

DEPARTMENT OF MEASUREMENT

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

Head of Department

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I. STAFF

| | |
|----------------------|---|
| Professors | Prof. Ing. Viktor Smieško, PhD., Prof. Ing. Július Bajesy, PhD., professor emeritus |
| Associate Professors | Doc. Ing. René Hartánský, PhD., Doc. Ing. Eduard Kaluš, PhD., Doc. Ing. Karol Kováč, PhD., Doc. Ing. Peter Kukuča, PhD., Doc. Ing. Rudolf Ravas, PhD., Doc. Ing. Lívia Syrová, PhD. |
| Assistant Professors | Ing. Oľga Čičáková, Mgr. Ján Grman, PhD., Ing. Miroslav Kamenský, PhD., Ing. Eva Králiková, Ing. Iveta Ondrášová, PhD. |
| Senior Scientists | Ing. Mikuláš Bittera, PhD., Ing. Jozef Hallon, PhD., Ing. Milan Hanajík, PhD., Ing. Jaroslav Hricko, Ing. Anton Krammer, Ing. Lucia Noskovičová, Ing. Imrich Szolík |
| Technical Staff | Ružena Nagyová (secretary) |
| PhD. Students | Ing. Miroslav Földi, Ing. Anton Krammer, Ing. Lukáš Maršalka, Ing. Marek Šuplata, Ing. Gabriel Války |

II. EQUIPMENT

II.1 Teaching and Research Laboratories

- Electromagnetic Compatibility (EMC) Laboratory with a 4,5 x 4,5 x 8 m Semianechoic Shielded Chamber
- Precise Measurements Laboratory
- Laboratory of Distributed Measurement Systems
- Laboratory of Digital Signal Processing
- Laboratory of Diagnostics Systems
- Laboratory of Power Saving
- Laboratory of Nonelectrical Quantities
- Laboratory of Microprocessor Engineering
- Laboratory of Artificial Intelligence
- Laboratory of Visual Systems
- Laboratory of Telematics
- Metrological Laboratory

II.2 Special Measuring Instruments and Computers

- Calibrator DATRON 4700
- Digitizing Oscilloscopes up to 4 channels 1 GHz 5 GS/s
- VXI System (VX 4236 Digital Multimeter, VX 5520 VXI SLOT O Resource Manager, VX 1500 VXI D-Size Mainframe - 13 Slot, VX 4223 Counter/Timer)
- HP 84100A EMC Design Development System (HP 8591A Spectrum Analyzer and HP 11945A Close Field Probe Set)
- Agilent E7405A 26GHz EMC Analyzer
- R&S Measuring Receivers 9 kHz - 7000 MHz (ESVP, ESH3, ESHS10, ESVS10 and ESP17)

- Handheld Spectrum Analyzer Rohde&Schwarz FSH8 9 kHz – 8 GHz
- Time Domain EMI Measuring Receiver TDEMI 1G
- Measuring Antenna Set (BiConLog, Log. Periodic, Biconical, Active Rod and Active Loop Antennas)
- Low Frequency Field Intensity Meter Chauvin Arnoux C. A 42 DC – 400 kHz 100nT – 1T,
- Line Interference Simulator Set - Schaffner NSG 200
- Schaffner BEST 96 - Burst, Surge and Power Drop-out Simulator
- EM TEST VCS500 Combination Wave Generator
- EM TEST EFT500 Electric Fast Transients Generator
- EM TEST CWS500 Combination Wave Generator
- EM TEST UCS500 Combination Wave Generator
- Haefely PEFT - Electric Fast Transients/Burst Generator with EM 101 Coupling Clamp
- Haefely PESD 1600 - Electrostatic Discharge Simulator
- Rohde and Schwarz Signal Generator SMH (100 kHz ... 2000 MHz)
- Agilent E8257D PSG Analog Signal Generator 20 GHz
- Programmable AC Power Supply Chroma 61503 1500 VA Low Distortion
- Agilent ENA RF Network Analyzer E5071C 9 kHz – 3 GHz
- Automotive EMC Testing System UCS200N, LD200N, VDS 200N and PFS200
- High Voltage Divider HTS6-1
- Reference Noise Generator CGE 01 up to 18 GHz
- RF Network/Spectrum/Impedance Analyzer Agilent 4396B
- MicroWave Switch & Attenuator Agilent L4445A
- Calibration Set for RF Attenuators Agilent
- RF Power Amplifier Research 150 W 80 – 1000 MHz
- HF Power Amplifier MILMEGA AS0840 0.8 – 4 GHz 30/17W
- HF Broadband Amplifier Research 1W 4 – 10,6 GHz
- High Power Supply with Power Factor Correction SW 3500
- Low Distortion Amplifier/Harmonic Analyzer Tti HA1600A
- Electromagnetic Field Intensity Meter MP60000
- Large Set of Coupling Decoupling Networks for EMC Testing
- EM Field Simulation Station ThinkStation D20
- EMC Measurement Software

III. TEACHING

III.1 Undergraduate Study (Bc.)

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

| | | |
|--|------------------|------------|
| Introduction to Engineering | (1st sem., 2-2h) | R. Ravas |
| Measuring Information Systems | (4th sem., 2-2h) | L. Syrová |
| Measuring Information Systems | (3rd sem., 2-2h) | L. Syrová |
| Measurement | (4th sem., 2-3h) | P. Kukuča |
| Measurement | (5th sem., 2-2h) | P. Kukuča |
| Diagnostics and Testing of Automobiles | (6th sem., 2-2h) | K. Kováč |
| Microprocessor Engineering | (6th sem., 2-2h) | R. Ravas |
| Technical Diagnostics | (6th sem., 3-2h) | K. Kováč |
| Measurement Technology | (3rd sem., 2-3h) | V. Smieško |
| Measurement Technology | (4th sem., 2-3h) | V. Smieško |

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| Computer Architecture | (2nd sem., 3-2h) | R. Ravas |
| Measurement in Information Technology | (5th sem., 2-2h) | L. Syrová |
| Methodology of Measurement | (5th sem., 2-1h) | L. Syrová |

III.2 Graduate Study (Ing.)

| | | |
|--|-------------------|------------|
| Electromagnetic Compatibility | (2nd sem., 3-2h) | K. Kováč |
| Electromagnetic Compatibility | (1st sem., 3-2h) | K. Kováč |
| Visual Systems | (3rd sem., 2-3h) | R. Ravas |
| Telemetry and Information Transmission | (3rd sem., 3-2h) | P. Kukuča |
| Telemetry and Information Transmission | (4th sem., 3-2h) | P. Kukuča |
| Theory of Measuring Systems | (2nd sem., 3-2h) | R. Ravas |
| Digital Signal Processing | (2nd sem., 3-2h) | K. Kováč |
| Distributed Measurement Systems | (1st. sem., 2-3h) | V. Smieško |
| Distributed Measurement Systems | (3rd. sem., 2-3h) | V. Smieško |
| Digital Image Processing | (1st. sem., 2-3h) | R. Ravas |
| Diagnostic Systems | (1st. sem., 3-2h) | K. Kováč |
| Diagnostic Systems | (3rd sem., 3-2h) | K. Kováč |
| Designing of Information Systems | (1st sem., 2-3h) | R. Ravas |
| Methods and Tools of Artificial Intelligence | (2nd sem., 2-3h) | R. Ravas |
| Methods and Tools of Artificial Intelligence | (4th sem., 2-3h) | R. Ravas |
| Metrology, Testing and Quality Control | (2nd sem., 3-2h) | P. Kukuča |

III.3 Distance Study (Bc.)

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|-------------------------------|------------|------------|
| Measurement Technology | (6th sem.) | V. Smieško |
| Measuring Information Systems | (5th sem.) | L. Syrová |
| Measuring Information Systems | (6th sem.) | L. Syrová |
| Methodology of Measurement | (7th sem.) | L. Syrová |
| Technical Diagnostics | (8th sem.) | K. Kováč |
| Computer Architecture | (2nd sem.) | R. Ravas |

III.4 Distance Study (Ing.)

| | | |
|--|------------|----------|
| Methods and Tools of Artificial Intelligence | (2nd sem.) | R. Ravas |
| Visual Systems | (3rd sem.) | R. Ravas |
| Electromagnetic Compatibility | (2nd sem.) | K. Kováč |

III.5 Undergraduate Study for Foreign Students (in English Language)

| | | |
|------------------------|------------|-------------------------|
| Measurement Technology | (3rd sem.) | V. Smieško L. Syrová |
| Electronic Measurement | (4th sem.) | P. Kukuča |
| Microprocessor Systems | (7th sem.) | K. Kováč |

Methodology and Measurement (5th sem.) L. Syrová

III.6 Graduate Study (Ing.) for Foreign Students (in English Language)

Electromagnetic Interference and Compatibility (1st sem.) K. Kováč

IV. RESEARCH PROJECTS

- Electromagnetic Compatibility of Large Systems. VEGA, 1/0551/09 (V. Smieško)
- The Use of Image Information in the Measurement and Diagnostics. VEGA, 1/0490/10 (R. Ravas)
- Construction and Control of Micro-electro-mechanical Elements and Devices. VEGA, 2/0006/10 (R. Hartánský)
- Support of Research and Development Infrastructure from the Point of View of Electromagnetic Compatibility Requirements. State Research and Development Program, 338/2003, 2003 – 2010 (K. Kováč)
- Effective Control of Production and Consumption of Energy from Renewable Resources, ENERGOZ 26240220028, Operational Programme Research and Development, European Regional Development Fund, 2010-2013 (V. Smieško, M. Bittera, R. Hartánský, E. Kaluš)

V. COOPERATION

V.1 Cooperation in Slovakia

- Institute of Measurement Science, Slovak Academy of Sciences, Bratislava
- Slovak Institute of Metrology, Bratislava
- Nuclear Power Plants Research Institute, Trnava
- Department of Theoretical Electrical Engineering and Electrical Measurement, FEI TU Košice
- Slovak Institute of Technical Standardization, Bratislava
- Office for Standardization, Metrology and Testing of Slovak Republic, Bratislava
- National Security Authority, Bratislava
- Slovak Power Plants, Bratislava
- University of Žilina, Žilina
- Faculty of Mechatronics, Trenčín University, Trenčín
- Volkswagen Slovakia, jsc., Bratislava
- Slovak Electric Transmission System, jsc., Bratislava
- Západoslovenská energetika, jsc., Bratislava
- Stredoslovenská energetika, jsc., Žilina
- Elektrovod Holding, jcs., Bratislava
- LIV ELEKTRA, jcs., Bratislava
- Institute of Informatics, Slovak Academy of Sciences, Detached branches Banská Bystrica

V.2 International Cooperation

- Department of Measurement, Czech Technical University, Prague, Czech Republic
- Katholieke Hogeschool Brugge - Oostende, Oostende, Belgium
- University of York, York, England
- European Organization for Nuclear Research CERN, Geneva, Switzerland
- Institute of Logistics and Warehousing (ILIM), Poznań, Poland
- Austrian Research Centre, Seibersdorf, Austria
- Izhevsk State Technical University, Russian Federation

V.3 Membership in International Organizations and Societies

- The European Academy of Sciences and Arts (V. Smieško)
- IEEE - The Institute of Electrical and Electronics Engineers (V. Smieško)

- IEEE - The Institute of Electrical and Electronics Engineers (R. Harfanský)
- IET - The Institution of Engineering and Technology (V. Smieško)
- IET - The Institution of Engineering and Technology (P. Kukuča)
- The International Information Academy (V. Smieško)
- URSI – Scientific Commission for Electromagnetic Noise and Interference (V. Smieško)

V.4 Contracts

- EMC Testing and Consultancy. Contracts for Small and Medium Enterprises (K. Kováč et al.)

VI. THESES

VI.1 Masters Theses

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

- [1] Ambróš, T.: Measuring and Security Central Unit for EMC Laboratories (J. Hallon)
- [2] Hipp, T.: Optimization of Problems and Genetic Algorithms (J. Grman)
- [3] Juhas, M.: Recognition of Colour Textures (R. Ravas)
- [4] Lipovský, M.: Simulation of the Artificial Life (J. Grman)
- [5] Majzel, M.: Application of Information Theory in the Telemetry System Used in E-learning (O. Čičáková)
- [6] Nečas, T.: Interactive Design of 34-D Scene Model (L. Syrová)
- [7] Polák, T.: Modeling and Visualization of 3D Landscape (J. Grman)

VI.2 PhD Theses

- [1] Hallon, J.: Speciality of EMC Measurement of Large Systems (K. Kováč)

VII. OTHER ACTIVITIES

- Chairman of the Council of Universities of Slovak Republic (V. Smieško)
- Member of Slovak Republic Government Council for Science and Technology (V. Smieško)
- Member of Scientific Council of the Slovak Academy of Sciences (V. Smieško)
- Vice-chairman of Scientific Council for Electronics of the Slovak Academy of Sciences (V. Smieško)
- Member of Scientific Council of Institute of Measurement Science in Slovak Academy of Sciences (V. Smieško)
- Member of Scientific Council of the FEI STU (V. Smieško)
- Chairman of Council for State Program of Ministry of Education SR (V. Smieško)
- Member of Chairmanship of Slovak Research and Development Agency (V. Smieško)
- Member of Accreditation Board for Research Institution in SR (V. Smieško)
- Membership in the Slovak Electrotechnical Committee (P. Kukuča)
- Membership in the Scientific Council of the Slovak Institute of Metrology (V. Smieško)
- Membership in the Slovak National Technical Standardisation Committees (K. Kováč, P. Kukuča)
- Membership in the Technical Subcommittees of IMEKO (TC1 - J. Bajcsy, TC19 - K. Kováč)

Participation in the Program Committees of Conferences:

- Electrical Engineering and Information Technology 2010, Trenčín (V. Smieško)
- International Symposium Advances in Mechatronics 2010, Brno (V. Smieško)
- International Conference Applied Electronics 2010, Plzeň (P. Kukuča)

Membership in the Editorial Boards of Journals:

- Journal of Electrical Engineering (V. Smieško)

- AT&P Journal (V. Smieško)
- EE - Journal of Electrical and Power Engineering (V. Smieško, P. Kukuča)
- Metrology and Testing (P. Kukuča)
- Measurement Science Review – on-line edition (V. Smieško)
- Radioengineering Journal - reviewer (R. Harťanský)
- Auditor of Slovak National Accreditation Service (J. Bajcsy, K. Kováč, M. Bittera, J. Hallon)

Courses for Practical Engineers:

- EMC for Electronic Equipment Designers, June 2010

VIII. PUBLICATIONS**VIII.1 Journals**

- [1] BITTERA, M. - HALLON, J. - HARŤANSKÝ, R. - KOVÁČ, K. - SMIEŠKO, V.: A Sensitivity Analysis Theory of Cable Test against RF Fields. In: Vestnik Iževskogo gosudarstvennogo tehničeskogo universiteta. - ISSN 1813-7903. - No. 3 (2010), p. 94-97. (in Russian)
- [2] BITTERA, M. - SMIEŠKO, V. - KOVÁČ, K. - HALLON, J.: Directional Properties of the Bilog Antenna as a Source of Radiated Electromagnetic Interference Measurement Uncertainty. In: IET Microwave Antennas & Propagation. - ISSN 1751-8725. - Vol. 4, Iss. 10 (2010), p. 1469-1474. (in English)
- [3] BITTERA, M. - SMIEŠKO, V.: Influence of Interface Cables Termination Impedance on Radiated Emission Measurement. In: Measurement Science Review. - ISSN 1335-8871. - Vol. 10, No. 5 (2010), p. 157-161. (in English)
- [4] BITTERA, M.: The Shielded Cabin of the Laboratory of EMC in a New Garment. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 5 (2010), p. 36. (in Slovak)
- [5] ČIČÁKOVÁ, O. - KRÁLIKOVÁ, E.: The Use of Automated Measuring Systems in Teaching at the Department of Measurement FEI STU. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 1 (2010), p. 10-12. (in Slovak)
- [6] HARŤANSKÝ, R. - HALLON, J.: Electromagnetic Field Sensor for Electrical Parts. In: Vestnik Iževskogo gosudarstvennogo tehničeskogo universiteta. - ISSN 1813-7903. - No. 4 (2010), p. 119-122. (in Russian)
- [7] KALUŠ, E. - KUKUČA, P.: Power Factor - Nothing Simpler? In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 1 (2010), p. 40-43. (in Slovak)
- [8] KRÁLIKOVÁ, E. - RAVAS, R.: Effect of Selected Factors on the Choice Error Correction Method of Sensors. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, Special Issue (2010), p. 46-49. (in Slovak)
- [9] KRAMMER, A.: Alternative Method of Susceptibility Test of Large system EMC. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, Special Issue (2010), p. 50-52. (in Slovak)
- [10] KRAMMER, A. - SMIEŠKO, V.: Equipment of Analog Signal Transmission in Area with High Level Disturbance. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 1 (2010), p. 20-22. (in Slovak)
- [11] KRAMMER, A. - SZOLIK, I.: Fundamentals of Generation of High Frequency Disturbing Voltage at Cable Interface and its Effect on Electronic System. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 1 (2010), p. 16-19. (in Slovak)

- [12] VÁLKY, G. - BITTERA, M. - HALLON, J.: Automation and Optimalization of a Station for Measuring Electromagnetic Emissions. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 16, No. 3 (2010), p. 14-16. (in Slovak)

VIII.2 Conference Proceedings

- [1] BITTERA, M. - SMIEŠKO, V. - KOVÁČ, K.: Novel Approach to Uncertainty of Antenna Factor Measurement. In: IMEKO Symposium TC-4., TC-19 & IWADC Instrumentation for the ICT Era. Košice, Slovakia, 8-10.9.2010. - Košice: Technical University, 2010. - ISBN 978-80-553-0424-3. - CD-Rom. (in English)
- [2] CHRAPČIAK, I. - KALUŠ, E.: Efficient Use of Electrical Energy. Is it Enough to Measure what we Measure Now? In: Power Engineering 2010. Energy, Ecology, Economy: 9th International Scientific Conference. Tatranské Matliare, Slovakia, 18.-20.5.2010. - Bratislava: STU, 2010. - ISBN 978-80-89402-23-6, - p. 80-81. (in English)
- [3] ČIČÁKOVÁ, O. - JANÍK, J. - VESELÝ, M. - VINDUŠKA, P.: Computerized Measurements in Vacuum. In: JVC-13. Programme and Book of Abstracts: 13th Joint Vacuum Conference. Štrbské Pleso, Slovak Republic, 20.-24.6.2010. - Bratislava: Slovak Vacuum Society, 2010. - ISBN 978-80-7399-969-8. - p. 120. (in English)
- [4] FÖLDI, M. - RAVAS, R.: Contour Vectorization from Medical Images. In: InterTech 2010: 3rd International Interdisciplinary Technical Conference of Young Scientists. Poznań, Poland, 19.-21.5.2010. - Poznań: Uczelniany Samorząd Doktorantów Politechniki Poznańskiej, 2010. - ISBN 978-83-926896-2-1. - p. 154-157. (in English)
- [5] HARŤANSKÝ, R. - BITTERA, M. - HALLON, J. - BENKÓ, P.: Increase of Calibrated Meter Range at Distance Measurement. In: IMEKO Symposium TC-4., TC-19 & IWADC Instrumentation for the ICT Era. Košice, Slovakia, 8.- 10.9.2010. - Košice: Technical University, 2010. - ISBN 978-80-553-0424-3. - CD-Rom. (in English)
- [6] HAVRILA, L. - KRÁLIKOVÁ, E.: Temperature Stabilization During the Measurement of AC Losses in Superconductors. In: ŠVOČ 2010: Proceedings of Selected Works. - Bratislava: FEI STU, 2010. - ISBN 978-80-227-3286-4. - CD-Rom. (in Slovak)
- [7] HRICKO, J. - HAVLÍK, Š. - HARŤANSKÝ, R.: Optimization in Designing Compliant Robotic Micro-Devices. In: RAAD 2010: 19th International Workshop on Robotics in Alpe-Adria-Danube Region. Budapest: Balatonfüred, Hungary, 23.-27.6.2010. - Piscataway: IEEE, 2010. - ISBN 978-1-4244-6884-3. - p. 397-402. (in English)
- [8] JANÍK, J. - VINDUŠKA, P. - VESELÝ, M. - ČIČÁKOVÁ, O.: Some Remarks to Calculations of Field Enhancement Factor. In: JVC-13: 13th Joint Vacuum Conference. Štrbské Pleso, Slovak Republic, 20.-24.6.2010. - Bratislava: Slovak Vacuum Society, 2010. - ISBN 978-80-7399-969-8. - p. 121. (in English)
- [9] KALUŠ, E. - KUKUČA, P.: Single (value) is not Enough. In: Power Engineering 2010. Energy, Ecology, Economy: 9th International Scientific Conference. Tatranské Matliare, Slovakia, 18.-20.5. 2010. - Bratislava: STU, 2010. - ISBN 978-80-89402-23-6, p. 86-87. (in English)
- [10] KAMENSKÝ, M. - KOVÁČ, K.: Analysis of Dithered Measurement Based on Widrow's Quantization Theory. In: Annals of DAAAM for 2010 & Proceedings: 21st International DAAAM Symposium Intelligent Manufacturing & Automation: Focus on Interdisciplinary Solutions. Zadar, Croatia, 20.-23.10.2010. - Vienna: DAAAM International, 2010. - p. 0855-0856. (in English)

- [11] KAMENSKÝ, M. - KOVÁČ, K.: Correction of ADC Errors by Iterative Method with Dithering using Dither with Uniform Distribution. In: IMEKO Symposium TC-4-, TC-19 & IWADC Instrumentation for the ICT Era. Košice, Slovakia, 8.-10.9. 2010. - Košice: Technical University, 2010. - ISBN 978-80-553-0424-3. - CD-Rom. (in English)
- [12] KRÁLIKOVÁ, E. - RAVAS, R.: Analysis of the Influence of Quantization Error at Sensor Autocalibration. In: Mechatronika 2010: 13th International Conference on Mechatronics. Trenčianske Teplice, Slovak Republic, 2.-4.6.2010. - Trenčín: Alexander Dubček University in Trenčín, 2010. - ISBN 978-80-8075-451-8. - p. 74-77. (in English)
- [13] MAJERÍK, M. - HARTÁNSKÝ, R. - ZGODAVOVÁ, K.: Mechatronic Product Interchangeability Management: Electronic Components. In: Annals of DAAAM for 2010 & Proceedings: 21st International DAAAM Symposium Intelligent Manufacturing & Automation: Focus on Interdisciplinary Solutions. Zadar, Croatia, 20.-23.10.2010. - Vienna: DAAAM International, 2010. - p. 0263-0264. (in English)
- [14] NEČAS, T. - SYROVÁ, L.: Modelling of 3-D Scene. In: ŠVOČ 2010: Proceedings of Selected Works. Bratislava: FEI STU, 2010. - ISBN 978-80-227-3286-4. - CD-Rom. (in Slovak)
- [15] NOSKOVIČOVÁ, L. - RAVAS, R.: Image Selection for Computing Intrinsic Camera Parameters. In: InterTech 2010: 3rd International Interdisciplinary Technical Conference of Young Scientists. Poznań, Poland, 19.-21.5.2010. - Poznań: Uczelniany Samorząd Doktorantów Politechniki Poznańskiej, 2010. - ISBN 978-83-926896-2-1. - p. 215-217. (in English)
- [16] NOSKOVIČOVÁ, L. - RAVAS, R.: Subpixel Corner Detection for Camera Calibration. In: Mechatronika 2010: 13th International Conference on Mechatronics. Trenčianske Teplice, Slovak Republic, 2.-4.6.2010. - Trenčín: Alexander Dubček University in Trenčín, 2010. - ISBN 978-80-8075-451-8. - p. 78-80. (in English)
- [17] PÁLENÍK, T. - HARTÁNSKÝ, R.: Numerical Impedance Analysis of Thin Wire Dipoles. In: Mechatronika 2010: 13th International Conference on Mechatronics. Trenčianske Teplice, Slovak Republic, 2.-4.6.2010. - Trenčín: Alexander Dubček University in Trenčín, 2010. - ISBN 978-80-8075-451-8. - p. 51-53. (in English)
- [18] PÁLENÍK, T. - HARTÁNSKÝ, R. - BITTERA, M. - HALLON, J. - KOVÁČ, K.: Numerical Input Impedance Analysis of Loop Antennas. In: 7th International Workshop of Electromagnetic Compatibility: Odorheiu Secuiesc, Romania, 2.-4.9.2010. - Bucharest: ICPE-CA, 2010. - CD-Rom. (in English)
- [19] PIKNA, M. - JURČEK, M. - HAVLÍK, Š. - HARTÁNSKÝ, R.: Compliant Mechanisms in Micro-Robotic Device. In: ROBTEP 2010: 10th National Conference „Automation/Robotics in Theory and Practice“. Bardejov, Slovak Republic, 7.-9.6.2010. - Košice: Technical University, 2010. - ISBN 978-80-553-0427-4. - p. 255-264. (in Slovak)
- [20] RAVAS, R. - SYROVÁ, L.: Automated Reconstruction of 3D Object. In: Mechatronika 2010: 13th International Conference on Mechatronics. Trenčianske Teplice, Slovak Republic, 2.-4.6.2010. - Trenčín: Alexander Dubček University in Trenčín, 2010. - ISBN 978-80-8075-451-8. - p. 31-33. (in English)
- [21] SITÁR, J. - RÁČEK, J. - BAUER, P. - HARTÁNSKÝ, R.: Active Filter Stabilization Methods. In: IPEC-Sapporo 2010: The 2010 International Power Electronic Conference. Sapporo, Japan, 21.-24.6.2010. - New York: IEEE, 2010. - ISBN 978-1-4244-5395-5. - p. 2153-2159. (in English)

- [22] SMIEŠKO, V. - KALUŠ, E.: Measurement and Effectivity of Transport of Electrical Energy. In: Power Engineering 2010. Energy, Ecology, Economy: 9th International Scientific Conference. Tatranské Matliare, Slovakia, 18.-20.5.2010. - Bratislava: STU, 2010. - ISBN 978-80-89402-23-6. - p. 84-85. (in English)
- [23] ŠMIGURA, D. - KRÁLIKOVÁ, E.: Virtual Oscilloscope in LabVIEW. In: ŠVOČ 2010: Proceedings of Selected Works. - Bratislava: FEI STU, 2010. - ISBN 978-80-227-3286-4. CD-Rom. (in Slovak)
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