Scope

The 9-th International Conference on **Development and Application Systems** organized by *the Faculty of Electrical Engineering and Computer Science, Ştefan cel Mare University of Suceava* has six sections:

A - DIGITAL SYSTEMS IN PROCESS CONTROL

B – INTELLIGENT CONTROL

C - DATA TRANSMISSION AND REMOTE
      IDENTIFICATION

D - COMPUTER AIDED DESIGN

E - INFORMATION TECHNOLOGIES

F - PATTERN RECOGNITION

The scope of the Conference is to bring together specialists from universities, research institutes and companies for useful idea exchanges regarding concerns in their domains. The latest progresses in these fields as well as the newest scientific and technical results will be presented and discussed during the Conference.

Thursday, May 22, 2008

9:00   Opening Session
      Joseph Schmidt Auditorium

Welcome addressed by

> Adrian GRAUR
> The Rector of Suceava University

Invited Papers

o   *Simulation Analyses of Behaviours of Spatially Extended Predator-Prey Systems with Random Fluctuations*
Masaaki ISHIKAWA, *Yamaguchi University, Japan*

o   *Temperature Optimization of a Naphtha Splitter Unit*
Antonio NEVADO, *UNED, Spain,*
Lourdes Martín OÑATE, *UNED, Spain,*
Javier SANZ, *Repsol-YPF, Puertollano, Spain,*
Raúl ALCALDE, *Repsol-YPF, Puertollano, Spain,*
Ken SLAVEN, *ADEX S.L., Spain*

o   *Adaptive Monitoring of Mobile Robot*
Rochdi MERZOUKI, *Ecole Polytechnique de Lille, France,*
Khaled FAWAZ, *Ecole Polytechnique de Lille, France,*
Belkacem BOUAMAMA, *Ecole Polytechnique de Lille, France*

11:00 Coffee break

Section A
DIGITAL SYSTEMS IN PROCESS CONTROL

Thursday, May 22, 2008, 11:30
Session A1 in Remus Răduleț Lecture Theatre

Chairmen: Virgil MAIER
                Volodymyr BRAJLOVSKYJ
                Cornel TURCU

1. *Considerations Concerning the Pressure Sensors Interfacing Modeling in the Frame of the Modern Measurement Systems*
Gianina CRETU
"Gh. Asachi" University of Iasi

2. *Using of Humidity Sensors in Measuring System. Actual Tendencies and Problems*
Gianina CRETU
"Gh. Asachi" University of Iasi

3. *Automated NQR – Spectrometer*
Michael IVANCHUK, Volodimir BRAJLOVSKYJ
Department of the Radio Engineering and Informative Safety Chernivtsi, National University Jurij Fed'kovych Chernivtsi city, Ukraine

4. *Geometrical Sizes Change Measuring by a Capacity Sensor*
Volodimir BRAJLOVSKYJ, Andriy VERIGA, Michael IVANCHUK, Petro SHPATAR
Department of the Radio Engineering and Informative Safety Chernivtsi, National University named after Jurij Fed'kovych Chernivtsi city, Ukraine

5. *Agent-Based Systems in Power System Control*
Cristinel COSTEA, Adrian PETROVAN
North University of Baia Mare

6. *A Modified SQP Algorithm for Mathematical Programming*
Vasile MORARU
Technical University of Moldova

7. *Integration of Simulink Models with Component-based Software Models*
Nicolae MARIAN, Søren TOP
"Mads Clausen Institute for Product Innovation" University of Southern Denmark

13:00 Lunch

Section A
DIGITAL SYSTEMS IN PROCESS CONTROL

Thursday, May 22, 2008, 15:00
Session A2 in Remus Răduleț Lecture Theatre

Chairmen: Nicolae MARIAN
                Vasile GĂITAN
                Cezar POPA

8. *Controllability of Linear Systems with a Lag with Change of Phase Space Measurability*
Fedir SOPRONIUK, Tetyana GABUZA
"Yuriy Fedkovych" Chernivtsi National University, Ukraine

9. *MCPI – a HMI Application for Monitoring and Controlling Industrial Processes*
Vasile Gheorghiță GĂITAN, Mihai Gabriel DĂNILĂ, Mihai Gavril ROBU, Nicoleta Cristina GĂITAN
Stefan cel Mare University of Suceava, GENPRO 07 SRL Suceava

10. *The Integration of Real Device Capabilities in Distributed Applications Based on OPC Technology*
Ioan UNGUREAN, Vasile Gheorghiță GAITAN, Valentin POPA, Cornel VENTUNEAC
Stefan cel Mare University of Suceava, GENPRO 07 SRL Suceava

11. *An Analytical Method to Determine the Data Inputs (R-S, D, J-K, T) for Synthesis of Finite Automata*
Alexandru VALACHI, Călin-Mircea MONOR, Mihai TIMIŞ
Technical University "Gh.Asachi"Iasi

12. *Reconfigurable Control Systems Modeling and Design Based on Petri Nets*
Viorica SUDACEVSCHI, Victor ABABII, Valentin NEGURA
Technical University of Moldova

13. *Contributions of Controllers Tuning in the Multiple-Loop Feedback Control System with Two Contours with Inertia*
Irina COJUHARI, Bartolomeo IZVOREANU
Technical University of Moldova

14. *Correct Application of the Discrete Fourier Transform in Harmonics*
V. MAIER, S. Gh. PAVEL, C. D. MAIER, I. BIROU
Technical University of Cluj-Napoca

17:00 Coffee break

Section B
INTELLIGENT CONTROL

Thursday, May 22, 2008, 17:30
Session B in Remus Răduleț Lecture Theatre

Chairmen: Ken SLAVEN
                Costică NITU
                Călin CIUFUDEAN

1. *Control of the State of Intercalant in Layered Compound GaSe*
Zachar   KOVALYUK[1],   Galina   LASTIVKA[2],   Alexander
KHANDOZHKO[2]
[1]*Chernivtsi Department of the Institute of Materials Science Problems of NAS of Ukraine*
[2]*Yuriy Fedkovych Chernivtsi National University, Radiotechn. Dept., Ukraine*

2. *Guided Source of Current for the Helmholtz Coils*
Volodimir BRAJLOVSKYJ, Andriy VERIGA, Andriy SAMILA, Alexander KHANDOZHKO
Dept. of the Radio Engineering and Informative Safety Chernivtsi, , Ukraine

3. *The Role of Weather Indicators in Energy Consumption*
Costică NITU, Anda Sabena DOBRESCU
University Politehnica of Bucharest

4. *Open-End Winding Motor Drive with Synchronous PWM in the Overmodulation Region*
Valentin   OLESCHUK,   Vasilii   ERMURATSKI,   Evgenii
YAROSHENKO
Institute of Power Engineering of the Academy of Sciences Republic of Moldova

5. *Controlling a Mobile Robot in Indoor Environment with On–Chip Network of Intelligent Sensors*
Cristian Andy TĂNASE, Aurel CHIRAP
Stefan cel Mare University of Suceava

6. *Nine Men's Morris: Evaluation Functions*
Simona-Alexandra PETCU, Stefan HOLBAN
Politehnica University of Timisoara

7. *Sensorless AC Driving Systems Based on Adaptive Identification Algorithms and Robust Control Strategies*
Iulian M.T. BIROU, Sorin Gh. PAVEL
Technical University of Cluj-Napoca

8. *Modeling Manufacturing Systems Using the IEC 61499 Standard*
Valentin VLAD, Cristina Elena TURCU
Stefan cel Mare University of Suceava

Section C
DATA TRANSMISSION AND REMOTE IDENTIFICATION

Thursday, May 22, 2008, 11:30
Session C in Nicolae Boțan Lecture Theatre

Chairmen: Dimitris C. VOUKALIS
                Nicolae Dumitru ALEXANDRU
                Alin Dan POTORAC

1. *Design of an Online Clock Recovery System Using*
Mohammad Hassan GHAED, Reza KAZEMI
University of Technology Tehran, Iran

2. *Spectral Shaping for Codes with P.S.D. Expressed by Rational Functions*
Nicolae Dumitru ALEXANDRU[1], Maria Liliana ALEXANDRU[2]
[1]*Gheorghe Asachi Technical University of Iaşi*
[2]*Garabet Ibrăileanu Highschool of Iaşi*

3. *A New Model Signal Recognizable Integrated System*
Dimitris C. VOUKALIS
Technical University of Pireous, Greece

4. *Investigation of Properties of Pseudorandom Binary Sequences Generator on the Basis of Cellular Automata*
Sergey OSTAPOV, Vladimir ZHIKHAREVICH, Lidiya VAL'
Chernivtsi Yuri Fed'kovich National University, Ukraine

5. *Quantum Security on a Colour Image*
Gabriela MOGOS
Al.I.Cuza University of Iasi

6. *Flow Control and Routing of Bursty Traffic in Asynchronous Transfer Mode Systems*
Victoria BOGHANASTJUK, Nicolae KOBILEATZKY
Technical University of Moldova

7. *Optimization of the Improved Nyquist Filter with a Piece-Wise Rectangular Characteristic*
Alexandra Ligia ONOFREI[1], Nicolae Dumitru ALEXANDRU[2]
[1]*Ştefan cel Mare University of Suceava*
[2]*Gheorghe Asachi Technical University of Iaşi*

13:00 Lunch

Section D
COMPUTER AIDED DESIGN

Thursday, May 22, 2008, 15:00
Session D1 in Nicolae Boțan Lecture Theatre

Chairmen: Emilian GUȚULEAC
George MAHALU
Eugen COCA

1. *Electronic Textbook in Electronic Portfolio:*
a New Approach for the Self-Regulated Learning
Elena RAILEAN
University State of Moldova

2. *Research of Impulse Heat Resistance of Powerful Switching DMOS*
Transistors
Leonid POLITANS'KYY, Valentyn LESINS'KYY
Yuriy Fedkovych National University of Chernivtsi, Ukraine

3. *Efficient Evolutionary Approach for the Test Compaction Problem*
Doina LOGOFĂTU
University of Applied Sciences, Munich, Germany

4. *VMPN –Software Tool for Performance Modeling of Dynamic*
Modifiable Structure Systems with Timed Membrane Petri Nets
Emilian GUȚULEAC, Iurie ȚURCANU, Emilia GUȚULEAC
Technical University of Moldova

5. *Technological Aspects of Designing of Functional Electronics*
Devices, Which are Realization of the Neuron Networks Algorithms
Vasya LYASHKEVYCH
Yuriy Fedkovych Chernivtsi National University, Ukraine

6. *The Optimization of a Design using VHDL Concepts*
Iuliana CHIUCHIȘAN, Alin Dan POTORAC
Stefan cel Mare University of Suceava

17:00 Coffee break

Section D
COMPUTER AIDED DESIGN

Thursday, May 22, 2008, 17:30
Session D2 in Nicolae Boțan Lecture Theatre

Chairmen: Iurie ȚURCANU
Ștefan HOLBAN
Constantin FILOTE

7. *GenFSM, a Finite State Machine Generation Tool*
Codrin PRUTEANU[1], Cristian-Gyözö HABA[2]
[1]AsicAhead International S.R.L.
[2]Gh. Asachi Technical University, Iasi

8. *Designing the Synchro-Generator of an FPGA or CPLD Video*
Interface for Micro-Systems
Aleodor Daniel IOAN
Gh. Asachi Technical University of Iasi

9. *The Methods of the Fast Shading*
Alexander ROMANYUK[1], Anders HAST[2], Yuri LASHENKO[1]
[1]Vinnitsa National Technical University, Ukraine
[2]Creative Media Lab University of Gavle, Sweden

10. *A Short Introduction in the History of Fractals*
Ildiko SZOKE, Ștefan HOLBAN
Politehnica University of Timisoara

11. *A Review of ESD Stress Models*
Eugen COCA, Georgiana BUTA
Stefan cel Mare University of Suceava

Section E
INFORMATION TECHNOLOGIES

Thursday, May 22, 2008, 11:30
Session E1 in Dimitrie Leonida Lecture Theatre

Chairmen: Bert DUFRAIMONT
          Sabin C. BURAGA
          Cristina TURCU

1. *Restatement of Information Statistics through the Concept of Unit Histogram*
Radu D. RUGESCU
Politehnica University of Bucharest

2. *Vector Space Model for Legal XML Retrieval*
Sorina CORNOIU
Consiuliul Legislativ, Bucharest

3. *Belgian e-government Application: the eID Card*
Philip KEERSEBILCK, Bert DUFRAIMONT
University College KAHO St Lieven, Belgium

4. *Virtual Machines Technologies*
Mircea Bogdan GAGNIUC
University Politechnica, Bucharest

5. *Using the Grid and Semantic Web Technologies for Resource Management*
Sabin C. BURAGA
Al. I. Cuza University of Iasi

6. *Ontology Mapping for Interagent Communication*
Ioan Alfred LETIA, Mihai COSTIN
Technical University of Cluj-Napoca

7. *Dynamically Integrating Knowledge in Applications. An Online Scoring Engine Architecture*
Diana GOREA
Al. I. Cuza University of Iasi

8. *Web Service Selection Based on Trust*
Ioan Alfred LETIA, Octavian POP
Technical University of Cluj-Napoca

13:00 Lunch

Section E
INFORMATION TECHNOLOGIES

Thursday, May 22, 2008, 15:00
Session E2 in Dimitrie Leonida Lecture Theatre

Chairmen: Kevin D'HOE
          Virgil TIPONUT
          Mariana MILICI

9. *TELEMON – an SOA-based e-Health System. Designing the Main Architectural Components*
Lenuta ALBOAIE, Sabin C. BURAGA, Victor FELEA
A. I. Cuza University of Iaşi

10. *Quality-Enabled Value Argumentation for Service Bundling*
Ioan Alfred LETIA, Anca MARGINEAN
Technical University of Cluj-Napoca

11. *Indoor Room Location Estimation*
Kevin D'HOE, Geoffrey OTTOY, Philip KEERSEBILCK, Jean-Pierre GOEMAERE, Lieven De STRYCKER
KaHo Sint-Lieven, Gent, Belgium

12. *An Ontology-Based Retrieval Mechanism for E-learning Systems*
Mihaela BRUT
Al. I. Cuza University of Iaşi

13. *Dynamic GPS Maps*
Cosmin VARLAN
Al. I. Cuza University of Iaşi

14. *Multiple Linear Model for Determination of Factoring Performing Expedience*
T.O. SAVCHUK[1], G.G. BONDARCHUK[1], P.S. MARTYNIUK[2]
[1]Vinnytsia National Technical University, Ukraine
[2]Vinnytsia Financial Economic University, Ukraine

15. *The Real Potential of an RFID_B2B Integrated Application*
Marius CERLINCĂ, Cornel TURCU, Tudor CERLINCĂ, Remus PRODAN, Felicia GÎZĂ, Alexandru GOLOCA
Stefan cel Mare University of Suceava

17:00 Coffee break

Section F
PATTERN RECOGNITION
Thursday, May 22, 2008, 17:30
Session F1 in Dimitrie Leonida Lecture Theatre

Chairmen: Masaaki ISHIKAWA
                 Valeriy FRATAVCHAN
                 Ştefan-Gheorghe PENTIUC

1. *Defining an Ontology for the Radiograph Images Segmentation*
Oliviu MATEI
Technical University of Cluj-Napoca

2. *Applying Rough Sets Algorithm for Radiography Diagnosis*
Oliviu MATEI
Technical University of Cluj-Napoca

3. *The Automated System for Identification of License Plates of Cars*
Valeriy FRATAVCHAN, Dmytro SHKILNJUK
Yuriy Fedkovych Chernivtsi National University, Ukraine

4. *A Genetic Algorithm - Support Vector Machine Approach to DNA Microarrays Supervised Learning*
Nicolae Teodor MELITA, Ştefan HOLBAN
Politehnica University of Timisoara

5. *Above-the-Table Interactions for Intelligent Sensing Systems*
Radu-Daniel VATAVU, Ştefan-Gheorghe PENTIUC
Stefan cel Mare University of Suceava

6. *A Genetic Algorithm Approach to DNA Microarrays Analysis of Pancreatic Cancer*
Nicolae Teodor MELITA[1], Irinel POPESCU[2], Ştefan HOLBAN[3]
[1]Politehnica University of Timisoara
[2]Fundeni Clinical Institute, Bucharest
[3]Politehnica University of Timisoara

7. *User Head Movement Recognition and Interpretation System for Computer Interaction*
Ciprian Ovidiu UNGUREAN
Stefan cel Mare University of Suceava

8. *Modeling Shapes for Pattern Recognition: A Simple Low-Cost Spline-based Approach*
Radu-Daniel VATAVU[1], Ştefan-Gheorghe PENTIUC[1], Laurent GRISONI[2], Christophe CHAILLOU[2]
[1]Stefan cel Mare University of Suceava
[2]Laboratoire d'Informatique Fondamentale de Lille, France

Section F
PATTERN RECOGNITION
Friday, May 23, 2008, 09:00
Session F2 in Dimitrie Leonida Lecture Theatre

Chairmen: Vladimir MESYURA
                 Laurenţiu-Dan MILICI
                 Remus PRODAN

9. *Knowledge Base of an Expert System Used for Dyslalic Children Therapy*
Ovidiu-Andrei SCHIPOR, Ştefan-Gheorghe PENTIUC, Doina-Maria SCHIPOR
Stefan cel Mare University of Suceava

10. *Training Neural Networks Using Input Data Characteristics*
Cosmin CERNĂZANU, Ştefan HOLBAN
University Politehnica of Timişoara

11. *Methodological Peculiarities of Neural-Like Network Model for Pyramidal and Parallel-Hierarchical Processing of Digital Information*
Volodymyr KOZHEMYAKO[1], Leonid TIMCHENKO[2], Andriy YAROVYY[3]
[1]Vinnytsia National Technical University
[2]Kyiv University of Economy and Transport Technologies
[3]Vinnytsia National Technical University, Ukraine

12. *Hand Posture Recognition under Unconstrained Scenes for Human Robot Interaction*
Tudor-Ioan CERLINCĂ, Ştefan-Gheorghe PENTIUC
Stefan cel Mare University of Suceava

13. *Make it Smile :) A Muscle-based Approach on Facial Animation*
Emanuel DIMA, Corina DIMA, Dan CRISTEA
Al. I. Cuza University of Iaşi

10:30 Coffee break