
General Information

Date and Place

SISY 2008 will take place on September 26-27, 2008, in Subotica, Serbia.

Official Language

The official language of the symposium is English. All presentations, including discussions and submissions, must be made in the official language. No translation will be provided.

Proceedings

Each accepted paper reaching us in time will be published in the Volume of CD Proceedings that will be distributed at the conference registration desk.

Opening Hours of the Registration Desk

The registration desk will be open during the symposium.

Presentation

All the presentations can be made by using OHP or Power Point. All authors are kindly asked to take their presentation either on CD or USB. To present the paper it is not allowed to use own computer.

All conference rooms are supplied with OHP and data projector with PC.

Smoking

Please, be so kind to your lungs and your colleagues by not smoking during the sessions and social event of the symposium.

SISY 2008 Technical Program

September 26, 2008, Friday

Town Hall

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

9:00 – 9:30 **OPENING CEREMONY** **Assembly Hall**

9:30 – 10:15 **PLENARY SESSION I** **Assembly Hall**

Session Chair: **Endre Pap**

Copulas: A Tool for Modeling the Dependence Structure of Random Vectors (pp. 1-5)

Radko Mesiar

Slovak University of Technology, Bratislava, Slovakia

10:15 – 10:30 **COFFEE BREAK**

10:30 – 11:15 **PLENARY SESSION II** **Assembly Hall**

Session Chair: **Imre J. Rudas**

Dynamic Balance Concept and the Maintenance of the Dynamic balance in Humanoid Robotics (pp. 7-17)

Miomir Vukobratović

Institute Mihajlo Pupin, Belgrade, Serbia

Branislav Borovac

University of Novi Sad, Serbia

Session Chair: **János Fodor**

”Aggregation Functions”, Cambridge University Press (pp. 19-25)

Michel Grabisch

University of Panthéon-Sorbonne, Paris, France

Jean-Luc Marichal

University of Luxembourg, Luxembourg

Radko Mesiar

Slovak University of Technology, Bratislava, Slovakia

Endre Pap

University of Novi Sad, Novi Sad, Serbia

12:00 – 14:00 LUNCH

Ball Room, Hotel Galleria (Floor 5)

14:00 – 16:00 Session MATHEMATICAL BACKGROUND OF INTELLIGENT SYSTEMS

Assembly Hall

Session Chair: **Márta Takács**

14:00 – 14:15 Solution for an Invoice System Used in the Field of Optometry (pp. 27-30)

Gabriella Divéki

Polytechnical Engineering College, Subotica, Serbia

14:15 – 14:30 Learning Automata-based Co-Evolutionary Genetic Algorithms for Function Optimization (pp. 31-35)

F. Abtahi, M. R. Meybodi, M. M. Ebadzadeh

Amirkabir University of Technology, Tehran, Iran

R. Maani

University of Manitoba, Winnipeg, Canada

14:30 – 14:45 Lazy Multigram Learning Environment for Automatic Content Recommendation Systems (pp. 37-40)

Zoran Popović

Belgrade University, Serbia

14:45 – 15:00 Sensor-Data-Fusion for an Autonomous Vehicle Using a Kalman-Filter (pp. 41-45)

Roland Kasper, Stephan Schmidt

Otto-von-Guericke Universität Magdeburg, Germany

15:00 – 15:15 The Hough Transformation of Rectangle (pp. 47-50)

Nebojša M. Ralević, Slobodan Dražić, Radovan Obradović

University of Novi Sad, Serbia

15:15 – 15:30 Statistical Method for Determination of Interspike Interval Probability Density Function (pp. 51-55)

János Minich

Polytechnical Engineering College Subotica, Serbia

László Négyessy

Neurobionics Research Group, Hungarian Academy of Sciences - Péter Pázmány Catholic University - Semmelweis University, Budapest, Hungary

Pascal Barone

Faculté de Médecine de Rangueil-Bât A3, Toulouse Cedex, France

Emmanuel Procyk

Inserm, U846, Stem Cell and Brain Research Institute, Bron, France

Université de Lyon, France

László Zarányi

KFKI Research Institute for Particle and Nuclear Physics of the Hungarian Academy of Sciences, Budapest, Hungary

Fülöp Bazsó

Polytechnical Engineering College Subotica, Serbia, and KFKI Research Institute for Particle and Nuclear Physics of the Hungarian Academy of Sciences, Budapest, Hungary

15:30 – 15:45 Tractatus on the Knowledge Approximation (pp. 57-59)**Aleksandar Jovanović**

Group for Intelligent Systems (GIS), Faculty of Mathematics, Belgrade, Serbia

Aleksandar Perović

GIS and Faculty of Transportation and Traffic Engineering, Belgrade, Serbia

15:45 – 16:00 Solving Multi-Agent Markov Decision Processes Using Learning Automata (pp. 61-66)**Farnaz Abtahi, Mohammad Reza Meybodi**

Amirkabir University of Technology, Tehran, Iran

14:00 – 16:00 Session APPLIED INFORMATICS and SIGNAL PROCESSING**Blue Salon**

Session Chair: Gyula Mester

14:00 – 14:15 Document Space Dimension Reduction by Latent Semantic Analysis and Hebbian Neural Network (pp. 67-70)**Igor Mokriš, Lenka Skovajsová**

Slovak Academy of Sciences, Bratislava, Slovakia

14:15 – 14:30 Dependency-based Mapping between Symbolic Language and Extended Conceptual Graph (pp. 71-76)**László Kovács, Erika Baksa-Varga**

University of Miskolc, Miskolc, Hungary

14:30 – 14:45 DSP Platform for 64-Channel Brain Cell Signal Preprocessing (pp. 77-79)**Kálmán Máthé**

Pécs University, Hungary

Péter Odry

Polytechnical Engineering College, Subotica, Serbia

14:45 – 15:00 Algorithm Model for LDPC Matrix Loading–Application to a More Efficient Analysis of Error Correction Codes (pp. 81-83)**Dragan Rastovac, Vladimir Biljetina, Vladimir Majski, Milinko Mandić**

Facultati of Education/Informatic and Media, Sombor, Serbia

15:00 – 15:15 Threshold Potential Optimization in the Pulse Coupled Neural Network (pp. 85-88)**Radoslav Forgáč, Igor Mokriš**

Institute of Informatics, Slovak Academy of Sciences, Bratislava, Slovakia

15:15 – 15:30 A Dominator Path Scheduler for Deep Pipeline Architectures (pp. 89-94)**Aleksandar Simeonov**

MicronasNIT LLC, Novi Sad, Serbia

Slavica Medić
University of Novi Sad, Serbia

Miroslav Popović
Faculty of Technical Sciences, Novi Sad, Serbia

15:30 – 15:45 **Content-based Image Retrieval (pp. 95-100)**

Igor Marinović
Manufaktura d.o.o., Subotica, Serbia

Igor Fürstner
Polytechnical Engineering College, Subotica, Serbia

15:45 – 16:00 **On Image Compression Systems for Band-limited Information Networks (pp. 101-105)**

Evgeny Gershikov, Moshe Porat
Technion - Israel Institute of Technology, Haifa, Israel

16:00 – 16:30 **COFFEE BREAK**

16:30 – 18:30 **Session ROBOTICS and FUZZY APPLICATION**

Assembly Hall

Session Chair: **Endre Pap**

16:30 – 16:45 **Obstacle Avoidance and Velocity Control of Mobile Robots (pp. 107-111)**

Gyula Mester
University of Szeged, Szeged, Hungary
Polytechnical Engineering College, Subotica, Serbia

16:45 – 17:00 **Segmented Foot Sensor with Curved Surface (pp. 113-118)**

Damir Krklješ, Laslo Nagy, Milan Nikolić, Kalman Babković
Faculty of Technical Science, Novi Sad, Serbia

17:00 – 17:15 **Preliminary Sketch of Possible Fixed Point Transformations for Use in Adaptive Control (pp. 119-124)**

József K. Tar, János F. Bitó, László Nádai
Budapest Tech, Hungary

José A. Tenreiro Machado
Institute of Engineering of Porto, Portugal

17:15 – 17:30 **Modeling of the Controlled DC-drives without Current and Speed Feedback (pp. 125-128)**

Milan Adžić
Polytechnical Engineering College, Subotica, Serbia

Evgenije Adžić, Vladimir Katić
Faculty of Technical Sciences, Novi Sad, Serbia

17:30 – 17:45 **Determining Distance and Shape of an Object by 2D Image Edge Detection and Distance Measuring Sensor (pp. 129-132)**

Bojan Kuljić, János Simon, Tibor Szakáll
Polytechnical Engineering College, Subotica, Serbia

17:45 – 18:00 **An Approach in Modifying Submission Phase of Change Request Process (pp. 133-137)**

Željko Stojanov, Dalibor Dobrilović
Technical Faculty “Mihajlo Pupin”, Zrenjanin, Serbia

Branko Perišić
Faculty of Technical Science, Novi Sad, Serbia

- 18:00 – 18:15** **Optimum Fuzzy Logic Control of Induction Generator in Wind Turbine Application (pp. 139-143)**
Evgenije Adzic, Zoran Ivanovic
Faculty of Technical Sciences, Novi Sad, Serbia
Milan Adzic
Polytechnical Engineering College , Subotica, Serbia
Vladimir Katic
Faculty of Technical Sciences, Novi Sad, Serbia
- 18:15 – 18:30** **Software Implementation of Fuzzy Decision Making in Determining the Severity of Respiratory Distress (pp. 145-149)**
Dragan Z. Šaletić, Milica Savić
Faculty of Computing, University "Union", Belgrade, Serbia

16:30 – 18:30 **Session APPLIED INFORMATICS and WEB APPLICATION**

Blue Salon

Session Chair: **Aleksandar Jovanovic**

- 16:30 – 16:45** **Intrusion Detection–One of The Security Methods (pp. 151-156)**
Peter Cisar
Telekom Srbija, Subotica, Serbia
Sanja Maravic Cisar
Polytechnical Engineering College, Subotica, Serbia
- 16:45 – 17:00** **A Study of Password Authentication Method against Observing Attacks (pp. 157-162)**
Kazuhide Fujita
Graduate School of Engineering, Shibaura Institute of Technology
Yutaka Hirakawa
Shibaura Institute of Technology
- 17:00 – 17:15** **Interpretation Method in FRDB's (pp. 163-165)**
Aleksandar Perović
University of Belgrade, Serbia
Aleksandar Takači, Srdjan Škrbić
University of Novi Sad, Serbia
- 17:15 – 17:30** **Aiming for Best fit T-norms in Speech Recognition (pp. 167-171)**
Gábor Gosztolya
Research Group on Artificial Intelligence of the Hungarian Academy of Sciences, and the University of Szeged, Hungary
László L. Stachó
Bolyai Institute, University of Szeged, Szeged, Hungary
- 17:30 – 17:45** **Abstractions for Concurrent Programming in Embedded Systems (pp. 173-176)**
Anita Sabo
Polytechnical Engineering College, Subotica, Serbia
Norbert Schramm
UVA, Subotica, Serbia
- 17:45 – 18:00** **Handling Multiple Language Contexts by Subtractive Context Switching (pp. 177-180)**
Markus Löberbauer
Johannes Kepler University, Linz, Austria

- 18:00 – 18:15** **Conversion of Texts by Applying the Memory-based Learning (pp. 181-183)**
Andelka Zečević, Nataša Glišović
University of Belgrade, Serbia
- 18:15 – 18:30** **Implementing BGP-4 Protocol Scenario in VNLab Open Networking Environment (pp. 185-189)**
Dalibor Dobrilović, Željko Stojanov
Technical Faculty “Mihajlo Pupin”, Zrenjanin, Serbia
- Borislav Odadžić**
Ratel – Republic Agency for Telecommunication, Belgrade, Serbia
- 19:00** **BANQUET**
Ball Room, Hotel Galleria (Floor 5)

September 27, 2008, Saturday

Hotel Galleria

address: Matije Korvina 17

- | 9:00 – 10:15 | Session FUZZY COMPUTATION I | Room Subotica |
|----------------------|--|----------------------|
| | <u>Session Chair:</u> István Matijevis | |
| 9:00 – 9:15 | Generalization of the Jensen’s Inequality for Pseudo-Integral (pp. 191-193)
Endre Pap, Mirjana Štrboja
University of Novi Sad, Serbia | |
| 9:15 – 9:30 | On Uninorms with Strict Underlying T-norm and T-conorm (pp. 195-198)
János Fodor
Budapest Tech, Hungary | |
| | Bernard De Baets
Ghent University, Belgium | |
| 9:30 – 9:45 | Pseudo-Integral of Interval-valued Functions and some Limit Properties (pp. 199-203)
Tatjana Grbić, Ivana Štajner-Papuga
University of Novi Sad, Novi Sad, Serbia | |
| 9:45 – 10:00 | Pseudo-Linear Superposition Principle based on Generated Pseudo-Operations: Applications (pp. 205-208)
Doretta Vivona
”Sapienza”- Universit´a di Roma, Italy | |
| | Ivana Štajner-Papuga
University of Novi Sad, Novi Sad, Serbia | |
| 10:00 – 10:15 | Mobility Measures which induce order in the Semiring of Transition Bistochastic Matrices (pp. 209-214)
Branka Janković, Endre Pap
University of Novi Sad, Novi Sad, Serbia | |

Two Independent Front-Wheel Driven Robot Model (pp. 215-217)

Ákos Odry

University of Technology and Economics, Budapest, Hungary

Dénes Tóth

University of Technology and Economics, Subotica, Serbia

Tibor Szakáll

Technical Secondary School, Subotica, Serbia

On the Practical Approach to Functions and Structure of Virtual University Programs (pp. 219-223)

József Gáti, Gyula Kártyás

Budapest Tech, Budapest, Hungary,

Microeconomic Aspects of Exploiting Non- Renewable Resources (pp. 225-228)

Andras Sagi

The Faculty of Economics, Subotica, Serbia

Eva Pataki

Polytechnical Engineering College, Subotica, Serbia

Image Processing in the Material Science or Fractal Behaviour on the GaAs/Electrolyte Interface (pp. 229-231)

Ákos Nemcsics

Budapest Tech, Hungary

Research Institute for Technical Physics and Materials Science, Hungary

Miklós Schusztar

Technical University Budapest, Hungary

László Dobos

Research Institute for Technical Physics and Materials Science, Hungary

Péter Turmezei

Budapest Tech, Hungary

Realization Business Intelligence in Commerce using Microsoft Business Intelligence (pp. 233-238)

Dragoljub Krneta

LANACO Computers & Communications, Banja Luka, Bosnia and Herzegovina

Dragica Radosav, Biljana Radulovic

“Mihajlo Pupin”, Zrenjanin, Serbia

Design of a Calibration System for Measuring Probes (pp. 239-243)

Gyula Hermann

BrainWare Ltd, Budapest, Hungary

Attila Nagy

Budapest Tech Budapest, Hungary

Development of Web-based Modular Information System for the Needs of Distance Learning (pp. 245-247)

Zlatko Čović

Polytechnical Engineering College, Subotica, Serbia

Biljana Radulović

Technical Faculty “Mihajlo Pupin”, Zrenjanin, Serbia

Reconfigurable Control in Robust Systems by FPAA (pp. 249-252)

György Györök

Budapest Tech, Hungary

Linear and Fuzzy Control Solutions for a Laboratory Anti-lock Braking System (pp. 253-258)

Mircea-Bogdan Rădac, Radu-Emil Precup, Stefan Preitl

“Politehnica” University of Timisoara, Timisoara, Romania

József K. Tar

Budapest Tech Polytechnical Institution, Budapest, Hungary

Emil M. Petriu

University of Ottawa, Ottawa, Canada

Succinct Representation of Binary Trees (pp. 259-262)

Miklós Póth

Polytechnical Engineering College, Subotica,

10:15 – 10:30 COFFEE BREAK

10:30 – 12:30 Session APPLIED EDUCATION

Room Subotica

Session Chair: **Peter Odry**

10:30 – 10:45 The Evaluation of Local and Global Approaches in Assessment of Baroreflex Sensitivity using Sequence Technique (pp. 263-266)

Tatjana Loncar-Turukalo, Dragana Bajic

Faculty of Technical Sciences, Novi Sad, Serbia

Nina Zigon

University of Belgrade, Serbia

10:45 – 11:00 The Roles and Possibilities of Cultural and Social Relationship in the Development of Tourism in Subcarpathia (pp. 267-271)

Ferenc Katona, Orsolya Zsellér

Széchenyi István University, Hungary

11:00 – 11:15 Crop Rotation Constraints in Agricultural Production Planning (pp. 273-277)

Zoltan Pap

Polytechnical Engineering College, Subotica, Serbia

11:15 – 11:30 Complex Networks in the Higher Education (pp. 279-284)

Árpád Horváth

Budapest Tech, Hungary

Zoltán Trócsányi

University of Debrecen and Institute of Nuclear Research of the Hungarian Academy of Sciences, Hungary

11:30 – 11:45 Using Path-Finding Algorithms of Graph Theory for Route-Searching in Geographical Information Systems (pp. 285-290)

Branislav Sobota, Csaba Szabó, Ján Perháč

Technical University of Košice, Slovakia

11:45 – 12:00 Informational Imperfections, Uncertainty and Agricultural Development (pp. 291-296)

Zsoka Koczan

University of Cambridge, Cambridge, UK

12:00 – 12:15 E-board (pp. 297-298)

Zlatko Čović, Robert Bašić, Bojan Pejić, Maja Petrić
Polytechnical Engineering College, Subotica, Serbia

12:15 – 12:30 Gender Related Issues Associated To Computer Science Students (pp. 299-303)

Zoran Putnik, Mirjana Ivanović, Zoran Budimac
University of Novi Sad, Novi Sad, Serbia

10:30 – 12:30 POSTER SESSION

Enhanced Product Modeling Beyond Description of Dependencies (pp. 305-310)

László Horváth, Imre J. Rudas
Budapest Tech, Budapest, Hungary

Realization of On-line Web Shop for Computer Hardware Using .NET Technology (pp. 311-314)

Tibor Szakáll, János Simon
Polytechnical Engineering College, Subotica, Serbia

The Realization of a Web Based Control Laboratory for Distant Learning (pp. 315-317)

István Matijevics
University of Szeged, Hungary

Classification of Image Databases Using Face Detection (pp. 319-322)

Szabolcs Sergyán
Budapest Tech, Budapest, Hungary

Simulation of TIG Welder Unit in PSpice (pp. 323-326)

Szabolcs Divéki, Gabriella Divéki, Nándor Burány
Polytechnical Engineering College, Subotica, Serbia

Combinatorics at Electronic Circuit Realization in FPAA (pp. 327-330)

György Györök, Margit Makó, József Lakner
Budapest Tech, Hungary

Ontological Manifestation of Product Risk in Service Oriented Environment (pp. 331-336)

Sudha Catherine Arathoon, Anhar Fazal, Omar Khadeer Hussain, Farookh Khadeer Hussain, Elizabeth Chang
Curtin University of Technology, Perth, Australia

The Role of Insolvency in Transition and Economic Stabilization (pp. 337-341)

Eva Pataki
Polytechnical Engineering College, Subotica, Serbia

Andras Sagi
The Faculty of Economics, Subotica, Serbia

Design of Tactile Measuring Probes (pp. 343-347)

Gyula Hermann, Csongor Sántha
BrainWare Ltd, Budapest, Hungary

On the Road to Adaptive and Intelligent Web-based Educational Systems (pp. 349-351)

Róbert Pintér
Polytechnical College Subotica, Subotica, Serbia

12:30 – 12:45 **COFFEE BREAK**

12:45 – 13:45 **SESSION FUZZY COMPUTATION II**

Room Subotica

Session Chair: **Imre J. Rudas**

12:45 – 13:00 **New Interpretation of the Euler-Bernoulli Equation (pp. 353-358)**

Mirjana Filipovic, Miomir Vukobratovic

Mihajlo Pupin Institute, Belgrade, Serbia

13:00 – 13:15 **Self-Duality of Fuzzy Integral-based T_L - and S_L -Evaluators (pp. 359-364)**

Slavka Bodjanova

Texas A&M University-Kingsville, U.S.A.

Martin Kalina

Slovak University of Technology, Bratislava, Slovakia

13:15 – 13:30 **Basic Generated Partial Differential Equations (pp. 365-370)**

Doretta Vivona, Maria Divari

"Sapienza"- Universit' a di Roma, Italy

13:30 – 13:45 **Non-Monotonic Set Functions and General Fuzzy Integrals (pp. 371-374)**

Biljana Mihailović, Endre Pap

University of Novi Sad, Serbia

12:45 – 13:45 **POSTER SESSION**

Distance Control of Virtual Machines in Education of a Computer Laboratory (pp. 375-377)

Lehel Nyers, Zlatko Čović

Polytechnical Engineering College, Subotica, Srbija

PLC Control for a Rotating Ironing Press (pp. 379-382)

Gabor A. Biacs, Milan S. Adžić

Polytechnical Engineering College, Subotica, Serbia

A Common Fixed Point Theorem for Compatible Mappings in Fuzzy Metric Spaces (pp. 383-386)

Tatjana Došenović

University of Novi Sad, Novi Sad, Serbia

A Comparison of Rule Sets Induced by Techniques Based on Rough Set Theory (pp. 387-390)

Vladimir Brtko, Ivana Berkovic, Eleonora Brtko, Vesna Jevtic

Technical Faculty "Mihajlo Pupin", Zrenjanin, Serbia

Pole Placement Approaches for Linear and Fuzzy Systems (pp. 391- 396)

Stefan Preitl, Radu-Emil Precup, Petru Alexandru Clep, Ion-Bogdan Ursache

"Politehnica" University of Timisoara, Timisoara, Romania

János Fodor

Budapest Tech Polytechnical Institution, Budapest, Hungary

Igor Škrjanc

University of Ljubljana, Ljubljana, Slovenia

OpenCV C# Wrapper-based Video Enhancement Using Different Optical Flow Methods in the Super-Resolution (pp. 397-402)

Attila Nagy, Zoltán Vámosy

Budapest Tech, Budapest, Hungary

Detecting Defaulters for Consumed Electric Energy with Neural Network Clustering (pp. 403-406)

Imre Petkovic

The Advanced Engineering School, Subotica, Serbia

Nedjo Balaban

The Faculty of Economics, Subotica, Serbia

A Work-in-Progress Platform for Solving Knowledge Sharing Issues in Organizations (pp. 407-412)

Hai Dong, Farookh Khadeer Hussain, Elizabeth Chang

Curtin University of Technology, Perth, Australia

Fast Node Detection Using AODV and GPS (pp. 413-416)

Ishtiaque Mahmood, Dr. Sadia Aziz

Center for Advanced Studies in Engineering, Islamabad, Pakistan

Basic Approaches to Small Turbojet Engine Modeling (pp. 417-422)

Rudolf Andoga, Ladislav Főző, Ladislav Madarász

Technical University of Košice, Košice, Slovakia

13:45 CLOSING CEREMONY Room Subotica

14:00 CULTURAL EVENT and LUNCH