

**DEPARTMENT OF ELECTROMAGNETIC THEORY**

<http://iris.elf.stuba.sk>

**Head of Department**

**Doc. Ing. Ľubomír Šumichrast, PhD.**  
e-mail: lubomir.sumichrast@stuba.sk

Tel: +421-2-654 23 502  
Fax: +421-2-654 20 415

**I. STAFF**

Professors	Prof. Ing. Jozef Jasenek, PhD., Prof. Ing. Jozef Sláma, PhD.
Associate Professors	Doc. Ing. Ivan Bojna, PhD., Doc. Ing. Jan Bydžovský, PhD., Doc. Ing. Rastislav Dosoudil, PhD., Doc. Ing. Peter Jahn, PhD., Doc. Ing. Vladimír Jančárik, PhD., Doc. Ing. Ľubomír Šumichrast, PhD., Doc. Ing. Elemír Ušák, PhD.
Assistant Professors	Ing. Jozefa Červeňová, PhD., Ing. Jaroslav Franek, PhD., Ing. Mojmír Kollár, PhD., Ing. Pavol Krivošík, PhD., Ing. Marian Štofka, PhD., Ing. Vladimír Olah, PhD.
Senior Scientists	Ing. Jozef Paľa, PhD., Ing. Marianna Ušáková, PhD., Ing. Martin Šoka
Technical Staff	Marta Jančovičová (secretary), Mária Brunovská, Milan Brunovský, Alojz Vďačný
PhD. Students	Ing. Branislav Korenko

**II. EQUIPMENT**

**II.1 Teaching and Research Laboratories**

- Laboratory of Electric Circuits
- Laboratory of Electromagnetic Field
- Laboratory of Optoelectronics
- Laboratory of Signal Processing
- Laboratory of Microwave Technology
- Laboratory of Pulse and Nonlinear Electrodynamics
- Laboratory of Electronics
- Laboratory of Applied Magnetism
- Laboratory of Magnetic Measurement
- Laboratory of Magnetic Materials Testing
- Laboratory of Magnetic Materials Technology
- Laboratory of Chemical Technology

**II.2 Special Measuring Instruments and Computers**

- Michelson Interferometer for Measurement of Chromatic Dispersion of Single Mode Optical Fibres
- Apparatus for Generation of Second Harmonics in Optical Frequency Range
- Apparatus for Back-Scattering Measurement in Optical Fibers Using Photon Counting Method
- Correlator and Signal Analyzer, frequency range to 50 kHz
- Microwave Power Meter HP-432 B
- Spectral Analyser 10 MHz - 4 GHz
- Precision Wattmeter 104B, 4mW - 60 kW, up to 200 kHz
- VSM Magnetometer,  $H_m$  up to 0.8 MA/m, temperature range 77 K - 800 K

- Precision Gaussmeter, 1  $\mu$ T - 10 T at DC, up to 1 kHz AC
- Lock-In-Amplifier DSP SR 850 2nV to 1V
- High Coercivity Measuring Apparatus
- PC Controlled AC/DC Hysteresisgraph
- Automated System for Magnetic Susceptibility Temperature Dependence Measurement
- Universal Counter HP53132A up to 12.4 GHz
- Vibrator DERRITRON SC-3000 – mechanical resistance testing equipment
- RF Impedance/Material Analyzer HP4191 A 1 MHz-1 GHz, 1 mOhm - 100 kOhm, APC-7 coaxial (50 Ohm) input, GPIB standard; spot, linear and logarithmic frequency sweep
- HP4192A LF Gain Phase - Impedance Analyser, 5 Hz - 13 MHz, 1 mOhm - 1 MOhm, GPIB
- Optical Fibre Reflectometer JDSU - MTS 6000L
- Optical Fibre Polarimeter – POD-101D - General Electronics
- Vector Network Analyzer Agilent 8714ET, 300 kHz - 3 GHz, GPIB interface

### **III. TEACHING**

#### **III.1 Undergraduate Study (Bc.)**

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

Electric Circuits I	(2nd+3rd sem., 3-2h)	V. Jančárik, R. Dosoudil
Electrotechnology I	(2nd+3rd sem., 3-2h)	J. Červeňová, M. Kollár
Electrotechnology	(2nd+3rd sem., 3-2h)	J. Sláma, E. Ušák,
Theory of Electricity I	(2nd+3rd sem., 3-2h)	J. Bydžovský, M. Kollár
Electric Circuits II	(3rd+4th sem., 3-2h)	E. Ušák, R. Dosoudil
Electrotechnology II	(2nd+3rd sem., 3-2h)	L. Šumichrast, M. Kollár
Theory of Electricity II	(2nd+3rd sem., 3-2h)	P. Jahn, M. Kollár
Theory of Electricity III	(2nd+3rd sem., 3-2h)	I. Bojna , J. Franek, J. Sláma
Electromagnetic Field	(4th+5th sem., 3-2h)	J. Jasenek
Basics of Electrical Engineering	(FIIT 3rd sem., 3-2h)	V. Jančárik
Electronics	(FIIT 4th sem., 3-2h)	E. Ušák

#### **III.2 Graduate Study (Ing.)**

Electromagnetism	(SvF 1st sem., 2-2h)	L. Šumichrast
Modelling of Fields	(1st sem., 2-2h)	L. Šumichrast
Numeric methods in Electromagnetism	(SvF 1st sem., 2-2h)	L. Šumichrast
Safety of Electric Equipment	(2nd sem., 2-1h)	I. Bojna
Optical Waveguides	(3rd sem., 2-1h)	J. Jasenek

#### **III.3 Doctoral Studies (PhD.)**

Electrodynamics of Optical Fibres	(2nd sem., 2-0 h)	J. Jasenek
Special Measurement Methods in Fibre Optics	(2nd sem., 2-0 h)	J. Jasenek

**IV. RESEARCH PROJECTS**

- Optical Fibre Sensors and their Application, 1/0617/09 (J. Jasenek, L. Šumichrast)
- Selected Effects of High-Frequency Electrodynamics - Methods and Algorithms of Computer Simulation with Applications, 1/0377/10 (L. Šumichrast, J. Jasenek)
- Research and Preparation of Prospective Magnetic Nanomagnetic and Hybrid Composite Materials for New Applications in Electrotechnology, Electronics, and Car Production, 1/0575/09 (J. Sláma, A. Grusková)
- Diagnostics of Electrical Steels and Construction Ferromagnetic Materials by Means of Novel Magnetic Defectoscopy Methods, 1/0747/09 (E. Ušák, J. Bydžovský)
- Research and Synthesis of Electronic Composites and Magnetic Dielectrics, 1/0529/10 (R. Dosoudil, J. Sláma)

**V. COOPERATION****V.1 Cooperation in Slovakia**

- Matador Púchov
- VA SNP L. Mikuláš
- EÚ SAV, Bratislava
- FÚ SAV, Bratislava
- IBOK, Bratislava
- EVPÚ, Nová Dubnica
- TU Košice (KEMT)
- FCHPT STU, Bratislava

**V.2 International Cooperation**

- School of Physics and Electronic Systems Engineering, University of South Australia, Pooraka
- TU Budapest, Hungary
- Doshisha University, Japan
- Nuclear Engineering Research Laboratory, University of Tokyo, Japan
- Department of Physics Colorado State University Fort Collins, USA
- Instituto Nazionale di Ricerca Metrologica
- TU Ilmenau, Germany
- Cardiff University, Wolfson Centre for Magnetic Technology, United Kingdom
- VEV Elektrotechnisch Vakondernus Nijkjerk, The Netherlands
- TU of Czenstochowa, Poland
- Warsaw University of Technology
- Moscow Energy Institute, Russia
- Lublin Technical University, Poland
- Institute of Physics, Academy of Sciences of Czech Republic, Prague, CzR
- Institute of Inorganic Chemistry, Academy of Sciences of Czech Republic, Prague, CzR
- Czech Technical University, Prague, CzR
- West Bohemian University, Pilsen, CzR
- Technical University, Brno, CzR
- CINVESTAV, Saltillo, Mexico
- Research Institute for Technical Physics and Materials Science, Hungarian Academy of Sciences, Budapest, Hungary
- Politehnika Zagreb, Chorvatsko
- Faculty of Engineering, Universidad Nacional Autonoma de Mexico (UNAM), Ciudad, Mexico

**V.3 Membership in International Organizations and Societies**

- IEEE, Optical Society of America, European Physical Society, The International Society for Optical Engineering (SPIE), European Association for International Education (EAIE), European Association for Education in Electrical and Information Engineering (EAEEIE), American Society for Engineering Education (ASEE) (J. Jasenek)
- IEE Slovak Centre (M. Kollár)
- IEE Slovak Centre, SAES, European Physical Society (J. Sláma)
- IEEE, IEE Slovak Centre, European Physical Society, President of the Slovak National Committee of the International Union of Radio Science (URSI), Optical Society of America (OSA), European Physical Society (L. Šumichrast)

**VI. THESES****VI.1 Masters Theses**

Masters theses supervised at the Institute of Control and Industrial Informatics. The names of supervisors are in brackets.

none

**VI.2 PhD Theses**

[1] Ušáková, M.: Ferrite Powder Materials as the Filler for Magnetocomposites

**VII. OTHER ACTIVITIES**

- Presidentship of the Slovak Committee of URSI and membership of International URSI Committee (L. Šumichrast)
- Memberships in the Commission for the ‘PhD Degree Award’ in the study field Theoretical Electromagnetic Engineering (5.2.10), (J. Jasenek, J. Sláma, L. Šumichrast, V. Jančárik, E. Ušák, J. Bydžovský, R. Dosoudil)
- Memberships in the Commission for the ‘Award of the title of Associate Professor’ in the study field Theoretical Electromagnetic Engineering (5.2.10), (J. Jasenek, J. Sláma, L. Šumichrast)
- Memberships in the Commission for the ‘PhD Degree Award’ in the study field Electrical Power Engineering (5.2.11), (P. Jahn)
- Membership in Slovak Expertise Commission for Electronics (J. Jasenek)
- Membership in Working Group of Accreditation Commission of the Government of Slovak Republic (J. Jasenek)
- Membership in Inauguration Commission at Military Academy L. Mikuláš (J. Sláma)
- Membership in Commission for Degree Doctor of Scienciare (DrSc) in Theoretical Electromagnetic Engineering (5.2.10), (J. Jasenek, J. Sláma)
- Membership in Slovak Academy of Engineering Sciences and Guarantor for Electrical Engineering (J. Sláma)
- Expert No. 256 for Branch of Metrology at the Institute of Normalization, Measurement and Standards (ÚNMS) of Slovak Republic (J. Bydžovský)
- Cooperation with Encyclopaedic Institute of Slovak Academy of Sciences - Encyclopaedia Beliana, (J. Sláma, P. Jahn, J. Franek)
- Executive Editor of Journal of Electrical Engineering - Elektrotechnický časopis (M. Kollár)
- Member of the Working Group for the implementation of the National Qualification Framework established by the Ministry of Education of the SR (J. Jasenek)
- Participation in the EIE-Surveyor: Reference point for Electrical and Information Engineering in Europe, Project Nr. 225997-CP-1-2005-1-FR-ERASMUS-TNPP, Project funded by the European Commission, SOCRATES Thematic Network, (J. Jasenek)

- Participation in the project ELLEIEC (Enhancing Lifelong Learning in Electrical and Information Engineering), Project number: 142814-LLP-1-2008-FR-ERASMUS-ENW, project funded by the European Commission, SOCRATES Thematic Network, (J. Jasenek)
- Membership in the Scientific Committee of Magnetic Measurement 2010 (J. Bydžovský, V. Jančárik, M. Kollár, J. Sláma, E. Ušák)
- Erasmus- Lifelong learning program, bilateral agreement for years 2007-2010, STU-NTUA (Greece), (J. Bydžovský)
- Membership in the Organizing Committee of EAEEIE Annual Conference 2010, Palanga, Lithuania (J. Jasenek)

## **VIII. PUBLICATIONS**

### **VIII.1 Journals**

- [1] BOJNA, I.: Low-Voltage Electrical Installations - Special Installations and Special Locations. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 2 (2010), Supplement Volt, p. 12-16. (in Slovak)
- [2] BOJNA, I.: Protective Separation, Physical Separation, Electrical Separation. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 3 (2010), Supplement Volt, p. 7. (in Slovak)
- [3] BOJNA, I.: Selection and Erection of Electrical Equipment - Devices for Protection against Overvoltages. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 1 (2010), Supplement Volt, p. 2-3. (in Slovak)
- [4] BOJNA, I.: Some Comments on the Notice No. 708/2009 in the Field of Professional Qualification. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 3 (2010), Supplement Volt. p. 2-6. (in Slovak)
- [5] BOJNA, I.: The Meaning and Use of Additional Letters in IP Code. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 1 (2010), Supplement Volt, p. 3. (in Slovak)
- [6] BOJNA, I.: Verification of Principles of Older Electrical Installations. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 5 (2010), Supplement Volt, p. 9. (in Slovak)
- [7] BYDŽOVSKÝ, J. - KOLLÁR, M. - ONDREIČKA, K. - PAĽA, J.: Design and Experimental Examination of New Type of Electro-Permanent Magnetic Chuck. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 61, No. 7/s (2010), p. 152-155. (in English)
- [8] DOSOUDIL, R. - UŠÁK, E. - OLAH, V.: Automated Measurement of Complex Permeability and Permittivity at High Frequencies. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 61, No. 7/s (2010), p. 111-114. (in English)
- [9] DOSOUDIL, R. - UŠÁKOVÁ, M. - GRUSKOVÁ, A. - SLÁMA, J.: Complex Permeability of LiZn/MnZn/PVC Composite Materials. In: Acta Physica Polonica A. - ISSN 0587-4246. - Vol. 118, No. 5 (2010), p. 1049-1050. (in English)
- [10] DOSOUDIL, R. - UŠÁKOVÁ, M. - FRANEK, J. - SLÁMA, J. - GRUSKOVÁ, A.: Particle Size and Concentration Effect on Permeability and EM-Wave Absorption Properties of Hybrid Ferrite Polymer Composites. In: IEEE Transactions on Magnetics. - ISSN 0018-9464. - Vol. 46 (2010), p. 436-439. (in English)

- [11] GONZÁLEZ-ANGELES, A. - LIPKA, J. - GRUSKOVÁ, A. - SLÁMA, J. - JANČÁRIK, V. - SLUGEŇ, V.: Magnetic Comparison of BaCa and BaSr Substituted Hexaferrite Powders. In: Journal of Physics: Conference Series. - ISSN 1742-6588. - Vol. 217 (2010), Art. no. 012137. (in English)
- [12] GRUSKOVÁ, A. - SLÁMA, J. - UŠÁKOVÁ, M. - ŠOKA, M. - DOSOUDIL, R. - DEGMOVÁ, J.: Study of Magnetic and Structural Properties of Non-Stoichiometric NiZn Ferrites Prepared by Wet Method. In: Acta Physica Polonica A. - ISSN 0587-4246. - Vol. 118, No. 5 (2010), p. 780-781. (in English)
- [13] KRIVOŠÍK, P. - PATTON, C.E.: Hamiltonian Formulation of Nonlinear Spin-Wave Dynamics: Theory and Applications. In: Physical Review B. - ISSN 1098-0121. - Vol. 82 (2010), Art. no 184428. (in English)
- [14] PAĽA, J. - BYDŽOVSKÝ, J. - STOYKA, V. - KOVÁČ, F.: Stabilization of the Barkhausen Noise Parameters. In: IEEE Transactions on Magnetics. - ISSN 0018-9464. - Vol. 46 (2010), p. 207-209. (in English) ]
- [15] PAVLOVIČ, M. - MIGLIERINI, M. - MUSTAFIN, E. - SEIDL, T. - ENSINGER, W. - STRAŠÍK, I. - ŠOKA, M.: Ion Irradiation Studies of Soft Magnetic Metallic Glasses. In: Acta Physica Polonica A. - ISSN 0587-4246. - Vol. 118, No. 5 (2010), p. 754-755. (in English)
- [16] REKOŠOVÁ, J. - HUDEC, I. - KRUŽELÁK, J. - DOSOUDIL, R. - OLAH, V.: Composite Materials with Magnetic Fillers and Elastomeric Matrix for Construction of Intelligent Tyres. In: Plasty a kaučuk. Plastics and Rubber. - ISSN 0322-7340. - Vol. 47, No. 5-6 (2010), p. 135-141. (in Slovak)
- [17] SLÁMA, J. - GRUSKOVÁ, A. - ŠOKA, M. - UŠÁKOVÁ, M. - JANČÁRIK, V.: Analysis of Magnetic Properties of Substituted Li Ferrites. In: IEEE Transactions on Magnetics. - ISSN 0018-9464. - Vol. 46 (2010), p. 455-458. (in English)
- [18] SLÁMA, J. - UŠÁK, E. - ŠOKA, M. - GRUSKOVÁ, A. - UŠÁKOVÁ, M. - JANČÁRIK, V.: Analysis of Selected Be-Substituted NiZn Ferrites. In: IEEE Transactions on Magnetics. - ISSN 0018-9464. - Vol. 46 (2010), p. 447-450. (in English)
- [19] SLÁMA, J. - ŠOKA, M. - GRUSKOVÁ, A. - UŠÁKOVÁ, M. - OLAH, V. - JANČÁRIK, V.: Changes of NiZn Properties by Substitution of Zn with Cu And Co Ions. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 61, No. 7/s (2010), p. 160-162. (in English)
- [20] ŠOKA, M. - SLÁMA, J. - GRUSKOVÁ, A. - UŠÁKOVÁ, M. - DOSOUDIL, R.: Role of Thermomagnetic Curves at Preparation of NiZn Ferrites with Fe Ions Deficiency. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 61, No. 7/s (2010), p. 163-165. (in English)
- [21] ŠTOFKA, M.: Amplifiers Deliver Accurate Complementary Voltages. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 18 (2010), p. 44-45. (in English)
- [22] ŠTOFKA, M.: Circuit Lets You Test Sample-and-Hold Amplifiers. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 5 (2010), p. 34, 37. (in English)
- [23] ŠTOFKA, M.: Circuit Uses Two Reference Voltages to Improve Hysteresis Accuracy. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 1 (2010), p. 43-44. (in English)
- [24] ŠTOFKA, M.: DC-Voltage Doubler Reaches 96% Power Efficiency. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 13 (2010), p. 48-49. (in English)
- [25] ŠTOFKA, M.: Electronically Tinge White-Light Source. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 21 (2010), p. 46-47. (in English)

- [26] ŠTOFKA, M.: Get Four Colors from 2 Bits. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 15 (2010), p. 48-49. (in English)
- [27] ŠTOFKA, M.: High-Side Current-Shunt Monitor Reduces Error. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 22 (2010), p. 43-44. (in English)
- [28] ŠTOFKA, M.: Multidecade BCD DAC Uses Resistors of only Six Values. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 3 (2010), 44, 47. (in English)
- [29] ŠTOFKA, M.: Pulse Generator with Precision Output-Duty Cycle Operates at a Repetition Rate beyond 50 MHz. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 9 (2010), p. 43-44. (in English)
- [30] ŠTOFKA, M.: Rectangular-Waveform Generator Produces 25 and 75% Duty Cycles. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 6 (2010), 74, 76. (in English)
- [31] ŠTOFKA, M.: Schottky Diodes Improve Comparator's Transient Response. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 2 (2010), p. 32-33. (in English)
- [32] ŠTOFKA, M.: Set LEDs' Hue from Red to Green. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 20 (2010), p. 59-60. (in English)
- [33] ŠTOFKA, M.: Tilt/Fall Detector Has Staggered Thresholds. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 4 (2010), p. 40, 42. (in English)
- [34] ŠTOFKA, M.: Tricolor LED Emits Light of Any Color or Hue. In: EDN. - ISSN 0012-7515. - Vol. 55, Iss. 17 (2010), p. 52-53. (in English)
- [35] UŠÁK, E.: A New Approach to Evaluation of Magnetic Parameters for Non-Destructive Inspection of Steel Degradation. In: Journal of Electrical Engineering. - ISSN 1335-3632. - Vol. 61, No. 7/s (2010), p. 100-103. (in English)
- [36] ZEMANOVÁ, M. - LI, K. - CHOVARCOVÁ, M. - UŠÁK, E.: An Optimisation of Electrolytic Colouring Process for Solar Collectors. In: Transfer inovácií. - ISSN 1337-7094. - No. 17 (2010). - ISSN 1337-7094, p. 131-136. (in Slovak)
- [37] ZEMANOVÁ, M. - GÁL, M. - UŠÁK, E. - JURIŠOVÁ, J.: Pulse Nickel Electrolytic Colouring Process of Anodised Aluminium. In: Journal of Applied Electrochemistry. - ISSN 0021-891X. - Vol. 40, Iss. 5 (2010), p. 981-988. (in English)

### VIII.2 Conference Proceedings

- [1] BERNÁT, M. - ČERVENOVÁ, J.: The Lightwave Polarization and its Utilization in Special Optical Fibers. In: ŠVOČ 2010: Proceedings of Selected Works. - Bratislava: FEI STU, 2010. - ISBN 978-80-227-3286-4. - CD-Rom. (in Slovak)
- [2] BOJNA, I.: Actual Information of Technical Standardisation and Legislation in Electrical Engineering Field. In: 32nd Conference of Slovak Electrical Engineers: Bratislava, Slovak Republic, 24.-25.3.2010. - Bratislava: Slovenský elektrotechnický zväz, 2010. - p. 89-98. (in Slovak)
- [3] BOJNA, I.: Actual Information of Technical Standardisation in Electrical Engineering Field. In: 3rd. Conference of Slovak Electrical Engineers: Poprad, Slovak Republic, 10.-11.11.2010. - Bratislava: Slovenský elektrotechnický zväz, 2010. - p. 127-137. (in Slovak)
- [4] BOJNA, I.: Attendance and Work on Electrical Installations According to Technical Standards and Notice No. 508/2009. In: 32nd Conference of Slovak Electrical Engineers: Bratislava, Slovak Republic, 24.-25.3.2010. - Bratislava: Slovenský elektrotechnický zväz, 2010. - p. 99-108. (in Slovak)

- [5] BOJNA, I.: Information of Slovak Technical Standards Issued Last Year. In: Eltech SK 2010: 1st National Meeting Inspectors of Electrical Installation, Workers in Electrical Industry and the Maintenance Engineers with Technical Inspection Staff. Štrbské pleso, Slovak Republic, 8.10.6.2010. - Prague: Saltek, 2010. - DVD-Rom. (in Slovak)
- [6] BOJNA, I.: Particularities of the Protection Against Electric Shock According to STN 33 2000-4 41. In: Eltech SK 2010: 1st National Meeting Inspectors of Electrical Installation, Workers in Electrical Industry and the Maintenance Engineers with Technical Inspection Staff. Štrbské pleso, Slovak Republic, 8.-10.6.2010. - Prague: Saltek, 2010. - DVD-Rom. (in Slovak)
- [7] BOJNA, I. - FRANEK, J.: Skin Effect, Proximity Effect and the Lighting Current. In: 33rd Conference of Slovak Electrical Engineers: Poprad, Slovak Republic, 10.-11.11.2010. - Bratislava: Slovenský elektrotechnický zväz, 2010. - p. 138-155. (in Slovak)
- [8] BYDŽOVSKÝ, J. - KOLLÁR, M. - ONDREIČKA, K.: Design and Testing of a New Magnetic Chuck-Type Holding Device. In: Magnetic Measurements '2010: Book of Abstracts. Prague, Czech Republic, 12.-15.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04616-6. - p. 79. (in English)
- [9] ČERVEŇOVÁ, J.: Numerical Methods in Electromagnetism. In: Innovation Process in e-Learning: Scientific International Conference. Bratislava, Slovak Republic, 11.3.2010. - Bratislava: University of Economics, 2010. - ISBN 978-80-225-2949-5. - CD-Rom. (in Slovak)
- [10] DOSOUDIL, R. - UŠÁK, E. - OLAH, V.: Automated Measurement of Complex Permeability and Permittivity at High Frequencies. In: Magnetic Measurements '2010: Book of Abstracts. Prague, Czech Republic, 12.-15.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04616-6. - p. 60. (in English)
- [11] DOSOUDIL, R. - UŠÁKOVÁ, M. - GRUSKOVÁ, A. - SLÁMA, J.: Complex Permeability of LiZn/MnZn/PVC Composite Materials. In: CSMAG '10. 14th Czech and Slovak Conference on Magnetism: Košice, Slovak Republic, 6.-9.7.2010. - Košice: Pavol Jozef Šafárik University, 2010. - ISBN 978-80-7097-804-7. - p. 234. (in English)
- [12] FRANEK, J. - KOLLÁR, M.: Solution of a Case of Static Field with Mixed-Boundary Conditions. In: Elektro 2010. Proceedings of the 8th International Conference: Žilina, Slovak Republic. 24.-25.5.2010. - Žilina: Žilinská univerzita, 2010. - CD-Rom. (in English)
- [13] GRUSKOVÁ, A. - SLÁMA, J. - UŠÁKOVÁ, M. - ŠOKA, M. - DOSOUDIL, R. - DEGMOVÁ, J.: Study of Magnetic and Structural Properties of Non-Stoichiometric NiZn Ferrites Prepared by Wet Method. In: CSMAG '10. 14th Czech and Slovak Conference on Magnetism: Košice, Slovak Republic, 6.-9.7.2010. - Košice: Pavol Jozef Šafárik University, 2010. - ISBN 978-80-7097-804-7. - p. 105. (in English)
- [14] IGLARČÍK, M. - ČERVEŇOVÁ, J.: Optical Time Domain Reflectometry. In: ŠVOČ 2010: Proceedings of Selected Works. - Bratislava: FEI STU, 2010. - ISBN 978-80-227-3286-4. - CD-Rom. (in Slovak)
- [15] JASENEK, J.: Principles of Optical Fiber Reflectometry and its Applications in Fiber Optic Sensors with Spread Parameters. In: ITSS 2010. 20th International Travelling Summer School on Microwaves and Lightwaves: Metz, France, 3.-9.7.2010. - Supélec, 2010. - CD-Rom. (in English)
- [16] KORENKO, B.: Birefringence Dependence to Pressure Fields in Optical Fiber Sensors. In: ELITECH'10: 12th Conference of Doctoral Students. Bratislava, Slovak Republic, 26.5.2010. - Bratislava: STU, 2010. - ISBN 978-80-227-3303-8. - CD-Rom. (in English)

- [17] KORENKO, B. - JASENEK, J. - HLAVÁČ, M.: Optical Fiber Sensors with Spread Parameters. In: Optical Communications 2010: Prague, Czech Republic, 21.-22.10.2010. - Prague: Action M, 2010. - ISBN 978-80-86742-29-8. - p. 63-72. (in Slovak)
- [18] KORENKO, B. - JASENEK, J. - ČERVEŇOVÁ, J.: Optical Fiber Sensors with Distributed Parameters and Optical Time - Domain Reflectometry (OTDR). In: ITSS 2010. 20th International Travelling Summer School on Microwave and Lightwaves: Metz, France, 3.-9.7.2010. - Supélec, 2010. - CD-Rom. (in English)
- [19] KRUŽELÁK, J. - HUDEC, I. - UŠÁKOVÁ, M. - DOSOUDIL, R.: Elastomeric Materials with Magnetic Fillers-Properties and Network Structure. In: 9th Fall Rubber Colloquium: Hannover, Germany, 3.-5.11.2010. - Hannover: Deutsches Institut für Kautschuktechnologie e. V., 2010. - ISBN 978-3-9814076-0-0. - p. 75-79. (in English)
- [20] KRUŽELÁK, J. - HUDEC, I. - UŠÁKOVÁ, M. - DOSOUDIL, R.: The Influence of Ferrite on Magnetic Characteristics of Elastomeric Composites. In: Magnetic Measurements '2010: Book of Abstracts. Prague, Czech Republic, 12.-15.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04616-6. - p. 48. (in English)
- [21] PAVLOVIČ, M. - MIGLIERINI, M. - MUSTAFIN, E. - SEIDL, T. - ENSINGER, W. - STRAŠÍK, I. - ŠOKA, M.: Ion Irradiation Studies of Soft Metallic Glasses. In: CSMAG '10. 14th Czech and Slovak Conference on Magnetism: Košice, Slovak Republic, 6.-9.7.2010. - Košice: Pavol Jozef Šafárik University, 2010. - ISBN 978-80-7097-804-7. - p. 44. (in English)
- [22] SLÁMA, J. - ŠOKA, M. - GRUSKOVÁ, A. - UŠÁKOVÁ, M. - OLAH, V. - JANČÁRIK, V.: Changes of NiZn Properties by Substitution of Zn with Cu and Co Ions. In: Magnetic Measurements '2010: Book of Abstracts. Prague, Czech Republic, 12.-15.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04616-6. - p. 89. (in English)
- [23] SLÁMA, J. - ŠOKA, M. - GRUSKOVÁ, A. - GONZÁLEZ-ANGELES, A. - JANČÁRIK, V.: Hopkinson Effect Study in a Spinel and Hexagonal Ferrites. In: Magnetic Measurements '2010: Book of Abstracts. Prague, Czech Republic, 12.-15.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04616-6. - p. 24. (in English)
- [24] ŠOKA, M. - SLÁMA, J. - GRUSKOVÁ, A. - UŠÁKOVÁ, M. - DOSOUDIL, R.: Role of Thermomagnetic Curves at Preparation of NiZn Ferrites with Fe Ions Deficiency. In: Magnetic Measurements '2010: Book of Abstracts. Prague, Czech Republic, 12.-15.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04616-6. - p. 78. (in English)
- [25] UŠÁK, E.: A New Approach to Evaluation of Magnetisation Curve Parameters in Weak Fields as Well as Saturated State. In: Magnetic Measurements '2010: Book of Abstracts. Prague, Czech Republic, 12.-15.9.2010. - Prague: ČVUT, 2010. - ISBN 978-80-01-04616-6. - p. 66. (in English)

### VIII.3 Parts of Books

- [1] ČERVEŇOVÁ, J. - JASENEK, J. - JANÍČEK, F. - KORENKO, B.: Teaching of Electromagnetism Using e-Courses. In: Proceedings of the Joint International IGIP-SEFI: Annual Conference 2010. Diversity Unifies - Diversity in Engineering Education. Trnava, Slovakia, 19.-22.9.2010. - Brussels: SEFI, 2010. - ISBN 978-2-87352-003-8. - CD-Rom. (in English)

- [2] JANÍČEK, F. - JASENEK, J.: Bologna Process and the Transformation of the Study at FEI STU Bratislava. In: Proceedings of the Joint International IGIP-SEFI: Annual Conference 2010. Diversity Unifies - Diversity in Engineering Education. Trnava, Slovakia, 19.-22.9.2010. - Brussels: SEFI, 2010. - ISBN 978-2-87352-003-8. - CD-Rom. (in English)

#### **VIII.4 Textbook**

- [1] BOJNA, I.: Textbook for Professional Examination According to Notice 718/2002. - Bratislava: FEI STU, 2010. - 193 p. (in Slovak)