Conference Program

Dubrovnik, Croatia
September 26-28, 2018

Conference Location:

Royal Princess Hotel
Kardinala Stepinca 31, 20 000 Dubrovnik, Croatia
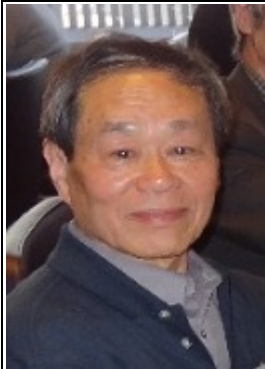**https://www.hotelroyalprincess.com/en/**

Wednesday 26th September 2018

Conference Room: A
Time: 09:00-09:30
Plenary Lecture:

Studies of Neuron and Neural Systems and its Application to Detection of Random Multiple Events on Time-Space Domain
by Dr. Atsushi Fukasawa, Musasino Co. Ltd, Tokyo, JAPAN.

Conference Room: A
Time: 09:30-10:00
Plenary Lecture:

Interactive Management Tool on Course Mapping
by Prof. Savitri Bevinakoppa, Melbourne Institute of Technology, Melbourne, AUSTRALIA.

Conference Room: A
Time: 10:00-10:30
Plenary Lecture:

Novel Regulators of Female Reproduction
by Prof. Alexander V. Sirotkin, Constantine the Philosopher University in Nitra, SLOVAKIA.

10:30-11:00: Coffee Break

Wednesday 26th September 2018

Conference Room: A
Time: 11:00-13:00
Title: Remote Sensing and System Science in Engineering
Chair: Atsushi Fukasawa, Edmary Altamiranda

Maritime Traffic Surveillance with SENTINEL-1 High Resolution Images	Maria C. Proença, Jorge M. Marques
Characteristics of a Circular Polarization Plane Antenna with Grounded Cylindrical Collar	Atsushi Fukasawa, Yumi Takizawa
Condition Monitoring of Subsea Sensors. A Systems of Systems Engineering Approach	Edmary Altamiranda, Eliezer Colina
Distributed Data Analytic Models for IoT Edge Computing Network	Tony Jan, Savitri Bevinakoppa
Integration of Low-Cost Vision System with the Fanuc M-1ia Robot for Sorting and Assembly Operations	L. Van Der Westhuizen, I. A. Gorlach
Circular Polarization Array Antenna with a Grounded Cylindrical Collar for Elimination of Cross-Sectional Radiation	Yumi Takizawa, Atsushi Fukasawa
Silver Thin Film and Water Dielectric SPR Sensor Experimental and Simulation Characteristics	Tanaporn Leelawattananon, Suphamit Chittayasothorn
Towards Understanding the Role of Institutional Pressures in Raising Awareness about Student Academic Integrity Issues in Australia	Karthik Nagarajan, Savitri Bevinakoppa
The Hidden Destructive Impact's Countering in the Unmanned Aerial Vehicles Swarms	Egor Marinenkov, Ilya Viksnin, Sergey Chuprov
Comparison of Different Self-developed Simulation Driver Seats with Two, Four and Six Servos	Karan Hemnani, Dan Hamernik, Josef Brozek, Karel Sotek

Wednesday 26th September 2018

Conference Room: B
Time: 11:00-13:00
Title: Applications of Data Clouding, Data Processing and Analysis
Chair: Victor Kasyanov, Mario Milicevic

Extract Transfer Load Considerations of Temporal Data Sources to Data Warehouses	Thanapol Phungtua-Eng, Suphamit Chittayasothorn
3D Vector Field Approximation and Critical Points Reduction using Radial Basis Functions	Michal Smolik, Vaclav Skala, Zuzana Majdisova
The use of Cloud Computing in Managing Companies and Business Communication: Security Issues for Management	Marcel Pikhart
Incremental Meshfree Approximation of Real Geographic Data	Zuzana Majdisova, Vaclav Skala, Michal Smolik
Visualization of Data-Flow Programs	Victor Kasyanov, Elena Kasyanova, Timur Zolotuhin
Application of Transfer Learning for Fine-Grained Vessel Classification using a Limited Dataset	Mario Milicevic, Krunoslav Zubrinic, Ines Obradovic, Tomo Sjekavica
Energy-oriented Analysis of HPC Cluster Queues: Emerging Metrics for Sustainable Data Center	Anastasiia Grishina, Marta Chinnici, Davide De Chiara, Eric Rondeau, Ah Lian Kor
Design of Real-time Transaction Monitoring System for Blockchain Abnormality Detection	Jiwon Bang, Mi-Jung Choi

Wednesday 26th September 2018

Conference Room: A
Time: 13:00-15:00
Title: Applications in Environmental Sciences
Chair: Jan Glasa, Roumen Trifonov

A Short-Term Load Forecasting Scheme based on Auto-Encoder and Random Forest	Minjae Son, Jihoon Moon, Seungwon Jung, Eenjun Hwang
Source Apportionment and Associated Oxidative Potential of Ambient PM in Beirut during Saharan and Arabian Dust Events	Christopher Lovett, Mohammad H. Sowlat, Najat A. Saliba, Alan L. Shihadeh, Constantinos Sioutas
Supply-Demand based Algorithm for Gasoline Blend Planning under Time-Varying Uncertainty in Demand	Mahir Jalanko, Vladimir Mahalec
On Impact of Slope on Smoke Spread in Tunnel Fire	Jan Glasa, Lukas Valasek, Peter Weisenpacher
Data Analytics for Home Air Quality Monitoring	Petya Mihaylova, Boyan Jekov, Roumen Trifonov, Petia Georgieva
Design of the Civil Protection Data Model for Smart Cities	Jakub Rak, Petr Svoboda, Dusan Vicar, Jan Micka, Tomas Balint

Conference Room: B
Time: 13:00-15:00
Title: Applied Computer Science
Chair: Antoniya Tasheva, Tasho Tashev

Determining the Feedback Multipliers in a p-ary Linear Feedback Shift Registers	Antoniya Tasheva, Zhaneta Savova-Tasheva, Boyan Petrov, Kamen Stoykov
E-commerce Obstacles in Small and Medium European Enterprises	Jovana Zoroja, Mirjana Pejic-Bach
Smart Solutions to Interactive English Language Education – A Pilot Study	Ales Berger, Blanka Klimova
Semantic System for Searching of Employees	Mariya Evtimova-Gardair, Tasho Tashev
A Comparison of Machine Learning Algorithms in Opinion Polarity Classification of Customer Reviews	Krunoslav Zubrinic, Tomo Sjekavica, Mario Milicevic, Ines Obradovic
Development of a Repository of Virtual 3D Conversational Gestures and Expressions	Izidor Mlakar, Zdravko Kačič, Matej Borko, Aleksandra Zögling, Matej Rojc
Computer System for Designing Musical Expressiveness in an Automatic Music Composition Process	Michele Della Ventura
Risk Mapping in the Town of Uherský Brod	Alzbeta Zabranska, Jakub Rak, Petr Svoboda
Genetic Algorithms and their Ethical Degeneration in Simulated Environment	Josef Brozek, Karel Sotek

15:00-15:30: Coffee Break

Conference Room: A
Time: 15:30-17:30
Title: Mathematical Models and Simulation and Informatics
Chair: Guido Izuta, Vitaliy Tanana

On the Solution of the Fredholm Equation with the use of Quadratic Integro-Differential Splines	I. G. Burova, N. S. Domnin
An Adaptative Meshless Method based on Prandtl's Equation	Asmae Mnebhi-Loudyi, El Mostapha Boudi, Driss Ouazar
On Optimization of Regularization Methods for Ill-Posed Problems	Vitaliy Tanana, Alexey Tanana
Artificial Bee Colony Algorithm for Parameter Identification of Fermentation Process Model	Maria Angelova, Olympia Roeva, Tania Pencheva
Reliability Analysis of a New k-out-of-n Model	M. A. El-Damcese, M. S. Shama
Permutation Codes, Hamming Graphs and Turan Graphs	Janos Barta, Roberto Montemanni
A System of Selecting Multi-Index Comprehensive Evaluation Method	Li Yang, Wang Jian
Arduino Wrapper for Game Engine-based Simulator Output	Miroslav Benedikovic, Dan Hamernik, Josef Brozek

Conference Room: B
Time: 15:30-17:30
Title: Cellular and Molecular Biology
Chair: Alexander V. Sirotkin, Karel Sotek

Combined Nested PCR and High Resolution Melting for the Screening of Cryptosporidium Parvum	Elena Hatalová, Alexandra Valenčáková
Tracking the Evolution of Functional Connectivity Patterns between Pancreatic Beta Cells with Multilayer Network Formalism	Marko Gosak, Lidija Križančić Bombek, Marjan Slak Rupnik, Andraž Stožer
Prediction of Neoadjuvant Chemotherapy Outcome in Breast Cancer Patients	José Neves, Almeida Dias, Cristiana Silva, Diana Ferreira, Luís Costa, Filipa Ferraz, Victor Alves, João Neves, Jorge Ribeiro, Henrique Vicente
Quantitative Modeling with Petri Nets: Perspectives for the Target-Based Treatment of β-globin Disorders	Mani Mehraei, Enver Bashirov
Software Solution Incorporating Activation Congnitive Memory Portion in Early Stages of Alzhaimer's Disease	Provaznik Josef, Kopecky Zbynek, Brozek Josef, Sotek Karel, Brozkova Monika, Karamazov Simeon, Janeckova Hana

Poster Presentation

Development of a Photoacoustic Spectroscopic Technique for Monitoring the Ethylene with Application in the Assessment of Oxidative Stress at Astronauts	Cristina Achim (Popa), Marian Mogildea, George Mogildea, Daniela Mogildea, Ana Bratu, Mioara Petrus, Dan Dumitras

18:00 Welcome Drink

Conference Room: A
Time: 09:00-09:30
Plenary Lecture:

Some Insights into Certain Kind of Asymptotically Stable Lagrange Solutions of 2-D Systems on the Grounds of Lie Algebra
by Prof. Guido Izuta, Yonezawa Women's College, Dept. of Social Information Science, Yonezawa, Yamagata, JAPAN.

Conference Room: A
Time: 09:30-10:00
Plenary Lecture:

Studies Regarding Finishing and Work Hardening the Internal Surfaces by Radial Vibratory Rolling Method
by Prof. Badea Lepadatescu, Transylvania University of Brasov, ROMANIA.

10:00-10:30: Coffee Break

Thursday 27th September 2018

Conference Room: A
Time: 10:30-12:30
Title: Education and Educational Technologies
Chair: Badea Lepadatescu, Diana Katherine Gonzalez

Cognitive Learning Strategies Instruction and Listening Proficiency Development in Foreign Languages Undergraduates	Diana Katherine Gonzalez, Estefanya Cataño Franco, Mónica López Medina
Management and Resources in the Research Project: Carbon dioxide (CO_2) Laser with Applications in Industrial Engineering	Girdu Constantin Cristinel
Selecting Assessments for Problem based Learning	Javier Bilbao, Concepción Varela, Carolina Rebollar, Eugenio Bravo, Olatz García
Some Researches in the Field of Fatigue Phenomenon in Engineering	Ioan Enescu
E-learning Platform used in Romanian Students' Teaching Activities	Popa Luminita, Popa N. Vasile
Analysis of the Fulfillment of the Quality Control Purpose of the System of Assurance of the Higher Education Quality by the Ministry Of National Education in Colombia, through Conaces	Juan Diego Lopez Vargas, Felipe Hernandez Polo, Jorge Gomez Escobar, William Aristizabal Cardona, Jorge Velez Ramirez
Increasing of Carbon Steel Performances by Superficial Heat Treatments in Plasma	Bolfa Traian Eugen

Thursday 27th September 2018

Conference Room: A
Time: 12:30-14:30
Title: Mechanical Engineering
Chair: Ion Malael, John Kechagias

Ground Effect Influence on Aircraft Exhaust Jet with Different Nozzle Configurations	Bogdan Gherman, Oana Dumitrescu, Ion Malael
Projection Regularization Method for Solving Inverse Heat-Conduction Problem	Anna Sidikova
A Design Optimization Study for the Multi-axle Steering System of an 8x8 ARFF Vehicle	Mehmet Murat Topaç, Merve Karaca, Batuhan Kuleli
Flow Evaluation of the Lobe Pump using Numerical Methods	Ion Mălăel, Florina Costea, Marian Drăghici
Design and 3D Printing of a Two Stroke Engine with a Low Cost 3D Printer: A Case Study	Ilas Alexandridis, Apostolos Avranas, Kostas Kitsakis, John Kechagias
Experimental Setup for H_2/O_2 Small Thruster Evaluation	Jeni Alina Vilag, Valeriu Alexandru Vilag, Cleopatra Florentina Cuciumita, Răzvan Edmond Nicoară

14:30-15:00: Coffee Break

Thursday 27th September 2018

Conference Room: A
Time: 15:00-17:00
Title: Applied, Numerical and Computational Mathematics with Informatics
Chair: Edi Cahyono, Yuri K. Dem'yanovich

Gradient Estimation for Hexagonal Grids and Its Application to Classification of Instrumentally Registered Tactile Images	Stepan A. Nersisyan, Vladimir M. Staroverov
Avoidance of Numerical Singularities in Free Vibration Analysis of Euler-Bernoulli Beams using Green Functions	Goranka Štimac Rončević, Branimir Rončević, Ante Skoblar, Sanjin Braut
Adopting Some Good Practices to Avoid Overfitting in the use of Machine Learning	Imanol Bilbao, Javier Bilbao, Cristina Feniser
Pseudo-Continuous Minimal Splines of Lagrange Type	Yuri K. Dem'yanovich
Mobile Human Shape Superimposition: An Initial Approach using OpenPose	Roman Bajireanu, Joao A. R. Pereira, Ricardo J. M. Veiga, Joao D. P. Sardo, Pedro J. S. Cardoso, Roberto Lam, Joao M. F. Rodrigues
Fraction-Free Factorization of a Toeplitz Matrix	Yuval Bistritz

Thursday 27th September 2018

Conference Room: A
Time: 17:00-19:00
Title: Management and Control of Systems via Signal Processing and Informatics
Chair: R. T. Naayagi, Rafał Kowalik

Performance Evaluation of Solar Modules using Lucas-Nülle Emulator	Emirul Akbar Bin Sha'ari, R. T. Naayagi
Comparison of the SVM Classification Results between Original and DWT Denoised Respiratory Signals Considering to the Transients Noise	Igor Mazic, Anamaria Bjelopera, Luka Strazicic
Doppler Delay in Navigation Signals Received by GNSS Receivers	Lucjan Setlak, Rafał Kowalik, Maciej Smolak
Knowing and/or Believing a Think: Deriving Knowledge using RDF CFL	Martin Žáček, Alena Lukasová
Spectrum Management and Internal Interference Resolving using DSA Techniques and Coasian Bargaining; with Case Study	Fidel Krasniqi, Arianit Maraj
The use of a Modified Phase Manipulation Signal to Interfere GNSS Receivers	Lucjan Setlak, Rafał Kowalik, Maciej Smolak
Application of Raman Spectroscopic Measurement for Banknote Security Purposes	Hana Vaskova, Pavel Tomasek, Milan Struska

20:00: Conference Dinner

Conference Room: A
Time: 09:00-11:00
Title: Communication and Web Services
Chair: Eva Milkova, Arūnas Tamaševičius

Performance Evaluation of GPU-based PO-SWE for Analysis of Large-sized Dual-Reflector Antennas	Saki Matsuo, Masato Gocho, Tetsuya Katase, Hiroto Ado, Atsuo Ozaki
3D Technology in the Sphere of Cultural Heritage and Serious Games	Eva Milkova, Lenka Chadimova, Martina Manenova
Spam Detection in Social Media: A Bayesian Scheme based on Social Activity over Content	Klimis Ntalianis, Nikolaos Mastorakis
Destroying Synchrony in an Array of the FitzHugh–Nagumo Type Oscillators by Low-Pass Filtering the Mean Field	Arūnas Tamaševičius, Elena Adomaitienė, Skaidra Bumelienė
Social Network Sites and Older Generation	Blanka Klimova
Relational Connections between Preordered Sets?	I. P. Cabrera, P. Cordero, E. Muñoz-Velasco, M. Ojeda-Aciego
An Overview of Solutions to the Issue of Exploring Emotions using the Internet of Things	Jan Francisti, Zoltán Balogh
Police Office Model for Mobile Robotic Systems with Quantum Encryption	Sergey Chuprov, Ilya Viksnin, Egor Marinenkov, Nikita Shepin

11:00-11:30: Coffee Break

Friday 28th September 2018

Conference Room: A
Time: 11:30-13:30
Title: Management and Teaching and Learning Methods
Chair: Karel Sotek, Savitri Bevinakoppa

Design of Computer Networking Courses with Major in Cyber Security	Savitri Bevinakoppa, Ammar Alazab, Tony Jan
Unity3D Game Engine Applied to Chemical Safety Education	Nishaben S. Dholakiya, Jan Kubík, Josef Brozek, Karel Sotek
Comparative Content Analysis of the Netspeak Elements among Pupils and Students in Asynchronous Discussion 'Professor-Student'	Karmela Aleksić-Maslać, Franjo Borović, Zdravka Biočina
Industry based Capstone Projects Review Process and Assessments	Savitri Bevinakoppa
Use of Game Engines and VR in Industry and Modern Education	Tim van Der Heijden, Dan Hamerník, Josef Brozek
CIPP Model to Evaluate the Principles Applied to Develop the Input Skills in the Bachelor Degree Program of EFL	Gonzalo Romero Martínez, Daniela Agudelo Pinta, Luz Ángela Borda Santacruz

Poster Presentation

A Preliminary Approach to Composition Classification of Ultra-High Energy Cosmic Rays	Alberto Guillén, Carlos Todero, José Carlos Martínez, Luis Javier Herrera