#### **Joint Program**

#### Vienna, Austria, 15-17 March 2015



2015 International Conference on Applied Physics, Simulation and Computers (APSAC 2015)

2015 International Conference on Mathematical Methods, Mathematical Models and Simulation in Science and Engineering (MMSSE 2015)

2015 International Conference on Educational Technologies and Education (ETE 2015)
2015 International Conference on Chemical Engineering and Materials Science
(CEMS 2015)

2015 International Conference on Pure Mathematics - Applied Mathematics (PM-AM 2015)

2015 International Conference on Neural Networks - Fuzzy Systems (NN-FS 2015)
2015 International Conference on Economics and Statistics (ES 2015)
2015 International Conference on Theoretical Mechanics and Applied Mechanics

2015 International Conference on Theoretical Mechanics and Applied Mechanics (TMAM 2015)

2015 International Conference on Mechanical Engineering (ME 2015)
2015 International Conference on Environmental Science and Geoscience (ESG 2015)
2015 International Conference on Circuits, Systems, Signal Processing, Communications and Computers (CSSCC 2015)

2015 International Conference on Biology and Biomedical Engineering (BBE 2015)

#### **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 15 minutes for a regular paper, 30 minutes for an invited paper and 40 minutes for a plenary speech, including questions. Invited papers are marked in Italic letters
- (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.

Keynote Lecture: 09:00-09:45 Room A'



Highlights of Modern Astrophysics, or The Gold Effect: How reliable is Modern Astrophysics?
by Professor Wolfgang Kundt, Argelander Institut für Astronomie, University of Bonn, Germany.

Plenary Lecture: 09:45-10:30 Room A'



**Data Compression: Learning and Clustering** by Professor Bruno Carpentieri, University of Salerno, Italy.

Coffee Break: 10:30-11:00

**CONFERENCE ROOM A': 11:00-14:00** 

Session: Pure and Applied Mathematics and Mathematical Methods I

**Chair: Nataniel Greene, Petra Perner** 

| Application of Statistic Complexity Metrics to Detection of Malware Threats in Autonomic Component Ensembles    | A. Prangishvili, O. Shonia, I. Rodonaia, V.<br>Rodonaia  | 5562007 |
|---|--|---------|
| Generalized Least-Squares Regressions V: Multiple<br>Variables  | Nataniel Greene  | 5651003 |
| Swarm Optimization-Based Personalization of<br>Interactive Systems  | Alexander Nikov, Stefka Stoeva, Tricia<br>Rambharose   | 5554011 |
| Vision-Based Navigation and System Identification of<br>Unmanned Underwater Survey Vehicle                      | Seda Karadeniz Kartal, M. Kemal<br>Leblebicioğlu   | 5619007 |
| Some Problems of Fuzzy Modeling of<br>Telecommunications Networks   | Kirill Garbuzov, Alexey S. Rodionov  | 5551007 |
| New Computational Methods for Spectrometer Signal<br>Analysis   | Petra Perner   | 5550007 |
| Ridge Regression and Bootstrapping in Asthma<br>Prediction  | Ioannis I. Spyroglou, Eleni A. Chatzimichail,<br>E. N. Spanou, E. Paraskakis, Alexandros G.<br>Rigas | 5615003 |
| Quasi-Conformal Harmonic Mappings Related to the<br>Janowski Starlike Functions                                 | Melike Aydogan, Yasar Polatoglu, H. Esra<br>Ozkan Ucar, Arzu Yemisci, Yasemin<br>Kahramaner          | 5577007 |
| On a Subclass of p-Valent Starlike Functions Associated with a Generalized Hypergeometric Differential Operator | Entisar El-Yagubi, Maslina Darus, Melike<br>Aydogan  | 5577003 |
| LQR Control of a Quadrotor Helicopter   | Demet Canpolat Tosun, Yasemin Işık, Hakan<br>Korul   | 5585007 |

**CONFERENCE ROOM B': 11:00-14:00** 

Session: Applied Physics, Simulation, Computers and Networks I

Chair: Alexander L. Dmitriev, Junhui Hu

| Polarization Angle Independent Perfect Multi-Band    |  |         |
|--|--|---------|
| Metamaterial Absorber in Microwave Frequency Regime  | O. T. Gunduz, C. Sabah                     | 5514007 |
|  |  |         |
| Prospects of High-Frequency Gravimetry               | Alexander L. Dmitriev                      | 5539007 |
| Detection Singular Polarization State by Multi-Order | Dmitry A. Savelyev, Nikolay L. Kazanskiy,  |         |
| Diffractive Optical Element                          | Svetlana N. Khonina                        | 5654003 |
|  | Jium-Ming Lin, Ubadigha Chinweze           |         |
| A Novel Flexible Electrodynamic Planar Loudspeaker   | Ukachukwu, Cheng-Hung Lin                  | 5527003 |
|  | Talgat Gazizov, Alexander Melkozerov,      |         |
|  | Alexander Zabolotsky, Sergey Kuksenko,     |         |
|  | Pavel Orlov, Vasiliy Salov, Roman Akhunov, |         |
| Ensurance and Simulation of Electromagnetic          | Ilya Kalimulin, Roman Surovtsev, Maxim     |         |
| Compatibility: Recent Results in TUSUR University    | Komnatnov, Alexander Gazizov               | 5606003 |
|  | Viktor Sverdlov, Joydeep Ghosh, Alexander  |         |
|  | Makarov, Thomas Windbacher, Siegfried      |         |
| Silicon and CMOS-Compatible Spintronics              | Selberherr                                 | 5574011 |
|  | Junhui Hu, Qiang Tang, Xu Wang, Xiaofei    |         |
| Progress in Ultrasonic Nano Manipulations            | Wang                                       | 5567003 |

**CONFERENCE ROOM C': 11:00-14:00** 

Session: Biology, Biomedical & Chemical Engineering and Materials Science I

Chair: Anton Semenchenko, Mohamed E. Khalifa

| Agent based Amino Acid Elongation Model: Influence of Ribosome Abundance on Polysome Formation            | Anton Semenchenko, Allbens Atman   | 5662003 |
|---|--|---------|
| Rapid Screening 73 Antibiotic Drugs in Animal Feeds using Ultra-Performance Liquid Chromatography         |  |         |
| Coupled to FT-Orbitrap High Resolution Mass   | Yu-An Sun, Qiuxia Zhang, Wei Ke, Zhenxing                                    |         |
| Spectrometry  | Li, Ke Wang, Guoqing Wang  | 5551003 |
| The Effect of Filler Size, Rheology Control Agent Content and Temperature Variation on Viscosity of Epoxy | F.Nihal Tüzün  | 5575003 |
| . , , , ,   |  | 3373003 |
| 3D Biopolymer Scaffolds for Stem-Cell Culture in Biomedical Engineering                                   | Q. T. Nguyen, E. Al Tawil, A. Monnier, B.<br>Deschrevel                      | 5656023 |
| Drill-Ability Studies of Laser Drilled Micro Holes on CFRP Composites                                     | Anarghya A., Yatheesha R. B., Gurumurthy<br>B. M., Nitish Rao, Ranjith B. S. | 5383003 |
| Development of a Portable System for Vibration  |  |         |
| Stimulation to Improvement of Walking Stability   | Park Min-Hwa, Kim Dong-Wook  | 5633023 |
| Biological Impact of Certain Substituted Monoazo  |  |         |
| Thiazole-thiophene and Their Seleno Like Moieties: Part I   | Mohamed E. Khalifa , Adil A Gobouri  | 5658015 |

**CONFERENCE ROOM A': 14:00-17:00** 

Session: Pure and Applied Mathematics and Mathematical Methods II

Chair: Ciprian Sorandaru, Diana Bílková

| PMSG Wind System Control for Time-Variable Wind      | Ciprian Sorandaru, Sorin Musuroi, Gheza-  |         |
|--|---|---------|
| Speed by Imposing the DC Link Current                | Mihai Erdodi, Doru-Ionut Petrescu         | 5628035 |
| The Mathematical Model of Reflection of Plane Waves  | in  |         |
| a Transversely Isotropic Magneto-Thermoelastic       |   |         |
| Medium under Rotation                                | Abo-El-Nour N. Abd-alla, Fatimah Alshaikh | 5612007 |
| Mathematical Modeling of Incheon Bridge, Structural  | Gheorghe M. T. Radulescu, Corina M.       |         |
| Monitoring   | Radulescu, Adrian T. Radulescu            | 5595047 |
|  |   |         |
| A Special Constant Acceleration Curve Equation       | Mehmet Pakdemirli, İhsan Timuçin Dolapçı  | 5588003 |
| Molecular Dynamics Simulations for Lithographic      |   |         |
| Production of Carbon Nanotube Structures from        |   |         |
| Graphene   | D. Fülep, I. Zsoldos, I. László           | 5596027 |
| Math-Statistical Models of Income Distribution: L-   |   |         |
| moments and TL-moments and Their Estimations         | Diana Bílková                             | 5633047 |
| Generalized Real Numbers Pendulums and Transport     |   |         |
| Logistic Applications                                | A. P. Buslaev, A. G. Tatashev             | 5633019 |
| The Decision Making Process in the System of Product |   |         |
| Design and Planning based on Kansei Engineering      | Kai-Shuan Shen                            | 5597007 |

**CONFERENCE ROOM B': 14:00-17:00** 

Session: Applied Physics, Simulation, Computers and Networks II

Chair: Bruno Carpentieri, Sébastien Le Yaouanq

| Plastic Deformation and Fracture Processes in Layered  |  |         |
|--|--|---------|
| Metal-Graphene Composites and Polycrystalline  |  |         |
| Graphene   | Ilya A. Ovid'ko, Alexander G. Sheinerman   | 5573007 |
| 1H NMR study of water clusters in supercooled LiCl/water solution                                | Carmelo Corsaro, Domenico Mallamace,<br>Nicola Cicero, Sebastiano Vasi, Giacomo<br>Dugo, Francesco Mallamace | 5658011 |
| Math Modelling of the Basic Defensive Activities   | Jan Mazal, Petr Stodola, Libor Kutěj, Milan<br>Podhorec, Dana Křišťálová                                     | 5595055 |
| Co-Simulation of Redundant and Heterogeneous<br>Modelling Scales for a Phenomenological Approach | Sébastien Le Yaouanq, Christophe Le Gal,<br>Pascal Redou, Jacques Tisseau                                    | 5595051 |
| The Structural Constant of an Atom as the Basis of Some<br>Known Physical Constants              | Milan Perkovac   | 5604007 |
| Mobility State Classification with Particle Filter   | Ha Yoon Song, Ji Hyun Baik   | 5596007 |
| Lossless Compression of Multidimensional Medical<br>Images                                       | Raffaele Pizzolante, Bruno Carpentieri   | 5609011 |

**CONFERENCE ROOM C': 14:00-17:00** 

Session: Circuits, Systems, Signal Processing, Communications & Computers I

Chair: Andrei Pasca, Michal Kvet

| Temporal Data Approach Performance  | Michal Kvet                                 | 5578039 |
|---|---|---------|
|   | Rustem G. Biyashev, Saule E.                |         |
| Modification of the Cryptographic Algorithms, Developed   | Nyssanbayeva, Yenlik Ye. Begimbayeva,       |         |
| on the Basis of Nonpositional Polynomial Notations  | Miras M. Magzom                             | 5593007 |
| Synchronous Differential Logic Gate for Low Clock Swing Operation with Standing Wave Clock Distribution |   |         |
| Networks  | Andrei Pasca                                | 5593011 |
| Fuzzy Method for Suppressing of Different Noises in   |   |         |
| Color Videos  | Volodymyr Ponomaryov                        | 5600003 |
| Lossless, Multiband, on Board, Compression of   |   |         |
| Hyperspectral Images  | Bruno Carpentieri, Raffaele Pizzolante      | 5603003 |
| Extending the Matrix Vector Transition Net Approach for   |   |         |
| Modeling Interaction  | A. Spiteri Staines                          | 5483007 |
| Question-Answering Systems in the Specific Domain of  | A. Beltrán, S. Ordoñez, S. Monroy, L. Melo, |         |
| E-Government  | N. Duarte                                   | 5391011 |

Coffee Break: 17:00-17:30

**CONFERENCE ROOM A': 17:30-20:30** 

Session: Pure and Applied Mathematics and Mathematical Methods III

Chair: Olga Martin, Matteo D. L. Dalla Vedova

|   | T  |         |
|---|--|---------|
| Advance Trends of Hybrid Electric Vehicles                  | Shahram Javadi                             | 5512015 |
| Scorpion Envenomation in Naama, Algeria                     | Schehrazad Selmane                         | 5416003 |
| Scorpion Envenomation in Naama, Algeria                     | Schemazad Schnane                          | 3410003 |
| Adaptive Spline Processing of Discrete Flow                 | Irina Burova, Yu. K. Dem'yanovich          | 5630015 |
| Effects of Dry Friction on Linear Electromechanical         |  |         |
| Actuators: A New Prognostic Method based on                 | Matteo D. L. Dalla Vedova, Paolo Maggiore, |         |
| Simulated Annealing Algorithm                               | Lorenzo Pace                               | 5591027 |
| Bounds on the Generalized Krein Parameters of an            |  |         |
| Association Scheme  | Vasco Moco Mano, Luis Almeida Vieira       | 5628027 |
| Study of a Neutron Transport Problem by the Variational     |  |         |
| Iteration Method  | Olga Martin                                | 5590015 |
| Stability Analysis and Special Solution of the Perturbation |  |         |
| K(n,m) Rosenau-Hyman equation                               | Abdon Atangana, Dumitru Baleanu            | 5591011 |
| Onboard Electromechanical Actuators Affected by Motor       |  |         |
| Static Eccentricity: A New Prognostic Method based on       | Dario Belmonte, Matteo D. L. Dalla Vedova, |         |
| Spectral Analysis Techniques                                | Paolo Maggiore                             | 5591019 |
| Performance Estimate for a Proton Exchange Membrane         | Enrico Testa, Paolo Maggiore, Lorenzo      |         |
| Fuel Cell: Sensitivity Analysis Aimed to Optimization       | Pace, Matteo D. L. Dalla Vedova            | 5591023 |

**CONFERENCE ROOM B': 17:30-20:30** 

Session: Applied Physics, Simulation, Computers and Networks III

Chair: Chara Remoundou, Anna Sandulyak

| Photonic Crystal Cavities for Optical Signal Processing  | Nikolay L. Kazanskiy, Pavel G. Serafimovich  | 5584003 |
|--|--|---------|
| On Adaptation Possibility of Model based on Slow Flow<br>around Sphere for Determination of Flow Local Speeds in<br>Window Between Spheres | Anna Sandulyak, Darya Sandulyak, Olga<br>Semina, Alexander Sandulyak   | 5376001 |
| Chromatics Aberrations of Diffractive Elements in Pulsed<br>Laser Beams Formation  | Alexey P. Porfiriev, Sergey A. Degtyarev,<br>Svetlana N. Khonina, Nikolai L. Kazanskiy   | 5660015 |
| A Generalized Hebb (GH) Rule Based on a Cross-Entropy<br>Error Function for Deep Belief Recursive Learning                                 | Mark J. Embrechts, Bernhard Sick   | 5630003 |
| Towards Community Recommendations on Location-<br>Based Social Networks  | Chara Remoundou, Pavlos Kosmides,<br>Konstantinos Demestichas, Ioannis<br>Loumiotis, Evgenia Adamopoulou, Michael<br>Theologou | 5629007 |
| Face-Recognition Based Authentication: Theory and Practice   | Thomas Fenzl, Christian Kollmitzer, Stefan<br>Rass, Peter Schartner  | 5656007 |

**CONFERENCE ROOM C': 17:30-20:30** 

Session: Biology, Biomedical & Chemical Engineering and Materials Science II

Chair: Derya Avci, C. Atupelage

| Grayscale and Binary Image Enhancement of Hand Vein<br>Images to Aid Peripheral Intravenous Access | Marlina Yakno, Junita Mohamad-Saleh,<br>Bakhtiar Affendi Rosdi | 5635007 |
|--|--|---------|
| ,  | Gehan A-R. Ahmed, Faten A. Khorshid, Alaa                      |         |
| The Mechanism of PMF Nanoparticles in Invading A549  | Khedr, Salem M. El-Hamidy, Numan A.                            |         |
| cells, A New Selective Drug Delivery for Cancer Therapy  | Salah  | 5627035 |
| An Intelligent Diagnosis System based on Extreme   |  |         |
| Learning Machine For Diabetes Diseases   | Resul Coteli   | 5452003 |
| An Automatic Diagnosis System for Hepatitis Diseases   |  |         |
| based on Extreme Learning Machine  | Derya Avci   | 5499003 |
| A Novel Automatic Thresholding Method based on   | Engin Avci, Turker Tuncer, Resul Coteli, Esin                  |         |
| Shape of Histogram for Microscopic Blood Cell Images   | Dogantekin   | 5441003 |
| New Sulfamates on the Basis of 8α-Analogues of Steroid   | A. F. Fidarov, S. N. Morozkina, S. I.                          |         |
| Estrogens with Selective Mode of Action Against Breast   | Selivanov, R. A. Kovalev, M. V. Filatov, A. G.                 |         |
| Cancer   | Shavva   | 5625019 |
| An Intelligent Diagnostic System for Lung Cancer based   |  |         |
| on Principle Component Analysis - Wavelet Support  |  |         |
| Vector Machines Classifiers  | Derya Avci   | 5501003 |
| Planckian Distributions in Molecular Machines, Living  |  |         |
| Cells, and Brains: The Wave-Particle Duality in  |  |         |
| Biomedical Sciences  | Sungchul Ji  | 5630035 |
| Cytoplasmic Motion Visualization and Analysis of C.  | C. Atupelage, K. Kyoda, S. Onami, H.                           |         |
| elegans Embryo   | Nagahashi  | 5602003 |

|  | T   |         |
|--|---|---------|
| New Results on Stability of Hybrid Stochastic Systems  | Manlika Rajchakit   | 5402003 |
| Topological Optimization of Lake Aeration Process  | Mohamed Abdelwahed  | 5434003 |
| A Comprehensive Analysis of XML and JSON Web Technologies  | Zia Ul Haq, Gul Faraz Khan, Tazar Hussain   | 5443003 |
| Speech Enhancement using Rao-Blackwellised Particle Filtering of the Real and Imaginary DFT Coefficients Part  | M. Meddah, A. Amrouche, A. Taleb-Ahmed  | 5480003 |
| The Video Game as Practice for Developing Virtual<br>Reality Sports Jumping Skills in Children 5 Years. Case<br>Study of Innovative Practices in Educational Institutions<br>of Bogotá, Colombia | J. Lopez, L. Coy, J. Caviativa, Y. Guzman, A.<br>Gutierrez  | 5376003 |
| Mathematical Model of Two-Links Mechanism  Movement at Discrete Control Actions  | Sergey Jatsun, Sergei Savin, Petr Bezmen  | 5600011 |
| A Modified Adaptive Line Enhancer for Noisy Speech<br>Signals  | Maha Sharkas, M. Essam Khedr, Amr<br>Nasser   | 5403003 |
| Exponential Stability of Linear Hybrid Systems with Interval Time-Varying Delays   | Grienggrai Rajchakit  | 5412003 |
| Automatic Censoring in K-Distribution for Multiple<br>Targets Situations   | N. Boudemagh, Z. Hammoudi   | 5483003 |
| Modeling of a Small Unmanned Aerial Vehicle  | Ahmed Elsayed Ahmed, Hossam Eldin<br>Hussein Ahmed, Ashraf Hafez, Hala<br>Mohamed Abd-Elkader, A. N. Ouda | 5488003 |
| Monitoring Metropolitan City Air-quality using Wireless<br>Sensor Nodes based on ARDUINO and XBEE  | Ali Al-Dahoud, Mohamed Fezari, Ismail<br>Jannoud, Thamer AL-Rawashdeh                                     | 5465003 |
| Swarm Intelligence Optimization of Lee Radio-wave<br>Propagation Model for GSM Networks in Irbid   | M. S. H. Al Salameh, M. M. Al-Zu'bi   | 5464003 |
| A Recognition and Synthesis Environment for the Arabic Language  | Tebbi Hanane, Hamadouche Maamar,<br>Azzoune Hamid   | 5463003 |
| Image Encryption using Development of Chaotic Logistic<br>Map based on Feedback Stream Cipher  | Hossam Eldin H. Ahmed, Ayman H. Abd Elaziem   | 5461007 |
| Modeling and Analysis of Elapsed Time and Energy Consumption of Interactive Applications in Mobile Cloud Computing Environments  | Young-Chul Shim   | 5472003 |
| CFD Simulation of Free Convection Heat Transfer in a<br>Vertical Conical Partially Annular Space   | B. Ould said, N. Retiel, E. H. Bouguerra  | 5475011 |
| Improved Non-local Algorithm with Reliability of Neighbor Pixel  | J. Lee, J. Jeong  | 5474003 |
| Control of Interferograms Image of Deformed Object<br>Samples by Non Destructive Control as Optical Method   | R. Daira  | 5481003 |
| Modelling Plasticity of Materials with a Micro and Nanostructure   | Natalia R. Kudinova, Anatoli M. Polyanskiy,<br>Vladimir A. Polyanskiy, Yuriy A. Yakovlev                  | 5642027 |

|   | C. Sabah, F. Dincer, M. Karaaslan, E. Unal,<br>O. Akgol             | 5514015 |
|---|---|---------|
| ,   | C. Sabah, F. Dincer, E. Demirel, M.<br>Karaaslan, E. Unal, O. Akgol | 5514011 |
| Experimental Human Machine Interface System based on Vowel and Short Words Recognition  | Mohamed Fezari, Ali Al-Dahoud                                       | 5512007 |
| A Stateless Key Management Technique for Protection of Sensitive Data at Proxy Level for SQL Based Databases Using NIST Recommended SP800-132 | Kurra Mallaiah, S. Ramachandram                                     | 5659007 |

**CONFERENCE ROOM A': 09:00-12:00** 

Session: Mechanics and Mechanical Engineering I

Chair: Olivier Bareille, Kaige Wu

| Corrosion Damage Monitoring of Stainless Steel by<br>Acoustic Emission                               | Kaige Wu, Seung-Mi Lee, Won-Sik Lee,<br>Dong-Pyo Hong, Jai-Won Byeon                    | 5498003 |
|--|---|---------|
|  | Daniel Constantin, Marin Lupoae, Cătălin  |         |
| Forward Kinematic Analysis of an Industrial Robot  | Baciu, Dan-Ilie Buliga  | 5592019 |
| Advanced Approaches for Mechanical Characterization on Innovative Materials                          | C. Barile, C. Casavola, G. Pappalettera, C.<br>Pappalettere                             | 5643019 |
| Design and Experiment of Miniaturized and Low-Cost<br>Robotic Fish with Customerized Electromagnetic |   |         |
| Actuation  | Zhiqing Qian, Hongzhou Liu, Zhuming Bi  | 5597019 |
| Approach to Solving the Problem of Vibration during the  |   |         |
| Drilling Phase 81/2" in an Oil Southern Algerian Fields  | A. Mellak, K. Benyounes   | 5613003 |
| Numerical Study Regarding the Behaviour of a Multilayer<br>Slab on Shock and Impact                  | Marin Lupoae, Cătălin Baciu, Daniel<br>Constantin, Dumitru Matahala, Dan-Ilie<br>Buliga | 5592023 |
| The Performance Measurement of the Parabolic trough Solar Collector                                  | Jozef Matusov, Peter Durcansky, Richard<br>Lenhard                                      | 5598027 |
| Self-Organization of the Dynamic Cutting System  | Zakovorotnyy V.   | 5629015 |
| Propagative Interactions of Guided Waves in Structured Plates  | Olivier Bareille, Christophe Droz, Jean-Pierre<br>Laine, Mohamed N. Ichchou             | 5628007 |

**CONFERENCE ROOM B': 09:00-12:00** 

**Session: Environmental Science and Geoscience I** 

Chair: Pavla Pekarova, Jesús M. Blanco

| Model Parameters Estimation in Two River Basins in     | Pavol Miklanek, Hyosang Lee, Pavla         |         |
|--|--|---------|
| Slovakia and Korea                                     | Pekárová, Michal Danko                     | 5502015 |
| Environmental Impact Test in Thermal Power Plants;     |  |         |
| Experimental and CFD Evaluation of Burning Alternative | Jesús M. Blanco, Lakhdar Remaki, Francisco |         |
| Fuels  | Peña                                       | 5632007 |
| The Water Temperature Simulation in the Morava River   | Dana Halmova, Pavla Pekarova, Jan Pekar,   |         |
| Basin Watercourses                                     | Katarina Kucarova                          | 5503003 |
|  | P. Pekarova, V. Bacova Mitkova, P.         |         |
| Flash Flood on July 21, 2014 in the Vratna Valley      | Miklanek                                   | 5502007 |
| Development of Land Use in the Morava River            | Vilém Pechanec, Ivo Machar, Helena         |         |
| Floodplain During the Past 175 Years                   | Kilianová                                  | 5592003 |
| Measurement Results of Longitudinal Dispersion         |  |         |
| Coefficient in Urban Sewer Networks under Dry Weather  | •  |         |
| Conditions   | Marek Sokáč, Yvetta Velísková              | 5504003 |

Coffee Break: 12:00-12:30

**CONFERENCE ROOM A': 12:30-15:30** 

Session: Pure and Applied Mathematics and Mathematical Methods IV

Chair: Ricardo Riaza, Takao Ito

|   | Jelena Vasiljevic, Jelena Pribic, Ksenija    |         |
|---|--|---------|
|   | Kanjer, Wojtek Jonakowski, Jelena Sopta,     |         |
| Prediction and Evaluation of Response to Breast Cancer  | Dragica Nikolic Vukosavljevic, Marko         |         |
| Chemotherapy by Use of Multifractal Analysis            | Radulovic                                    | 5478003 |
| Stability Breakdown along a Line of Equilibria in       |  |         |
| Nonlinear Circuits with Memristors                      | Ricardo Riaza                                | 5471003 |
| Numerical Calculation of the Magnetic Field Produced by | Dumitru Toader, Iulia Cata, Constantin Blaj, |         |
| a Multi-Conductor Power Cable                           | Alina Lihaciu                                | 5656035 |
| Systems Optimization Prospected from Torus Cyclic       |  |         |
| Groups  | Volodymyr V. Riznyk                          | 5634003 |
| Multiobjective Genetic Algorithm-Based for Time-Cost    |  |         |
| Optimization  | Jorge Magalhães-Mendes                       | 5428007 |
|   | Takao Ito, Rajiv Mehta, Tsutomu Ito,         |         |
| Inter-Firm Transactional Relationship in Yokokai using  | Makoto Sakamoto, Satoshi Ikeda, Seigo        |         |
| IDE Spatial Model: An Empirical Investigation           | Matsuno, Yasuo Uchida                        | 5608019 |
| A Mathematical Model of Hierarchical Organization       | Satoshi Ikeda, Takao Ito, Makoto Sakamoto    | 5608015 |
| acrementation model of meraremear organization          | accommeda, rando ito, manoto sunamoto        | 3000013 |
| Modeling the Virtual Machine Allocation Problem         | Zoltán Ádám Mann                             | 5614011 |

**CONFERENCE ROOM B': 12:30-15:30** 

Session: Circuits, Systems, Signal Processing, Communications & Computers II

Chair: Andrei Pasca, Andrei Rusan

| Clock Distribution using a Bi-Dimensional Orthogonal Salphasic Structure  | Andrei Pasca   | 5555003 |
|---|--|---------|
| Parallel Adaptive Arbiter for Improved CPU Utilization and Fair Bandwidth Allocation  | M. Nishat Akhtar, Junita Mohamad-Saleh                               | 5604019 |
| Urban Traffic Management Approach based on Ontology and VANETs  | H. Toulni, B. Nsiri, M. Boulmalf, T. Sadiki                          | 5476003 |
| Alternative Approach to Enable RTSP-based Services with Dynamic Quality of Service over 4G LTE Mobile Networks                        |  | 5633039 |
| Location Search by using Phonetic Algorithm with Location-Based Service   | Kittiya Poonsilp, Attakorn Poonsilp                                  | 5502003 |
| ,   | Said Ghendir, Salim Sbaa, Riadh Ajgou, Ali<br>Chemsa, A. Taleb-Ahmed | 5505003 |
| Semantic Web Technologies and Model-Driven Approach for the Development and Configuration Management of Intelligent Web-Based Systems | Arturs Bartusevics, Andrejs Lesovskis,<br>Leonids Novickis           | 5596019 |

**Coffee Break: 15:30-16:00** 

**CONFERENCE ROOM A': 16:00-19:00** 

**Session: Mechanics and Mechanical Engineering II** 

Chair: H. Esen, K. Adamek

| Biocomposite Silicone: Synthesis, Mechanical Testing and Analysis                                    | Siti Noor Azizzati Mohd Noor, Mohd Arif<br>Fikri Khairuddin, Jamaluddin Mahmud | 5576007 |
|--|--|---------|
| The One and Two Dimensional Wavelet Transform<br>Applied in Unsteady Industrial Phenomena            | A. Amoresano, C. Allouis, G. Langella, V.<br>Niola, G. Quaremba                | 5614007 |
| Permeability of Winding on the Bobbin Core   | K. Adamek  | 5629023 |
| GDI Spray Impact Characterization by Optical Techniques for the Assessment of 3D Numerical Models    | Luigi Allocca, Michela Costa, Alessandro<br>Montanaro, Ugo Sorge               | 5618003 |
| Modelling of Biogas, Solar and a Ground Source Heat Pump Greenhouse Heating System by using Ensemble | . 5  |         |
| Learning   | H. Esen, M. Esen, T. Yuksel  | 5456007 |
| Methodology Framework for Surface Shape Evaluation   | A. Cupar, J. Kaljun, V. Pogacar, Z.<br>Stjepanovic                             | 5633031 |
| Numerical experiments on the performance of the RBF meshfree Galerkin Methods for solid mechanics    | Abderrachid Hamrani, Eric Monteiro, Idir<br>Belaidi, Philippe Lorong           | 5502011 |

**CONFERENCE ROOM B': 16:00-19:00** 

Session: Applied Physics, Simulation, Computers and Networks IV

**Chair: Ioan Both, Nico Assink** 

| Variable Cosmological Parameter and S-channel<br>Quantum Matter Fields Hadamard Renormalization in |   |         |
|--|---|---------|
| Spherically Symmetric Curved Space Times   | Hossein Ghaffarnejad                        | 5635003 |
| Neural Networks Based Feature Selection from KDD<br>Intrusion Detection Dataset                    | Adel Ammar, Khaled Al-Shalfan               | 5574007 |
| The Impact of Memristive Devices and Systems on Nonlinear Circuit Theory                           | Ricardo Riaza                               | EE0E002 |
| ,  | RICUTUO RIUZU                               | 5595003 |
| Does Time Pressure Induce Tunnel Vision? An  |   |         |
| Examination with the Eriksen Flanker Task by Applying  | Nico Assink, Rob H. J. Van Der Lubbe, Jean- |         |
| the Hierarchical Drift Diffusion Model   | Paul Fox                                    | 5624003 |
| Complex Social Network Interactions in Coupled Socio-  |   |         |
| Ecological System: Multiple Regime Shifts and Early  | Hendrik Santoso Sugiarto, Lock Yue Chew,    |         |
| Warning Detection  | Ning Ning Chung, Choy Heng Lai              | 5568003 |
| Numerical Simulations of a Pipeline Crossing   | Ioan Both, Adrian Ivan                      | 5566015 |

Conference Banquet: 20:30

| Efficient Media Digital Library Design of Summarized Video based on Scalable Video Coding for H.264 (MDLSS)                             | Hesham Farouk, Kamal ElDahshan, Amr<br>Abozeid, Mayada Khairy         | 5518003 |
|---|---|---------|
| On Selection of Efficient Fuzzy Models Incorporated with Multi-Objective Reactive Power Control   | Ragab A. El Sehiemy   | 5516011 |
| Effect of Flow Characteristics on the Heat Transfer<br>Performance Across Low-Finned Fin Banks  | Seif A. Ahmed   | 5532003 |
| The method of Probabilistic Nodes Combination in Simulation and Modeling  | Dariusz J. Jakóbczak  | 5525003 |
| Navier-Stokes Equations-Millennium Prize Problems   | Asset Durmagambetov, Leyla Fazilova                                   | 5540003 |
| Scaling-Up Liquid-Liquid Extraction Experiments with<br>Deep Eutectic Solvents  | Emad Ali, Sarwono Mulyono, Mohamed<br>Hadj-Kali                       | 5536007 |
| Chemical Composition and Antibacterial Activity of Ceratonia Siliqua L. Growing in Boumerdes (Algeria)                                  | N. Meziou-Chebouti, A. Merabet, N. Behidj,<br>M. Kirouani, S. Aliouat | 5535007 |
| Modelling of Exoskeleton Movement in Verticalization<br>Process   | Sergey Jatsun, Sergei Savin, Petr Bezmen                              | 5600007 |
|   | N. K. Sharma, M. K. Yadav, D. K. Sehgal, R.<br>K. Pandey              | 5572007 |
| On DC/DC Voltage Buck Converter Control Improvement through the QFT Approach  | Luis Ibarra, Israel Macías, Pedro Ponce,<br>Arturo Molina             | 5598011 |
| On-line Monitoring of Yogurt Fermentation using<br>Ultrasonic Characteristics   | Ahmad Aljaafreh, Ralf Lucklum   | 5596003 |
| Decision Making in Group Process of Consensus Based on Structures of Decision Dynamics: Application to the Superior Council of the UTEM | Munoz S. Simon, Zapata C. Santiago                                    | 5595043 |
| Gradient-Statistical Algorithm for Calculating Critical Points of Density Probability of Gaussian Mixture                               | N. N. Aprausheva, V. V. Dikusar, S. V.<br>Sorokin                     | 5595039 |
| Migration of Travel Time in a Common-Shot Gather by Structural Similarity   | Hernando Castañeda M., José Luciano<br>Maldonado, Rómulo Sandoval F.  | 5593003 |
| EH-WSNs Optimizing Technique  | Vladimir Shakhov  | 5591035 |
| Dual Approach to Complex Ecological System Analysis and Modeling  | Migdat Hodzic, Mirsad Hadzikadic, Ted<br>Carmichael, Suvad Selman     | 5595027 |
| Product Generation Development – Importance and Challenges from a Design Research Perspective   | Albert Albers, Nikola Bursac, Eike<br>Wintergerst                     | 5599011 |
| Optimal Problems with Control-State Constraints in a Regional Economy Model Identification  | Vasily V. Dikusar, Nicholas N. Olenev,<br>Marek Wojtowicz             | 5593015 |

| Point Triangulation using Convex Layers                  | V. Tereshchenko, Y. Tereshchenko | 5589003 |
|--|----------------------------------|---------|
| A Hybrid System for Identification of Elastic, Isotropic |                                  |         |
| Thin Plate Parameters Applying Lamb Waves and            |                                  |         |
| Artificial Neural Networks                               | Zenon Waszczyszyn, Ewa Pabisek   | 5622003 |
| Unifying Geometric Features and Facial Action Units for  |                                  |         |
| Improved Performance of Facial Expression Analysis       | Mehdi Ghayoumi, Arvind K. Bansal | 5578047 |
| Hall Current Effect on MHD Free Convection Flow an       |                                  |         |
| Inclined Porous Plate with Constant Heat Flux            | G. Venkata Ramana Reddy          | 5587007 |

**CONFERENCE ROOM A': 09:00-12:00** 

Session: Pure and Applied Mathematics and Mathematical Methods V

Chair: Sergio Ortobelli, Steward H. Huang

| Bayesian Multivariate Growth Curve Models   | Steward H. Huang   | 5634015 |
|---|--|---------|
|   |  |         |
| On the Use of Conditional Expectation Estimators  | Sergio Ortobelli, Tommaso Lando                                    | 5598015 |
| Longitudinal Dispersion Coefficient as Sensitivity<br>Parameter in Water Quality Simulation Model | Yvetta Velísková, Marek Sokáč                                      | 5636003 |
| Normalizations of the Proposal Density in Markov Chain<br>Monte Carlo Algorithms                  | Antoine E. Zambelli  | 5429003 |
| Features Gas Explosion in a Cylindrical Tube with a Hole on the Side                              | Iurii H. Polandov, Vitaly A. Babankov, Sergei<br>A. Dobrikov       | 5608003 |
| Informetric Models for Citation Frequency Data: An<br>Empirical Investigation                     | Lucio Bertoli-Barsotti, Tommaso Lando                              | 5598019 |
| One Approach to the Design of TS Fuzzy Fault Detection Filters                                    | Dusan Krokavec, Anna Filasova, Vratislav<br>Hladky                 | 5619003 |
| Introduction and Simulation of a New Model of Phantom   |  |         |
| by Monte Carlo to Obtain Depth Dose   | Seyed Alireza Mousavi Shirazi                                      | 5498015 |
| On the Financial Applications of Multivariate Stochastic Orderings                                | Sergio Ortobelli, Tomas Tichy, Tommaso<br>Lando, Filomena Petronio | 5590007 |

**CONFERENCE ROOM B': 09:00-12:00 Session: Economics and Statistics** 

Chair: José António Porfírio, Martin Schindler

| Conditions for Entrepreneurship Development in Creative   |   |         |
|---|---|---------|
| Industries in Portugal  | José António Porfírio, Tiago Carrilho     | 5648007 |
| Challenges of Strategic Rethinking of Development of<br>Travel Intermediaries in Croatia in Terms of Dynamic<br>Environment | Iris Mihajlovic                           | 5626003 |
| The Contribution of the Averaged Regression Quantiles   |   | 3020003 |
| for Testing Max-Domains of Attractions  | Jan Picek, Martin Schindler               | 5627003 |
| Academic Self-Regulation in the Context of Education in   |   |         |
| Early Adolescence   | Burešová I., Klimusová H., Kabeláčová, J. | 5486003 |
|   |   |         |
| Loss Distributions in Insurance Risk Management   | Viera Pacáková, David Brebera             | 5598023 |
| Modeling Value at Risk of Agricultural Commodity  |   |         |
| Futures while Accounting for Seasonality and Weather  | Xue Gong, Songsak Sriboonchitta, Sanzidur |         |
| Using Extreme Value Theory  | Rahman                                    | 5498007 |
| The Economics of Pharmaceuticals in Central and   |   |         |
| Eastern Europe: A Focus on Generics, Research, and  |   |         |
| Development   | Steven Szydlowski, Robert Babela          | 5613011 |
| Training and Work Skills  | Maria José Sousa                          | 5625035 |

**Coffee Break: 12:00-12:30** 

**CONFERENCE ROOM A': 12:30-15:30** 

Session: Circuits, Systems, Signal Processing, Communications & Computers III

Chair: Taeil Yi, Shayma M. Al-Ani

| Teachers' Perception on Free Screen Capture Software  | Taeil Yi  | 5578043 |
|---|---|---------|
| System for the Detection Earthquake Victims –<br>Construction and Principle of Operation                | C. Buzduga, A. Graur, C. Ciufudean, V. Vlad   | 5579003 |
| Irregular Segmentation Technique for the Image<br>Compression using Stochastic Models                   | Benabdellah Yagoubi   | 5530115 |
| Integrated Visual-Perception Real-Time Monitoring System  | Jian-Wei Li, Fu-Syuan Yang, Yi-Chun Chang,<br>Yen-Lun Chiu  | 5625003 |
| Interoperability for an Obserbatory of Habits and<br>Healthy Life Styles Ralated with Physical Activity | Andrea Torres Ruiz, Fernando Prieto B.,<br>Jose Arturo Lagos, Nixon Duarte, Rosmary<br>Martinez, Juan Pablo Moreno, Aldo Vilardy,<br>Bryan Toro | 5485015 |
| Prediction of Cancer Behavior based on Artificial Intelligence  | Shayma M. Al-Ani, Maysma Abbod  | 5474007 |

**CONFERENCE ROOM B': 12:30-15:30** 

Session: Applied Physics, Simulation, Computers and Networks V

Chair: Vitaly O. Groppen, Ivan R. Kennedy

| Influence of the Applied Electric Field on the Growth of an Electrical Discharge  | L. Zeghichi, L. Mokhnache, M. Djebabra                           | 5547003 |
|---|--|---------|
| The Gravity Control Experiments: Sensors, Equipment, Results  | Vitaly O. Groppen  | 5565003 |
| The First Principles Study on the TbP Compound  | Y. O. Ciftci, Y. Mogulkoc, M. Evecen                             | 5599007 |
| The Simulation of Negative Influences in the<br>Environment of Fixed Transmission Media   | Rastislav Róka   | 5630007 |
| Effect of Precursor on Growth of MoS2 Monolayer and Multilayer  | Shraddha Ganorkar, Jungyoon Kim, Young<br>Hwan Kim, Seong-Il Kim | 5598031 |
| Testing Planetary Atmospheres for Operation of the Virial Theorem: A Logical Computer Analysis May Discredit Radiative Forcing by Greenhouse Gases as the |  |         |
| Sole Cause of Global Warming  | Ivan R. Kennedy  | 5573003 |

**Coffee Break: 15:30-16:00** 

**CONFERENCE ROOM A': 16:00-19:00** 

**Session: Environmental Science and Geoscience II** 

Chair: Gunter Spöck, Jaroslav Burian

| Urban Planner – Model for Land Use Suitability                 |  |         |
|--|--|---------|
| Assessment   | Jaroslav Burian, Jan Brus, Stanislav Stastny | 5509003 |
| Architectural Education in the Light of Climate Change -       |  |         |
| Case Study: Agrarian Landscape as a Resource for a New         |  |         |
| Sustainable Lifestyle  | Ana Nikezić, Dragan Marković                 | 5608023 |
|  |  |         |
| Safety of Critical Facilities                                  | Dana Prochazkova                             | 5391015 |
| Infiltration Efficiency of Percolation Facility for its Safety | Gabriel Markovič, Daniela Kaposztásová,      |         |
| Operation  | Zuzana Vranayová                             | 5608007 |
| Taking Account of Covariance Estimation Uncertainty in         |  |         |
| Spatial Sampling Design for Prediction with Trans-             |  |         |
| Gaussian Random Fields   | Gunter Spöck, Jürgen Pilz                    | 5597015 |
| Measuring Devices for Visualization of WJM and AWJM            | Peter Poor, Michal Simon, Lýdia Sobotová,    |         |
| Technologies Physical Factors                                  | Monika Karkova                               | 5544003 |
| Grey Water System Application – Water Savings and Use          | Martina Rysulová, Daniela Káposztásová,      |         |
| in the Hotel Building  | Zuzana Vranayová                             | 5590011 |
|  | Michal Vik, Martina Vikova, Sayed Ali        |         |
| Polarimetric Contrast Microscopy of Textile Materials          | Ibrahim, Nayab Khan                          | 5630027 |

**CONFERENCE ROOM B': 16:00-19:00** 

Session: Pure and Applied Mathematics and Mathematical Methods VI

Chair: I. David, Otilia Dragomir

| Mathematical Modelling of Groundwater Flow Coupled with Internal Flow in Drainage Pipe Situates in a Bounded Shallow Aquifer  | I. David, C. Grădinaru, C. Gabor, I. Vlad,<br>C.Stefanescu  | 5629019 |
|---|---|---------|
| Mathematical Modelling of Groundwater Flow in Aquifers which Contain Extraction/infiltration Cavity of Arbitrary Shape, using the Theory of Functions of a Complex Variable | I. David, C. Ștefănescu, C. Grădinaru, I. Vlad,<br>C. Gabor | 5602007 |
| The Tactical Model based on a Multi-Depot Vehicle<br>Routing Problem  | P. Stodola, J. Mazal  | 5542003 |
| Simulation Study of Using Shift Registers Based on 16th Degree Primitive Polynomials  | Mirella Amelia Mioc   | 5628003 |
| Modeling and Simulation of a 12kW Direct Driven PM Synchronous Generator of Wind Power  | A. Senthil Kumar, Thomas Cermak, Stanislav<br>Misak         | 5644023 |
| Application of the Orthogonal Invariants of Three-<br>Dimensional Operators in some Hydrodynamic Problems<br>and Hubble Expansion Law                                       | Ilia R. Lomidze   | 5558015 |
| Fuzzy-Multi Agent Hybrid System for Decision Support of<br>Consumers of Energy from Renewable Sources   | Otilia Dragomir, Florin Dragomir, Eugenia<br>Minca          | 5581003 |

| Finite Element Analysis of Debonding Propagation in FM73 Joint under Static Loading   | Reza Hedayati, Meysam Jahanbakhshi              | 5579011 |
|---|---|---------|
| Prediction of Fatigue Crack Propagation in Bonded Joints Using Fracture Mechanics   | Reza Hedayati, Meysam Jahanbakhshi              | 5579007 |
| Numerical Study of Energy Separation in Counter-Axial Flows   | R. Manimaran                                    | 5617003 |
| Nanomaterials Synthesis in Combustion   | Z. A. Mansurov                                  | 5615007 |
| An Optimal Manner of Distribution of Drinking Water using Heuristic Method  | Abdullah Al-Hossain, Said Bourazza              | 5592027 |
| A Compact Microstrip Lowpass Filter using a Stepped<br>Impedance Hairpin Resonator with Radial Stubs                        | M. Samadbeik, B. F. Ganji, A. Ramezani          | 5611003 |
| Certain Integrable Cases in Dynamics of a Multi-<br>Dimensional Rigid Body in a Nonconservative Field                       | Maxim V. Shamolin                               | 5610003 |
| Predictive Robots Programming based on Imitation Strategy   | A. Fratu, M. Fratu                              | 5634011 |
| Photocatalytic Oxidation and Morphology Control of TiO2 Film  | Jinshu Wang, Bingxin Zhao, Hongyi Li            | 5634007 |
| Dynamic Modeling and Parametric Analysis on Nonlineal Vertical Cutting Process with Variable Stiffness                      | Mahmood Reza Mehran, Mehdi Mehran               | 5632003 |
| Math Modeling of Underground Water Infiltration in<br>Exhausted Gas Deposit   | Irina N. Polshkova                              | 5630019 |
| Time of flight Measurement Method to Determine the Milk Coagulation Cut Time  | Mourad Derra, Abdellah Amghar, Hassan<br>Sahsah | 5628039 |
| Multi-Element Circuits based on LCLC Resonant Tank -<br>Theory and Application  | Branislav Dobrucky, Juraj Koscelnik             | 5627039 |
| Rigid Non-Archimedean Spaces and Applications   | Nikolaj Glazunov                                | 5625063 |
| Double Check of Optimization Results Using Neural Network and Statistical Methods   | Natalja Fjodorova, Marjana Novič                | 5623003 |
| Some Recent Advances of Ultrasonic Diagnostic<br>Methods Applied to Materials and Structures (Including<br>Biological Ones) | L. Nobile, S. Nobile                            | 5643007 |