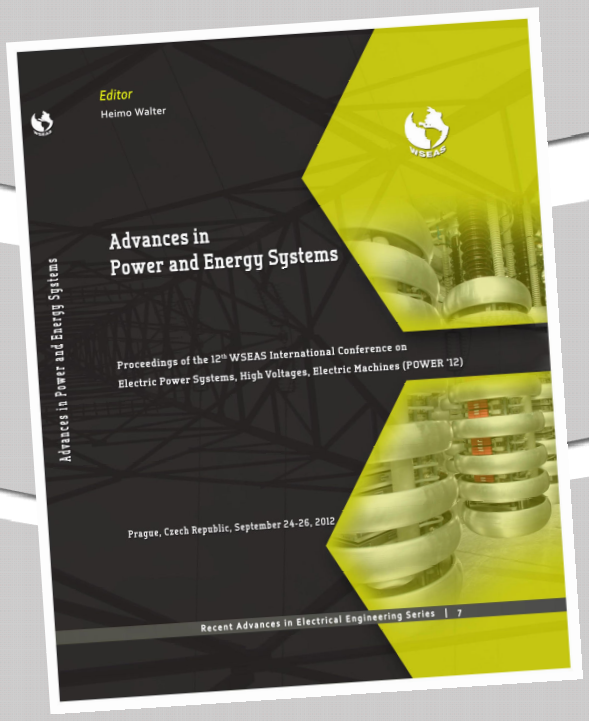
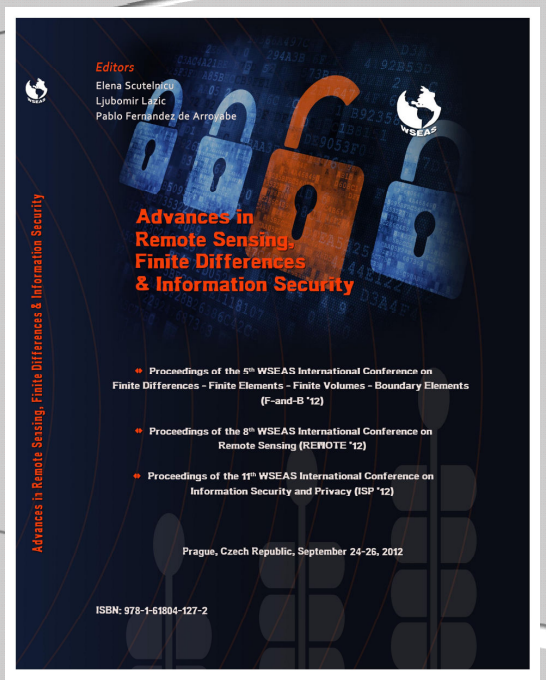
Conference Program

World Scientific and Engineering Academy and Society





Prague, Czech Republic
September 24-26, 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.

6th WSEAS European Computing Conference (ECC '12)

5th WSEAS International Conference on Finite Differences - Finite Elements - Finite Volumes - Boundary Elements (F-and-B '12)

12th WSEAS International Conference on Electric Power Systems, High Voltages, Electric Machines (POWER '12)

8th WSEAS International Conference on Remote Sensing (REMOTE '12)

11th WSEAS International Conference on Information Security and Privacy (ISP '12)

Prague, Czech Republic
September 24-26, 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.

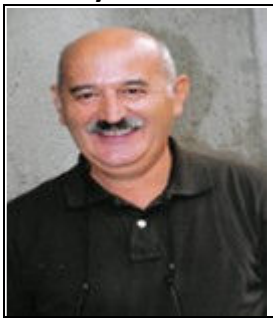
We trust that you will enjoy discussing the latest scientific developments with your peers during these three days, and that you will find your stay as pleasant as possible.

The WSEAS Team

Monday September 24th 2012

Registration: 08:00-08:45

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

	**OptimalSQM: Optimal Software Quality Management Repository is a Software Testing Center of Excellence** by Prof. Ljubomir Lazic, State University of Novi Pazar, SERBIA.

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

	Investigation and Numerical Resolution of Some Nonlinear Partial Differential and Integro-Differential Models by Prof. Temur Jangveladze, Caucasus University, GEORGIA.

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

	Artificial Bee Colony (ABC) Algorithm with Crossover and Mutation by Prof. Milan Tuba, University Megatrend Belgrade, SERBIA.

Monday September 24th 2012

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

	Numerical Surface Model Precision: Case of DEM's by Prof. Jose Francisco Zelasco, Buenos Aires University, ARGENTINA.

Coffee Break: 10:15-10:45

Conference Room: A
Time: 10:45-11:30
Plenary Lecture 5:

	Multidimensional Optimization Problems in Tropical Mathematics with Applications to Location Analysis by Assoc. Prof. Nikolai Krivulin, St. Petersburg State University, RUSSIA.

Conference Room: B
Time: 10:45-11:30
Plenary Lecture 6:

	The Relationship between Changes of Deflection and Natural Frequencies of Damaged Beams by Prof. Rainer Gillich, "Eftimie Murgu" University of Resita, ROMANIA.

Monday September 24th 2012

Conference Room: A
Time: 11:30-14:00
ECC Session: Image, Sound and Signal Processing
Chair: Roberto Gil-Pita, Byung-Yeon Hwang

Edit Distance Calculation by Phonetic Rules and Word-length Normalization	Byunggul Bae, Seung-Shik Kang, Byung-Yeon Hwang	68501-291
A Comparative Study of Time-Delay Estimation Techniques for Convolutive Speech Mixtures	Cosme Llerena Aguilar, Inma Mohino, Lorena Alvarez Perez	68501-266
Identifying the Number of Sources in Speech Mixtures with the Mean Shift Algorithm	David Ayllon, Inmaculada Mohino, Cosme Llerena	68501-191
Stress Detection through Emotional Speech Analysis	Inma Mohino, Roberto Gil-Pita, Lorena Alvarez Perez	68501-216
Fog Border Detection in the Airflow Image	J. Richter, J. Stastny	68501-121
Visualization of Lighting Circuits in the Home	Jana Jurinová, Miroslav Ölvecký	68501-061
Comparison of Different Taxonomies of Automatic Speech/music/noise Classification Systems in Digital Hearing Aids	Lorena Alvarez Perez, Inma Mohino, Cosme Llerena Aguilar	68501-236
Evolutionary Diagonal Quadratic Discriminant for Speech Separation in Binaural Hearing Aids	Roberto Gil-Pita, Lorena Alvarez Perez, Inma Mohino	68501-201

Monday September 24th 2012

Conference Room: B
Time: 11:30-14:00
POWER Session: Electric Power Systems
Chair: Francesco Muzi, Mirko Marracci

The Transformer Inrush Currents in large MV-Cable Installations	Francesco Muzi	68503-067
Using Acoustic Emissions for Corona Detection	Marco Antônio Martins Renno, Erik L. Bonaldi, Levy Ely L. Oliveira, Jonas G. Broges Da Silva, Germano Lambert-Torres	68503-079
The Variants of Control the Boost Converter in DC-Link of Frequency Converter, which is Used for Minimization of Influence of Voltage Drop to Electric Drive with Inductance Motor	Martin Pittermann, Jiří Fořt	68503-058
Characterization of Asymmetric Loops of Soft Magnetic Materials via the Induction Method	Mirko Marracci, Bernardo Tellini	68503-061
An Automatic System to Test Li-Ion Batteries and Ultracapacitors for Vehicular Applications	Mirko Marracci, Bernardo Tellini	68503-070
Shielding in Rail Launcher Environment	Mirko Marracci, Bernardo Tellini	68503-076
Electrical Short Circuit Finding in MV Network Using Fuzzy Clustering Techniques	Muhammad M. A. S. Mahmoud	68503-082
VEDSA: Prototype of Variable Stiffness Electrodynamic Member for Flexible Robotic Joint	Petr Beneš	68503-043

Coffee Break: 14:00-14:30

Conference Room: A
Time: 14:30-15:00
Plenary Lecture 7:

Performance Management Systems (PSM) Construction and Analysis
by Prof. Jiří Strouhal, University of Economics Prague, CZECH REPUBLIC.

Monday September 24th 2012

Conference Room: A
Time: 15:00-17:30
ECC Session: Software Quality Management & Security
Chair: Ljubomir Lazic, Jitae Shin

On Optimizing Payments Clearance Business Process – An Evolutional Approach	Deniss Kumlander	68501-496
Uncertainty Management Framework Elements – Test Based Verification of the Process	Deniss Kumlander	68501-516
An Unequal Error Protection Using Prioritized Network Coding for Scalable Video Streaming	Jisun Yoon, Chunsoo Ahn, TaeMin Cho, Jitae Shin	68501-041
Software Security Analysis, Metrics, and Test Design Considerations	Ljubomir Lazić, Dženan Avdić, Aldina Pljasković	68501-336
Comparative Study on Applicability of Four Software Size Estimation Models Based on Lines of Code	Ljubomir Lazić, Mile Petrović, Petar Spalević	68501-066
Software Test Suite Size Reduction by Applying Cause-Effect Graphs and Combinatorial Testing	Ljubomir Lazić, Radomir Janković, Branislav Milojković	68501-096
OptimalSQM: Optimal Software Quality Management Repository is a Software Testing Center of Excellence	Ljubomir Lazić, Stevan A. Milinković, Siniša S. Ilić	68501-176
Practical Issues in Temporal Authentication	Stevan Milinković, Branislav Milojković, Dragan Spasić, Ljubomir Lazić	68501-246
Chain Creation between Parts of Performance Management Systems	Tarmo Kadak, Jiří Strouhal	68501-221

Conference Room: B
Time: 15:00-17:00
F-and-B Session: Finite Elements: Simulation and Modelling
Chair: Stefano de Miranda, Badea Lepadatescu

A Lattice Boltzmann Approach to Fluid-Structure Interaction Problems	Alessandro De Rosis, Giacomo Falcucci	68502-053
Stress State of Shells under Arbitrary Load	E. A. Barashkova, I. G. Emelyanov	68502-013
Recovery by Compatibility in Patches for Elastic Perfectly-Plastic Structures	Federica Daghia, Stefano De Miranda	68502-049
Finite Element Methods for Contact Problems in Rolling Bearing Elements	Ioan Enescu, Daniela Enescu	68502-045
Verified Non-linear Model for Reinforced Concrete Beams	Oldrich Sucharda, Jiri Brozovsky	68502-009
Simulation of the Air-Oil Mixture Flow in the Scavenge Pipe of an Aero Engine	Stratis Kanarachos, Michael Flouros	68502-061

Tuesday September 25th 2012

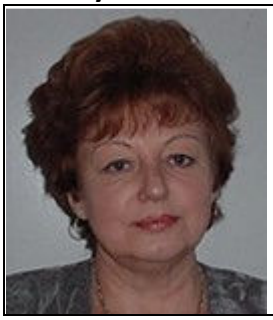
Conference Room: A
Time: 08:45-09:30
Plenary Lecture 8:

	Intelligent Information Technologies Used for E-Learning Systems by Assoc. Prof. Badea Lepadatescu, Transilvania University of Brasov, ROMANIA.

Conference Room: B
Time: 08:45-09:30
Plenary Lecture 9:

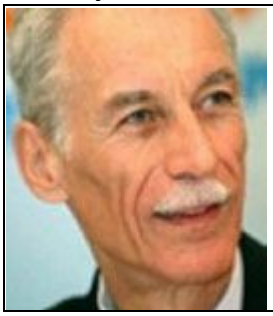
	New Authentication Methods of Symmetric Cryptographic Check Values by Prof. Nataša Živić, University of Siegen, GERMANY.

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

	**Integration of RS and GIS to Encourage Automation, Temporal Analysis and to Support the Decision Making** by Assoc. Prof. Dana Klimešová, Czech Academy of Sciences & Czech University of Life Sciences in Prague, CZECH REPUBLIC.

Tuesday September 25th 2012

Conference Room: B
Time: 09:30-10:15
Plenary Lecture 11:

	**Nodal Electricity Market Design Based on Regulated Access to Transmission Network** by Dr. Jean Constantinescu, ROENP, ROMANIA.

Coffee Break: 10:15-10:45

Conference Room: A
Time: 10:45-11:30
Plenary Lecture 12:

	A Distributed and Autonomous Framework for Resilient Information Networks: Some Results from Self-Repairing Networks by Prof. Yoshiteru Ishida, Toyohashi University of Technology, JAPAN.

Conference Room: B
Time: 10:45-11:30
Plenary Lecture 13:

	Smart Grids and Building Automation by Prof. Francesco Muzi, University of L'Aquila, ITALY.

Tuesday September 25th 2012

Conference Room: A
Time: 11:30-14:00
POWER Session: Energy Systems and High Voltage
Chair: Davide Poli, Jaroslav Lokvenc

The PRIME Project: The Assessment of the Impact of Electric Vehicles on the Power System and on the Environment	D. Poli, M. Giuntoli, S. Scalari, E. Pasca, A. Quadrelli, P. Menga, R. Buccianti	68503-085
Electric Mobility Systems: Possible Providers of Energy Services to Active Distribution Networks?	D. Poli, S. Barsali, R. Giglioli	68503-088
Three-Phase High Overload DC Power Supply Voltage with the Mid Frequency Transformer Ripple Filter	Jaroslav Lokvenc, Rene Drtina, Milos Sobek	68503-019
A Nodal Electricity Market Design Based on Regulated Access to Transmission Network	Jean Constantinescu	68503-016
Numerical Analysis of Quality of Power Generated by an Innovative AC PV-module with On-board Energy Storage	R. Carbone, A. Tomaselli	68503-046
Research on Islanded Operation of Ac System Consisting of BESS and Distributed Energy	Tomoki Nagahira, Junichi Arai, Takao Shinji, Takao Ogata, Akira Yamashita	68503-025
Stability Analysis of Inverter for Renewable Energy	Tooru Morii, Junichi Arai, Tsumenaga Masahiro	68503-022
Adaptive Field Oriented Control (FOC) for 3-phase AC-Drives	Zhivko Grozdev, Dimitar Dimitrov, Nikolay Djagarov, Milen Bonev	68503-004

Conference Room: B
Time: 11:30-14:00
REMOTE Session: Latest Trends in Remote Sensing
Chair: Dana Klimešová, José Francisco Zelasco

Aspects Regarding Monitoring and Future Behavior Forecasting in Case of Concrete Dams	Alexandra Popa, Maricel Palamariu	68504-071
GIS-Supported Spatial - Temporal Modelling	Dana Klimešová, Jakub Konopásek	68504-101
Forest Cartography using Landsat Imagery, for Studying Deforestation over Three Catchments from Apuseni Mountains, Romania	George Costea, Aziz Serradj, Ionel Haidu	68504-036
A Vertical and Horizontal Error Estimator for Digital Surface Models	José Francisco Zelasco, Patrick Julien, Gaspar Porta, Kevin Ennis, Judith Donayo	68504-011
Moving Type Three Dimensional Measurement System of a Tubular Structure	Kikuhito Kawasue, Takayuki Komatsu,Takafumi Ikeda, Kumiko Yoshida	68504-031
Thermal Analysis of the Disc Brake Test using the High-Speed Camera	Min-Soo Kim, Byeong-Choon Goo	68504-061
Design of the Scaled Adhesion Tester for Analyzing the Adhesion Characteristic of Railway Vehicles	Min-Soo Kim, Nam-Po Kim	68504-056
Spatial Fragmentation on the Wetland Ecosystem in Indonesia	Suprajaka, Niendyawati, Prijadi Kardono, Hartono	68504-081

Tuesday September 25th 2012

Conference Room: A
Time: 14:00-17:00
ECC Session: Information Science and Applications I
Chair: Badea Lepadatescu, Nikolai Krivulin

Statistical Inference of Reliability Estimation of Industrial Processes	Adela-Eliza Dumitrascu, Anisor Nedelcu	68501-281
FIR Filtering on ARM Cortex-M3	Alexandru Bârleanu, Vadim Băitoiu, Andrei Stan	68501-471
An Internet of Things Oriented Approach for Water Utility Monitoring and Control	Cristina Turcu, Cornel Turcu, Vasile Gaitan	68501-156
D-Code: A Programming Language that Simulates Probability and Statistics Experiments using Modifiable Sided Dice (MSD)	Gaspar Porta, Trisha Bergthold, Robert Lindauer, Israel Wasserstein, Jose Francisco Zelasco	68501-251
Driver Classification Identification using Artificial Intelligence	L. Ekonomou, T. I. Maris	68501-361
A Complete Closed-Form Solution to a Tropical Extremal Problem	Nikolai Krivulin	68501-131
A Tropical Extremal Problem with Nonlinear Objective Function and Linear Inequality Constraints	Nikolai Krivulin	68501-186
A Solution of a Tropical Linear Vector Equation	Nikolai Krivulin	68501-226
Trustworthiness in Electronic Voting System Design	Petr Silhavy, Radek Silhavy, Zdenka Prokopova	68501-071
Requirements Size Estimation Model Case Study	Petr Silhavy, Radek Silhavy, Zdenka Prokopova	68501-076

Tuesday September 25th 2012

Conference Room: B
Time: 14:30-17:00
ISP Session: Information Security and Privacy
Chair: David Malanik, Roshidi Din

Establishing Effective Information Security on Modern Mobile Devices	Blaž Markelj, Igor Bernik	68505-001
Rogue AP with HTTPS Credentials Sniffer	David Malanik, Roman Jasek, Radek Vala	68505-029
Criminal Network Mining by Web Structure and Content Mining	Javad Hosseinkhani, Suriayati Chaprut, Hamed Taherdoost	68505-057
Performances Indicators of Authentication System	Michal Jerabek, Lucie Krcalova	68505-013
Evolution of Stepping Stone Detection and Emerging Applications	Mohd Nizam Omar, Angela Amphawan, Roshidi Din	68505-045
A Study on Android-based IDS: A Propose for Cost-sensitive Based Intrusion Response System	Naqliyah Bt Zainuddin	68505-017
Monitoring Framework for Access Control Configurations	Nicoleta Stanciu	68505-009
Multilevel User Verification with Intelligent Artificial Neural Network	Roman Jasek, David Malanik, Radek Vala	68505-025
"IT" Infrastructure Protection From Malicious Codes and Malware Protection System using Controlled Environment	Seema Khanna, Harish Chaudhry, Gundeep Singh Bindra	68505-053

Coffee Break: 17:00-17:30

Tuesday September 25th 2012

Conference Room: A
Time: 17:30-19:30
ECC Session: E-Learning, Distance Learning, Web Learning
Chair: José Francisco Zelasco, Badea Lepadatescu

Problem Resolution Processes in Computer Science Teaching	José Francisco Zelasco, Gustavo López, Jose Manuel Cabo Herández, Judith Donayo	68501-011
Project Development Workshop in Computer Science Program applying the Competency Model Approach	José Francisco Zelasco, Gustavo López, Judith Donayo, Jose Manuel Cabo Herández	68501-321
Problem Resolution Processes in Computer Science Teaching	José Francisco Zelasco, Judith Donayo, Gustavo López, Jose Manuel Cabo Herández	68501-091
Computer Modeling, Simulations and Design Manufacturing Strategy in the Engineering Education	Josef Sedivy, Karel Dvorak	68501-331
Intelligent Information Technologies Used for E-Learning Systems	Luminița Popa, Simona Sofia Duicu, Badea Lepădătescu	68501-271
Current Managerial Communication Based on Modern Technology and Cross-Cultural Exchanges	Marcel Pikhart	68501-481
Blended Learning as a Strategy to Eliminate the Shortages of Traditional Education	Miroslav Ölvecký, Jana Jurinová, Ladislav Huraj	68501-136

Conference Banquet: 20:30

Wednesday September 26th 2012

Conference Room: A
Time: 08:45-09:30
Plenary Lecture 14:

Global Navigation Satellite Systems Applications in Modern Aviation and Terrestrial Applications
by Prof. Krzysztof A. Cyran, Director of the Virtual Flying Laboratory (VFL), POLAND.

Conference Room: B
Time: 08:45-09:30
Plenary Lecture 15:

Duality and Projective Computation in Engineering and Geometry
by Prof. Václav Skala, University of West Bohemia & VSB-Technical University of Ostrava, CZECH REPUBLIC.

Conference Room: A
Time: 09:30-12:00
ECC Session: Data Analysis
Chair: Bruno Carpentieri, Vaclav Skala

A New Instance Weighting Method for Transfer Learning	Bariş Koçer, Ahmet Arslan	68501-081
Data Compression and Clustering: A “Blind” Approach to Classification	Bruno Carpentieri	68501-016
Sequencing on Tightly Dependent Dataset with Genetic Algorithms	Didem Abidin	68501-051
Knowledge Management using Open Source Repository	Giulio Concas, Filippo Eros Pani, Maria Ilaria Lunesu	68501-301
A Logic Based Feature Selection Method for Improving the Accuracy of Data Mining Classification Algorithms	Mehmet Hacibeyoglu, Ahmet Arslan, Sirzat Kahramanli	68501-101
Quality of Data in Information Systems	Stanislava Simonova, Iva Zavadilova	68501-021
CT and MRI Data Processing for Rapid Prototyping	Vaclav Skala	68501-486
The Geocode Correction in the Database as a Base for Spatial Analysis	Zdena Dobesova	68501-511

Wednesday September 26th 2012

Conference Room: B
Time: 09:30-12:00
F-and-B Session: Finite Element Analysis
Chair: Gilbert-Rainer Gillich, Jiri Brozovsky

Beam Model Validation Based on Finite Element Analysis	Carla Protocsil, Petru Florin Minda, Gilbert-Rainer Gillich, Andrea Amalia Minda, Ovidiu Vasile	68502-037
Stress Analysis in a Flexible Slider of a Friction Pendulum with Variable Curvature	Claudiu Mirel Iavornic, Stefania Camelia Jurcau, Gilbert-Rainer Gillich, Nicoleta Gillich, Andrea Amalia Minda	68502-041
FEM Analysis of a Micro Acoustic Levitator Integrated into a Nozzle of a Printing Device	Gheorghe Amza, Adrian Milică	68502-065
The Relationship between Changes of Deflection and Natural Frequencies of Damaged Beams	Gilbert-Rainer Gillich, Zeno-Iosif Praisach, Ionica Negru	68502-025
Finite Element Analysis of Acoustic Pressure Levels and Transmission Loss of a Muffler	Ovidiu Vasile, Gilbert-Rainer Gillich	68502-029
Acoustic Wave Propagation in Relation to a Simple Partition Wall Modeled as an Elastic Non-Inertial Element	Ovidiu Vasile, Gilbert-Rainer Gillich	68502-033

Coffee Break: 12:00-12:30

Wednesday September 26th 2012

Conference Room: A
Time: 12:30-15:30
ECC Session: Algorithms in Computer Science
Chair: Ali Ukasha, Milan Tuba

New Method for Contour Extraction & Compression using Ramer Algorithm & Wavelet Transform	Ali A. Ukasha, Ahmed B. Abdurrhman	68501-181
Solving TSP using Genetic Algorithms - Case of Kosovo	Avni Rexhepi, Agni Dika, Adnan Maxhuni	68501-241
Vision-Based Algorithm for Real-Time Hand Posture Recognition	Bojan Markovich, Milan Tuba	68501-311
Firefly Algorithm with a Feasibility-Based Rules for Constrained Optimization	Ivona Brajevic, Milan Tuba, Nebojsa Bacanin	68501-146
Advanced Elementary Symmetric Polynomials Calculation Algorithm	Jerzy Stefan Respondek	68501-026
Face Detection Algorithm Based on Skin Color and Edge Density	Marko B. Stankovich, Milan Tuba	68501-306
Artificial Bee Colony (ABC) Algorithm with Crossover and Mutation	Milan Tuba	68501-141
Improved Adaptive Median Filter for Denoising Ultrasound Images	Nikola Rankovic, Milan Tuba	68501-151
Two Multi-Criteria Evolutionary Algorithms for a Multi-Path Evacuation Problem	Pedro Cardoso, Mario Jesus, Pedro Guerreiro, Paula Ribeiro, Alberto Marquez, José-Ramón Portillo	68501-126
Text Steganalysis using Evolution Algorithm Approach	Roshidi Din, T. Zalizam T. Muda, Puriwat Lertkrai, Mohd Nizam Omar, Angela Amphawan, Fakhrul Anuar Aziz	68501-436
Denoising Algorithm Using Adaptive Block Based Singular Value Decomposition Filtering	Somkait Udomhunsakul	68501-001

Wednesday September 26th 2012

Conference Room: B
Time: 12:30-15:30
ECC Session: Information Science and Applications II
Chair: Hamid Reza Karimi, Masaji Watanabe

Software Engineering Used in Simulation of Flexible Manufacturing Systems	Adriana Fota, Sorin Barabas	68501-276
Magneto-Rheological Damper Hysteresis Characterization for SAS Systems	D. Ghorbany, H. R. Karimi, Y. Iskandarani	68501-466
A New Approach for Computing Levels of Animals Diseases	Hesham Ahmed Hassan, Hazem El-Bakry, Hamada Gaber Abd Allah	68501-261
Computational Study of Microbial Depolymerization Processes of Xenobiotic Polymers	Masaji Watanabe, Fusako Kawai	68501-116
Using Web Analytics to Study Non-Price Competition in the E-Commerce Environment	Renata Bilkova, Hana Kopackova	68501-166
Ontology Transformation in Function of User-Interface Creation	Saša Arsovski	68501-456
Distributed Function Constraints with Action Construction and Implementation	Susumu Yamasaki	68501-046
Permission, Prohibition and Default in Action Structures	Susumu Yamasaki	68501-256
GPGPU Accelerated Optimization Method of Interconnection Network Topology	Vladimír Siládi, Ladislav Huraj, Michal Povinský	68501-086
Virtual Plant control based on ABB 800xa Conceptualization to Simulator	Yousef Iskandarani, Karina Nohammer, Hamid Reza Karimi	68501-036

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