

**DEPARTMENT OF RADIO AND ELECTRONICS**

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

**Head of Department**

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**I. STAFF**

Professors	Prof. Ing. Igor Baláž, DrSc., Prof. emeritus. Ing. Florián Makáň, PhD.
Associate Professors	Doc. Ing. Peter Hajach, PhD., Doc. Ing. Ján Hribík, PhD., Doc. Ing. Miloslav Hruškovic, PhD., Doc. Ing. Vladimír Kudják, PhD., Doc. Ing. Peter Kulla, PhD., Doc. Ing. Oldřich Ondráček, PhD., Doc. Ing. Peter Podhoranský, PhD.
Assistant Professors	Ing. Zdenko Brezovič, Ing. Elena Cocherová, PhD., Ing. Miroslav Hagara, Ing. Zuzana Krajčušková, Ing. Peter Kubinec, Ing. Marek Kukučka, PhD., Ing. Branislav Lojko, Ing. Marián Minárik, PhD., Ing. Jozef Petrek, PhD., Ing. Anna Přibilová, PhD., Ing. Jozef Púčík, PhD.
Research Workers	Ing. Ján Bezek, PhD., Ing. Vladimír Bilík, PhD., Ing. Peter Fuchs, PhD., Ing. Milan Košťál, PhD.
Technical Staff	Bohumil Frey, Ivana Prokopová, Gabriela Vránová (secretary), Edita Boďová
PhD. Students	Ing. Loránt Burián, Ing. Jozef Huska, Ing. Michal Lipovský, Ing. Stanislav Lovás, Ing. Michal Majchrák, Ing. Ján Zemanovič, Ing. Filip Krajčovič, Ing. Peter Šaštinský, Ing. Matúš Jendruch, Ing. Jozef Šurda

**II. EQUIPMENT**

**II.1 Teaching and Research Laboratories**

- Laboratory of Analog Circuits and Systems and Navigation
- Research Laboratory of Wireless Communication and Navigation
- Laboratory of RF Circuits and Systems
- Laboratory of Pulse Circuits
- Laboratory of Microwave Fundamentals
- Laboratory of Microwave Measurements
- Laboratory of Microwave Applications
- Laboratory of Antennas and Wave Propagation
- Laboratory of Radio Communication Technology
- Echoic Acoustical Chamber
- Laboratory of Electrical Power Calibration
- Laboratory of Electro acoustics
- Laboratory of Analog and Digital Television
- Laboratory of Audio Engineering
- Laboratory of Signal Processors and Microcontrollers
- Laboratory of Digital Circuits
- Research Laboratory of Audio and Video Technologies
- Laboratory of Medical Electronics Instrumentation

- Laboratory of Electronic Power Measurement
- Research Laboratory of Signal Processors and Microcontrollers Applications
- Laboratory of Signal Processing
- Laboratory of Electronic Devices and Circuits
- Laboratory of Electronic Measurement
- Laboratory of Biomedical Engineering
- Laboratory of PhD. Graduants and Students
- Research Laboratory in Medical Engineering

## II.2 Special Measuring Instruments and Measuring Systems

- Six-Port Reflectometers and Automatic Impedance Matching System for High-Power Industrial Applications
- European Customer Training Centre – Texas Instruments (DSP TMS320C2xx, TMS370, TMS320C5x, TMS320C6xxx, MSP430)
- Precise Registration / Calibration Electricity Meter
- Precise Digital Network Analyzer and Standard Meter PEM 6711

## III. TEACHING

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

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

Electronic Devices and Circuits	(3rd, 4th sem., 3-2h)	V.Kudjak
Signals and Systems	(4th sem., 3-2h)	O.Ondracek
Analog Circuits	(5th, 6th sem., 3-2h)	I.Balaz, M. Minarik
Microwave Techniques	(5th, 7th sem., 3-2h)	P.Hajach
Radio Communication Techniques	(5th sem., 2-2h)	P.Podhoransky
Bachelor Project I	(5th, sem., 0-4h)	O.Ondracek
Electronic Circuits	(5th sem., 3-2h)	P.Kulla
Digital and Pulse Circuits	(6th sem., 3-2h)	M.Hruškovic
Audio and Video Technique	(6th sem., 2-2h)	A.Přibilova, P.Kulla
Bachelor Project II	(6th sem., 0-8h)	O.Ondracek
Final Project I I	(8th sem., 0-8h)	O.Ondracek
Microcontrollers	(8th sem., 2-2h)	P.Fuchs

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

Digital Signal Processing	(1st sem., 3-2h)	O.Ondracek
Medical Electronic Transducers, Circuits and Equipment	(1st sem., 3-2 h)	M.Kukučka
Biophysics	(1st sem., 3-2 h)	E.Cočerova
Circuits of Radio-communication Systems	(1st sem., 3-2 h)	V. Kudjak
Applied Electroacoustics	(1st sem., 3-2 h)	A. Přibilova
Diploma Project I	(1st sem., 0-6h)	V.Kudjak,

Radio-communication	(2nd sem, 3-2h)	O.Ondráček J. Petrek
Applied Electroacoustics	(2nd sem., 3-2h)	A.Přibilová
Microcontrollers	(2nd sem., 3-2h)	P.Fuchs
Radionavigation Systems	(2nd sem., 3-2h)	M.Minárik
Digital Signal Processors	(2nd sem., 3-2h)	P.Fuchs
Analyses of Biosignals and Systems	(2nd sem., 3-2h)	J.Pučík
Diploma Project II	(2nd sem., 0-6h)	V.Kudják, O.Ondráček
Analog and Digital Television	(3rd sem., 3-2h)	P.Kulla
Team Project	(3rd sem., 0-8h)	V.Kudják, O.Ondráček
Radio-communication Technologies and Networks	(3rd sem., 3-2h)	J.Petrek
Diploma Project III	(3rd, 4th sem., 0-6h)	V. Kudják, O.Ondráček

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

Microprocessor Systems	B. Lojko
Bachelor Project II	O. Ondráček
Diploma Thesis	O. Ondráček
Applied Electronics	J. Hribik
Computer Networks	S. Lovás
Digital Signal Processing	O. Ondráček
Team Project I	J. Pučík

### IV. RESEARCH PROJECTS

- Progressive Digital Processing Methods of Non-Deterministic Video Signals and Biomedical Signals with Direct Application in Modern Systems of Signals Digital Processing and Visualisation. VG-1/3107/06, P.Kulla
- Screening Capacitance Microscope with High Sensitivity and Resolution, and with Sensing Head Controlled by Lateral Forces. VEGA č. 2/5097/25 (J. Hribik)
- CWFM Signals Creation and Research of Influence on Biological Objects; Technical and Environmental Approach. VG 1/3093/06, I.Baláž
- Design of Progressive Algorithms for the Radio-Communication Network Topology Optimisation with the Use of Digital Map Terrain of the Slovak Republic. 1/2047/05 VEGA, J.Petrek
- Evoked Potentials and Iridoscope, AV 4/1010/05, M.Kukučka
- Modern Methods of Digital Signal Processing in Radio Electronics, Biomedicine, Electronic Measurement, Multimedia and Vehicular Technology, AV-4/0012/07, P.Fuchs
- Modern Systems of Signal Processing Applications in Audio-Video Technique – Part Audio (A. Přibilová)
- AMR and PLC Communication (P.Podhoranský)

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- Modern Systems of Signal Processing Applications in Audio-Video Technique – Part Video (P.Kulla)
  - Power Amplifiers Analysis for Calibration Stations (J.Hribik)
  - Digital 3-Phase Calibration Electricity Meter with DSP TMS320C6711 (P.Fuchs)
  - Single Phase Electricity Meter with Micro-Controller MSP430FE427 (P.Fuchs)
  - Electronic Calibration Station EKS 05-3 (P.Fuchs)
  - Frequency Synthesis in the LERA Transceiver by the DAFC (P.Fuchs)
  - Digital Frequency Locked Loop with High Spectral Purity (P.Fuchs, B.Lojko)
  - Control Application Based on GSM, GPS and USB Technology (P.Fuchs, B.Lojko)
  - Adaptive Noise Canceling of the Acoustic Signal (P.Fuchs, L.Burián)
  - Aviation Radio Station “LERA TRX 1.5S” (P. Fuchs, B. Lojko)
  - Digital Calibration and Registration Electricity Meter (P. Fuchs, J. Hribik)

**Collaboration:**

- Aeronautical Station LERA TRX 1.5S (LOBB, Banská Bystrica)
- Digital Calibration/Registration Electricity Meter (Křížik GBI, JSC, Prešov)
- Electronic Calibration Station EKS-03 (Applied Meters, JSC, Prešov)
- Methods and System for Image Information Processing by Signal Processor TMS320C3x in Real Time (I.S.E.P. Paris)

**V. COOPERATION**

**V.1 Cooperation in Slovakia**

- Applied Meters, jsc
- ANDIS Ltd. Bratislava
- AMSET Ltd., Bratislava
- Centre of Acupuncture, Bratislava
- HIS SENZOR Ltd., Prešov
- Institute of Physics, Slovak Academy of Sciences, Bratislava
- Institute of Measurement, Slovak Academy of Sciences, Bratislava
- Institute of Molecular Physiology and Genetics, Slovak Academy of Sciences, Bratislava
- Institute of Metrology Bratislava
- LOBB, Banská Bystrica
- Main Data, Bratislava
- Mediatech, Bratislava
- National Academy of Defence, Liptovský Mikuláš
- National Security Institute, Bratislava
- PHILIPS Slovakia, Bratislava
- PRIUS, Bratislava
- Prof. Dérer Hospital, Bratislava
- RACOM, Slovakia
- SATRO Ltd., Bratislava
- Slovak Broadcasting Corporation, Bratislava
- Slovak Institute of Technical Normalization, Bratislava
- Slovak Telecommunications / Radiocommunications, Bratislava
- Slovak Television, Bratislava
- MIRONIX Bratislava
- Special Software and Systems, Bratislava
- Telecommunication Office SR, Bratislava
- T-Mobile
- University of Technology, Košice
- University of Technology, Žilina
- VÚS, Banská Bystrica

- ZPA Křížik GBI jsc, Prešov

## V.2 International Cooperation

- AS Crystal, Hradec Králové, CzR
- Czech Technical University, Prague, CzR
- GAČR, Prague, CzR
- IBME Brno, CzR
- Institut für Allgemeine Physik, TU Vienna, Austria
- Laboratory for Biomedical Informatics, Delft, Netherland
- Muegge Electr., GmbH, Germany
- PHILIPS, Components Center Vienna, Austria
- Technical University Brno, CzR
- Technical University Ostrava, CzR
- Texas Instruments, Inc, USA
- University of Applied Sciences, Heilbronn, Germany
- Universite de Nantes, France
- URE AV CzR, CzR
- URSI Prague, CzR
- UTIA AV CzR, CzR
- TRICOM GmbH, Freising, Germany

## V.3 Membership in International Organizations and Societies

- I.Baláz: URSI, Union Radio-Scientifique Internationale, Member of NC
- I.Baláz: IEEE, The Institute of Electrical and Electronics Engineers, Member
- Z.Krajčušková: URSI, Scientific Secretary
- V. Kudják: IEEE, The Institute of Electrical and Electronic Engineers, Member
- P.Kulla: IET, The Institution of Engineering and Technology, Fellow
- J.Hribik, O. Ondráček, Z. Krajčušková: Radioengineering, Proc. of Czech and Slovak Technical Universities and URSI Committees, Members of Editorial Board, IEEE
- O.Ondráček: Acta Electrotechnica et Informatica, Proc. of TU Košice, Member of Editorial Board

## VI. THESES

### VI.1 Masters Theses

Masters theses supervised at the Department of Radio and Electronics. The names of supervisors are in brackets.

- [ 1] Peter Dvořák: Evaluation of Electromagnetic Fields Using FDTD Method (E.Cocherová)
- [ 2] Ondrej Gallo: Digital Reverberators.(O.Ondráček)
- [ 3] J. Hudcovič: Development and Testing of a Device for Temperature Stabilization of Two Isolated Blocks (I. Zahradník)
- [ 4] L. Iskerka: Measurement of Telescreen Deflection Characteristic (M. Hagara)
- [ 5] J.Janák: Power Meter Based on Time Division Multiplier (J.Hribik)
- [ 6] M.Jendruch: Automatic Solution Exchange System for Electrophysiological Experiments (P.Novák, I. Zahradník)
- [ 7] M.Kapusta: Digital Signal Processing in Electrophysiological Experiment (P.Novák, I. Zahradník)
- [ 8] R. Kotrusz: Low Frequency Oscilloscope with Signal Processor ADSP-218 (Z.Brezovič)
- [ 9] M. Kotulič: Biosignal Acquisition Based on Microconverter ADuC812 (J.Půčik)
- [10] M. Kozina: VOG Application in Medical Diagnostics (M.Kukučka)
- [11] F. Krajčovič: Receiver with PLL for Radio Controlled Models (Z. Brezovič)

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- [12] M.Lences: Applications of Transmission Line Models (A. Križanová)
  - [13] S. Marček: Apparatus for Measurement of Sportsman's Special Disjunctive Reactive-Flick Abilities (I. Krajčůška, P. Miklovič)
  - [14] R. Mizerák: Reliability and Calculation Reliability Parameters Using Monte Carlo Method (Z. Krajčůšková)
  - [15] O. Pindroch: MSP430F169 Evaluation Board (B. Lojko)
  - [16] P.Sabaka: Image Cryptography for Multimedia (P.Kulla)
  - [17] P. Sahajda: Frequency Synthesis in LERA Transceiver Based on the DAFC System Controlled by Microcomputer (B.Lojko)
  - [18] P.Solár: Vacuum Tube Model Implementation to PSpice Software and DSP Simulation with TMS320 Processors (P. Podhoransky)
  - [19] A.M.Sultan: Filters for ECG Digital Signal Processing (O.Onráček)
  - [20] A.Susko: Device for Measurement of Telescreen Deflection Characteristic (M.Hagara)
  - [21] A.Sebo: Active Electrodes for Biosignal Measurement (J. Púčik)
  - [22] I. Tlášek: Voice Conversion for LPC Speech Model (M. Přibilová)

## **VII. OTHER ACTIVITIES**

- Co-organizing of the 17<sup>th</sup> International Conference Radioelektronika 2007. Brno, April 24-25, 2007

## **VIII. PUBLICATIONS**

### **VIII.1 Journals**

- [1] HORŇÁK, P., KOŠŤÁL, M.: Which Brightnesmeter is Appropriate for Official Measurement? In: Jemná mechanika a optika. - ISSN 0447-6441. - Vol. 52, No. 9 (2007), p. 257-261. (in Slovak)
- [2] HUSKA, J., KULLA, P.: Content Adaptive True Motion Estimator for H.264 Video Compression. In: Radioengineering. - ISSN 1210-2512. - Vol. 16, No. 4 (2007), p. 68-75. (in English)
- [3] KOTHAJ, P., KOŠŤÁL, M.: Sound Field Simulation in the Room. In: EE časopis pre elektrotechniku a energetiku. - ISSN 1335-2547. - Vol. 13, No. 6 (2007), p. 36-38. (in Slovak)
- [4] LÁNYI, Š., NÁDAŽDY, V., HRUŠKOVIC, M., HRIBIK, J.: Sub-Micrometre-Scale Analysis of Defects in Semiconductors and Dielectrics. In: Jemná mechanika a optika. - ISSN 0447-6441. - Vol. 52, No. 10 (2007), p. 290-292. (in English)

### **VIII.2 Conference Proceedings**

- [1] BALÁŽ, I., MINÁRIK, M., ŠTOFANIK, V.: Crystal Oscillator Design for Using in Sensor Technique. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 427-429. (in English)
- [2] BILÍK, V., HUTIRA, F., BEZEK, J.: Two-Probe Coaxial-to-Coplanar Dual Directional Coupler for 2.45-GHz ISM Measurement Application. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 303-306. (in English)
- [3] BORIŠ, M., HRUŠKOVIC, M.: Switch Mode Power Supply Source 2x50 V/350W for Power Amplifier Supply. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU,

2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)

- [4] BREZOVIČ, Z., KUDJÁK, V.: Extraction Parameters of Quartz Equivalent Circuit in Matlab. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 385-388. (in English)
- [5] BREZOVIČ, Z., KUDJÁK, V.: Two Types of Flexible Oscillators for Measurement of Serial and Parallel Resonators. In: ELITECH '07. 9th Conference for PhD Students Electrical Engineering and Information Technology: Bratislava, Slovak Republic, 16.5.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2655-9. - CD-Rom. (in English)
- [6] BRTÁNYI, P., KUDJÁK, V.: Receiving of DRM Signals on AM Broadcast Bands. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [7] GRAJCIAR, B., ONDRÁČEK, O., PÚČIK, J.: Methods for Increasing Measurement Depth in Fourier Domain OCT. In: Applied Electronics 2007: International Conference. Pilsen, Czech Republic, 5.-6.9.2007. - Pilsen: University of West Bohemia, 2007. - ISBN 987-80-7043-537-3. - p. 61-63. (in English)
- [8] HOMBAUER, M., BALÁŽ, I.: Short Range Radar Systems Applications. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [9] HRIBIK, J., HRUŠKOVIC, M.: Power Supply Source for Class TD Power Amplifiers. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 105-108. (in English)
- [10] HRUŠKOVIC, M., HRIBIK, J.: Digital Capacitance and Inductance Meter. In: Measurement 2007: Proceedings. 6th International Conference. Smolenice, Slovak Republic, 20.-24.5.2007. - Bratislava: Institute of Measurement Science Slovak Academy of Sciences, 2007. - ISBN 978-80-969672-0-9. - p. 237-240. (in English)
- [11] HUSKA, J., KULLA, P.: A New Block Based Motion Estimation with True Region Motion Field. In: EUROCON 2007. International Conference on Computer as a Tool: Warsaw, Poland, 9.-12.9.2007. - Warsaw: Institute of Electrical and Electronics Engineers, 2007. - p. 182-188. (in English)
- [12] HUSKA, J., KULLA, P.: A New Recursive Search with Multi Stage Approach for Fast Block Based True Motion Estimation. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 227-232. (in English)
- [13] HUSKA, J., KULLA, P.: Adaptive Image Regions Segmentation Based on Motion Estimation Confidence. In: ELITECH '07. 9th Conference for PhD Students Electrical Engineering and Information Technology: Bratislava, Slovak Republic, 16.5.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2655-9. - CD-Rom. (in English)
- [14] HUSKA, J., KULLA, P.: Possibilities of Motion Vectors Interpolation in Block Based Motion Estimation for 4.264 Video Compression. In: TRANSCOM 2007: Section 3. Information and Communication Technologies. 7th European Conference of Young Research and Scientific Workers. Žilina, Slovak Republic, 25.-27.6.2007. - Žilina: University of Žilina, 2007. - p. 95-98. (in English)

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- [15] JANÁK, J., HRIBIK, J.: Power Meter Based on Time Division Multiplier. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [16] JUS, M., ONDRÁČEK, O., PÚČIK, J.: Digital Group Delay Equalizer. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 479-482. (in English)
- [17] KAPUSTA, M., NOVÁK, P., ZAHRADNÍK, I., COCHEROVÁ, E.: Digital Data Processing and Control of Electrophysiological Experiment by Use of DSP. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [18] KRAJČUŠKOVÁ, Z.: Software Reliability Models. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 399-402. (in English)
- [19] KRAJČUŠKOVÁ, Z., KUKUČKA, M.: The Study Programm Radioelectronics in Magister Degree - Block of Biomedical Engineering. In: Trends in Biomedical Engineering: Kladno, Czech Republic, 11.-13.9.2007. - Prague: ČVUT, 2007. - p. 37-39. (in Slovak)
- [20] KUDJÁK, V., BREZOVIČ, Z.: A Flexible Oscillator for Measurement of Varactor-Tuned Resonator. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 59-62. (in English)
- [21] KUKUČKA, M., KRAJČUŠKOVÁ, Z.: Design of Advanced Experimental Fuzzy Diagnostic System. In: Trends in Biomedical Engineering: Kladno, Czech Republic, 11.-13.9.2007. - Prague: ČVUT, 2007. - p. 262-265. (in English)
- [22] KUKUČKA, M.: Design of Experimental Fuzzy Diagnostic System. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 499-502. (in English)
- [23] KULLA, P., SABAKA, P., HUSKA, J.: Simple Possibilities of 2D DCT Application in Digital Monochrome Image Cryptography. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - CD-Rom. (in English)
- [24] LÁNYI, Š., NÁDAŽDY, V., HRUŠKOVIC, M., HRIBIK, J.: Nanoscale Analysis of Defects in Semiconductors by Means of Capacitance- and Charge- Transient Spectroscopy. In: Book of Abstracts E-MRS 2007 Fall Meeting: Warsaw, Poland, 17.-21.9.2007. - Warsaw: University of Technology, 2007. - p. 244. (in English)
- [25] LIPOVSKÝ, M., ZEMANOVIČ, J., PODHORANSKÝ, P.: Design of Modem for Power Communication. In: ELITECH '07. 9th Conference for PhD Students Electrical Engineering and Information Technology: Bratislava, Slovak Republic, 16.5.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2655-9. - CD-Rom. (in English)
- [26] LIPOVSKÝ, M., ZEMANOVIČ, J., PODHORANSKÝ, P.: Modem for Power Line Communication. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 91-96. (in English)
- [27] LOJKO, B.: Contribution to the Design of a Frequency Synthesizer for Fast Frequency-Hopped Spread-Spectrum Systems. In: Radioelectronics 2007: Proceedings of 17th International



- Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 413-418. (in English)
- [28] LOVÁS, S., ONDRÁČEK, O.: Time-Frequency Analysis of Biosignals. In: ELITECH '07. 9th Conference for PhD Students Electrical Engineering and Information Technology: Bratislava, Slovak Republic, 16.5.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2655-9. - CD-Rom. (in English)
- [29] LOVÁS, S., PÚČIK, J., ONDRÁČEK, O.: Time-Frequency Detection of Epileptic Spikes. In: ECS'07. 6th Electronic Circuits and Systems Conference. Bratislava, Slovak Republic, 6.-7.9.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2697-9. - p. 149-153. (in English)
- [30] MAJCHRÁK, M., LOVÁS, S., FUCHS, P.: Automated Workplace for Measurement of Directional Characteristics of Microphones. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 97-100. (in English)
- [31] MAJCHRÁK, M., FUCHS, P.: New Methods in Measuring of Directional Characteristics of Microphones. In: ELITECH '07. 9th Conference for PhD Students Electrical Engineering and Information Technology: Bratislava, Slovak Republic, 16.5.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2655-9. - CD-Rom. (in English)
- [32] MAJCHRÁK, M., HEINDRICH, J., FUCHS, P., HOSTÝN, V.: Single Phase Electricity Meter Based on Mixed-Signal Processor MSP430FE427 with PLC Modem. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 419-422. (in English)
- [33] MARČEK, S., KRAJČUŠKOVÁ, Z.: Apparatus for Measurement of Sportmann's Reactive-Flick Abilities. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [34] NOVÁK, P., HRIBIK, J.: Low-Frequency Digital Phase Meter. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [35] ONDÍK, V., FUCHS, P.: Modifications of Three Phase Electricity Meter PEM6711. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [36] PETREK, J.: An Algorithm for Repeater Station Placement. In: Mechatronics 2007: Proceedings of 10th International Symposium. Trenčianske Teplice, Slovak Republic, 6.-8.6.2007. - Trenčín: Univerzita Alexandra Dubčeka, 2007. - ISBN 978-80-8075-210-1. - p. 127-131. (in English)
- [37] PINDROCH, O., LOJKO, B.: MSP430F169 Evaluation Board. In: Applied Electronics 2007: International Conference. Pilsen, Czech Republic, 5.-6.9.2007. - Pilsen: University of West Bohemia, 2007. - ISBN 987-80-7043-537-3. - p. 151-154. (in English)
- [38] PINDROCH, O., LOJKO, B.: MSP430F169 Evaluation Board. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in English)
- [39] PODHORANSKÝ, P., KUBINEC, P.: Concept of Compact Disc System Properties Education. In: Applied Electronics 2007: International Conference. Pilsen, Czech Republic, 5.-6.9.2007. - Pilsen: University of West Bohemia, 2007. - ISBN 987-80-7043-537-3. - p. 155-158.

(in English)

- [40] PODHORANSKÝ, P., LIPOVSKÝ, M., MAJCHRÁK, M., ZEMANOVIČ, J.: Harmful Interference of Switching Power Supplies in the LonWorks Power Line Communication Systems. In: Applied Electronics 2007: International Conference. Pilsen, Czech Republic, 5.-6.9.2007. - Pilsen: University of West Bohemia, 2007. - ISBN 987-80-7043-537-3. - p. 159-162. (in English)
- [41] PODHORANSKÝ, P., LIPOVSKÝ, M., ZEMANOVIČ, J.: Power Line Transmission Channel Properties and Their Influence to the Transfer Rate of the LonWorks Systems. In: ELITECH '07. 9th Conference for PhD Students Electrical Engineering and Information Technology: Bratislava, Slovak Republic, 16.5.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2655-9. - CD-Rom. (in English)
- [42] PODHORANSKÝ, P., LIPOVSKÝ, M., ZEMANOVIČ, J., SABO, M.: Transfer and Error Rate Measurement in the Lon Works Power Line Communication Systems. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 441-443. (in English)
- [43] PŘIBIL, J., PŘIBILOVÁ, A.: Application of Speaking Style Conversion in the Czech and Slovak TTS System with Cepstral Description. In: 2007 IWSSIP & EC-SIPMCS. 14th International Workshop on Systems, Signals & Image Processing and EURASIP Conference Focused on Speech & Image Processing, Multimedia Communications & Services: Maribor, Slovenia, 27.-30.6.2007. - Maribor: University of Maribor, 2007. - ISBN 978-961-248-029-5. - p. 289-292. (in English)
- [44] SOLÁR, F., PODHORANSKÝ, P.: Vacuum Tube Model Implementation to PSpice Software and DSP Simulation with TMS320 Processors. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [45] ŠÍRA, K., BREZOVIČ, Z.: Module for Radio Frequency Identification. In: ŠVOČ 2007. Bratislava, Slovak Republic, 25.4.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2650-4. - CD-Rom. (in Slovak)
- [46] ŠTOFANIK, V., BALÁŽ, I., MINÁRIK, M.: Dual-Mode Crystal Oscillator with Simultaneous Excitation of Two Overtones in a Stress Compensated Quartz Resonator. In: TimeNow '07: European Frequency and Time Forum. Geneva, Switzerland, 29.5.-1.6.2007. - Piscataway: IEEE, 2007. - p. 227-229. (in English)
- [47] ŠURDA, J.: Spectral Analysis of ECG Signal. In: ELITECH '07. 9th Conference for PhD Students Electrical Engineering and Information Technology: Bratislava, Slovak Republic, 16.5.2007. - Bratislava: STU, 2007. - ISBN 978-80-227-2655-9. - CD-Rom. (in English)
- [48] ŠURDA, J., LOVÁS, S., PÚČIK, J., JUS, M.: Spectral Properties of ECG Signal. In: Radioelectronics 2007: Proceedings of 17th International Conference. Brno, Czech Republic, 24.-25.4.2007. - Brno: VUT, 2007. - ISBN 978-80-214-3390-8. - p. 537-541. (in English)

### VIII.3 Book

- [1] ONDRÁČEK, O., COCHEROVÁ, E., GAŠPARÍK, I., PÚČIK, J.: Numerical Processing of Signals. Biosignals. - Bratislava: STU, 2007. - 313 p. - ISBN 978-80-227-2695-5. (in Slovak)

### **VIII.3 Part of book**

- [1] PŘIBIL, J., PŘIBILOVÁ, A.: Emotional Style Conversion in the TTS System with Cepstral Description. In: Verbal and Nonverbal Communication Behaviours. - Berlin Heidelberg: Springer Verlag, 2007. - ISBN 978-3-540-76441-0. - p. 65-73. (in English)