects :	Domestic :	0	International :	2

Science, arts and professional qualifications

Name and last name:	Živanov D. Ljiljana
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	15.03.1976
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2000	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1989	School of Electrical Engineering - Beograd	Electronics
Magister thesis	1980	School of Electrical Engineering - Beograd	Electronics
Bachelor's thesis	1974	School of Electrical Engineering - Beograd	Electrical and Computer Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E222A	Electronics	(E20) Computing and Control Engineering, Undergraduate Academic Studies
2.	EM303	Microelectronics	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	H110	Materials in Electrical Engineering	(H00) Mechatronics, Undergraduate Academic Studies (MR0) Measurement and Control Engineering, Undergraduate Academic Studies
4.	H311	Application of Sensors and Actuators	(H00) Mechatronics, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	BM117C	MEMS and NEMS	(BM0) Biomedical Engineering, Undergraduate Academic Studies
6.	BMI107	Materials and fabrication technologies in medical devices	(BM0) Biomedical Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
7.	BMI110	Sensors and actuators in medicine	(BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	DE101S	Contemporary microelectronic technologies and materials	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
9.	DE502S	Micro-sensors and MEMS	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	EM517	Modeling and Simulation of Semiconductor Components	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
11.	SI014	Microelectronic technologies	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
12.	SI024	Application of Sensors and Actuators	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
13.	BMIM1D	Application of MEMS and NEMS in biomedicine	(BM0) Biomedical Engineering, Master Academic Studies
14.	EM519	Sensors, actuators, MEMS and NEMS	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
15.	DE101	Contemporary Microelectronic Technologies and Materials	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
16.	DE502	Micro-sensors and MEMS	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1. R. Raghavendra, P. Bellew, N. Mcloughlin, G. Stojanović, M. Damnjanović, V. Desnica, Lj. Živanov, “Characterization of Novel Varistor+Inductor Integrated Passive Devices,” IEEE Electron Devices Letters , vol. 25, no. 12, pp. 778-780, 2004.
2. G.Stojanović, M. Damnjanović, V. Desnica, Lj. Živanov, R. Raghavendra, P. Bellew, N. Mcloughlin, “High performance zig-zag and meander inductors embedded in ferrite material,” Journal of Magnetism and Magnetic Materials, vol. 297/2, pp. 76-83, 2006.
3. M.Damnjanović, G. Stojanović, Lj. Živanov, V. Desnica, “Comparison of different structures of ferrite EMI suppresors,“ Microelectronics International, vol. 23, no. 3, pp. 42-48, September 2006.

Representative refferences (minimum 5, not more than 10)

4.	M.Damnjanović, G. Stojanović, V. Desnica, Lj. Živanov, R. Raghavendra, P. Bellew, N. Mcloughlin, “Analysis, design and characterization of ferrite EMI suppressors,” IEEE Transactions on Magnetics (impact factor: 0.837), vol. 42, no. 2, pp. 270-277, 2006.
5.	G. Stojanović, Lj. Živanov, “Novel efficient method for inductance calculation of inductors with optimized layout,” International Journal of RF and Microwave Computer-Aided Engineering, vol. 16, no. 5, pp. 463-469, September 2006
6.	V. Desnica, Lj. Živanov, O. Aleksić, “The modeling and design of symmetrical thick film EMI/EMC cells”, Studies in Applied Electromagnetics and Mechanics: Electromagnetic Fields in Electrical Engineering, vol. 22, pp. 395-400, IOS Press, Amsterdam, 2002
7.	V. Desnica, Lj. Živanov, M. Nimrihter, O. Aleksić, M. Luković: “A Comparative Characteristics of Thick Film Integrated LC Filters”, IEEE Transactions on Instrumentation and Measurement - IMTC Special Issue, Vol. 51, No. 4, pp. 570-576,
8.	V. Desnica, Lj. Živanov, O. Aleksić, S. Jenei: "Modeling and optimization of thick film solenoid-bar type inductors and transformers", COMPEL (Computation and Mathematics in Electrical and Electronic Engineering), Vol. 19, No. 2, pp. 615-621, 2000
9.	P.M.Nikolić, M.B.Pavlović, Z.Maričić, S.Djurić, Lj.Živanov, D.Samaras, G.A.Gledhill, "Low temperature far-infrared complete reflectivity spectra of single crystal Ba hexaferrite", Infrared Physics, vol. 33, No.5, Pergamon Press, G.B., pp.401-408, 1992
10.	P.M.Nikolić, Lj.D.Živanov, O.S.Aleksić, D.Samaras, G.Gledhil, J.Collins: "Far infrared optical properties of single crystal Ba- and Sr- hexaferrite", Infrared Physics, Vol.30,

Summary data for teacher's scientific or art and professional activity:

Quotation total :	48			
Total of SCI(SSCI) list papers :	12			
Current projects :	Domestic :	1	International :	3

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Živanov B. Miloš
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	01.04.1994
Scientific or art field:	Electronics

Academic carieer	Year	Institution	Field
Academic title election:	2004	Faculty of Technical Sciences - Novi Sad	Electronics
PhD thesis	1992	School of Electrical Engineering - Beograd	Electronics
Magister thesis	1978	School of Electrical Engineering - Beograd	Electronics
Bachelor's thesis	1973	School of Electrical Engineering - Beograd	Physics

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM414	Optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	EM301A	Analog Microelectronic Circuits	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	EM430A	Control and process electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	EM444B	Applied electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	DE201S	Selected Chapters in Optoelectronics and Photonics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
6.	DE503S	Industrial Electronics	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
7.	E1SO01	Modern technologies in electrical engineering	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
8.	H1402	Digital Controlling Electronics	(H00) Mechatronics, Master Academic Studies
9.	SI013	Applied electronics in industry	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
10.	SI035	Electronic Systems in Oil Industry	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
11.	BMIM1A	Applications of lasers in medicine	(BM0) Biomedical Engineering, Master Academic Studies
12.	DE117S	Selected chapters from optoelectronics sensors systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
13.	DE315S	Optoelectronics sensors systems-advanced course	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
14.	DE418S	Design of complex optoelectronics systems	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
15.	EM435A	Electronic Systems in Oil Industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
16.	EM437A	The application of electronic systems in clean and renewable energy	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
17.	EM439A	Electronics in veichles	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
18.	EM521	Applied optoelectronics	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
19.	EM523	Applied electronics in industry	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
20.	DE201	Selected Chapters in Optoelectronics and Photonics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies
21.	DE503	Industrial Electronics	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies (M40) Technical Mechanics, Doctoral Academic Studies
22.	DE117	Selected chapters from optoelectronics sensors systems	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

Representative refferences (minimum 5, not more than 10)

1.	Šašić B.,Živanov M., Lazić M.: Desing of Multiphase Boost Converter for Hybrid Fuel Cell/Battery Power Sources, Beč, Jatin Nathwani and Artie Ng (Ed.),, 2010, str. 1-51, ISBN 978-953-307-401-6
2.	Manojlović L., Živanov M.: White-Light Interferometric Sensor for Rough Surface Height Distribution Measurement, IEEE Sensors Journal, 2010, Vol. 10, No 6, pp. 1125-1132, ISSN 10.1109/JSEN.2007.90
3.	Slankamenac M., Lukić-Petrović S., Živanov M., Čajko K.: Electrical switching behavior of bulk Cux(AsSe1.4I0.2)100−x glasses: Composition dependence and topological effects, SOLID STATE COMMUN, 2012, Vol. 152, No 13, pp. 1160-1163, ISSN 0038-1098
4.	Sekulić D., Satarić M., Živanov M.: Symbolic Computation of Some New Nonlinear Partial Differential Equations of Nanobiosciences Using Modified Extended Tanh-function Method, Applied Mathematics and Computation, 2011, Vol. 218, No 7, pp. 3499-3506, ISSN 0096-3003
5.	Stupar D., Bajić J., Manojlović L., Slankamenac M., Joža A., Živanov M.: A Wearable Low-Cost System for Human Joint Movements Monitoring Based on Fiber-Optic Curvature Sensor, IEEE Sensors Journal, 2012, ISSN 10.1109/JSEN.2007.90
6.	Manojlović L., Živanov M.: Spectrally Resolved White-Light Interferometric Sensor for Absolute Position Measurement Based on Hilbert Transform, IEEE Sensors Journal, 2012, Vol. 12, No 6, pp. 2199-2204, ISSN 10.1109/JSEN.2007.90
7.	Bajić J., Stupar D., Manojlović L., Slankamenac M., Živanov M.: A simple, low-cost, high-sensitivity fiber-optic tilt sensor, Sensors and Actuators A: Physical, 2012, Vol. 185, pp. 33-38, ISSN 0924-4247
8.	Manojlović L., Živanov M., Slankamenac M., Bajić J., Stupar D.: High-speed and high-sensitivity displacement measurement with phase-locked low-coherence interferometry, APPL OPTICS, 2012, Vol. 51, pp. 4333-4342, ISSN 0003-6935
9.	M.B. Živanov, “Elektronika - elektronske komponete i kola - analiza i projektovanje”, 2001. Univerzitet u Novom Sadu, Fakultet tehničkih nauka, No. 129, Novi Sad, str. 651. 2001.
10.	G.Mančić, S.Martinović, M.Živanov, "Karotažna merenja - osnovni fizički principi", 2002.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	32			
Total of SCI(SSCI) list papers :	23			
Current projects :	Domestic :	2	International :	2

Study Programme Accreditation - PhD Studies

DOCTORAL ACADEMIC STUDIES

Power, Electronic and Telecommunication Engineering

Science, arts and professional qualifications

Name and last name:	Župunski Ž. Ivan
Academic title:	Full Professor
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad
	14.10.1974
Scientific or art field:	Electrical Measurements

Academic carieer	Year	Institution	Field
Academic title election:	1997	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
PhD thesis	1985	Faculty of Technical Sciences - Novi Sad	Electrical Measurements
Magister thesis	1981	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Bachelor's thesis	1973	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	E130	Electrical Measurements	(S00) Traffic and Transport Engineering, Undergraduate Academic Studies (S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
2.	E130A	Electrical Measurements	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
3.	E140	Measuring in Electronics	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
4.	E142	Measuring Instruments	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
5.	EI408	Project Management	(E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	EIEEM	Electrical and electronic measurements	(BM0) Biomedical Engineering, Undergraduate Academic Studies
7.	EIEEMI	Electrical and electronic measurements in industry	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies
8.	EIMNV	Measurements of non-electrical quantities	(MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
9.	DE204S	Selected topics in metrology	(E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
10.	SI023	Measurement and processing of the results	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
11.	SI039	Metrology	(E00) Power, Electronic and Telecommunication Engineering, Specialised Professional Studies
12.	EIIKL	Engineering communication, logistics and intellectual property	(MR0) Measurement and Control Engineering, Master Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13.	EIORM	Measurement and Data Processing	(E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
14.	DE204	Selected Chapters in Metrology	(E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies

Representative refferences (minimum 5, not more than 10)

1.	S. Avramov, I. Župunski: "An AC Comparator for Audio Frequency Waveforms", IEEE Trans. Instrum. Meas., vol. IM-40, pp. 373-376, Apr. 1991.
2.	I. Župunski, L. Holiček, V. Vujičić, S. Milovančev: "Power Factor Calibrator", IEEE Trans. Instrum. Meas., vol. IM-46, No.2, pp. 408-411, Apr. 1997.
3.	V. Vujičić, I. Župunski, S. Milovančev: "Predetermination of the Quantization Error in Digital Measurement Systems, IEEE Trans. Instrum. Meas., vol. IM-46, No.2, pp. 439-441, Apr. 1997.
4.	V. Vujičić, S. Milovančev, M. Pešaljević, D. Pejić, I. Župunski: "Low Frequency Stochastic True RMS Instrument", IEEE Trans. Instrum. Meas., vol. IM-48, No.2, pp. 467-470, Apr. 1999.

Representative refferences (minimum 5, not more than 10)

5.	M. Pešaljević, I. Župunski: "Komparacija električnih mernih etalon-uređaja", Savezni zavod za mere i dragocene metale, naučna knjiga, 339 strana, Beograd, 1981.
6.	I. Župunski, P. Miljanić: "AC Power Calibrator with a Precision Digital Wattmeter in Feedback Loop", IEEE Trans. Instrum. Meas., vol IM-36, pp.354-356, June 1987.
7.	I. Župunski, P. Miljanić: "AC Power Calibrator with a Precision Digital Wattmeter in the Feedback Loop", Conference on Precision Electromagnetic Measurements CPEM "86, CPEM"86 Digest, Editor: Ronald F. Dziuba, pp. 23-24, Gaithersburg, 1986.
8.	S. Avramov, I. Župunski: "One AC Comparator", Conference on Precision Electromagnetic Measurements CPEM "90, CPEM"90 Digest, Editor: Gary R. Hanes, pp. 74-75, Ottawa, 1990.
9.	S. Milovančev, V. Vujičić, V. Katić, I. Župunski: "An Intelligent Multichannel Converter of AC Electrical Power and/or Voltage and Current RMS Values", Proceedings of IEEE International Symposium on Industrial Electronics ISSIE "95, pp. 138-142, Athens, Greece, 1995.
10.	V. Vujičić, I. Župunski, S. Milovančev: "General Method for Quantization Error Predetermination in Digital Measurement System", Conference on Precision Electromagnetic Measurements CPEM "96, CPEM"96 Digest, pp.49-50, Editor: Andreas Braun, Braunschweig, Jun. 1996.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	11			
Total of SCI(SSCI) list papers :	10			
Current projects :	Domestic :	2	International :	0

Standard 10. Organizational and Material Resources

To perform the study programme, the adequate human, spatial, technical and technological, library and other resources suitable to the study programme features and predicted students` number are provided. To perform the study programme, the adequate space for lecturing is provided, as well as the adequate laboratory space necessary for the experimental work and the contemporary equipment necessary for qualitative and productive scientific and research work. Lectures are held in classrooms and specialized laboratories.

Faculty provides the usage of the library fund from its own or other sources (books, monographs, scientific magazines, other periodicals) in the amount necessary for the Doctoral study programme. Doctoral study students have the access to databases (KOBSON, IEEE, etc) necessary for Doctoral dissertation elaboration and scientific and research work.

The library possesses more than 100 library units relevant for the performance of the study programme. All courses from the study programme have adequate textbooks, devices and supplementary equipment available on time and in a satisfactory number for the normal teaching process. There is also adequate information support.

Standard 11. Quality Control

Estimation of the study programme quality is elaborated regularly and systematically via self-evaluation and external quality control. One should place an emphasis on the multi-decade practice of students` surveys.
Study programme quality control is elaborated in the following manners:
- Surveying students at final lecture from the given course.
- Surveying students on the quality of the study programme and logistic support to the studies in the event of awarding the Diploma. Also, the studying comfort (classroom cleanness and tidiness) is evaluated there.
- Surveying students during the confirmation on completing a year of studies. Then students evaluate the logistic support to the studies.
- Surveying students on enrolling each year of studies. Then students evaluate the study programme at the year they completed in the prior academic year.
- Surveying the teaching and non-teaching staff on the quality of the study programme and the logistic support to the studies. This survey evaluates the work of the Dean`s office, Registrar`s office, library, and other services at the Faculty. Furthermore, the studying comfort (classroom cleanness and tidiness) is also evaluated.

To monitor the quality of the study programme, there is also a committee with all heads of all Departments participating in the realization of the study programme, together with a student from each study group.
Additional quality is obtained by the obligatory scientific production of candidates. Prior to beginning the defence of the Doctoral dissertation, each candidate is obliged to publish at least 2 (two) papers in the M33 rank (following the categorization provided by the Ministry of Science) and at least one paper in the journal from the SCI list.