

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. RNDr. Vladimír Tvarožek, PhD., Prof. Ing. František Uherek, PhD.
Associate Professors	Doc. Ing. Ladislav Hulényi, PhD., Doc. Ing. Peter Kordoš, DrSc., Doc. Ing. Róbert Redhammer, PhD., Doc. Ing. Viera Stopjaková, PhD., Doc. Ing. Ľubica Stuchlíková, PhD., Doc. Ing. Alexander Šatka, PhD., Doc. Ing. Marian Veselý, PhD., Doc. Ing. Milan Žiška, PhD., Doc. Ing. Ladislav Harmatha, PhD., Doc. Ing. Ján Janík, PhD., Doc. Ing. Jozef Liday, PhD., Doc. Ing. Ivan Hotový, PhD., Doc. Ing. Rudolf Srnánek, PhD.
Assistant Professors	Ing. Fedor Mika, PhD., Ing. Martin Tomáška, PhD., Ing. Erik Vavrinský, PhD.
Senior Scientists	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 Búc, PhD., Ing. Martin Florovič, PhD., Ing. Ján Jakobovič PhD., Ing. Alexander Kromka, PhD., Ing. Ivan Novotný, PhD., RNDr. Vlastimil Řeháček, PhD., Ing. Andrej Vrbický, PhD.
Research Workers	Ing. Peter Benko, Ing. Soňa Flickyngerová., RNDr. Alena Grmanová, Ing. Aleš Chvála, Ing. Ľubomír Jánoš, Ing. Milan Kempný, Ing. Michal Konfál, 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. Juraj Brenkuš, Ing. Matin Daříček, Ing. Martin Donoval, Ing. Pavol Gašpírik, Ing. Tibor Ižák, Ing. Milan Kytka, Ing. Juraj Marek, Ing. Jozef Mihálov, Ing. Lenka Michalíková, Ing. Miroslav Mikolášek, Ing. Martin Mišun, Ing. Juraj Pecháček, Ing. Emil Raschman, Ing. Andrea Reháková-Pullmannová, Ing. Martin Šimlašík, 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 SAM and REM
- Laboratory of SEM
- Laboratory of Electronic Devices

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- Laboratory of Electrophysical Measurements
 - Laboratory of Computer Analysis
 - Laboratory of Microelectronic Devices Diagnostics
 - Laboratory of Material 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 Design IO
 - 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 CIS
 - Laboratory of Digital Circuits
 - PC Laboratory for Design IO and Semiconductor Structures
 - Laboratory of Laser Technology
 - Laboratory of IC Design and Testing
 - Laboratory of Nanostructures and Electronic Devices Characterisation

II.2 Special Measuring Instruments and Computers

- Computer aided system for I-V and C-V measurements and analysis in temperature range from 20 to 400 K
- DLTS system 300 W Solar, QDLTS Time Domain Spectrometer
- 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)
- Auger electron spectrometer (Varian)
- X-ray Photoelectron spectrometer (VG Microtech)
- Raman spectrometer (ISA-Jobin Yvon-Dilor-Horiba)
- Microwave analyzer HP 8408 S
- TCAD Process and Device Modelling and Simulation Tools (ISE)
- Symbolic layout software design software CAMELEON
- HSPICE, CADENCE and SYNOPSIS design systems (through EURO PRACTICE)
- XILINX and ALTERA development systems (vendors donation)
- Workstations Sun Ultra 10, Sun Sparc, HP712
- Analog Devices and Motorola DSP systems
- AFM, Park XE-100
- Semiconductor Parameter Analyzer, Agilent 4155C
- DSA 8200 Digital Serial Analyser - Sampling oscilloscope with TDR module
- DL8000 Digital Deep Level Transient Spectrometer
- SUSS Manual Prober PM5, SUSS MicroTec, Test Systems
- Microwave network analyzer (40 GHz) Agilent E8363 B
- Spectroscopic ellipsometer Angstrom Advanced PHE 102

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	(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)	L. Hulényi, 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
Electronics	(5th sem., 3-2h)	M. Žiška
Electronic Circuits	(5th sem., 3-2h)	F. Mika
Electronic Devices and Circuits	(5th sem., 3-2h)	R. Redhammer
Electronics	(5th sem., 3-2h)	E. Stuchlíková
Design and Reliability of IC and Systems	(5th sem., 3-2h)	D. Ďuračková V. Stopjaková
Quality Management	(5th sem., 2-1h)	L. Hulényi, 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	(1th sem., 2-2h)	M. Tomáška
CAD of Electronic Devices	(1st sem., 2-2h)	D. Donoval
Electronic Measurement 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)	F. Uherek
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)	F. Uherek
Diagnostics of Integrated Circuits and Systems	(3rd sem., 3-2h)	V. Stopjaková
Applied Optoelectronics and Lasers	(3rd sem., 2-2h)	J. Kováč F. Uherek
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, L. Hulényi
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

IV. RESEARCH PROJECTS

- Advanced Low Dimensional Structure Development Based on Compound A^3B^5 , A^2B^6 and Organic Semiconductors for Applications in Optoelectronic and Photonic Devices. VEGA 1/3106/06, J. Kováč
- **Electrophysical and technological issues of MIS structures with ultra-thin insulator layers for a new generation of unipolar devices. VEGA 1/3091/06, L.Harmatha**
- Sensoric micro-/nano- structures and interfaces. VEGA 1/3098/06, V. Tvarožek
- Nanocrystalline thin film structures for sensorics and microsystem technology. VEGA 1/3095/06, I. Hotový
- Carbon Nanotubes and Their Emission Properties. VEGA 1/2040/05, J. Janik

- Raman Spectroscopy of Catalytically Synthesized Carbon Nanotubes, VEGA 1/03034/06, 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, D. 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
- Intelligent module for gas detection. AV 4/0014/07, I. Hotový
- Development of Wireless Non-intrusive Measurement System for Monitoring of Human Psycho-physiological Processes under Stress. AV 04/0018/07, V. Stopjaková
- 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 - 2010, 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 1/3095/06, 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
- Metal-insulator-metal structures for nanoscale DRAM memories. APVV-01-33-07, K. Fröhlich (SAV Bratislava)

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 e 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:

- IST/FP6, IST-4-045059, IDEALIST7FP, Support for participants in ICT Priority by network for IST under the transition to the 7th Framework Programme, B. Weber
- IST/FP6, IST-3-015704, MINOS-EURONET, Micro-Nano-Systems European Network, Pursuing the integration of NMS and ACC in ERA, B. Weber
- 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 coordinator J. Kováč
 - FP7 IDESA, 215180, Implementation of widespread IC design skills in advanced deep submicron technologies at European Academia

Projects within bilateral co-operation Slovakia - Austria

- Optimized contacts for blue light emitting diodes (2004-2008).

Co-ordinator: J. Liday (STU Bratislava))

Co-operating institutions: STU Bratislava (J. Liday); Johannes Kepler University Linz (H. Sitter)

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

Projects within the bilateral co-operation Slovakia - Germany:

- MVTS Nem/SR/Ilm/STU/08 - Nanoscale multilayer systems for electronics and sensorics – technology, simulation, diagnostics
Co-ordinator: J. Liday
Co-operating institutions: STU Bratislava (J. Liday), TU Ilmenau (H. Tippmann)
- Program DAAD, Project č. 10/2006: Nanocrystalline thin film structures for sensorics and microsystem technology
Co-ordinator: I. Hotový
Co-operating institutions: STU Bratislava, TU Ilmenau (L. Spiess)

Project within the bilateral co-operation Slovakia - Poland:

- Advanced Semiconductor Heterostructures and Nanostructures Characterisation and Processing for Optoelectronic Devices (2006-2008).
Co-ordinator: J. Kováč
Co-operating institutions: STU Bratislava; Faculty of Microsystems Electronics and Photonics, Wrocław University of Technology (M. Tlaczala, B. Boratynski)

Project within the bilateral co-operation Slovakia - Greece:

- Modified metal oxide thin film structures for gas microsensors. Gr/Sr/FEISTU/08,
Co-ordinator: I. Hotový (STU Bratislava)
Co-operating institutions: STU Bratislava; Theoretical and Physical Chemistry Institute, The National Hellenic Research Foundation, Athens (Greece)

Project within the bilateral co-operation Slovakia - Italy:

- Micromachined gas sensing microsystem. Bil/Tal/Sr/STU/06,
Co-ordinator: I. Hotový (STU Bratislava)
Co-operating institutions: STU Bratislava; Istituto per la Microelettronica ed i Microsystemi (IMM-CNR), Dip. Scienze dei Materiali-Univ. di Lecce (Italy)

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

- [1] M. Benčíč: The analysis of thermal annealing influence of silicon based mos structures with high permittivity of oxide (A. Vincze, F. Uherek)
- [2] M. Benko: Creation module of education with use of animation of electronic and optoelectronic characters of light emitting diodes (L. Stuchlíková, M. Florovič)
- [3] J. Beňo: The usage of various simulators for integrated circuit design (M. Višňovec, V. Stopjaková)

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- [4] M. Benkovič: Identification of deep energy levels in semiconductor structures using DLTS method (E. Stuchlíková, L. Harmatha)
 - [5] J. Benkovská: Electrical characterization of Schottky structures based on 4H-SiC (E. Stuchlíková)
 - [6] E. Borsody: Design of rail-to-rail amplifier for use in the neuron nets (D. Ďuračková)
 - [7] M. Bugár: CMOS low noise rf amplifier in 2 GHz band (L. Majer)
 - [8] M. Čelín: Electronics in the World of Multimedia (E. Stuchlíková)
 - [9] M. Drobný: Development of set-up for automatic measurement of analog IC. (P. Gurnik, L. Harmatha)
 - [10] M. Dudžák: Selected properties of semiconductor lasers analysis (J. Kováč, jr.)
 - [11] R. Dzvonič: Dose optimization of the liquid precursors injection for thin films growth by MOCVD (L. Harmatha)
 - [12] M. Fajta: Temperature – dependant resistivity measurements in thin layers of Ru–Si–O for advanced CMOS technology (L. Harmatha, M. Ďapajna)
 - [13] K. Florek: The simulation selected electrical properties of HEMT structures on the base of GaN/Al_xGa_{1-x}N/GaN/Al_xGa_{1-x}N/AlN (J. Racko)
 - [14] D. Foltánová: Optical monitoring of blood sedimentation (R. Víglaský, V. Tvarožek)
 - [15] P. Gašpírek: Simulation of solar cell electrical properties (V. Tvarožek)
 - [16] M. Griač: Analog integrated circuit characterization (P. Gurnik, L. Harmatha)
 - [17] J. Harkabuzík: Characterization of active defects in nitrogen-doped Si substrates of MOS structures by capacitance methods (L. Harmatha, M. Ďapajna)
 - [18] M. Helbich: Internet as the communication and information base of education in electronics (E. Stuchlíková)
 - [19] M. Hornáček: Design of regulator loop, reset circuit and current limiter for voltage regulator (R. Koleno, V. Stopjaková)
 - [20] E. Hudák: Influence of Ru and RuO₂ metal gates deposition on electrical properties of MOS structures with Ta₂O₅ dielectric. (L. Harmatha, M. Ďapajna)
 - [21] M. Kolesár: Characterization of photodetector's properties (J. Chovan, F. Uherek)
 - [22] M. Kolmačka: Deposition of carbon nanotubes and calibration of thermometer for sample holder in HF CVD reactor (M. Kadlečiková)
 - [23] O. Kučera: Modeling of quantum properties of the standard and Schottky NMOS transistor with dual gate (DG) based on silicon (J. Racko, PhD.)
 - [24] J. Kukučka: Graphic interface for creating photolithographic masks (J. Jakabovič)
 - [25] P. Kuřka: Reduction of the photodegradation of π -conjugated polymers for solar cells (H.-J. Egelhaaf, F. Uherek)
 - [26] B. Lančí: Optimization of ion sputtering by Auger electron spectroscopy (P. Vogrinčič, J. Liday)
 - [27] R. Lapoš: Dactyl alphabet learning using the sensory glove (D. Ďuračková)
 - [28] M. Maxián: Comparison of op-amp macromodel with transistor level model in SPICE environment (D. Ďuračková)
 - [29] G. Méhes: Distance detection of objects in machine environment (P. E. Veith, M. Tomáška)
 - [30] M. Meszároš: Analysis and design of ohmic contacts for GaN heterostructures (A. Vincze, F. Uherek)
 - [31] M. Minárik: Diagnostic MOS structures for advanced CMOS technology (L. Harmatha)
 - [32] M. Mišun: Thermal characterization and modeling semiconductor parts (M. Tomáška)
 - [33] P. Mondočko: Unipolar MOS structure as a component of electronic education (O. Csabay, E. Stuchlíková)
 - [34] L. Mrkva: 2-dimensional simulation of bipolar transistor electrical characteristics (A. Chvála, D. Donoval)
 - [35] A. Nagy: Interactive animations as part of electronic learning (E. Stuchlíková, L. Hulényi)

- [36]D. Ofčarovič: Electrooptic sensor based on interdigitated array of electrodes (R. Viglaský, V. Tvarožek)
- [37]B. Pastorek: Dispersion properties of photonic crystal fibres (D. Lorenc, F. Uherek)
- [38]J. Peleška: Design of voltage reference, oscillator and temperature protection for voltage regulator with reset output (R. Koleno, V. Stopjaková)
- [39]M. Pindroch: Design and realization of transfer system of power laser beam by optical fibre (F. Uherek, M. Michalka)
- [40]R. Pokorný: Spectrum analyses of time correlated single photon counting (D. Chorvát, F. Uherek)
- [41]M. Repák: Design and implementation of CIC filter in FPGA (A. Šatka)
- [42]M. Spodniak: The impact of annealing on the optical and electrical properties of thin ZnO:Al layers (S. Flickyngerová, I. Novotný)
- [43]A. Širočka: Preparation and characterization of electrical properties of organic field effect transistors based on pentacene (J. Jakobovič)
- [44]P. Švrček: Modelling of self organizing neural networks and their usage for data classification (V. Stopjaková)
- [45]D. Tengeri: Gas microsensor prepared on GaAs substrate (I. Hotový)
- [46]M. Tibenský: A micromachined gas sensor prepared on ceramics substrate (I. Hotový)
- [47]J. Urban: Laser technology of wood processing (F. Uherek)
- [48]M. Varga: Calculation of thermal relations of filaments and supporter of samples for substratum in HF reactor (Š. Bederka)
- [49]M. Végh: Measurement of cathodoluminescence spectra of semiconductors in scanning electron microscope LEO 1550 (A. Šatka)
- [50]M. Vereš: Graphical input-output for personal computer (F. Mika)
- [51]R. Vlášil: Characterization of ZnO (A. Vincze, F. Uherek)
- [52]R. Záluský: The automatization of data processing of Raman spectra of semiconductor structures (R. Srnánek)
- [53]P. Žobrák: Optimizational process of production of Audi Q7 and Skoda Octavia in Volkswagen Slovakia jsc (F. Mika)

VI.2 Doctoral Theses

- [1] A. Jakubec: Thin microelectrodes for biochemical impedance sensors (V. Tvarožek)
- [2] M. Marton: Thin layers for medical applications (M. Veselý)
- [3] V. Nagy: Testing and localization of defective parts of mixed-signal integrated circuits using a built-in current monitor (V. Stopjaková)

VII. OTHER ACTIVITIES

- The 14th International Conference on Applied Physics of Condensed Matter, Liptovsky Jan, Slovakia, 25-27 June, 2008, co-organized by Department of Microelectronics, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology Bratislava
- The 7th International Conference on Advanced Semiconductor Devices and Microsystems, Smolenice Castle, Bratislava, Slovakia, 12- 16 October, 2008, co -organized by Department of Microelectronics, Faculty of Electrical Engineering and Information Technology, Slovak University of Technology Bratislava

- Head of Office for European Union Programs at FEI STU (M. Veselý)
- Coordinator and Contractor of the FP7 Project EUROPRACTICE (M. Veselý)

- Coordinator and Contractor of the Leonardo Student Mobility Project 'European Labor 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

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