

DEPARTMENT OF MICROELECTRONICS

<http://www.kme.elf.stuba.sk/kme/>

Head of Department

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I. STAFF

Professors	Prof. Ing. Juraj Breza, PhD., Prof. Ing. Otto Csabay, DrSc., visiting professor of the Technical University in Vienna, Prof. Ing. Daniel Donoval, DrSc., Prof. Ing. Daniela Ďuračková, PhD., Prof. Ing. Jaroslav Kováč, PhD., Prof. Ing. Viera Stopjaková, PhD., Prof. RNDr. Vladimír Tvarožek, PhD., Prof. Ing. František Uherek, PhD.
Associate Professors	doc. Ing. Ladislav Harmatha, PhD., doc. Ing. Ivan Hotový, PhD., doc. Ing. Ladislav Hulényi, PhD., doc. Ing. Ján Janík, PhD., doc. Ing. Peter Kordoš, DrSc., doc. Ing. Jozef Liday, PhD., doc. Ing. Róbert Redhammer, PhD., doc. Ing. Rudolf Srnánek, PhD., doc. Ing. Ľubica Stuchlíková, PhD., doc. Ing. Alexander Šatka, PhD., doc. Ing. Martin Tomáška, PhD., doc. Ing. Marian Veselý, PhD., doc. Ing. Milan Žiška, PhD.
Assistant Professors	Ing. Fedor Mika, PhD., Ing. Erik Vavrinský, PhD.
Senior Scientists	doc. Ing. Ján Jakobovič PhD., Ing. Magdaléna Kadlečíková, PhD., doc. Ing. Rudolf Kinder, PhD., Ing. Juraj Racko, PhD., Ing. Jaroslava Škriniarová, PhD., doc. Ing. Bedřich Weber, PhD.
Scientific Workers	Ing. Dalibor Búč, PhD., Ing. Martin Florovič, PhD., Ing. Alexander Kromka, PhD., Ing. Ivan Novotný, PhD., RNDr. Vlastimil Řeháček, PhD.
Research Workers	Ing. Peter Benko, Ing. Soňa Flickyngerová, RNDr. Alena Grmanová, Ing. Aleš Chvála, Ing. Ľubomír Jánoš, Ing. Milan Kempný, Ing. Michal Konfal, Ing. Jaroslav Kováč, jr., Ing. Libor Majer, Ing. Marián Marton, Ing. Oľga Valentová, Ing. Peter Vogrinčič, Ing. Marian Vojs
Technical Staff	Božena Harmathová, Jozef Ivan, Jozef Král
PhD. Students	Ing. Daniel Arbet, Ing. Jana Benkovská, Ing. Tomáš Brath, Ing. Juraj Brenkuš, Ing. Martin Daříček, Ing. Martin Donoval, Ing. Pavol Gašpíerik, Ing. Gábor Gyepes, Ing. Juraj Hotový, Ing. Peter Horňák, Ing. Tibor Ižák, Ing. Peter Kalianko, Ing. Ondrej Kádár, Ing. Ivan Košč, Ing. Mário Krajmer, Ing. Radovan Kurinec, Ing. Filip Lazišťan, Ing. Juraj Marek, Ing. Jozef Mihálov, Ing. Lenka Michalíková, Ing. Miroslav Mikolášek, Ing. Martin Mišun, Ing. Lukáš Nagy, Ing. Michal Nemeč, Ing. Juraj Pecháček, Ing. Martin Predanoc, Ing. Patrik Príbytný, Ing. Emil Raschman, Ing. Karol Rendek, Ing. Ján Šebok, Ing. Roman Šramatý, Ing. Peter Telek, Ing. Marián Varga, Ing. Peter Vinduška, Ing. Roman Záluský

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Laboratory of Thin Films I
- Laboratory of Thin Films II
- Laboratory of Semiconductor Structures

- Laboratory of Optoelectronics
- Laboratory of AES
- Laboratory of SIMS
- Laboratory of Electronic Devices
- Laboratory of Electrophysical Measurements
- Laboratory of Computer Analysis
- Laboratory of Microelectronic Devices Diagnostics
- Laboratory of Material for Electronics
- Laboratory of Electronic Devices
- Laboratory of Semiconductor Structures
- Laboratory of Sensor Systems and Microsystems
- Laboratory of Thin Film Sensors
- Laboratory of Vacuum Technique and Electronics
- Laboratory of IC Design
- Laboratory of Raman Spectroscopy
- Laboratory of Vacuum Technology I
- Laboratory of Vacuum Technology II
- Laboratory of Chemical Processes I
- Laboratory of Chemical Processes II
- Laboratory of Optoelectronic Device Technology
- Laboratory of Deposition Technology
- Laboratory of Plasma Processes
- Laboratory of Microwave Electronics
- Laboratory of Digital Signal Processing
- Laboratory of Optical Measurements
- Laboratory of Sensors and Lock Technique
- Laboratory of Microlithography
- Laboratory of Biochemical Sensors
- Laboratory of ICs
- Laboratory of Digital Circuits
- Laboratory Semiconductor Structure and IC Design
- Laboratory of IC Design and Testing
- Laboratory of Nanostructures and Electronic Devices Characterisation
- Laboratory of Electronic Measurements

II.2 Special Measuring Instruments and Computers

- Computer controlled system for I-V and C-V measurements and analysis (from 20 to 400 K)
- DLTS system 300 W BIORAD
- QDLTS Time Domain Spectrometer
- DL8000 Digital Deep Level Transient Spectrometer ACCENT
- Sputtering unit Perkin-Elmer Ultek/Randex 2400/8L
- Talystep S112 profilometer
- Vacuum system B55.3 Hochvakuum Dresden with magnetron sputtering sources
- Sputter etcher XNE-01 (Secon)
- Arc Discharge Reactor for CNT Growth, home made
- CVD Reactor for CNT Growth, home made
- RTA (Rapid Thermal Annealing), home made
- Contact Angle Measurement System, home made
- Equipment for Emission Measurements, home made
- Leak Detector, SmartTest
- Auger electron spectrometer (Varian) equipped with EX 05 VG ion gun
- X-ray photoelectron spectrometer (VG Microtech)
- Raman spectrometer (ISA-Jobin Yvon-Dilor-Horiba)
- Microwave network analyzer HP 8408 S + HP83421A Lightwave Source (20GHz)
- Microwave network analyzer (40 GHz) Agilent E8363 B (temperature range: RT – 400K) –

- RFOV measurements
- AFM, Park XE-100
- Semiconductor Parameter Analyzer, Agilent 4155C
- DSA 8200 Digital Serial Analyser - Sampling oscilloscope with TDR module
- DTG5334 Digital pulse generator
- SUSS Manual Prober PM5, SUSS MicroTec, Test Systems
- Spectroscopic ellipsometer Angstrom Advanced PHE 102
- Surface profiler Dektak 150 (Veeco)
- XILINX and ALTERA (xiClone) systems - boards and SW, Development Kits, Xilinx ISE6.3i
- VisualDSP++ SHARC Processor Development Tools, ADSP-21364 and ADSP-TS201S Evaluation Kits, Analog Devices donation
- MC9S08LC60/36 Demonstration board + complete CodeWarrior Development Studio for HC08 and HC12, FreeScale donation
- Sonnet – Planar Structures Electromagnetic Simulator, University licence
- Design Tools-via EURORACTICE**
- Synopsys TCAD Sentaurus A_2007.12
- Synopsys Analog Simulation and Modelling (HSpice)
- Cadence IC Package
- Dolphin Integration Smash HDL & SLED
- Design Kits:**
- AMS 0.35 μm
- TSMC 90 nm
- Running on:**
- IBMx3400 Quad Core E5335 server (Linux), workstations SunBlade 1000, 2 pc Sun Ultra 10 (all Solaris), HP Proliant ML 370 - HP ML370G5 QC E5420 (Linux), and 21 PCs Core Duo/Quad (WinXP/Linux)

III. TEACHING

III.1 Undergraduate Study (Bc.)

Subject, semester, hours per week for lectures and for seminars or practical exercises, name of the lecturer:

Logic Systems (two weeks)	(1st sem., 4-1h)	F. Mika
Materials for Electronics	(3rd sem., 3-2h)	D. Donoval
Electronics (dist. study)	(3rd sem., 3-2h)	E. Stuchlíková
Optoelectronics and Laser Technique	(4th sem., 3-2h)	F. Uherek
Electronic Devices	(4th sem., 3-2h)	E. Stuchlíková
Quality Management	(4th sem., 2-1h)	M. Žiška
Systems for Objects Security and Safety	(4th sem., 3-2h)	V. Tvarožek, I. Hotový
Optoelectronics	(5th sem., 3-2h)	F. Uherek
Microelectronics	(5th sem., 3-2h)	D. Donoval, J. Breza
Sensor Systems for Automobiles	(5th sem., 2-2h)	V. Tvarožek
Electronic Systems	(5th sem., 3-2h)	M. Žiška
Electronic Circuits	(5th sem., 3-2h)	F. Mika

Electronic Devices and Circuits	(5th sem., 3-2h)	R. Redhammer
Design and Reliability of IC and Systems	(5th sem., 3-2h)	D. Ďuračková V. Stopjaková
Quality Management	(5th sem., 2-1h)	M. Žiška
Bachelor Project 1	(5th sem., 0-4h)	F. Uherek
Principles of IC Design	(6th sem., 2-2h)	D. Ďuračková
Digital and Impulse Circuits	(6th sem., 3-2h)	F. Mika
Sensorics	(6th sem., 2-2h)	V. Tvarožek
Bachelor Project 2	(6th sem., 0-8h)	F. Uherek

III.2 Graduate Study (Ing.)

Team Project	(1st sem., 0-6h)	D. Donoval
Computer Circuit Analysis	(1st sem., 2-2h)	M. Tomáška
CAD of Electronic Devices	(1st sem., 2-2h)	D. Donoval
Electronic Measurement of Devices and Systems	(1st sem., 2-2h)	A. Šatka
Scientific Communication	(1st sem., 1-0h)	F. Uherek, D. Donoval, J. Breza
Vacuum Electronics and Technique	(1st sem., 2-1h)	M. Veselý
Analog IC Design	(1st sem., 2-1h)	D. Ďuračková
Diploma Project 1	(2nd sem., 0-6h)	D. Donoval
Computer Aided IC Design	(2nd sem., 3-2h)	V. Stopjaková
Sensor Microsystems	(2nd sem., 2-2h)	V. Tvarožek
Nanoelectronics	(2nd sem., 2-2h)	R. Redhammer
Industrial Electronics	(2nd sem., 2-2h)	A. Šatka
Superconductor Electronics	(2nd sem., 2-1h)	J. Breza
Microsystems Technology	(2nd sem., 2-1h)	I. Hotový
Physical Electronics of Solids	(2nd sem., 3-1h)	M. Veselý
Structures of IC	(2nd sem., 2-2h)	M. Žiška
Integrated Optoelectronics	(2nd sem., 2-1h)	J. Kováč
Diploma Project 2	(3rd sem., 0-6h)	D. Donoval
Diagnostics of Integrated Circuits and Systems	(3rd sem., 3-2h)	V. Stopjaková
Applied Optoelectronics and Lasers	(3rd sem., 2-2h)	J. Kováč F. Uherek
Spectroscopic Methods of Analysis and Inspection of Matter	(3rd sem., 3-1h)	J. Breza
RF Circuit Design	(3rd sem., 2-2h)	M. Tomáška
DSP Circuits and Methods	(3rd sem., 2-1h)	A. Šatka

Optical Communication Systems	(3rd sem., 2-1h)	F. Uherek
Programming IC	(3rd sem., 2-2h)	J. Jakabovič
Diploma Project 3	(4th sem., 0-8h)	D. Donoval

III.3 Undergraduate and Graduate Study for Foreign Students (in English Language)

Electronics	(3rd sem., 4-2h)	M. Žiška
Safety in Electrical Engineering	(4th sem., 1-0h)	M. Kempný
Sensorics	(5th sem., 4-2h)	V. Tvarožek
Integrated Circuits	(5th sem. 4-2h)	M. Žiška
Quality Management	(3th sem., 2-1h)	M. Žiška

IV. RESEARCH PROJECTS

- Development and characterization of advanced nano-dimensional structures based on compound and organic semiconductors for applications in microelectronics and photonics VEGA 1/0689/09, J. Kováč
- Electrophysical properties and technological issues of Si, GaN and ZnO semiconductor materials and structures for a new generation of electronic devices and circuits VEGA 1/0507/09, L.Harmatha
- MIM structures for nanoscale DRAM memory. APVV – 0133 -07. Cooperation with SAV, K. Fröhlich
- Thin films of transparent conductive oxides for photovoltaic solar cells. VEGA 1/0220/09, V. Tvarožek.
- Nanostructured thin film systems for MEMS sensor applications VEGA 1/0553/09, I. Hotový
- Field Emission from Carbon Nanotubes. VEGA 1/807/08, J. Janík
- Nanotechnologies - Synthesis of carbon nanotubes and nanocomposites on natural catalysts., VEGA 1/0746/09, M. Kadlečíková
- New architecture of neurochips and their application as the neuroimplants. VEGA 1/0693/08, D. Ďuračková
- Ohmic Contacts on p – type Gallium Nitride. Quantitative Aspects of AES of Group III Nitrides and of their Alloys. VEGA 1/4079/07, J. Liday
- Design, preparation and characterization of high speed power electronic devices based on submicron semiconductor structures supported by 2/3-D modeling and simulation. VEGA 1/0742/08, D. Donoval
- Submicron technologies and (nano-) structures of Bipolar-CMOS-DMOS FET for smart power electronic devices and integrated circuits, APVV-20-055405, Daniel Donoval
- Innovation of Educational Schedule in Microelectronics Study with an Orientation on Basic Subjects of Undergraduate and Graduate Study with an Emphasis on Progressive Micro-, Opto- and Nanoelectronic Technologies, KEGA 3/4009/06, O. Csabay
- Doped carbon films for tool engineering and electronic applications. AV-4/0124/06, R. Redhammer
- Development and Application of Diagnostic Methods to Semiconductor Devices and Integrated Circuits Assessment. AV 4/0022/05, A. Šatka
- Advanced MEMS chemical sensors for extreme conditions. APVV-0655-07, T. Lalinský, I. Hotový
- Six-port Reflectometer Integration. AV/4/0017/05, M. Tomaška

- Preparation of carbon nanotubes and study of electronics devices based on carbon nanotubes networks. APVV-0628-06, M. Veselý
- Nanocrystalline thin film structures for sensorics and microsystem technology. VEGA 1/3095/09, I. Hotový
- Optimization of the technology of semiconductor structures by progressive diagnostics methods. VEGA 1/3111/06, R. Srnánek
- Research of growth and doping of D- and DLC layers for electronic applications. LPP-0246-06, M. Veselý
- Preparation of carbon nanostructures by CVD methods and their characterization. APVV-SK-CZ-0078-07, M. Kadlečíková
- Center of excellence of nano-/micro-electronic, optoelectronic and sensoric technologies (CENAMOST). APVV, VVCE-0049-07, D. Donoval
- Diamond electrodes for electrochemical applications. APVV-0548-07, M. Veselý
- Nanocrystalline diamond doping mechanism investigation. VEGA 1/0857/08, R. Redhammer
- Advanced parametric test methods for the reliability enhancement of mixed-signal integrated circuits and systems. VEGA 1/0285/09, V. Stopjaková
- Development of special methods of characterization and diagnostics of advanced semiconductor micro-/nano-structures and devices, VEGA 1/0716/09, doc. Šatka
- Educational and training support of soft skills for undergraduate students of FEI and FIIT STU. KEGA 3/7413/09, M. Žiška
- Support of Center of Excellence for Smart Technologies, Systems and Services (SMART), AŠF EÚ MŠ SR, ITMS 26240120005, D. Donoval
- Support of Center of Excellence for Smart Technologies, Systems and Services 2 (SMART 2), AŠF EÚ MŠ SR, ITMS 26240120029, D. Donoval
- Centre of Excellence for design, preparation and diagnostics of nanostructures for electronics and photonics (NanoNet), AŠF EÚ MŠ SR, ITMS 26240120010, D. Donoval
- Centre of Excellence for design, preparation and diagnostics of nanostructures for electronics and photonics 2 (NanoNet 2), AŠF EÚ MŠ SR, ITMS 26240120018, D. Donoval

V. COOPERATION

V.1 Cooperation in Slovakia

- International Laser Centre Bratislava
- Institute of Electrical Engineering, Slovak Academy of Sciences, Bratislava
- Institute of Physics, Slovak Academy of Sciences, Bratislava
- Institute of Informatics, Slovak Academy of Sciences, Bratislava
- Research Institute for Welding, Bratislava
- ON Semiconductor Slovakia, Piešťany
- Semikron Vrbové
- Applied Precision, Bratislava
- LOX Technologies, Piešťany
- First Welding Company, Bratislava
- University of Žilina

V.2 International Cooperation

- Czech Technical University, Department of Microelectronics, Prague, Czech Republic
- Technical University of Brno, Department of Microelectronics, Czech Republic
- West Bohemian University, New Technology Center, Pilsen, Czech Republic
- IMEC Leuven, Belgium
- Johannes Kepler Universität Linz, Austria
- Technical University Ilmenau, Germany
- Hungarian Academy of Sciences Budapest, Hungary
- Universität Leipzig, Fakultät für Physik und Geowissenschaften, Fakultät für Chemie und Mineralogie, Leipzig, Germany

- Technical University Vienna, Austria
- Technical University Munich, Germany
- Institute of Scientific Instruments, Czech Academy of Sciences, Brno, Czech Republic
- University of Athens, Department of Physics, Greece
- Regensburg University, Germany
- Institut für Schicht- und Ionen Technik Jülich, Germany
- On Semiconductor, Rožnov pod Radhoštěm, Czech Republic
- Harlingen Lanškroun, Czech Republic
- Faculty of Microsystem Electronics and Photonics, Wrocław University of Technology, Poland
- Institute for Solid State Physics, Technical University Graz, Graz, Austria
- Physikalisches Institut, Universität Würzburg, Germany
- RAL Didcot UK, Surrey, Great Britain
- Imperial College, Department of Materials, London, UK
- Istituto per la Microelettronica ed i Microsistemi CNR, Lecce, Italy
- Umweltsensortechnik GmbH, Geschwenda, Germany
- City University of Hong Kong, Hong Kong, China
- Technische Universität, Bergakademie Freiberg, Institut für Theoretische Physik, Freiberg, Germany
- National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, Athens, Greece
- Photeon Technologies GmbH, Bregenz, Austria
- Eberhard Karls Universität, Tübingen, Institut für Angewandte Physik, Germany

V.3 International Scientific Projects

Projects within the 6th and 7th EC Framework program:

- Europractice IC Service Consortium partners: CLRC (RAL), IMEC and FhG/IIS-A
STU Co-ordinator: M. Veselý
- ERA Pilot MiNa TSI – European Research Area Pilot Action on Micro/Nano Technology System Integration, 6RP/IST-3-015833, D. Donoval
- FP7-NMP-2007-LARGE-1: Materials for Robust Gallium Nitride, MORGaN, 214610
STU representative J. Kováč
- FP7 IDESA, 215180, Implementation of widespread IC design skills in advanced deep submicron technologies at European Academia, STU representative D. Donoval

Project within the Austrian and Slovak Scientific and Educational Co-operation (Action Austria – Slovakia):

- Towards a thorough characterization of promising materials for future technologies, 57s11
Co-ordinator: J. Breza, (SK)
Co-ordinator: A. Bonanni, (AT)
Co-operating institutions: STU Bratislava, Johannes Kepler University Linz

Projects within the bilateral co-operation Slovakia-Czech Republic:

- MŠMT ČR 1M06031 - Materials and components for environment protection
Project leaders: P. Šutta (NTC ZČU Plzeň), V. Tvarožek (STU)
- MVTS CR/SR/STU/CAV/08 Investigation of metal contacts on diamond and DLC thin films by optical and electrical measurements in order to further semiconductor application
Co-ordinator: M. Veselý

Project within the bilateral co-operation Slovakia-Germany:

- Program DAAD, Project č. 2/2009: Preparation and characterization of nanostructured mixing metal oxides for gas detection
Co-ordinator: I. Hotový
Co-operating institutions: STU Bratislava, TU Ilmenau (L. Spiess)

Project within the bilateral co-operation Slovakia-Italy:

-APVV-IT-0030-08: Nanostructured mixing metal oxides for MEMS gas sensors

Co-ordinator: I. Hotový (STU Bratislava)

Co-operating institutions: STU Bratislava; Institute for Microelectronics and Microsystems, Italian National Council of Research, Lecce

7 RP/215180/STK/08 Support of new forms and content of research and education in the field of advanced nanoelectronic devices and ICs., D. Donoval

VI. THESES

VI.1 Masters Theses

Masters theses supervised at the Department of Microelectronics. The names of supervisors are in brackets.

- [1] Arbet, D.: Design of the low voltage regulator with the current protection in CMOS technology (D. Tirinda, V. Stopjaková)
- [2] Balkovič, A.: Signal processing for neural network in the human speech frequency area (D. Ďuračková)
- [3] Bednár, M.: Analysis of SiGe HBT properties (R. Kinder, L. Stuchlíková)
- [4] Behula, M.: Perimeter Protection of the NC Machines (M. Kempný)
- [5] Böhmer, S.: Web technologies and Electronics (L. Stuchlíková, J. Benkovská)
- [6] Brath, T.: Thin film deposition using magnetron sputtering and hollow cathode (D. Búc)
- [7] Daniška, M.: Real-time video processing using field programmable gate array (D. Ďuračková)
- [8] Gábriš, P.: Diamond and diamond – Like carbon thin films for electronic applications (M. Vojs)
- [9] Gyepes, G.: Design of the voltage regulator with low dropout voltage in CMOS technology (V. Stopjaková)
- [10] Haško, J.: Equipment for Measurement of Breakdown Voltage of Semiconductor Devices (F. Mika)
- [11] Hobot, P.: Application of the oscillation method in analog circuit testing (J. Brenkuš)
- [12] Hotový, J.: Characterisation of polycrystalline ZnO heterostructures and devices (J. Kováč)
- [13] Incédi, T.: Design of asynchronous digital circuits in Null Convention Logic (V. Stopjaková)
- [14] Juráš, J.: Personal Protection Systems (PA) (M. Kempný)
- [15] Kalianko, J.: Design of tools for automated measurement of properties of integrated circuits (P. Gurnik, L. Harmatha)
- [16] Kocun, F.: The expert systems for optimization of logic combinational circuits (D. Ďuračková)
- [17] Košč, I.: Design of algorithm and implementation of universal CPLD device for analog signal processing (M. Donoval)
- [18] Kozár, Š.: Chemical analysis of InGaN/GaN and AlGaIn/GaN heterostructures (A. Vincze, F. Uherek)
- [19] Krajmer, M.: Modelling of floating gate MOS transistor as the memory element for neural networks implementation (D. Ďuračková)
- [20] Krivička, M.: Sputtered thin film of ZnO: Al, Ga, Sc (S. Flickyngerová, I. Novotný)
- [21] Kubík, P.: Electrical contacts on diamond and DLC structures (M. Varga)
- [22] Kunštek, D.: Application of DPSS laser in laser microtechnology (J. Bruncko, F. Uherek)
- [23] Kurinec, R.: Automated measurement of selected parameters of integrated photonic device (J. Chovan, F. Uherek)
- [24] Maczeák, M.: Safety integrity in NC device system (M. Kempný)
- [25] Muránsky, V.: Radiation hardness of MOS structure irradiated by 130 MeV Xe heavy ions (M. Žiška)

- [26] Nemeč, N.: Characterization of MOS structures with nitrogen doped Si substrate for unipolar power devices (L. Harmatha)
- [27] Oravec, D.: Preparation and electrical properties characterization of OFETs based on pentacene (J. Jakabovič)
- [28] Pavol, J.: Measurement of parameters of passive devices for WDM systems (J. Chovan, F. Uherek)
- [29] Pavlovič, M.: Optoelectronic devices in e-learning (L. Stuchlíková, J. Benkovská)
- [30] Predanocny, M.: Characterisation of optoelectronic devices with built in microcavity (J. Kováč, J. Kováč jr.)
- [31] Príbytný, P.: 2/3 dimensional simulation of ESD protection device (A. Chvála, D. Donoval)
- [32] Rendek, K.: Microprocessor controlled thin film deposition monitor (J. Jakabovič)
- [33] Salaj, P.: Measurement of selected electrical parameters of AlGaIn/GaN Schottky diodes (M. Florovič, D. Donoval)
- [34] Sámel, M.: Design and realization of accelerometer (F. Mika)
- [35] Šantúr, R.: Analysis of electrical parameters and ruggedness of power devices supported by modeling and simulation (J. Marek, D. Donoval)
- [36] Šebok, J.: Electrical characterization of semiconductor structures and devices (L. Stuchlíková, L. Harmatha)
- [37] Špalek, V.: Optical fibers for high speed communication systems (J. Chovan, F. Uherek)
- [38] Šramatý, R.: Diagnostics of semiconductor structures and devices quality (L. Stuchlíková)
- [39] Telek, P.: Preparation of light emitting diodes for spintronic applications (J. Novák, J. Kováč)
- [40] Vacek F.: Electrical characterization of Schottky diodes quality (L. Stuchlíková, O. Csabay)
- [41] Vallo, M.: Electrical characterization of semiconductor structures and devices by DLTS method (L. Stuchlíková)
- [42] Veľas, J.: Characterization of MOS structures for advanced CMOS technology (P. Benko, L. Harmatha)
- [43] Zabloudil, A.: TI DSP application in digital encoding of images and video-sequences within multimedia systems in real time (P. Kulla)
- [44] Zajko, M.: Design and visualization of the smart position gyroscopic sensor (L. Majer)
- [45] Žák, M.: Laser cutting of sapphire substrates (M. Michalka, J. Bruncko, F. Uherek)

VI.2 Doctoral Theses

- [1] Benko, P.: Gate materials for the new generation of CMOS structures (L. Harmatha)
- [2] Chvála, A.: Simulation and modelling of electrical properties of ESD protection devices (D. Donoval)
- [3] Košel, V.: Thermo-Mechanical Analysis of Smart Power Switches under Dynamic Thermal Stress Conditions (A. Šatka)
- [4] Kováč, J., jr.: Analysis of selected properties of semiconductor lasers (A. Šatka)
- [5] Kytka, M.: Characterization of rubrene thin films by optical techniques (J. Kováč)
- [6] Víglašký, R.: Thin film electrochemical microsensor for impedance and optical blood diagnostics (V. Tvarožek)
- [7] Vojs, M.: Carbon-based thin films for mechanical and electrochemical applications (M. Veselý)

VII. OTHER ACTIVITIES

- Head of Office for European Union Programs at FEI STU (M. Veselý)
- Coordinator and Contractor of the FP7 Project EURO PRACTICE (M. Veselý)
- Coordinator and Contractor of the Leonardo Student Mobility Project 'European Labour Market with Slovak Participation, ELMA' (M. Veselý)
- Coordinator and Contractor of the Leonardo Mobility Project 'European Dimension of Technical Education for STU Graduates, EDIGRA' (M. Veselý)
- Local Contractor of the Leonardo Pilot Project 'Teaching and Learning in Virtual Learning Environments for Water Management', WALTER (M. Veselý)

- STU Coordinator for Erasmus Mobility of Student to EU Companies (M. Veselý)
- Coordinator of the ESF project 'University Network for EU Program Offices' (M. Veselý)
- Member of the APVV Board for FP7 and ISTC (M. Veselý)
- National Expert for CEEPUS Program (M. Veselý)
- Deputy Head of the SAAIC Managing Board (M. Veselý)
- Supervision of Greek Erasmus Students from TEI Piraeus (M. Veselý)
- Member of the International Program Committee for JVC 12, Balatonalmadi, Lake Balaton, 22 - 26 September 2008 (M. Veselý)
- Member of the International Advisory Committee to Workshop on Recent Advances of Low Dimensional Structures and Devices, Nottingham University, UK, 7 – 9 April 2008 (M. Veselý)
- Member of Education and Training Coordination Board of Scientific Community Council of AENEAS platform (D. Donoval)
- Member of Governing Board and Public Authorities Board of ENIAC JU (D. Donoval)

VIII. PUBLICATIONS

VIII.1 Journals

- [1] ACHIMOVÍČOVÁ, M., DANEU, N., REČNIK, A., ĎURIŠIN, J., BALÁŽ, P., FABIÁN, M., KOVÁČ, J., ŠATKA, A.: Characterization of Mechanochemically Synthesized Lead Selenide. In: Chemical Papers. - ISSN 0366-6352. - Vol. 63, No. 5 (2009), p. 562-567. (in English)
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