

# EEICT 2011

## Obsah

## Předmluva

## Magisterské projekty

### Elektronika a komunikace

#### Čapek, L.

Wireless Sensoric Network for Hop Drying Facility .....

#### Havelka, M.

Planar Antenna Array for Receiving the Digital TV Signal .....

#### Juhás, M.

Control and Diagnostic System for I2C Bus .....

#### Kopecký, P.

Automatization of EM Field Measurement by Narda NBM-550 .....

#### Kopeček, P.

Adjustable Square - Triangle Wave Generetor .....

#### Králíček, M.

Wireless Thermostat .....

#### Kubík, M.

Design of Fully-Differential Filters with Synthetic Higher-Order Elements .....

#### Macíček, O.

Design of Flow, Temperature and Pressure Measuring System .....

#### Nečesaný, J.

Experimental Realization of PC Monitor Through USB .....

#### Novotný F.

Creation Real-Time IMS Application .....

#### Nowak, D.

Adaptive OFDM .....

#### Pitner, I

Remote Wake-On-Lan .....

#### Poliak, J.

Effect of Optical Elements on Transmitted Laser Beam .....

#### Svoboda, L.

Local Flood Early Warning System .....

#### Vožda, M.

Microprocessor Controlled Measurement and Control Temperature .....

#### Záplata, F.

Signal Processing Algorithms on AVR32 Platform .....

## **Zpracování signálů, obrazu a dat**

**Bartl, M.**

Acceleration of Signal Processing Using GPU .....

**Baše, M.**

Detection of Blood-Vessel Bifurcations in Retinal Images .....

**Červenec, R.**

Identifying Expression of Emotions in Czech Text .....

**Deyneka, A.**

Stochastic and Deterministic Adaptation Algorithms of Equalization Process in Digital Communication Systems .....

**Dvořák, P.**

Object Description in Images .....

**Kulig, T.**

Realization of Hand-Held Digital Oscilloscope .....

**Kurc, D.**

Noise Source Identification Using Beamforming .....

**Miksl, J.**

Electronically Adjustable Oscillator Employing Commercially Accessible Current Mode Multipliers .....

**Novotný, P.**

Signal Processing in Low-Coherence Interferometry .....

**Podlipná, P.**

Multimodal Retinal Image Registration .....

**Svoboda, T.**

Detection, Localization and Recognition of Traffic Signs .....

**Šikula, V.**

Retinal Image Registration Using Phase Correlation .....

**Štraus, P.**

FPGA Based Remote Sensing A/D Module .....

**Toufarová, T.**

Room Acoustical Parameters Measurement for Evaluation of Musical and Speech Qualities .....

**Uher, V.**

Tool for Mining Images Using a Low Level Features .....

**Val'ko, T.**

Biologically Inspired Methods of Object Recognition .....

## **Kybernetika a automatizace**

**Bastl, J.**

Online 3D Reconstruction .....

**Bastl, P.**

Eye Gaze Tracking .....

<b>Gábrlík, P.</b>	Quadrocopter - Stabilisation and Control .....
<b>Graf, M.</b>	Model Predictive Control of Surface Permanent Magnet Synchronous Motors .....
<b>Luža, R.</b>	Detection of Collision of Robotic Gripper Fingers with Obstacle .....
<b>Mikšík, O.</b>	Road Detection in an Outdoor Environment .....
<b>Mlatecová, H.</b>	Optical Proximity Sensor with Time-of-Flight Measuring Principle .....
<b>Píkula, S.</b>	Software for Measuring Track .....
<b>Raso, P.</b>	Wireless Sensor Network for Measurement of Soil Water Potential .....
<b>Sárközy, I.</b>	Control System for Small Mobile Robot .....
<b>Šimák, J.</b>	Flow Measurement of Air by Multiport Averaging Pitot Probes .....
<b>Španihel, P.</b>	Function Generator .....
<b>Vaňková, T.</b>	Adaptive Controller with Principles of Artificial Intelligence and Its Comparison with Classical Identifications Methods .....
<b>Vomočil, J.</b>	Quadrocopter - Control and Communication Unit .....

## **Silnoprúdová elektrotechnika a elektroenergetika**

<b>Fajkus, P.</b>	Mathematical Model of Synchronous Motor with Permanent Magnet .....
<b>Kubenka, M.</b>	Equivalent Magnetic Circuit of Permanent Magnet Synchronous Motor .....
<b>Mišinger, L.</b>	Practical Industrial Usage of Teflon Added Materials in Slide Contact .....
<b>Ondruš, T.</b>	Genetic Algorithm Design for Distribution Network Outfits Optimization .....
<b>Prudík, M.</b>	DC/DC Converter for Motor Bike .....
<b>Strmeň, M.</b>	Temperature Analysis of Elektric Machines .....
<b>Štaud, S.</b>	Switched Resonant Power Supply .....
<b>Trnka, Z.</b>	Cooling of Electrical Machines - Circulation .....

**Vetiška, V.**  
Mers Recovery Circuits from Power Factor Corrector .....

## **Teoretická elektrotechnika, fyzika a matematika**

**Myška, R.**  
Magneto-Optic Sensor for Measuring High-Level Currnt Pulses .....

## **Mikroelektronika a technologie**

**Baťa, D.**  
Effect of UV Radiation on the Electrical Properties of Modifed Oligobutadienes ...

**Belko, J., Gótz, L.**  
Network Connection Application of Measurement Instruments in Technical Diagnostics .....

**Cieslar, J.**  
Remotely Controlled Wokrplace Of Electrochemical Sensors .....

**Krátký, S.**  
Properties Study of Periodic Gratings Prepared by Electron-Beam Lithography ....

**Máca, J.**  
Decreasing Melting Point of Sulfolane Electrolytes .....

**Nezval, T.**  
Electronic Attendance Book .....

**Paščínský, J.**  
Influence of Curing Parameters on the Properties of Insulating Varnishes .....

**Spohner, M.**  
Study of Perspective Insulating Liquids Properties .....

**Svoboda, L.**  
Data Acquisition System with SD Card .....

**Svoboda, M.**  
Influence of Pressure and Admixture in Lead-Acid Batteries for Hybrid Electric Vehicles .....

**Szabó, J.**  
Improving of Use Properties of Lead-acid Accumulator .....

## **Biomedicínské inženýrství a bioinformatika**

**Blatný, M.**  
The EEG Biofeedback .....

**Fejgl, M.**  
Focusion of Eyes on Characteristic Component of Visual Perception .....

**Vogel, I.**  
Modified Methods for Constructing Phylogenetic Trees of Predefined Groups .....

## **Informační systémy**

**Černý, M.**

IPv6 Modelling in OMNeT++ .....

**Grešša, P.**

Mutli-Dimensional Access Control in Web Applications .....

**Horník, J.**

Language C Compiler Back-end for Soft-core Microcontroller .....

**Janošík, P.**

Decision Risks Management Methods .....

**Machů, P., Martinásek, Z.**

The New Side Channels in Cryptography .....

**Olšarová, N.**

Component Interconnection Inference Algorithm .....

**Pešek, M.**

Trajectory Outlier Detection in Moving Objects Data .....

**Sopuch, Z.**

Parallel Cocke-Younger-Kasami-Based Parsing .....

**Szkandera, J.**

Processor of TSQL2 on Post-Relational Databases in Oracle Database .....

**Volf, T.**

The Universal Wiki System .....

## **Grafika a multimédia**

**Angelov, M.**

Mobile Augmented Reality in Commercials .....

**Král, J.**

Dimensionality Reduction by Phonotactic Intersession Variation Compensation Model for Image Classification .....

**Micenková, B.**

A System for Verification of Authenticity of Stamps in Documents .....

**Nohejl, P.**

Augmented Reality 3D Engine for Smartphones .....

**Pilch, M.**

Simulation of Water Waves in Real-Time .....

**Sojma, Z.**

Interactive Offline Tracking System for Generic Color Objects .....

**Szentandrás, I.**

Modern Methods of Realistic Lighting in Real Time .....

**Vaňhara, J.**

Segmentation of Ultrasound Images for Visual Diagnosis .....

**Zahrádka, J.**

Augmented User Interface .....

## Počítačové systémy

<b>Bartoš, V.</b>	Optimization of Entropy-based Method for Network Anomaly Detection .....
<b>Drahoš, V.</b>	Server for Automatic IPv6 Tunnel Connectivity .....
<b>Gazda, M.</b>	The Design of Minimal Bluetooth Stack .....
<b>Charvát, L.</b>	A CPU Emulator for Course of Assembly Languages .....
<b>Malčík, D.</b>	Microscopic Analysis of Chips Security .....
<b>Martínek, R.</b>	Validation of Network Parameters Based on Network Monitoring .....
<b>Matoušek, J.</b>	FPGA-Based Packet Generator .....
<b>Pavlatá, K., Mraz, L.</b>	Smart Gateway for Wireless Sensor Networks .....
<b>Petrlík, J.</b>	Multiobjective Cartesian Genetic Programming .....
<b>Šimková, M.</b>	Hardware Accelerated Functional Verification .....

## Intelligentní systémy

<b>Benda, O.</b>	Genetic Programming Based Approximation .....
<b>Hohn, M.</b>	Artificial Immune Systems for Spam Detection .....
<b>Koreň, M.</b>	A Tool for Administration of the Company Product Portfolio .....
<b>Lisák, P.</b>	Human Recognition by Finger Veins .....
<b>Mališ, R.</b>	Evolutionary Solving of the Rubik's Cube .....
<b>Pešán, J.</b>	Speaker Recognition on the Mobile Phone .....
<b>Šanda, P.</b>	Determination of the Basic Shape of the Words .....
<b>Šikulová, M.</b>	Symbolic Regression Using Cartesian Genetic Programming .....
<b>Žoldoš, P.</b>	The Application to Display Wireless Network Model .....