

Budapest Tech
Hungarian Fuzzy Association

9th International Symposium of Hungarian Researchers
on
**COMPUTATIONAL INTELLIGENCE
and INFORMATICS**
PROGRAM

Magyar Kutatók 9. Nemzetközi Szimpóziuma

Budapesti Műszaki Főiskola
Magyar Fuzzy Társaság

General Information

VENUE

The Symposium will be held at Budapest Tech
Address: Bécsi út 96/B, H-1034 Budapest, Hungary

PROCEEDINGS

Each accepted paper reaching us in time will be published in the volume of proceedings that will be distributed at the registration desk.

OPENING HOURS OF THE REGISTRATION DESK

The registration desk will be open during the symposium.

LANGUAGE

The official languages of the Symposium are English and Hungarian. All the camera-ready manuscripts should be submitted in English, the presentations can be made either in English or in Hungarian.

LUNCH AND RECEPTION

All the participants are cordially invited by Budapest Tech for lunch and evening reception.

PRESENTATION

Presentations can be made by using OHP or data projector. All authors are kindly asked to take their presentation on CD or USB drive. To present the paper it is not allowed to use own computer. Conference room is supplied with OHP and data projector with PC.

SMOKING

Please, be so kind to your lungs and your colleagues by not smoking in the building and social events of the symposium.

November 6, 2008, Thursday

Budapest Tech
Bécsi út 96/B, H-1034 Budapest, Hungary

- 10:00 - 10:45 **OPENING CEREMONY** Aula
Chairman: *Imre J. Rudas*
 Rector of Budapest Tech, Hungary
- 11:00 - 11:45 **PLENARY SESSION I** Room Fo9
Session Chair: *János Fodor*
 Budapest Tech, Hungary
Coordination and Control of Groups of Intelligent Agents
József Bokor
 MTA SZTAKI
- 11:45 - 12:00 **COFFEE BREAK**
- 12:00 - 12:45 **PLENARY SESSION II** Room Fo9
Session Chair: *Jozef Kelemen*
 VŠM College of Management, Bratislava, Slovakia
Searching for Possible Life Signatures on Planet Mars
Antal K. Bejczy
 USA
- 12:45 - 14:30 **LUNCH**
- 14:30 - 15:50 **AFTERNOON SESSION I** Room Fo8
Session Chair: *János Fodor*
 Budapest Tech, Hungary
- 14:30 **Integrals Based on Non-Additive Measures**
Endre Pap
 University of Novi Sad, Serbia
- 14:50 **On Knowledge, Knowledge Systems, and Knowledge Management**
Jozef Kelemen
 VŠM College of Management, Bratislava, Slovakia
Jozef Hvorecký
 Silesian University, Opava, Czech Republic
- 15:10 **Integral Transforms Induced by Neural Networks**
Věra Kurková
 Institute of Computer Science of Czech Academy of Sciences

- 15:30 **Some Extensions of Migrativity for Triangular Norms**
János Fodor, Imre J. Rudas
 Budapest Tech, Hungary
- 15:50 – 16:00 **COFFEE BREAK**
- 16:00 – 17:20 **AFTERNOON SESSION II** Room Fo8
 Session Chair: *Endre Pap*
 University of Novi Sad, Serbia
- 16:00 **Vector Control of the Cage Induction Motor with Dual Field Orientation**
Mária Imecs, Csaba Szabó, János Jób Incze
 Technical University of Cluj-Napoca, Romania
- 16:20 **Structural Description of a Class of Involutive Uninorms by Skew-Symmetrization**
Sándor Jenei
 University of Pécs, Hungary
- 16:40 **Comparison of Fuzzy Rule-based Learning and Inference Systems**
*Krisztián Balázs**, *László T. Kóczy**, ****, *János Botzheim**, ****
 * Budapest University of Technology and Economics
 ** Széchenyi István University, Győr, Hungary
- 17:00 **Improvement of a Fixed Point Transformations and SVD-based Adaptive Controller**
József K. Tar, Imre J. Rudas, János F. Bitó
 Budapest Tech, Hungary
José A. Tenreiro Machado
 Institute of Engineering of Porto, Portugal
Krzysztof R. Kozłowski
 Poznan University of Technology, Poland
- 17:30 **ANNUAL MEETING OF HUNGARIAN FUZZY ASSOCIATION** Room Fo7
- 18:30 **BANQUET**

November 7, 2008, Friday

Budapest Tech
Bécsi út 96/B, H-1034 Budapest, Hungary

- 9:00 – 10:45 **MORNING SESSION I** Room Fo8
- Session Chair: *Stefan Preitl*
Timisora, Romania
- 9:00 **Democratising Economic Knowledge Acquisition by Products of Computational Intelligence and Informatics**
Ladislav Andrášik
Slovak University of Technology, Bratislava
- 9:20 **Digital Course Supported Education In Life Long Learning Process**
Zsolt Námesztovszki
Hungarian Language Teacher Training Faculty, Subotica, University of Novi Sad
Márta Takács
Budapest Tech, Hungary
- 9:40 **A Hybrid Approach to Computing the Measure of Success of Computing Tasks in a Grid**
Christer Carlsson, Robertt Fullér
Åbo Akademi University, Turku, Finland
József Mezei
Turku Centre for Computer Science, Finland
- 10:00 **Switching Fuzzy Classifier for Classification of EEG Spectrograms**
David Coufal
Institute of Computer Science of Czech Academy of Sciences
- 10:20 **3D Virtual Model for Intelligent Space**
*Péter Zanaty**, *Gábor Sziebig***, *Péter Korondi**, *Zsolt Frei****
*Budapest University of Technology and Economics
**Narvik University College, Norway
***Eötvös University, Hungary
- 10:40 – 11:00 **COFFEE BREAK**
- 11:00 – 13:00 **MORNING SESSION II** Room Fo8
- Session Chair: *Márta Takács*
Budapest Tech, Hungary
- 11:00 **Usability of Summation Hack in Bayes Classification**
Péter Barabás, László Kovács
University of Miskolc, Hungary
- 11:20 **Control of Embedded System via Internet**
Péter Szekeres, Béla Takarics, Gábor Sziebig, Péter Korondi
Budapest University of Technology and Economics

- 11:40 **An Application Conform Method to Enhance Intelligence at Automation of Product Definition**
László Horváth, Imre J. Rudas
 Budapest Tech, Hungary
- 12:00 **Computational Intelligence in Font Design**
Míron Kuzma, Rudolf Jakša, Peter Sincák
 Technical University of Kosice, Slovakia
- 12:20 **Application of Improved Performance Models**
Ágnes Bogárdi-Mészöly, Tihamér Levendovszky
 Budapest University of Technology and Economics
- 12:40 **TP Model Based H_∞ Control Design for the Heavy Vehicle Rollover Prevention Problem**
Szabolcs Nagy, Péter Gáspár, Péter Baranyi
 SZTAKI, Hungary
- 13:00 – 14:30 **LUNCH**
- 14:30 – 16:10 **AFTERNOON SESSION I** Room Fo8
Session Chair: *Péter Baranyi*
 SZTAKI, Hungary
- 14:30 **Applying Fuzzy Rule Interpolation for the Task of Controlling Guidance and Obstacle Avoidance Behaviour of a Robot**
Dávid Vincze, Szilveszter Kovács
 University of Miskolc, Hungary
- 14:50 **Safe Robot Control in the Intelligent Space using Mobile Code Technology**
László A. Jeni, Zoltán Istenes**, Máté Tejfel**, Péter Korondi*** and Hideki Hashimoto**
 *University of Tokyo
 **Eötvös Loránd University
 ***Budapest University of Technology and Economics
- 15:10 **Modelling Dataflow in Computer Network**
Gyula Max
 Budapest University of Technology and Economics
- 15:30 **Small Turbojet Engine MPM 20 – Simulations and Modeling**
Rudolf Andoga, Ladislav Fózó, Ladislav Madarász
 Technical University of Kosice, Slovakia
- 15:50 **Creating Semantically Enhanced Documents with the Help of Text Mining**
Mihály Héder, Domonkos Tikk
 Budapest University of Technology and Economics
- 16:10 – 16:30 **COFFEE BREAK**

Session Chair: *Péter Korondi*

Budapest University of Technology and Economics, Hungary

- 16:30 **Branch and Bound Method for Discrete Tomography Reconstruction of hv-convex Binary Matrices**
Miklós Póth
Polytechnical Engineering College, Subotica
- 16:50 **Baseline Extraction and Evaluation for Off-Line Signature Verification**
Bence Nagy, Bence Kővári
Budapest University of Technology and Economics
- 17:10 **Homotopy Solution of GPS - N Point Navigation Problem**
Béla Paláncz, Piroska Zaletnyik*, Levente Kovács****
* Budapest University of Technology and Economics
** Research Group of Physical Geodesy and Geodynamics of the Hungarian Academy of Sciences, Budapest University of Technology and Economics
*** Budapest University of Technology and Economics
- 17:30 **Universal Domain-Specific Code Generator**
László Siroki, Gergely Mezei, Tihamér Levendovszky, Tamás Mészáros
Budapest University of Technology and Economics
- 17:50 **Applicability of Fuzzy Flip-Flops in the Implementation of Neural Networks**
Rita Lovassy, László T. Kóczy**, László Gál****
* Széchenyi István University, Győr, Hungary, Hungary
** Széchenyi István University, Győr, Hungary and Budapest University of Technology and Economics
*** Széchenyi István University, Győr, Hungary

POSTER SESSION

- On the Stable Design of Stable Fuzzy Control Systems with Iterative Learning Control**
Stefan Preitl, Radu-Emil Precup, Mircea-Bogdan Radac, Claudia-Adina Dragos, “Politehnica” University of Timisoara, Romania
József K. Tar, János Fodor, Budapest Tech, Hungary
- A-class Amplifier with FPPA as a Predictive Supply Voltage Control**
György Györök
Budapest Tech, Regional Education and Innovation Center, Hungary
- Concurrent Programming Method for Embedded Systems**
Norbert Schramm, Anita Sabo***
*UVA, Subotica, **Polytechnical Engineering College Subotica, Serbia
- Introduction to Problem, Basis and Measurement of Magnetic Aura of Turbojet Aircraft Engines**
Jan Kabát, Ladislav Madarász, Jana Modrovicová
Technical University of Košice, Slovakia
- Optimized EWMA Control Charts in Function of Intrusion Detection**
Petar Čisar, Sanja Maravić Čisar***
*Telekom Srbija, Subotica, **Subotica Tech, Subotica

Economic Development from a Game Theoretic Perspective - from Micro Choices to Macro Dynamics
Zsóka Kóczán
King's College, Cambridge, UK

Intelligent AVR Control Using Hybrid Optimization Based On Bacterial Foraging and Clonal Selection
Dong Hwa Kim, Jae Hoon Cho***
* Hanbat National Univ., Korea, ** Chungbuk National University

18:15 **DINNER**

Technical Program

November 8, 2008, Saturday

Budapest Tech
Bécsi út 96/B, H-1034 Budapest, Hungary

9:00 – 11:00 **MORNING SESSION I** Room Fo8

Session Chair: *Szilveszter Kovács*
University of Miskolc, Hungary

9:00 Practical Applications of the Hodographic Approximation Method on Hydrodynamic Specialized Networks

Adalbert Kovács, Levente Kovács***
* University "Politehnica" of Timisoara, Romania
** Budapest University of Technology and Economics

9:20 A Content-based View of Real-Life BitTorrent Swarms

Gábor Simon, Róbert Dávid
Budapest University of Technology and Economics

9:40 Automatic Acquisition of Hungarian Subcategorization Frames

András Serény, Eszter Simon**, Anna Babarczy***
* Applied Logic Laboratory, Budapest
** Budapest University of Technology and Economics

10:00 Genetic Algorithm for Fuzzy System Optimization: Generational or Lamarckian?

Zoltán Zsolt Ortutay, István Kádár
Budapest University of Technology and Economics

10:20 Separation Techniques for Errors-in-Variables Parameter Estimation

Levente Hunyadi
Budapest University of Technology and Economics

10:40 Design of a Tactile Measuring Probe for Coordinate Measurement

Gyula Hermann, György Benkó, Csongor Sántha
BrainWare Ltd., Hungary

11:00 – 11:20 **COFFEE BREAK**

Session Chair: *Annamária R. Várkonyi-Kóczy*

Budapest University of Technology and Economics, Hungary

- 11:20 **An Examination of the Relationship between the Convex Hull and the Feasibility of LMI-based Control Design**
Kyriakos Ákos Matszangosz, Péter Baranyi, Szabolcs Nagy
 SZTAKI, Hungary
- 11:40 **Building Motion and Noise Detector Networks from Mobile Phones**
Péter Ekler, Hassan Charaf
 Budapest University of Technology and Economics
- 12:00 **Pattern Recognition Based on Multimodular Neural Networks**
András György, Tamás Barbarics
 Budapest University of Technology and Economics
József Padanyi
 Zrínyi Miklós National Defence University
- 12:20 **Implementation of a Basic Flow Model in Traffic Controlling**
Sándor Gacsal, Timót Hidvégi***
 * Budapest Tech, Hungary
 **Széchenyi István Egyetem, Győr, Hungary
- 12:40 **Gradient-based Parameter Optimisation of FRI “FIVE”**
Zoltán Krizsán, Szilveszter Kovács
 University of Miskolc, Hungary
- 13:00 **CLOSING CEREMONY**
 Closing speech by
János Fodor
- 13:15 **LUNCH**