
SISY 2007 Technical Program

August 23, 2007, Thursday

**18:30 OFFICIAL OPENING CEREMONY OF COMPUTER LABOR DONATED TO POLYTECHNICAL
ENGINEERING COLLEGE IN SUBOTICA BY BUDAPEST TECH
WELCOME RECEPTION**

August 24, 2007, Friday

Town Hall

*address: Gradska kuca
Trg Slobode 1.
Svečana sala*

**9:00 – 9:15 GREETINGS TO MULTIMEDIA CONFERENCE TO BE HELD IN BUDAPEST
Videoconference connection to Budapest**

9:15 – 9:30 OPENING CEREMONY

9:30 – 10:10 PLENARY SESSION I
Context Dependent Reconstructive Communication by Fuzzy Trees
László T. Kóczy

Session Chair: *Imre J. Rudas*

10:10 – 10:50 PLENARY SESSION II
Applications of Pseudo-Analysis on Models with Nonlinear Partial Differential Equations
Endre Pap

Session Chair: *János Fodor*

10:50 – 11:00 COFFEE BREAK

11:00 – 11:40 PLENARY SESSION III
Combined On/Offline ECG Monitoring and Heart Rate Analysis
Michael Domijan, Erika Domijan

Session Chair: *Aleksandar Takači*

11:40 – 12:20 PLENARY SESSION IV
Autonomous 3D Model Reconstruction and Its Intelligent Applications in Vehicle System Dynamics –
Theory and Applications
Annamária R. Várkonyi-Kóczy

Session Chair: *Endre Pap*

12:20 – 14:20 LUNCH

Polytechnical Engineering College

address: Marka Oreskovica 16

- 14:20 – 16:00 **Session INFORMATICS I** **Room A**
Session Chair: *Márta Takács*
- 14:20 – 14:40 Entropy and Gaussianity - Measures of Deterministic Dynamics of Heart Rate and Blood Pressure Signals of Rat
Tatjana Loncar-Turukalo, Snezana Milosavljevic, Olivera Sarenac, Nina Japundzic-Zigon, Dragana Bajic
- 14:40 – 15:00 Password - a Form of Authentication
Petar Cisar, Sanja Maravic Cisar
- 15:00 – 15:20 Automated Extraction of Decision Rules from Medical Databases – A Rough Sets Approach
Vladimir Brtka, Ivana Berkovic, Edith Stokic, Biljana Srdic
- 15:20 – 15:40 Heart Rate Analysis and Telemedicine: New Concepts & Maths
S. Khoór, Istvan Kecskés, I. Kovács, Daniel Verner, Arnold Remete, Peter Jankovich, Rudolf Bartus, Nandor Stanko, Norbert Schramm, Michael Domijan, Erika Domijan
- 15:40 – 16:00 Audio System Controlling Protocol with AES3
Péter Kaszás, Tibor Szakáll, Ákos Székács, Szabolcs Divéki
- 14:20 – 16:20 **Session COMPUTATIONAL INTELLIGENCE and INTELLIGENT MANUFACTURING Room B**
Session Chair: *László T. Kóczy*
- 14:20 – 14:40 Consistent Aggregation in Fuzzy Set Theory
János Fodor
- 14:40 – 15:00 Easy and Cheap AC Device for Softcomputing Realization
Istvan Proisinger, Nandor Burany, Peter Odry
- 15:00 – 15:20 On Axiomatization of Fuzzy Logic
Aleksandar Perović, Maja Jovanović, Aleksandar Jovanović
- 15:20 – 15:40 Fuzzyfication and Measurement Using Stochastic Approach
Károly Nagy, Vladimir Vujicic, Zoran Mitrovic, Márta Takács
- 15:40 – 16:00 Functional Programming in Embedded Systems and Soft Computing
Anita Szabó, Norbert Sram
- 16:00 – 16:20 Functional and Parametrical Self Adjustment in Analogue Circuit
György Györök
- 16:20 – 16:40 **COFFEE BREAK**
- 16:40 – 18:20 **Session MATHEMATICAL BASE OF COMPUTATIONAL INTELLIGENCE** **Room A**
Session Chair: Endre Pap
- 16:40 – 17:00 A Note on Pseudo Riemann-Stieltjes Integral
Ivana Štajner-Papuga, Tatjana Grbić and Martina Daňková
- 17:00 – 17:20 Comparing Priority, Weighted and Queries with Threshold in PFSQL
Aleksandar Takači, Srdjan Škrbić

17:20 – 17:40 Nonlinear Partial Differential Equations and Superposition Principle

Nebojša M. Ralević

17:40 – 18:00 Comparison of Convolutional-based Interpolation Techniques in Digital Image Processing

Miklós Póth

18:00 – 18:20 A Recursive Solution Concept for Multichoice Games

Fabien Lange, Michel Grabisch

16:40 – 18:20 **Session INTELLIGENT ROBOTICS I**

Room B

Session Chair: *Gyula Mester*

16:40 – 17:00 Virtual Hand – Hand Gesture Recognition System

Zoltán Vámosy, András Tóth, Balázs Benedek

17:00 – 17:20 Autonomous Hexapod Walker Robot “Szabad(ka)”

Ervin Burkus, Peter Odry

17:20 – 17:40 Estimation of Dynamical Parameters of Road Vehicles on Freeways

Péter Gáspár, László Nádai

17:40 – 18:00 Modular Robots Design Concepts and Research Directions

Claudiu Pozna

18:00 – 18:20 Automatic Parametrization of Edge Detection Algorithms

László Csink, Szabolcs Sergyán

14:20 – 18:20 **Poster Session**

Obstacle Avoidance of Mobile Robots in Unknown Environments

Gyula Mester

Adaptive Control of a Semi-Automatic Convoy of Unmodeled Internal Degrees of Freedom

József K. Tar, Katalin Lőrincz, Krishnan Agbemasu, László Nádai, Roland Kovács

Car-following Safety Algorithms Based on Adaptive Cruise Control Strategies

Wuhong Wang, Wei Zhang, Herner Bubb

The Illustration of Applying the Bureaucratic Organization in the Enterpriser

Eva Pataky, Andras Sagi

Spectral and Fractal Analysis of Biosignals and Coloured Noise

Sladjana Spasic

18:30 **BANQUET**

August 25, 2007, Saturday

Polytechnical Engineering College

address: Marka Oreskovica 16

- 9:00 – 10:20 **Session MATHEMATICAL BASE OF COMPUTATIONAL INTELLIGENCE II** Room A
- Session Chair: *István Matijevics*
- 9:00 – 9:20 An Axiomatization of Qualitative Probability
Zoran Ognjanović, Aleksandar Perović, Miodrag Rašković
- 9:20 – 9:40 Some Properties of Pseudo-Measures and Pseudo-Probability
Ljubo Nedović, Biljana Mihailović, Nebojša M. Ralević
- 9:40 – 10:00 Maximum Likelihood Methods for Data Mining in Datasets Represented by Graphs
Tamás Nepusz, Fülöp Bazsó
- 10:00 – 10:20 Semirings of Transition Bistochastic Matrices in Social Sciences
Branka Nikolić, Endre Pap
- 9:00 – 10:20 **Session INTELLIGENT ROBOTICS II** Room B
- Session Chair: *Peter Odry*
- 9:00 – 9:20 Design of Stable Fuzzy Controllers
Dragan Z. Šaletić
- 9:20 – 9:40 Infrared Sensors Microcontroller Interface System for Mobile Robots
Istvan Matijevics
- 9:40 – 10:00 Inverted Pendulum with a Sensored Foot
Kalman Babković, Laszlo Nagy, Damir Krkljes, Branislav Borovac
- 10:10 – 10:20 Mobile Robot Controlled by Voice
Bojan Kuljić, János Simon, Tibor Szakáll
- 10:20 – 10:40 **COFFEE BREAK**
- 10:40 – 12:20 **SESSION INFORMATICS II** Room A
- Session Chair: *Imre J. Rudas*
- 10:40 – 11:00 Symbolic Dynamic Analysis of Heart Rate and Blood Pressure Time Series of Rats
Damir Varga, Tatjana Loncar-Turukalo, Dragana Bajic, Sanja Milutinovic, Nina Japundzic-Zigon
- 11:00 – 11:20 Security of Web Forms
Zlatko Čović, Livia Szedmina
- 11:20 – 11:40 Model of Change Request Generator Integrated into Business Application
Zeljko Stojanov
- 11:40 – 12:00 Frameworks for Incorporating Logo Design into Knowledge-aid System
Huang Tai-Shen, Chang Chia-Fang
- 12:00 – 12:20 Realising the SPI Communication in a Multiprocessor System
Ákos Székács, Tibor Szakáll and Zoltán Hegyközi

9:00 – 12:20 **POSTER SESSION**

Recent Development in Virtual Higher Education Towards Advanced and Proven Information Technology

József Gáti and Gyula Kártyás

New Development Trends of Classical Models of Market Behaviour

Andras Sagi, Eva Pataky

Information Content Orientated Product Model Assisted Change Management

László Horváth, Imre J. Rudas

Suggestion for Network Organization Scheme in Schools of Vojvodina and Applied Moodle Distance Learning System in Global and Local Network

Zoran P. Rastovic

Simulation-based Dependability Evaluation of Complex Repairable System Using Variable Time Increment Method

Wuhong Wang, Fuguo Hou

12:30

Closing Ceremony

Room A

12:45

LUNCH and CULTURAL EVENT