Conference Program

WSEAS

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Recent Researches in Environmental & Geological Sciences

Proceedings of the 7th WSEAS International Conference on Energy & Environment (EE '12)
Proceedings of the 7th WSEAS International Conference on Continuum Mechanics (CM '12)
Proceedings of the 6th WSEAS International Conference on Geology and Seismology (GES '12)
Proceedings of the 7th WSEAS International Conference on Water Resources, Hydraulics & Hydrology (WHH '12)

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Kos Island, Greece, July 14-17, 2012

Energy, Environmental and Structural Engineering Series | 4

Editors
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Recent Researches in Circuits & Systems

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Proceedings of the 16th WSEAS International Conference on Circuits
Proceedings of the 16th WSEAS International Conference on Systems
(Part of CSCC '12)

Kos Island, Greece, July 14-17, 2012

Recent Advances in Electrical Engineering Series | 3

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Recent Researches in Communications and Computers

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Proceedings of the 16th WSEAS International Conference on Communications
Proceedings of the 16th WSEAS International Conference on Computers
(Part of CSCC '12)

Kos Island, Greece, July 14-17, 2012

ISBN: 978-1-61804-109-8

Editors
Carlos Rivas-Echeverria
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Recent Researches in Medicine & Medical Chemistry

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- Proceedings of the 3rd WSEAS International Conference on Medical Physiology (PHYSIO '12)
- Proceedings of the 3rd WSEAS International Conference on Biochemistry and Medical Chemistry (BIOMEDCH '12)
- Proceedings of the 3rd WSEAS International Conference on Medical Histology and Embryology (HISTEM '12)
- Proceedings of the 3rd WSEAS International Conference on Medical Pharmacology (PHARMACO '12)
- Proceedings of the 3rd WSEAS International Conference on Oncology (ONCO '12)
- Proceedings of the 3rd WSEAS International Conference on Psychiatry and Psychotherapy (PSYCHO '12)
- Proceedings of the 3rd International Conference on Pathology (PATHOLOGY '12)
- Proceedings of the 3rd International Conference on Surgery (SURGERY '12)
- Proceedings of the 3rd International Conference on Cardiology (CARDIOLOGY '12)
- Proceedings of the 3rd International Conference on Neurology (NEUROLOGY '12)
- Proceedings of the 3rd International Conference on Gastroenterology (GASTROENTEROLOGY '12)
- Proceedings of the 3rd International Conference on Obstetrics and Gynaecology (OBSTETRICS and GYNAECOLOGY '12)
- Proceedings of the 3rd International Conference on Ophthalmology (OPHTHALMOLOGY '12)
- Proceedings of the 3rd International Conference on Endocrinology (ENDOCRINOLOGY '12)

Kos Island, Greece, July 14-17, 2012

Recent Advances in Biology and Biomedicine Series | 1

Kos Island, Greece
July 14-17, 2012

Important Notes:
(1) You may register at any time during the conference.
(2) The Invoice of payment can be collected at the registration desk at any time.
(3) The Certificate of Participation can be collected at the registration desk only after your presentation.
(4) Session chairmen can ask for a special Certificate at the registration desk after the session
(5) The duration of a presentation slot is 20 minutes for a regular paper and 45 minutes for a plenary speech, including questions.
(6) All authors should give their biographies to the chairmen before the beginning of the session.
(7) Authors can upload their presentations to the available computers 10 minutes before the beginning of their session.

16th WSEAS International Conference on Circuits
16th WSEAS International Conference on Systems
16th WSEAS International Conference on Communications
16th WSEAS International Conference on Computers
7th WSEAS International Conference on Energy & Environment (EE '12)
7th WSEAS International Conference on Continuum Mechanics (CM '12)
7th WSEAS International Conference on Water Resources, Hydraulics & Hydrology
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Kos Island, Greece
July 14-17, 2012

The WSEAS staff welcome you to another prestigious event.

Since 1996, the World Scientific and Engineering Academy and Society has proudly organized a vast number of successful conferences and published the work of hundreds of scientists from all over the world. We and our affiliates NAUN and EUROPMENT would like to express our sincere gratitude to you for helping us continue our mission by honoring us with your presence in this conference.

WSEAS publications have succeeded in joining most important International Scientific Indexes and Libraries. Thanks to our latest efforts of adopting strict deadlines and a more rigorous review process, the quality of our proceedings and journals is continuing to rise exponentially.

We trust that you will enjoy discussing the latest scientific developments with your peers during these three days, and that you will find your stay as pleasant as possible.

The WSEAS Team

Saturday July 14th 2012

Registration: 08:00-08:45

Conference Room: Panacea
Time: 08:45-09:30
Keynote Lecture 1:

Folding and Unfolding Related Issues, Especially Decompositions, in Data Processing
by Prof. Metin Demiralp, Istanbul Technical University, TURKEY.

Conference Room: Aegle A
Time: 08:45-09:30
Keynote Lecture 2:

Program Analysis beyond Closed-form Expressions for Maximum Parallelization
by Dean Kleanthis Psarris, City University of New York-Brooklyn College, USA.

Conference Room: Aegle B
Time: 08:45-09:30
Plenary Lecture 1:

Pharmacogenomics of Romany people
by Prof. Bela Melegh, University of Pecs, HUNGARY.

Conference Room: Akeso
Time: 08:45-09:30
Plenary Lecture 2:

Therapy-Related Leukemia/Myelodysplastic Syndrome in Multiple Myeloma
by Assoc. Prof. Kazuhiko Natori, Toho University Medical Center, JAPAN.

Conference Room: Panacea
Time: 09:30-10:15
Plenary Lecture 3:

Lightning Protection for Power Apparatuses
by Prof. Hitoshi Kijima, Polytechnic University, JAPAN.

Conference Room: Aegle A
Time: 09:30-10:15
Plenary Lecture 4:

On Description of Continuous and Discrete Systems by Means of State Space Energy Approach, Theory and Results
by Prof. Milan Stork, University of West Bohemia, CZECH REPUBLIC.

Saturday July 14th 2012

Conference Room: Aegle B
Time: 09:30-10:15
Plenary Lecture 5:

Recent Developments in Biomass Pyrolysis for Bio-Fuel Production: Its Potential for Commercial Applications
by Assoc. Prof. Mohammad G. Rasul, Central Queensland University, AUSTRALIA.

Conference Room: Akeso
Time: 09:30-10:15
Plenary Lecture 6:

Continuum Mechanics in Nanosciences and Nanotechnologies
by Prof. Elias C. Aifantis, Aristotle University, GREECE.

Coffee Break: 10:15-10:45

Conference Room: Panacea
Time: 10:45-11:30
Plenary Lecture 7:

On Partial Differential Equations to Diffusion-Based Population and Innovation Models
by Prof. Andre A. Keller, Université de Lille Nord de France, FRANCE.

Saturday July 14th 2012

Conference Room: Aegle A
Time: 10:45-11:30
Plenary Lecture 8:

	Transitioning to a Renewable Energy Economy by Assoc. Prof. Rich Snow, Embry-Riddle Aeronautical University, USA.

Conference Room: Aegle B
Time: 10:45-11:30
Plenary Lecture 9:

	Creatinaemia in neonates: from biochemical quantification to clinical interpretation by Dr. Karel Allegaert, University Hospitals Leuven, BELGIUM.

Conference Room: Akeso
Time: 10:45-11:30
Plenary Lecture 10:

	Quantitative Structure-Activity Relationship Study on Polyphenols as Inhibitors of á-Glucosidase by Assist. Prof. Vesna Rastija, The Josip Juraj Strossmayer University, CROATIA.

Saturday July 14th 2012

Conference Room: Panacea
Time: 11:30-12:15
Plenary Lecture 11:

The Neurotrophic Roles of Extracellular Guanosine
by Assoc. Prof. Shucui Jiang, McMaster University, CANADA.

Conference Room: Aegle A
Time: 11:30-12:15
Plenary Lecture 12:

Propagation of Delamination in Composite Laminates: Local or Global?
by Prof. Simon S. Wang, Loughborough University, UK.

Conference Room: Aegle B
Time: 11:30-12:15
Plenary Lecture 13:

A System of Systems Approach for Improved Autonomy of Unmanned Systems
by Prof. George Vachtsevanos, Georgia Institute of Technology, USA.

Saturday July 14th 2012

Conference Room: Akeso
Time: 11:30-12:15
Plenary Lecture 14:

	Lessons Learnt from Establishing Liquefied Natural Gas Facilities in Countries of North Mediterranean Sea by Dr. Philip-Mark Spanidis, ASPROFOS Engineering S.A., GREECE.

Conference Room: Panacea
Time: 12:15-13:00
Plenary Lecture 15:

	On Grids of the Future-Transition to Smart Grids by Prof. Shahram Javadi, I.A.U., Central Tehran Branch, IRAN.

Conference Room: Aegle A
Time: 12:15-13:00
Plenary Lecture 16:

	Mathematical Modeling in Environment Problem Caused by Industrial Accidents by Prof. Andrey Kuleshov, Russian Academy of Sciences, RUSSIA.

Saturday July 14th 2012

Conference Room: Aegle B
Time: 12:15-13:00
Plenary Lecture 17:

	Clinical Pharmacology of Non-Opoids in Young Women: The Impact of Pregnancy, Postpartum and Co-Medication by Dr. Karel Allegaert, University Hospitals Leuven, BELGIUM.

Conference Room: Akeso
Time: 12:15-13:00
Plenary Lecture 18:

	A Safer Future: Reducing the Impacts of Earthquake Disasters through Soft Computing by Prof. Silvia Garcia, National University of Mexico, MEXICO.

Saturday July 14th 2012

Conference Room: Panacea
Time: 13:00-15:30
SYSTEMS Special Session: Informatics in Control Theory and its Applications I
Chair: Vladimir Vasek

Modification of Polymer Properties by Irradiation Properties of HDPE after Radiation Cross-Linking	A. Mizera, M. Manas, D. Manas, M. Stanek, J. Cerny, M. Bednarik, M. Ovsik	68102-100
Properties of Polymers after Radiation Cross-Linking	A. Mizera, M. Manas, D. Manas, M. Stanek, J. Cerny, M. Bednarik, M. Ovsik	68102-103
Simulation Optimization of the Short Barrel of the Gun Production Line	Bronislav Chramcov	68102-130
Vexflow APIin Music Learning Management System	Dalibor Slovak, Petr Latal, Pavel Varacha	68102-220
Time Series Prediction Using Artificial Neural Networks: Influence of the Input Vector Size	David Samek, Pavel Varacha	68102-193
OpenCL-based Algorithm for Heat Load Modelling of District Heating System	Erik Král, Petr Čápek, Lubomír Vašek	68102-166
Instrumented Microhardness Test and Raman Spectroscopy Analyses of Beta-Irradiated Polyamide 12	Hana Vaskova, David Manas, Martin Ovsik, Miroslav Manas, Michal Stanek	68102-124
Electrochemical Sensors for Gas Mix Analysis	Hruska Frantisek, Plšek Stanislav	68102-133
School Operating System for Freescale HCS08 Microcontrollers RTMON2	J. Dolinay, V. Vašek, P. Dostálek	68102-061

Saturday July 14th 2012

Conference Room: Aegle A
Time: 13:00-15:30
EE Session: Alternative Fuel and Biofuel
Chair: Mohammad Rasul, Francisc Popescu

Industrial Waste as Alternative Fuel in Cement Industry: Its Impact on Environment	Azad Rahman, M. G. Rasul, M. M. K. Khan, S. Sharma	68105-107
Olive Seed Oil Mixtures as Fuel	Charalampos Arapatsakos	68105-217
LPG as Fuel on Diesel Engine	Charalampos Arapatsakos, Alexandros Ververidis	68105-227
Vegetable Oil Blends on Diesel Engine	Charalampos Arapatsakos, Marianthi Moschou, Konstantinos Papastavrou	68105-222
Recent Developments in Biomass Pyrolysis for Bio-Fuel Production: Its Potential for Commercial Applications	M. G. Rasul, M. I. Jahirul	68105-292
Environmental Impact Comparison in Small Scale Cogeneration Fired with Alternative Fuels	Nicolae Lontis, Popescu Francisc, Ioana Ionel	68105-087
Biobutanol Blends used in Small Scale Cogeneration Driven by Reciprocating Internal Combustion Engine	Nicolae Lontis, Popescu Francisc, Ioana Ionel	68105-092
Utilization of Kapok Seed as Potential Feedstock for Biodiesel Production	Norafneeza Norazahar, Suzana Yusup, Murni M. Ahmad, Junaid Ahmad, Suliana Abu Bakar	68105-032

Saturday July 14th 2012

Conference Room: Aegle B
Time: 13:00-15:30
CIRCUITS Session: Microelectronic Circuits
Chair: Hitoshi Kijima, Liann-Be Chang

Lightning Surge Response Improvement by Combinations of Varistors and Gas Discharge Tubes	Hitoshi Kijima	68101-058
Circuit Breaker Type Disconnector for Overvoltage Protector	Hitoshi Kijima	68101-064
Graphical Analytical Method to Estimate Energy Coordination of Two Varistors connected in Parallel	Hitoshi Kijima, Koreyuki Taketani	68101-040
Unusual Involvement of Operational Amplifiers for Measurement Purposes: Non-Inverting Amplifier Integral and Derivative	Jaroslav Lokvenc, Rene Drtina, Josef Sedivy	68101-088
Unusual Involvement of Operational Amplifiers for Measuring Purposes, Low Frequency and DC Applications	Jaroslav Lokvenc, Rene Drtina, Josef Sedivy	68101-091
Properties and the Use of Capacitive Diodes and Experimental Verification of the Technical Parameters of the Diode	Karol Radocha, Josef Sedivy	68101-085
The Electrostatic Discharge Handling Capability of Flip-Chip AlGaN/GaN High Electron Mobility Transistors	L. B. Chang, S. L. Lin, S. T. Chou, Atanu Das	68101-013
An Ultra-Low Power Dry-Electrode ECG Amplifier Having Optimized Low-Frequency Response and CMRR	M. J. Burke, C. Assambo	68101-025
Energy based State Space Approach of Nonlinear Systems Simulation and Construction by Means of Electronic Circuits	Milan Stork, Josef Hrusak, Daniel Mayer	68101-043

Saturday July 14th 2012

Conference Room: Akeso
Time: 13:00-15:30
CM Session: Numerical Analysis in Continuum Mechanics
Chair: Radim Cajka, Iqbal Husain

Determination of Friction Parameters for Soil – Structure Interaction Tasks	Cajka Radim	68106-041
Non-Newtonian Pulsatile Blood Flow in a Modeled Artery with a Stenosis and an Aneurysm	I. Husain, C. Langdon, J. Schwark	68106-017
Testing Microcrystalline Corundum during Grinding of Hardened Steels	Lubos Rokyta, Berenika Hausnerova, Imrich Lukovics	68106-029
Actual Stresses in CFRP-Reinforced Composite Timber Beams	Marcela Karmazínová	68106-065
Probability Assessment of Compressive Strength as a Basis for Post Tensioned Masonry Testing	Radim Cajka, Pavlina Mateckova, Marie Stara, Lucie Mynarzova	68106-057
Viscosity Measurements of Polyphenylsulfone Melt	Tomas Sedlacek, Berenika Hausnerova, Petr Filip	68106-033
Numerical Simulation of Thermal Buoyancy Convection Using Implicit Method	V. K. Artemyev	68106-061
Analysis of Nonlinear Forced Vibrations of Fractionally Damped Suspension Bridges	Yury Rossikhin, Marina Shitikova	68106-009
Analysis of Thermoelastic Rod Impact Against a Heated Barrier with due Account for Temperature and Strain Fields Coupling	Yury Rossikhin, Marina Shitikova, Viktor Shitikov	68106-025

Saturday July 14th 2012

Conference Room: Panacea
Time: 15:30-18:00
SYSTEMS Special Session: Informatics in Control Theory and its Applications II
Chair: Vladimir Vasek

Modern Methods of Design of Ergonomics Parts	Jakub Cerny, Martin Ovsik, Martin Bednarik, Ales Mizera, David Manas, Miroslav Manas, Michal Stanek	68102-115
Tire Wear of Technical Vehicles	Jakub Cerny, Martin Ovsik, Martin Bednarik, Ales Mizera, David Manas, Miroslav Manas, Michal Stanek	68102-118
Predictive Control of a Boiler-Turbine System	Jakub Novak, Petr Chalupa	68102-157
Performance Evaluation of the Self-Organizing Migration Algorithm Parallel Implementation	Jan Kolek, Pavel Vařacha, Ivo Motýl	68102-181
Utilization of Direct Metal Laser Sintering in Injection Mold Design	Jan Navratil, Michal Stanek, Stepan Sanda, Miroslav Manas, David Manas, Ales Mizera, Martin Bednarik	68102-082
Utilization of Temperature and Pressure Sensors in Injection Mold	Kamil Kyas, Jakub Cerny, Michal Stanek, Miroslav Manas, David Manas, Vojtech Senkerik, Adam Skrobak	68102-106
Influence of Runners Trajectory on Rubber Product Properties	Kamil Kyas, Michal Stanek, Jan Navratil, Miroslav Manas, David Manas, Vojtech Senkerik, Adam Skrobak	68102-112
Correction in Heat Prediction Depending on the Deviation of Forecasts and a Historical Data with Similar Pattern of Outside Temperature	L. Vasek, V. Dolinay	68102-205

Saturday July 14th 2012

Conference Room: Aegle A
Time: 15:30-18:00
MEDICAL Session: Oncology and Neurology
Chair: Kazuhiko Natori, Alicia Gonzalo-Ruiz

Minocycline Treatment Reduces COX-2 and Microgial Activation in Response to Aβ1-42 Peptide in a Rat Model of Aβ Toxicity	A. Gonzalo-Ruiz, M. Delso, M. P. Gonzalo, S. Delso, J. M. Sanz-Anquela	68118-001
Activity of a Neuron and Formulation of a Neural Group for Synchronization and Signal Processing	Atsushi Fukasawa, Yumi Takizawa	68118-013
Guanosine Stimulates Neural Stem Cell Proliferation through cAMP-CREB Pathway	Caixin Su, Cai Jiang, Shelley Jacobs, Sanket Ullal, Michel P. Rathbone, Shucui Jiang	68118-009
Comparative Study over Electromyography at Professional Sportsmen	Denisa Enescu Bieru, Mirela Lucia Călina, Eliana Lică, Mihai Dragomir	68118-005
Formulation of a Neural System and Application to Topographical Mapping	Yumi Takizawa, Atsushi Fukasawa	68118-017
Cytokine Expression in Childhood Central Nervous System Tumors	Androniki Anastasiou, George I. Lambrou, Maria Adamaki, Maria Moschovi	68113-007
What is the Evidence to Contraindicate Breast-Feeding of an Infant whose Mother is on Platinum Based Chemotherapy?	H. Tesfaye, M. Halaska Jr, J. Kukacka, A. Korberova, R. Prusa, L. Rob, J. Skultety, H. Robova	68113-010
Therapy-Related Leukemia/Myelodysplastic Syndrome in Multiple Myeloma	Kazuhiko Natori, Daisuk Nagase, Susumu Ishihara, Akiko Shibuya, Yukitoshi Toyoda, Motohiro Kato, Yosinori Fujimoto, Yasunobu Kuraishi, Haruka Izumi	68113-001
Three Cases of Double Cancer Consisting of Familial Pancreatic Cancer and Hematological Malignancy	Kazuhiko Natori, Susumu Ishihara, Daisuke Nagase, Akiko Shibuya, Yukitoshi Toyoda, Motohiro Kato, Yoshinori Fujimoto, Yasunobu Kuraishi, Haruka Izumi	68113-004

Saturday July 14th 2012

Conference Room: Aegle B
Time: 15:30-18:00
MEDICAL Session: Medical Physiology, Surgery and Medical Chemistry
Chair: Yiannis Kaznessis, Jasbir Singh Saini

Discovering Mechanisms of Action in Chemical Structure-Activity Data Sets	Aaron Smalter Hall, Gerald H. Lushington	68110-001
Multiscale Models of Antimicrobial Peptides	Dan S. Bolintineanu, Victor Vivcharuk, Yiannis N. Kaznessis	68110-004
Integrated System for Information Retrieval in Medical Area	Jasbir Singh Saini, Kulvinder Singh Mann, Harsh Sadawarti	68110-013
A New Coherent and Extendible Model for Encoded Health Care Information System	Kulvinder Singh Mann, Harsh Sadawarti	68110-007
Creatinaemia in Neonates from Biochemical Quantification to Clinical Interpretation	Anne Smits, Elena Levtchenko, Jelte Kelchtermans, Sarah Hendrickx, Maissa Rayyan, Karel Allegaert	68109-001
Neonatal Mass Urine Screening for Inborn Errors of Metabolism in the Province of Quebec: An Update	Christiane Auray-Blais	68109-021
Dual-Cuff Method Improves Accuracy of Blood Pressure and Hemodynamics Determination	Jiri Jilek, Milan Stork	68109-009
Neonatal Physiology Reflects Neonatal Pharmacology	Karel Allegaert, Jan De Hoon, Liesbeth Thewissen, Maissa Rayyan, Gunnar Naulaers	68109-005
The Place of Axial Drainage in Common Bile Duct Surgery	Octavia-Luciana Porumbeanu Madge, Eugen Brătucu, Claudiu Daha	68116-001

Conference Room: Akeso
Time: 15:30-18:00
EE Session: Modelling and Simulation in Environmental Science
Chair: Andrey Kuleshov, Slim Chokri

Mathematical Modeling in Environment Problem Caused by Industrial Accidents	A. A. Kuleshov	68105-052
Mathematical Modelling of Road Traffic Noise in Urban Centers	Antonio Aloe, Vincenzo Barone, Federica Crocco, W. E. Mongelli Domenico	68105-267
Traffic Noise Forecasting Tools: A Mathematical Model	Antonio Aloe, Vincenzo Barone, Federica Crocco, W. E. Mongelli Domenico	68105-272
A Computational Intelligence Scheme for Load Forecasting	Chokri Slim	68105-287
Simulation of the Effects of the Single Phase High Temperature Heating Pump with Different Refrigerating Agents	Milovan Jotanović, Mirko Miščević, Bojan Kulčar, Darko Goricanec	68105-412
Communication Model of Home Area Network Devices	Vaclav Kaczmarczyk, Zdenek Bradac, Petr Fiedler, Michal Sir	68105-112
Object Model of Home Area Network Devices	Zdenek Bradac, Vaclav Kaczmarczyk, Petr Fiedler, Michal Sir	68105-117

Coffee Break: 18:00-18:30

Conference Room: Panacea
Time: 18:30-20:30
EE Session: Energy Efficient Buildings I
Chair: Andreas Kanarachos, Jiri Hrebicek

A Hierarchical Optimization Methodology for the Cost Optimal Design of Low Energy Buildings in Cyprus	Andreas Kanarachos, Georgette Kanarachos, Stratis Kanarachos	68105-147
A Building Performance Simulation Tool for the Design of Cost Efficient Low Energy Buildings in Cyprus	Andreas Kanarachos, Stratis Kanarachos	68105-142
Sustainability Indicators Evaluation and Reporting: Case Study for Building and Construction Sector	Jiří Hřebíček, Michal Hodinka, Ondřej Popelka, Michael Štencl, Oldřich Trenz	68105-372
Evaluation of Building Wrapper Performance by Means of Exergy Method	Lamberto Tronchin, Kristian Fabbri, Valerio Tarabusi	68105-317
Energy Performance of Building and Thermal Comfort: A Comparison	Lamberto Tronchin, Valerio Tarabusi	68105-312
Performance Assessment of Rooftop Greenery System in an Institutional Building in Subtropical Climate in Australia	M. Anwar, D. Steele, M. G. Rasul, M. M. K. Khan	68105-127
Design of a Small Scale "green" House to Study Electronic and Thermal Aspects of Energy Management	M. Feugas, P. Cassagne, Ph. Dondon, D. Nicolas, C. A. Bulucea	68105-002

Saturday July 14th 2012

Conference Room: Aegle A
Time: 18:30-20:30
EE Session: Environment and Development I
Chair: Ernst Kussul, Giacomo Mantriota

Support Frame for Solar Concentrator with Flat Mirrors, Device Assembly Method and Ericsson Heat Engine	Ernst Kussul, Tatiana Baidyk, José Saniger Blesa, Neil Bruce	68105-457
Mechanical CVU for Automotive KERS	Francesco Bottiglione, Giacomo Mantriota	68105-527
A Simple Approach for Hybrid Transmissions Efficiency	Francesco Bottiglione, Stefano De Pinto, Giacomo Mantriota	68105-522
Ecological and Green Design Significances in Interior Spaces	Gozen Guner Aktas	68105-282
Application of Artificial Bee Colony Algorithm for Optimal Distribution Protection Design	Kirill Netreba, Yury Chistyakov, Elena Kholodova	68105-157
Objective Analysis and Ranking of Hungarian Cities, based on Environmental Indicators, and their Clustering with Different Classification Techniques – A Case Study	László Makra, István Matyasovszky, Ioana Ionel, Francisc Popescu, Zoltán Sümeghy, Zoltán Csépe, Nicolae Lontis	68105-072
Analysis of Noise Nuisance on Residents of the Malaysian Condominiums: Heritage Condominium Case Study	Marjan Jilardi Damavandi, Majid Nowrouzi	68105-307

Conference Room: Aegle B
Time: 18:30-20:30
SYSTEMS Session: Advanced in Systems Science I
Chair: Angela Iagar, Cornel Turcu

Harmonic Analysis of a High Speed Automatic Reclosing on a 400 kV Overhead Transmission Line	Angela Iagar, Sorin Ioan Deaconu, Corina Daniela Cuntan, Ioan Baciu	68102-049
Merging the Internet of Things and Robotics	Cristina Turcu, Cornel Turcu, Vasile Gaitan	68102-250
An Overview of Current-Voltage Characteristics Estimation from Plate-Type Electrostatic Precipitator with Three Sections	Gabriel Nicolae Popa, Iosif Popa, Sorin Ioan Deaconu, Corina Maria Diniş	68102-085
Identification of Quadrature Inductance by Combination of Two Methods	Ivo Vesely, Michal Sir, Dusan Zamecnik	68102-109
The Impact of Mobile Phones on the Accuracy of Magnetic Azimuth Measuring Using Digital Magnetic Compass	Karel Šilinger, Martin Blaha	68102-154
Non-Linear Convolution Applied to Acoustic Signals	Lamberto Tronchin	68102-226
Application of LABVIEW and MATLAB Software Products for Infrared Objects Detections	Liljana Docheva, Snejana Pleshkova, Aleksander Bekiarski	68102-022

Saturday July 14th 2012

Conference Room: Akeso
Time: 18:30-20:30
SYSTEMS Session: Neural Systems, Fuzzy Systems and Evolutionary Computing
Chair: André A. Keller, Michael Voskoglou

Partial Differential Equations to Diffusion-Based Population and Innovation Models	Andre A. Keller	68102-232
Representing a System in Terms of Fuzzy Logic	Michael Gr. Voskoglou	68102-046
Fuzzy Measures for a System's Performance	Michael Gr. Voskoglou	68102-163
An Application of the "Centroid" Method in Measuring a System's Effectiveness	Michael Gr. Voskoglou	68102-208
Towards a Theory of Hybrid Intelligent Autonomous Systems	Ouarda Hachour	68102-004
Spiking Neural Networks for Real-Time Infrared Images Processing in Thermo Vision Systems	Snejana Pleshkova	68102-025

Sunday July 15th 2012

Conference Room: Melambus
Time: 08:45-09:30
Keynote Lecture 3:

Energy, Environment and Importance of Power Electronics
by Prof. Bimal K. Bose, The University of Tennessee, USA.

Conference Room: Aegle A
Time: 08:45-09:30
Keynote Lecture 4:

Current Video Coding Standards: H.264/AVC, Dirac, AVS China and VC-1
by Prof. K. R. Rao, University of Texas at Arlington, USA
and Dr. Do Nyeon Kim, Barun Technologies, Corp., SOUTH KOREA.

Conference Room: Aegle B
Time: 08:45-09:30
Keynote Lecture 5:

Human Control Strategies for Multi-Robot Teams
by Prof. Katia Sycara, Carnegie Mellon University, PA, USA.

Sunday July 15th 2012

Conference Room: Melambus
Time: 09:30-10:15
Keynote Lecture 6:
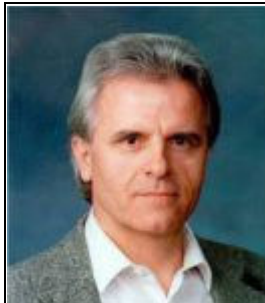
Energy and Environment: Fundamentals, Challenges and Potentials
by Prof. M. Kostic, Northern Illinois University, USA.

Conference Room: Aegle A
Time: 09:30-10:15
Plenary Lecture 19:

Reversible Canalicular Mrp2 Localization Induced by Intracellular Redox Status
by Prof. Toshiharu Horie, Chiba University, JAPAN.

Conference Room: Aegle B
Time: 09:30-10:15
Plenary Lecture 20:

A Concept on Thermal Equilibrium Establishment and Its Use in Heat Treating Industry
by Dr. Nikolai Kobasko, IQ Technologies Inc, USA.

Coffee Break: 10:15-10:45

Conference Room: Melambus
Time: 10:45-11:30
Plenary Lecture 21:

	Method for Determining the Residual Stress-Strain State of Welded Structures through the Wavelet Transform by Prof. Vincenzo Niola, University of Naples Federico II, ITALY.

Conference Room: Aegle A
Time: 10:45-11:30
Plenary Lecture 22:

	Targeting Environmental Sustainability of Electrical Ecosystems through Exergy by Prof. Cornelia Aida Bulucea, University of Craiova, ROMANIA.

Conference Room: Aegle B
Time: 10:45-11:30
Plenary Lecture :

	Neonatal Mass Urine Screening for Inborn Errors of Metabolism in the Province of Quebec: An Update by Prof. Christiane Auray-Blais, Université de Sherbrooke, CANADA.

Conference Room: Melambus
Time: 11:30-12:15
Plenary Lecture 24:

Applicability Didactical Instruments PUD-BJ In Improving Individual's Handwriting Style In Medical Purposes During The Rehabilitation Of Individuals After The Stroke
by Prof. Jozica Bezjak, University of Primorska PEF, SLOVENIA.

Conference Room: Aegle A
Time: 11:30-12:15
Plenary Lecture 25:

Dual rotor single inverter and single stator PMSM for HEVs
by Assoc. Prof. Sorin Ioan Deaconu, Polytechnic University of Timisoara, ROMANIA.

Conference Room: Aegle B
Time: 11:30-12:15
Plenary Lecture 26:

Sustainable Design Approaches in Interior Environments
by Asst. Prof. Nur Ayalp, University of Ankara, TURKEY.

Conference Room: Melambus
Time: 12:15-13:00
Plenary Lecture 27:

	A General Fuzzy Framework for Representing a System and Measuring its Performance by Prof. Michael Gr. Voskoglou, Graduate Technological Educational Institute of Patras, GREECE.

Conference Room: Aegle A
Time: 12:15-13:00
Plenary Lecture 28:

	Ecological Approaches and Green Design Implementations in Interior Architecture by Asst. Prof. Gozen Guner Aktas, TOBB ETU University, TURKEY.

Conference Room: Aegle B
Time: 12:15-13:00
Plenary Lecture 29:

	Targeting Fabry Disease Biomarkers Using Mass Spectrometry-Based Metabolomics by Prof. Christiane Auray-Blais, Universite de Sherbrooke, CANADA.

Sunday July 15th 2012

Conference Room: Melambus
Time: 13:00-15:30
MEDICAL Session: Pathology, Pharmacology, Cardiology and Gynaecology
Chair: Liliana Sandu, Shamimul Hasan

Significant Number of Elderly Patients Live with Potentially Toxic Levels of Digoxin Most Probably Overlooked for Long Enough	H. Tesfaye, Z. Paluch, B. Jedlickova, J. Skokanova	68117-021
Management of Adnexal Masses during Cesarean Section - Advantages of Exteriorizing the Uterus Technique Seen in a Twelve Year Retrospective Study	Furau Cristian, Ciobanu Gheorghe, Craina Marius, Furau Gheorghe	68120-001
Effect of Preparation Depth on Stress Distribution in Premolars Restored with MOD Pressed Ceramics Inlays	Liliana Sandu, Florin Topală, Sorin Porojan	68115-013
Oral Signs in Muco-Cutaneous Disorders - Report of Three Cases and Review of Literature	Shamimul Hasan	68115-001
Finite Element Analysis of Molars Restored with Ceramic Crowns	Sorin Porojan, Florin Topală, Liliana Sandu	68115-017
The Impact of Pregnancy on the Pharmacokinetics of Non-Opioid Analgesics	Aida Kulo, Rene Verbesselt, Jan De Hoon, Jan Deprest, Kristel Van Calsteren, Karel Allegaert	68112-001
Cefazolin Disposition in Special Populations	Anne Smits, Aida Kulo, Jan De Hoon, Veerle Cossey, Kristel Van Calsteren, Karel Allegaert	68112-029
Implementation of Clinical Pharmacology Course in the Carculum for Pregraduate Medical Students and Its Vital Importance	H. Tesfaye, D. Berry, V. Prokesova, K. Allegaert	68112-017
Current Situation and New Possibilities in Pharmacology of Parasitic Infections	Hrčkova Gabriela, Velebný Samuel	68112-025

Sunday July 15th 2012

Conference Room: Aegle A
Time: 13:00-15:30
SYSTEMS Special Session: Informatics in Control Theory and its Applications III
Chair: Vladimir Vasek

Optimal Pole Placement for LTI-TDS via Some Advanced Iterative Algorithms - Part I: Theory	Libor Pekar, Roman Prokop	68102-037
Optimal Pole Placement for LTI-TDS via Some Advanced Iterative Algorithms - Part II: Application	Libor Pekar, Roman Prokop	68102-040
The Accuracy of Chemical Reactors Models - A Case Study	Lubomír Macků	68102-196
Prediction of Semi-Batch Reactor Using Multilayered Feed-Forward Neural Networks	Lubomir Macku, David Samek	68102-199
Multilayer Neural Network in Differential Diagnosis of Balance Disorders	Lucie Pivnickova, Viliam Dolinay, Vladimir Vasek	68102-139
Robust Control Toolbox for Time Delay Systems	Marek Dlapa	68102-055
Robust Control Toolbox for Time Delay Systems with Time Delay in Numerator and Denominator	Marek Dlapa	68102-058
Effect of Beta Irradiation on the Microhardness of HDPE	Martin Ovsik, David Manas, Miroslav Manas, Michal Stanek, Kamil Kyas, Martin Bednarik, Ales Mizera	68102-091

Sunday July 15th 2012

Conference Room: Aegle B
Time: 13:00-15:30
COMPUTERS Session: Computational Techniques and Algorithms
Chair: Anastasios S. Lyrintzis, Cheng-Hung Huang

The Use of Petaflop Computing for Jet Noise Predictions	Chandra S. Martha, Yingchong Situ, Nitin Dhamankar, Anastasios S. Lyrintzis, Gregory A. Blaisdell, Zhiyuan Li	68104-226
Estimation of the Acid and Salt Diffusivities for Polymer Solution Using Inverse Algorithm in A Wet Spinning Process	Cheng-Hung Huang, Ming-Yuan Lee, Hsi-Mei Chen	68104-004
Fluctuation Free Differentiation via Circular Contour Integration	Ercan Gurvit, N. A. Baykara, Metin Demiralp	68104-133
Modeling of MMI Control System with Three Operators	George I. Popov, Maria P. Hristova, Rumen Trifonov	68104-235
Theory of Modeling and Simulation in Practice of Computer Modeling and Design	Josef Sedivy, Stepan Hubalovsky, Jan Chromy, Karel Dvorak	68104-223
Mining Frequent Strong Common Families in Weighted Leaf-Labeled Trees	Kyung Mi Lee, Keon Myung Lee	68104-211
A Computational Study of a Prebiotic Synthesis of L-Arginine	N. Aylward	68104-124
A Computational Study of a Prebiotic Synthesis of L-Lysine	N. Aylward	68104-127
An Efficient Hash-based Association Rule Mining Approach for Document Clustering	Noha Negm, Passent Elkafrawy, Abd-Elbadeeh Salem	68104-166

Sunday July 15th 2012

Conference Room: Akeso
Time: 13:00-15:30
EE Session: Energy and Power Systems
Chair: Bimal Bose, Yuri Vorobiev

Energy, Environment and Importance of Power Electronics	Bimal K. Bose	68105-007
The Study of Thermoelectric Generator with Various Thermal Conditions of Exhaust Gas from Internal Combustion Engine by Numerical Analysis	Byungdeok In, Kihyung Lee	68105-327
Design and Investigation of Solar Hybrid Electric/Thermal System with Sun-tracking Concentrator, Photovoltaic and Thermoelectric Generators	Edgar Arturo Chávez-Urbiola, Yuri V. Vorobiev	68105-442
Potential for Renewable Energy Resources in Strategic Planning of Tinaztepe Campus	Gulden Kokturk, Ayca Tokuc	68105-462
Cooling System for Photovoltaic Module	Ionel Laurentiu Alboteanu, Constantin Florin Ocoleanu, Cornelia Aida Bulucea	68105-132
A GIS-based Design of Power Line and Post-Construction Optimization	Kostas Kaousias, Stelios Zontos, Emmanuel Thalassinakis, Isidoros Vitellas	68105-502
Performance Evaluation of Small Scale Grid Connected Photovoltaic Systems in Europe	Petros J. Axaopoulos, Emmanouil D. Fylladitakis	68105-337
Transitioning to a Renewable Energy Economy	R. K. Snow, M. M. Snow	68105-037
Slovenian Electricity Market and Laws Connected to It	V. Pozeb, D. Goricanec, T. Krope	68105-407

Coffee Break: 15:30-16:00

Sunday July 15th 2012

Conference Room: Melambus
Time: 16:00-18:30
COMPUTERS Session: Software Engineering
Chair: Agostino Poggi, Agni Dika

ASiDE - A Software Framework for Complex and Distributed Systems	Agostino Poggi	68104-139
Conversion of Numbers to Text and to Speech in Albanian	Avni Rexhepi, Agni Dika, Adnan Maxhuni	68104-217
Software Reliability Compliance Model for Requirements Faults	Chandasekaran Subramaniam, Kanchana Natarajan	68104-130
Development of Algorithmic Thinking and Imagination: Base of Programming Skills	Eva Milková	68104-136
Optimized Source Code Generation from State Charts	Michal Bližnák, Tomáš Dulík, Roman Jašek, Pavel Varacha	68104-007
Signature Verification Based on Fractal Coding Scheme	Nadia M. G. Al-Saidi	68104-055
User Friendly Querying of Weakly Structured Data	Pavel Kácha	68104-112
Achievements of Interoperability between Governmental Information Systems	Tasho Tashev	68104-187

Sunday July 15th 2012

Conference Room: Aegle A
Time: 16:00-18:30
SYSTEMS Special Session: Informatics in Control Theory and its Applications IV
Chair: Vladimir Vasek

Effect of Beta Low Irradiation Doses on the Microhardness of PA6	Martin Ovsik, David Manas, Miroslav Manas, Michal Stanek, Stepan Sanda, Kamil Kyas, Martin Reznicek	68102-094
Evolutionary Algorithm Aided Biquad Design	Martin Pospisilik, Pavel Varacha	68102-190
A Method of Improvement of the Low-Cost Rectifiers Performance in Wideband AC Voltmeters and Amperemeters	Martin Pospisilik, Pavel Varacha, Milan Adamek	68102-184
Active Elements of Heat Accummulation in Laboratory of Intelligent Building - Thermal Accumulative Panels	Martin Zalesak	68102-148
Rapid Prototyping Methods Comparison	Michal Stanek, David Manas, Miroslav Manas, Jan Navratil, Kamil Kyas, Vojtech Senkerik, Adam Skrobak	68102-079
Fluidity of Polymer Influenced by the Amount of Filler	Michal Stanek, David Manas, Miroslav Manas, Kamil Kyas, Vojtech Senkerik, Adam Skrobak, Jan Navratil	68102-076
Intelligent Sensor Design for Audio Source Localization Implementing Digital Beamforming	P. Dostálek, V. Vašek, J. Dolinay	68102-067
Combined Production of Heat and Electric Energy - Linear Mathematical Model	Pavel Navratil, Libor Pekar	68102-043

Sunday July 15th 2012

Conference Room: Aegle B
Time: 16:00-18:30
EE Session: Air & Water Pollution, Waste Management
Chair: Jiri Krupka, Konradin Weber

Optimizing a Sensors Network According to a New Standardization Scheme for Preventing Air Contamination due to Hydrogen Leakage	C. G. Siontorou, F. A. Batzias, P. -M. P. Spanidis	68105-322
A Knowledge based Approach for Preventing Air Pollution due to Hydrogen Induced Corrosion in Gas Pipelines	Fragiskos A. Batzias, Philip-Mark P. Spanidis	68105-482
Timisoara's Waste Sorting Station	Iulia Para, Daniela Stanciu	68105-027
Data Analysis of Municipal Solid Waste Models	Jiří Křupka, Ivana Knížková, Miloslava Kašparová	68105-237
Research Aircraft Flight for Gas Leakage Investigation at the Elgin Wellhead Gas Platform in the North Sea - Initial Results	Konradin Weber, Andreas Vogel, Roland Reichardt, Thomas Zimmermann	68105-277
An Objective Assessment of the Connection between Meteorological Elements and the Main Air Pollutant Levels at Szeged, Hungary	László Makra, István Matyasovszky, Ioana Ionel, Francisc Popescu, Zoltán Csépe, Nicolae Lontis	68105-077
Evaluation of the Influence of Ammonia Water on the Environment	Lenka Fišerová, Martin Blaha	68105-212
A Review on Green Wastes Pyrolysis for Energy Recovery	M. J. Kabir, M. G. Rasul, N. Ashwath, A. A. Chowdhury	68105-102

Conference Room: Akeso
Time: 16:00-18:00
COMMUNICATIONS Session: Security and Encryption
Chair: Jakob Wassermann, Kamran Raza

Analysis of the Fractal Structures for the Information Encrypting Process	Ivo Motýl, Roman Jašek, Pavel Vařacha	68103-010
Advanced User Authentication Process Based on the Principles of 4th Degree Multibrot Fractal Structure	Ivo Motýl, Roman Jašek, Pavel Vařacha	68103-013
New Robust Watermarking Embedding Scheme Based on Combination of Basis Images of 2D Hadamard Transform and Quantization Index Modulation	Jakob Wassermann, Andrzej Dziech	68103-043
A Smart Agent-Based System for Real Time Network Intrusion Detection	Kamran Raza, Nadeem Qazi	68103-028
Security and Performance Evaluation of Lightweight Cryptographic Algorithms in RFID	Mojtaba Alizadeh, Mazleena Salleh, Mazdak Zamani, Jafar Shayan, Sasan Karamizadeh	68103-019

Conference Banquet: 20:00

Conference Room: Melambus
Time: 08:45-09:30
Plenary Lecture 30:

	Regular vs. Chaotic Dynamics of Beams and Plates by Prof. Jan Awrejcewicz, Lodz University of Technology, POLAND.

Conference Room: Aegle A
Time: 08:45-09:30
Plenary Lecture 31:

	Energy Efficiency, Exergy and Comfort in the Buildings by Prof. Lamberto Tronchin, University of Bologna, ITALY.

Conference Room: Aegle B
Time: 08:45-09:30
Plenary Lecture 32:

	Implementation of Clinical Pharmacology Course in the Curriculum for Pregraduate Medical Students and Its Vital Importance by Dr. Hundie Tesfaye, Charles University, CZECH REPUBLIC.

Conference Room: Melambus
Time: 09:30-10:15
Plenary Lecture 33:

Surface Quality of Parts Produced via Powder Injection Molding
by Prof. Berenika Hausnerova, Tomas Bata University, CZECH REPUBLIC.

Conference Room: Aegle A
Time: 09:30-10:15
Plenary Lecture 34:

Contribution of Knee Joint Mechanics to the Structure and Properties of Articular Cartilage
by Dr. Daniel M. Espino, University of Birmingham, UK.

Conference Room: Aegle B
Time: 09:30-10:15
Plenary Lecture 35:

Current Understanding of Cellular Mechanism on Sarcopenia
by Assoc. Prof. Kunihiro Sakuma, Toyohashi University of Technology, JAPAN.

Coffee Break: 10:15-10:45

Conference Room: Melambus
Time: 10:45-11:30
Plenary Lecture 36:

Gender Differences in the Phosphorus Content of the Sino-atrial Nodes and Other Cardiac Regions of Monkeys
by Prof. Yoshiyuki Tohno, Chiang Mai University, THAILAND.

Conference Room: Aegle A
Time: 10:45-11:30
Plenary Lecture 37:

Performance Analysis of SSC/SC Combiner at Two Time Instants in The Presence of Fading
by Dr. Dragana Krstic, University of Nis, SERBIA.

Conference Room: Aegle B
Time: 10:45-11:30
Plenary Lecture 38:

Significant Number of Elderly Patients Live with Potentially Toxic Levels of Digoxin Most Probably Overlooked for Long Enough
by Dr. Hundie Tesfaye, Charles University, CZECH REPUBLIC.

Conference Room: Melambus
Time: 11:30-12:15
Plenary Lecture 39:

Parallel WAN switch based on neural network
by Assoc. Prof. Vladislav Skorpil, Brno University of Technology, CZECH REPUBLIC.

Conference Room: Aegle A
Time: 11:30-12:15
Plenary Lecture 40:

Reverse Rate-Dependent Nature of Drug-Induced Changes in Action Potential Duration is an Intrinsic Property of Mammalian and Human Myocardium
by Prof. Peter P. Nanasi, University of Debrecen, HUNGARY.

Conference Room: Aegle B
Time: 11:30-12:15
Plenary Lecture 41:

Design and Implementation of River's Sectors Clustering Models
by Prof. Dana Simian, University "Lucian Blaga" of Sibiu, ROMANIA.

Conference Room: Melambus
Time: 12:15-13:00
Plenary Lecture 42:

Regulation of Morphogenesis and Gene Expression by Mechanical Forces
by Prof. Lev V. Beloussov, Lomonosow Moscow State University, RUSSIA.

Conference Room: Aegle A
Time: 12:15-13:00
Plenary Lecture 43:

Current Situation and New Possibilities in Pharmacology of Parasitic Infections
by Dr. Gabriela Hrckova, Parasitological Institute, SLOVAKIA.

Conference Room: Aegle B
Time: 12:15-13:00
Plenary Lecture 44:

Impact of Nonlinearities on Fiber Optic Communications
by Prof. Mário F. S. Ferreira, University of Aveiro, PORTUGAL.

Monday July 16th 2012

Conference Room: Melambus
Time: 13:00-15:30
CIRCUITS Session: Advances in Circuits and Systems
Chair: Ernst Kussul, Edelmoser Karl

Information Codification in Neural Networks with Ensemble Structures	Ernst Kussul, Tatiana Baidyk	68101-067
High Step-Up Ratio DC-to-DC Converter with Recuperation of the Leakage Energy	K. H. Edelmoser, F. A. Himmelstoss	68101-028
Solution to Eliminate Vibrations of Mechatronic Device used in Filming Effects for DSLR Camcoders	Mihai-Eugen Manescu, Luciana Cristea, Daniel-Calin Ola, Marius Hodirnau, Mihaela Ioana Baritz	68101-055
Design A STATCOM Supplementary Controller for Stability Studies using Various State Feedback Algorithm	N. Magaji, A. U. Lawan, Ado Dan-Isa, M. W. Mustafa	68101-007
Applications of Artificial Neural Networks in Control Systems	Silviya Kachulkova	68101-004
The Simplest Formulas for Self inductance, Mutual Inductance and Magnetic Force of Coaxial Cylindrical Magnets and Thin Coils	Slobodan Babic, Cevdet Akyel, Nazim Boudjada	68101-010
New Application of LIRA Neural Network	Tetyana Baydyk, Ernst Kussul, Miguel Hernández Acosta	68101-070
Software Implementation of Higher-Order Elements	Viera Biolková, Dalibor Biolek, Zdeněk Kolka	68101-034
Symbolic Analysis of Complex Circuit Models	Zdenek Kolka, Dalibor Biolek, Viera Biolkova	68101-052

Conference Room: Aegle A
Time: 13:00-15:30
SYSTEMS Special Session: Informatics in Control Theory and its Applications V
Chair: Vladimir Vasek

Comparison of Evolutionary Algorithms SOMA, DE, PSO	Pavel Vařacha, Martin Pospíšilík, Ivo Motýl, Michal Bližňák, Dalibor Slovák, Jakub Krampl, Kolek Jan	68102-187
Identification and Modeling of Nonlinear Servo Motor	Petr Chalup, Jakub Novak	68102-145
Graphical Analysis of Robust Stability for Polynomials with Uncertain Coefficients in Matlab Environment	Radek Matušů, Roman Prokop	68102-064
Robust Stabilization of First-Order Time-Delay Systems with Parametric Uncertainty	Radek Matušů, Roman Prokop	68102-070
Logistic Control of the Serial Rearrangeable Manufacturing System	Robert Bucki, Bronislav Chramcov	68102-127
Intelligent System for the Production of Biodiesel	Stanislav Plšek, Vladimír Vašek	68102-052
Heating Curve Corrections based on Behavior in the Consumption of the Heat	V. Dolinay, L. Vasek	68102-202
Optimization of Gate Location and Cooling System	Vojtech Senkerik, Michal Stanek, Miroslav Manas, David Manas, Adam Skrobak, Jan Navratil	68102-097

Conference Room: Aegle B
Time: 13:00-15:30
SYSTEMS Session: Simulation and Modelling in Systems Science
Chair: Siavash Sohrab, Grigorie Teodor Lucian

Control Charts and Models Predicting Cement Strength: A Strong Tool Improving Quality Control of Cement Production	Dimitris Tsamatsoulis	68102-001
Investigation of Some Basic Parameters Affecting the Optimum Sulfates Content of Cement	Dimitris Tsamatsoulis, Nikos Nikolakakos	68102-010
Organizational Structure New Concept for the Czech Artillery	Martin Blaha, Milan Kalina, Ladislav Potužák	68102-142
Supervisory Control and Data Acquisition Systems in Virtual Architecture Built via VMware vSphere Platform	Milos Pavlik, Roman Mihal, Lukas Lacinak, Iveta Zolotova	68102-160
On a Scale Invariant Model of Statistical Mechanics, Kinetic Theory of Ideal Gas, and Riemann Hypothesis	Siavash H. Sohrab	68102-259
A Redundant Bi-Dimensional Inertial Navigator in Vertical Plane	Teodor Lucian Grigorie, Ruxandra Mihaela Botez, Dragos George Sandu, Radu Obreja	68102-172
Analysis of Regional Road Safety Evaluation Model in the Czech Republic	Tomáš Kořínek, Jiří Křupka, Radovan Soušek	68102-178
Modeling of Mobile Processes	Tomas Kozel, Antonin Slaby	68102-073

Monday July 16th 2012

Conference Room: Akeso
Time: 13:00-15:30
CM-WHH-GES Session: Simulation and Modelling in Mechanics
Chair: Berenika Hausnerova, Fotini Labropulu

Surface Quality of Parts Produced via Powder Injection Molding	Berenika Hausnerova, Vladimir Pata	68106-021
Viscoelastic Mixed Convection Fluid Flow Over a Vertical Stretching Surface	Fotini Labropulu, I. Pop, D. Li	68106-013
Influence of Steel Yield Strength Value on Structural Reliability	Marcela Karmazínová, Jindrich Melcher	68106-049
Preparation and Characterization of Plasma Polymerized Thin Silica Layers on Polymeric Foil Materials	O. Hudecek, M. Rafajova, T. Sedlacek	68106-037
Two-Component Model of Localized Plasticity Autowaves and Quantum Properties of the Same	Vladimir Danilov, Lev Zuev, Svetlana Barannikova, Nikita Ploskov	68106-005
Evaluation of Adakites in the Northern Part of Sistan Suture Zone, Eastern Iran, for Porphyry Mineralization	M. H. Zarrinkoub, S. S. Mohammadi, M. H. Khatib	68108-011
Analysis of Deep Geological Structures by Variety of Curie Point Depth in Birjand Area, East of Iran	Mohammad Mahdi Khatib, Hesam Yazdanpenah, Mohamad Hossein Zarrinkoub	68108-006
Water Infrastructure and Socio-Economic Development Issues	Simona Maria Frone, Dumitru Florin Frone	68107-007
Conjugation of Artificial Neural Network and Geostatistics Approaches for Groundwater Modeling	Vahid Nourani	68107-004

Coffee Break: 15:30-16:00

Monday July 16th 2012

Conference Room: Melambus
Time: 16:00-18:00
COMPUTERS Session: Information Science and Applications I
Chair: Dionysios Politis, Hamid Abachi

Music Libraries: The Legitimate and Ethical Battlefield of Music Distribution	Dionysios Politis	68104-082
An Integrated Music Chromaticism Model	Dionysios Politis, Dimitrios Margounakis	68104-046
Analysis of NetworkMetrics of Master-Slave Multi-Super-Hypercube X-Tree Architecture	Hamid Abachi	68104-049
Ethical Paradigms in Biomechanical Innovations in Nanotechnology and Neurotechnology: Analyzing the Impact of Computer Technology on Tissue Engineering and Human Enhancement	J. S. Boyce	68104-202
Human Control Strategies for Multi-Robot Teams	Katia Sycara, Michael Lewis	68104-022
Compatibility Issues for the Constructive Impositions in High Dimensional Model Representation Based Data Decomposition	Metin Demiralp	68104-151

Conference Room: Aegle A
Time: 16:00-18:00
EE Session: Environment and Development II
Chair: Cornelia Aida Bulucea, Darko Goricanec

Fostering the Sustainability of Power Transformers	Cornelia A. Bulucea, Doru A. Nicola, Nikos E. Mastorakis, Philippe Dondon, Carmen A. Bulucea, Daniel C. Cismaru	68105-057
Techno-Economic Analysis of the Performances of High-Temperature Heat Pumps	Milovan Jotanović, Goran Tadić, Jurij Krope, Darko Goricanec	68105-417
Environmental Sustainability in Interior Design Elements	Nur Ayalp	68105-177
Bayesian Spatial Uncertainty Analysis	S. Zimeras, Y. G. Matsinos	68105-517
Thermal Comfort Determination Approach	Vaněk Josef, Nestorovič Tomáš	68105-012
Temporal Data Mining Approaches and Green Design Implementation for Data Center Chillers Management System	Wong Hui Shin, Ho Chin Kuan, Y. P.Singh	68105-197

Conference Room: Aegle B
Time: 16:00-18:00
SYSTEMS Session: Advanced in Systems Science II
Chair: Milan Stork, Sorin Ioan Deaconu

Hilbert-Huang Transform and Its Applications in Engineering and Biomedical Signal Analysis	Milan Stork	68102-034
The Cutting Stock Problem and Excessive Accumulation of Usable Leftovers	Mirko Gradišar, Luka Tomat	68102-175
An Explanation of the Nature of Thermal Waves "a Poker Effect" on the Basis of Hyperbolic Heat Conductivity Equation Analysis and Existence of Free Electrons in Metals	N. I. Kobasko, Sh. E. Guseynov	68102-016
A Concept on Thermal Equilibrium Establishment and Its Use in Heat Treating Industry	Nikolai Kobasko	68102-013
Commissioning, Monitoring and Control of a Low-Power Hydroelectric Power Plant	Sorin Ioan Deaconu, Gabriel Nicolae Popa, Răzvan Deaconu	68102-019
Adaptive Learning Rate for RBFNN	Syed Saad Azhar Ali, Muhammad Moinuddin	68102-136
The Color Relative Potential Field for Color Image Segmentation	Xiaodong Zhuang, N. E. Mastorakis	68102-211

Conference Room: Akeso
Time: 16:00-18:00
EE Session: Energy Efficient Buildings II
Chair: Nikos Sakkas, Slobodan Mirchevski

Potential Application of Solar Power Systems for Residential Buildings in High-Density Urban Pattern: The Case of the Eixample District, City of the Barcelona, in Spain	M. M. Riyahi Alam, A. Behfar, R. Shahmoradi	68105-452
Hourly Simulation of Energy Use and Cost in Buildings	Maria Kouveletsou, Nikos Sakkas, Stephen Garvin	68105-232
The Influence of Reactive Power on Energy Efficiency in Household Applications	Mirchevski Slobodan, Arsov Ljupcho, Iljazi Iljaz, Rafajlovski Goran	68105-162
Dynamic Thermal Simulation of A PCM Lined Building with Energy Plus	Murat Ozdenefe, Jonathan Dewsbury	68105-467
A System for Real-Time Calculation and Monitoring of Energy Performance and Carbon Emissions of RET Systems and Buildings	Panayiotis Philimis, Alessandro Giusti, Stephen Garvin	68105-207
DHW Design Flow Rates in Educational and Office Buildings	Teet-Andrus Koiv, Allan Hani, Alvar Toode	68105-427
The Importance of Building Criteria on Cooling Energy Demand of a Low Cost Residential House: Thailand Case Study	Waraporn Rattanongphisat, Federico M. Butera, R. S. Adhikari, Chalermporn Yooprateth	68105-247

Conference Room: Melambus
Time: 18:00-20:00
COMPUTERS Session: Information Science and Applications II
Chair: Petra Poulova, Erkan Ulker

A Two Factor Biometric Framework for User Authentication	Monica Carfagni, Matteo Nunziati, Matteo Palai	68104-058
The System of User Roles and Modelling of Access Privileges	Monika Simkova, Petra Poulova	68104-169
CESNET CSU System	Pavel Vachek	68104-148
Database System within the Computer Science Education	Petra Poulová, Ivana Šimonová, Monika Šimková	68104-121
Knot Estimation of the B-Spline Curve with Strength Pareto Evolutionary Algorithm 2 (SPEA2)	Saban Gülcü, Erkan Ülker	68104-118
Duality and Robust Computation	Vaclav Skala	68104-037

Conference Room: Aegle A
Time: 18:00-20:00
COMPUTERS Session: Image, Sound and Signal Processing I
Chair: Ales Prochazka, Anastasia Rita Widiarti

Biomedical Image Enhancement, Segmentation and Classification UsingWavelet Transform	A. Prochazka, J. Mares, M. Yadollahi, O. Vysata	68104-031
Widiarti-Winarko Algorithm for Grouping Syllables Result from the Javanese Literature Document Image Recognition	Anastasia Rita Widiarti, Edi Winarko	68104-097
Bit Error Probability Analysis of Cooperative Relay Selection OFDM Systems Based on SNR Estimation	B. Rama Devi, K. Kishan Rao, M.Asha Rani	68104-196
A Hybrid Case-Based and Content-Based Retrieval Engine for Mobile Cancer Management System - MCMS	Bassant Mohamed ElBagoury, Mohamed Roushdy, Abdel-Badeeh M.Salem	68104-085
Feature Matching in Off-Line Signature Verification	Bence Kovari, Hassan Charaf	68104-232
Computer-Aided Image Processing Method for Yarn Hairiness Evaluation	Rocco Furferi, Matteo Nunziati, Lapo Governi, Yary Volpe	68104-061

Conference Room: Aegle A
Time: 09:00-09:45
Plenary Lecture 45:

	Resilient Communication and Sensor Networks with Intrusion Detection by Prof. Demetrios Kazakos, Texas Southern University, USA.

Conference Room: Aegle B
Time: 09:00-09:45
Plenary Lecture 46:

	Innovations in Nanotechnology and Neurotechnology for Human Enhancement by Prof. Jeanann Boyce, Computer Science at Montgomery College, USA.

Conference Room: Aegle A
Time: 09:45-10:30
Plenary Lecture 47:

	Fast Information Retrieval for Textual and Geometrical Applications by Prof. Vaclav Skala, University of West Bohemia & VSB-Technical University of Ostrava, CZECH REPUBLIC.

Conference Room: Aegle B
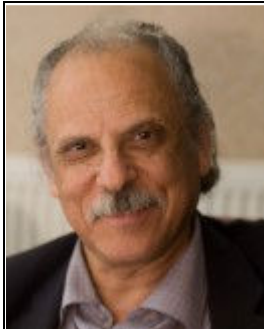**Time: 09:45-10:30**
Plenary Lecture 48:

	Knowledge Creation Capacity in Designing New Products for Industry as Extension of Constructing University Theoretical Knowledge by Prof. Les Mark Sztandera, Philadelphia University, USA.

Conference Room: Akeso
Time: 09:45-10:30
Plenary Lecture 49:

	Machine Learning in Biomedical Informatics by Prof. Abdel-Badeeh M. Salem, Ain Shams University, EGYPT.

Coffee Break: 10:30-11:00

Conference Room: Aegle A
Time: 11:00-11:45
Plenary Lecture 50:

	Digital Music Libraries: From Deregulation to Reconstruction by Assis. Prof. Dionysios Politis, Aristotle University of Thessaloniki, GREECE.

Tuesday July 17th 2012

Conference Room: Aegle B
Time: 11:00-11:45
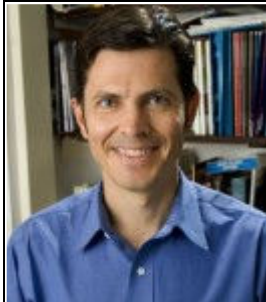**Plenary Lecture 51:**

Multimedia Application – Effective Support of Education
by Prof. Eva Milková, University of Hradec Králové, CZECH REPUBLIC.

Conference Room: Akeso
Time: 11:00-11:45
Plenary Lecture 52:

Towards Petaflop Computing – An Example Application on Jet Noise Simulation
by Prof. Anastasios Lyrintzis, Embry-Riddle Aeronautical University, USA.

Conference Room: Aegle A
Time: 11:45-12:30
Plenary Lecture 53:

On the Inversion of Adjacent Tridiagonal and Pentadiagonal Matrices
by Prof. N. A. Baykara, Marmara University, TURKEY.

Conference Room: Aegle B
Time: 11:45-12:30
Plenary Lecture 54:

	Simulation of Multiphase Porous Media Flows on High-Performance Hybrid Computing Systems by Prof. Boris Chetverushkin, Russian Academy of Sciences, RUSSIA.

Conference Room: Akeso
Time: 11:45-12:30
Plenary Lecture 55:

	Image Processing in Biometrics and Forensic Science by Prof. Ryszard S. Choraś, University of Technology and Life Sciences, POLAND.

Conference Room: Aegle A
Time: 12:30-14:30
COMMUNICATIONS Session: Advances in Telecommunications
Chair: Shweta Shah, Vladislav Skorpil

Efficient Open-Source Ray-Tracing Methods for Rural Environment	Andrej Vilhar, Andrej Hrovat, Igor Ozimek, Tomaž Javornik	68103-022
PDFs of Time Derivatives at Two Time Moments in the Presence of Nakagami Fading	Dragana Krstić, Petar Nikolić, Goran Stamenović	68103-046
Simulation Analysis of Image Transmission Using Hierarchical Modulation Based DVB-H System	Shweta Shah, Upena Dalal	68103-085
Path Optimization by Graph Algorithms	Vladislav Skorpil, Lubomir Cizek, Jiri Stastny	68103-040
Parallel WAN Switch Based on Neural Network	Vladislav Skorpil, Michal Polivka	68103-037
Knowledge and Data Fusion	Zdenek Bradac, Michal Sir, Vaclav Kacymarcyzk, Ivo Vesely	68103-034

Tuesday July 17th 2012

Conference Room: Aegle B
Time: 12:30-14:30
COMPUTERS Session: Image, Sound and Signal Processing II
Chair: Eréndira Rendón, Martin Nemec

Method to Classify Colposcopic Images	Eréndira Rendón, Adriana Díaz, Itzel Abundez, Eduardo Gasca	68104-178
3D Modeling Using Stereo Projection	Tomas Popek, Martin Nemec, Michal Krumnikl, Radoslav Fasuga	68104-028
A Unified Approach for Textual and Geometrical Information Retrieval	Vaclav Skala	68104-016
Holography, Stereoscopy and Blender 3D	Vaclav Skala	68104-040
Object Segmentation and Tracking in Image Sequences Based on the 3D Relative Potential Field	Xiaodong Zhuang, N. E. Mastorakis	68104-175

Conference Room: Akeso
Time: 12:30-14:30
COMPUTERS Session: Internet Applications I
Chair: Abdel-Badeeh Salem, Maria Mach-Król

Web-Based Ontology of Knowledge Engineering	Abdel-Badeeh M. Salem, Hisham S, Katoua	68104-091
Intelligent Methodologies for Medical Knowledge Management	Abdel-Badeeh M. Salem, Maria Mach-Król	68104-052
Reflection on the Development of eLearning in the Czech Republic	Blanka Frydrychová Klímová, Petra Poulová	68104-199
Web Sources in Academic Setting Comparative Study	Černá Miloslava, Poulová Petra	68104-109
Towards an Adaptation for the Web of Our Authoring Tool	Imane Ryane, Moncef Bentaleb, Mohammed Khalidi Idrissi, Samir Bennani	68104-070
Client/Server Implementation of an ATL Model Checker Using Web Services	Laura Florentina Stoica, Florin Stoica, Dana Simian	68104-142
Malicious Behavior in Voice over IP Infrastructure	Miroslav Voznak, Jakub Safarik, Lukas Macura, Filip Rezac	68104-043
Modular SIP Server on Embedded Platform	Miroslav Voznak, Lukas Macura, Jiri Slachta	68104-094

Tuesday July 17th 2012

Coffee Break: 14:30-15:00

Conference Room: Aegle A
Time: 15:00-17:30
COMPUTERS Session: Internet Applications II
Chair: Rumen Trifonov, Ching-Heng Ku

Ontology-Based Learning Environment in Distance Education Systems	Amin Daneshmand Malayeri, Nikos E. Mastorakis	68104-106
Framework for Personalized e-Learning Model	Maija Sedleniece, Sarma Cakula	68104-220
Mapping Tool for Networks Using OSPF and LLTD Protocols	Pavel Kriz, Filip Maly	68104-115
Web Content Management of the e-Government Sites	Roumen Trifonov, Georgi Popov, Valeri Mladenov	68104-190
A Study of the Service-based IPv6 Readiness Model for Government Agencies	Shian-Shyong Tseng, Ai-Chin Lu, Ching-Heng Ku, Chi-Ming Chu, Geng-Da Tsai	68104-172
Building an Anti-Botnet Platform to Mitigate Botnet	Shian-Shyong Tseng, Ai-Chin Lu, Nai-Wen Hsu, Geng-Da Tsai, Ching-Heng Ku	68104-181
Monitoring Environmental Changes and Medical Risks Using Distributed Mobile Applications	Sveatoslav Vizitiu, Lazar Sidor, Lupou Marius Gavril, Buta Ioan Bogdan	68104-184
Components of the Virtual Internet Classroom Model for Distance Learning of Information Content	Željko Marčićević, Radovan Tomić, Dragica Tomić	68104-064

Conference Room: Aegle B
Time: 15:00-17:00
COMPUTERS Special Session: Internet Computing and Security
Chair: Antoanela Naaji

Security Solution for False Antivirus Detection	Catalin Pop, Marius Popescu, Antoanela Naaji	68104-076
Preprocessing Using Structuring Element for Handwriting and Hand Printed Document Analysis	Dan L. Lacrăma, Florentina Anica Pintea, Florin Alexa	68104-100
About Recommender-Like Systems Using Co-Clustering Criteria	Klaus Bruno Schebesch	68104-103
Rest Web Services in Java Using WS-Wrapper	Ploscar Adina	68104-079
Using Forensic Techniques for Internet Activity Reconstruction	Zsolt Nagy	68104-088
AJAX-Based Data Collection Method for Recommender Systems	Zsolt Nagy	68104-214

Tuesday July 17th 2012

Conference Room: Akeso
Time: 15:00-17:00
COMMUNICATIONS Session: Computer Analysis of Signals
Chair: Vladislav Skorpil , Petr Cika

Measurement of Specific Signals with Experimental Equipment	Jiri Kouril	68103-076
Implementation of Universal Authentication Framework in the Electronic Archive Management	Jiri Sobotka, Ondrej Raso, Vaclav Zeman	68103-070
Educational Software for Optimal Order Determination of LP Speech Modeling in Telecommunication	Ondrej Raso, Miroslav Balik	68103-067
Software Based Video Stabilisation Method	Petr Cika, Martin Zukal, Vitezslav Otruba	68103-073
Grammatical Evolution as a Learning Process for Multiclass Object Detection	Skorpil V., Lysek J., Motycka A., Cepl M., Endrle P.	68103-061
Computer Analysis of Airflow Images Visualized by Smoke	Skorpil V., Richter J., Stastny J., Lysek J., Szocs J.	68103-055
Image Processing Methods Optimization by Means of GPU Computing	Skorpil V., Zidek K., Koubek T., Landa J., Endrle P.	68103-058