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
11:15 – 12:00 PLENARY SESSION III Assembly Hall

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 Universitat 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 Zalányi  
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

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 Bakska-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 Mandic  
Faculty 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
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

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

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 Exploititing 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 Schuszter
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 Ćović
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

Branislav Sobota, Csaba Szabó, Ján Perhák
Technical University of Košice, Slovakia

11:45 – 12:00 Informational Imperfections, Uncertainty and Agricultural Development (pp. 291-296)
Zsoka Koczán
University of Cambridge, Cambridge, UK
12:00 – 12:15  **E-board (pp. 297-298)**
Zlatko Ćović, 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"- Università 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 Ćović  
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 Brtka, Ivana Berkovic, Eleonora Brtka, 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 Vámossy
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)
Ishtiauqe 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