

# Conference Program



**Marathon, Athens, Greece  
July 14-17, 2019**

**Conference Location:**

**Golden Coast Hotel & Bungalows  
Paralia Marathonos, 19007 Attica, Greece  
<http://www.goldencoast.gr/en/>**

Sunday 14th July 2019

Conference Room: A

Time: 09:00-09:30

Plenary Lecture:



**Unbiased State Estimation: An Alternative to Kalman Filtering with Improved Robustness**

by Professor Yuriy S. Shmaliy

Universidad de Guanajuato, Department of Electronics Engineering, DICIS, Salamanca, MEXICO.

Conference Room: A

Time: 09:30-10:00

Plenary Lecture:



**A Computer-Aided Reconstruction of Proto-Languages**

by Professor Peter Z. Revesz

University of Nebraska-Lincoln, Department of Computer Science and Engineering, Lincoln, NE, USA.

Conference Room: A

Time: 10:00-10:30

Plenary Lecture:



**Knowledge Engineering Paradigms in Smart Education: Methodologies, Applications and Challenges**

by Professor Abdel-Badeeh M. Salem

Head of Artificial Intelligence and Knowledge Engineering Research Labs, Faculty of Computer and Information Sciences, AinShams University, Cairo, EGYPT.

10:30-11:00: Coffee Break

Sunday 14th July 2019

**Conference Room: A**

**Time: 11:00-13:00**

**Title: Computers in Data Classification and Processing**

**Chair: Yuriy S. Shmaliy, Peter Revesz**

Using Data Mining Algorithms to Discover Regular Sound Changes among Languages	Peter Revesz
Analysis and Smoothing of EMG Signal Envelope using Kalman and UFIR Filtering under Colored Measurement Noise	Sandra Márquez-Figueroa, Yuriy S. Shmaliy, Oscar Ibarra-Manzano
Error Analysis in Unbiased FIR Filtering with Time-Stamped Discretely Delayed and Missing Data	Karen Uribe–Murcia, Yuriy Shmaliy, Shunyi Zhao
Using Data Mining Algorithms to Discover Regular Sound Changes among Languages	Peter Revesz
Finger Recognition by Feature Length	Ching-Liang Su
UFIR Smoothing in State Space for T-wave Features Analysis	Carlos Lastre-Dominguez, Yuriy S. Shmaliy, Oscar Ibarra-Manzano
Determinants of ERP Systems as a Large-Scale Reuse Approach	Marko Mijač, Ruben Picek, Darko Andročec
State Estimation using UFIR and Kalman Filtering in Applications to Local Crystal and Master Clocks	Oscar Ibarra-Manzano, Jose A. Andrade-Lucio, Yuriy Shmaliy
Development of a Robust UFIR Filter with Consensus on Estimates for Missing Data and Unknown Noise Statistics over WSNs	Miguel Vazquez-Olguin, Yuriy S. Shmaiy, Oscar Ibarra-Manzano

Sunday 14th July 2019

**Conference Room: B**

**Time: 11:00-13:00**

**Title: Materials and Mechanics**

**Chair: Zdenek Kala, Mikhail Karyakin**

Identification of Variation Coefficient of Equivalent Stress Range of Steel Girders with Cracks	Z. Kala, A. Omishore, S. Seitzl, M. Krejsa, J. Kala
Influence of Doping and Thickness on the Performance of CIGS PV Cell	M. Bouchaour, L. Merad, A. Ould-Abbas, N. E. Chabane Sari
Radial Compression Stability of a Nonlinearly Elastic Cylinder with Internal Stresses	Mikhail Karyakin, Leonid Obrezkov
Ordering of Small Parameters in the Shallow Water Wave Problem	Georgy I. Burde
Water Waves Overtopping over Barriers	Francesco Gallerano, Giovanni Cannata, Marco Tamburrino, Simone Ferrari, Maria Grazia Badas, Giorgio Querzoli
Changing Stability of the Ship While Flooding Compartments in the Aspect of the Maritime Transport Safety	Waldemar Mironiuk
Changes of Mooring Force due to Structural Modification of a Barge Ship	Moon By

Sunday 14th July 2019

**Conference Room: A**

**Time: 13:00-15:00**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Modeling, Identification, Simulation and Optimization - Part I**

**Chair: Stanislav Sehnálek, Lubomír Šánek**

Simulation of Printed Circuit Boards Recycling Process	Dagmar Janacova, Jan Pitel, Vladimir Vasek, Pavel Mokrejs, Miluse Viteckova, Rudolf Drga, Jiri Krenek
Use of Approximate Methods to Determine Minimum Reflux Ratio in Distillation Process	Beltrán-Prieto Juan Carlos, Kolomazník Karel
Optimization of Lupine Hydrolyzate Separation	Jiří Pecha, Jakub Husár, Miloš Jelínek, Lubomír Šánek, Karel Kolomazník
Study of Interface Composition and Height Column During Absorption Process	Beltrán-Prieto Juan Carlos, Kolomazník Karel
Determination of Exothermic Batch Reactor Specific Model Parameters	Lubomír Macků
Modelling of the Kinetics of Transesterification Reaction of Rapeseed Oil with Different Reactant Dosing Procedures	Jakub Husár, Jiří Pecha, Lubomír Šánek, Karel Kolomazník

Sunday 14th July 2019

**Conference Room: B**

**Time: 13:00-15:00**

**Title: Signal Processing**

**Chair: Vairis Shtrauss, Gonzalo Urcid**

Multivariate Data Retrieval Modified by Random Noise using Lattice Autoassociative Memories with Eroded or Dilated Input Residuals	Gonzalo Urcid, Rocío Morales-Salgado, José-Angel Nieves-Vázquez
Improving Accuracy of FIR Filters for Computing Convolution Transforms for Smooth Non-bandlimited Signals	Vairis Shtrauss
Visible/Infrared Face Spoofing Detection using Texture Descriptors	Shaimaa Mohamed, Amr Ghoneim, Aliaa Youssif
Hidden Human Detecting behind a Concrete Wall by Using Microwave Imaging	Lotfi Merad, Laarej Merad, Sidi Mohammed Chouiti, Sidi Mohammed Meriah
Kinematic Studies in the Field of Accuracy and Position Determination of Aircrafts using the PPP Technique by the GPS System	Lucjan Setlak, Rafał Kowalik
The Basic Architecture of the System with the A-GNSS Receiver	Lucjan Setlak, Rafał Kowalik

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

Sunday 14th July 2019

**Conference Room: A**

**Time: 15:30-17:30**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Modeling, Identification, Simulation and Optimization - Part II**

**Chair: Stanislav Sehnálek, Lubomír Šánek**

Mathematical Modeling of Transesterification Process Kinetics of Triglycerides Catalyzed by TMAH	Lubomír Šánek, Jiří Pecha, Jakub Husár, Karel Kolomazník
Optimization and Economic Assessment of Renewable Energy Sources and their Combinations for Central Europe	Jan Skovajsa, Martin Zálešák
Fluorescence Investigation of Epoxy Resin LG 285 and Mathematical Description of the Curing Process	Michaela Mikuličová, Vladimír Vašek, Vojtěch Křesálek
Experimental and Numerical Testing of Possibilities and Limits for Applications of Phase Changed Materials in Buildings	Hana Charvátová, Martin Zálešák, Martin Koláček, Stanislav Sehnálek
Design and Development of a Process-Economic Mathematical Model of a Lupine Hydrolysis Unit	Jiří Pecha, Lubomír Šánek, Miloš Jelínek, Jakub Husár, Karel Kolomazník



## Sunday 14th July 2019

**Conference Room: B**

**Time: ~~15:30-17:30~~**

**Special Session CSCC '19: Supply Chain Management for Digital Age**

**Chair: Satya Shah**

**The Special Session rescheduled  
to Wednesday 17th July 2019**

**Conference Room: C**

**Time: 13:30-15:30**

An Overview of Digitalisation in Conventional Supply Chain Management	Sarath Menon, Satya Shah
Industry 4.0 and Autonomous Transportation: The Impacts on Supply Chain Management	Satya Shah, Ilias Logiotatopoulos, Sarath Menon
The Growing Adoption of Internet of Things on Supply Chains	Satya Shah, Keotshepile Mokakangwe, Keitumetes Bose, Sarath Menon
The Global Perception of Industry 4.0 for Reverse Logistics	Satya Shah, Galeboe Dikgang, Sarath Menon
To Examine the Impacts of IoT on Pharmaceutical Supply Chain Management in Zambia	Satya Shah, Thomas Musonda, Sarath Menon

### Poster Presentations

Microalgae Oil – New Raw Material for Biodiesel Fuel Production	Violeta Makareviciene, Milda Gumbyte, Egle sendzikiene
Numerical Study of based Perovskite Solar Cells by SCAPS-1D	Abdelhadi Slami, Mama Bouchaour, Laarej Merad

**18:00 Welcoming Drink**

Monday 15th July 2019

**Conference Room: A**

**Time: 09:00-09:30**

**Plenary Lecture:**



**The Use of Fuzzy Logic in Classification**

by Professor Amaury A. Caballero

Florida International University, Department of Electrical and Computer Engineering, Miami, FL, USA.

**Conference Room: B**

**Time: 09:00-09:30**

**Plenary Lecture:**



**Are the Existing Renewable Technologies Adequate to Replace the Carbon Fuels in Proper Time?**

by Professor Christos D. Papageorgiou

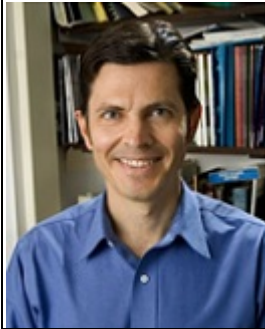
National Technical University of Athens, GREECE.

Monday 15th July 2019

**Conference Room: A**

**Time: 09:30-10:00**

**Plenary Lecture:**



**Realistic Jet Noise Simulations Including Noise Control Strategies**

by Professor Anastasios Lyrintzis

Embry Riddle Aeronautical University, Aerospace Engineering, Daytona Beach, FL, USA.

**Conference Room: B**

**Time: 09:30-10:00**

**Plenary Lecture:**



**Forecasting through Mathematical Models the Environmental Xenobiotics Impact on Humans and Ecosystems**

by Professor Cornelia Aida Bulucea

University of Craiova, Faculty of Electrical Engineering, Craiova, ROMANIA.

**10:00-10:30: Coffee Break**

Monday 15th July 2019

**Conference Room: A**

**Time: 10:30-12:30**

**Title: Neural Networks and Artificial Intelligence**

**Chair: Antonios Andreatos, Mahmoud Iskandarani**

Execution and Analysis of Classic Neural Network Algorithms when they are Implemented in Embedded Systems	Alfonso Jair Martínez López, José Raúl Pale Suarez, David Tinoco Varela
A Novel Intrusion Detection System based on Neural Networks	Antonios Andreatos, Vassilios Moussas
Artificial Intelligence Methods Suitable for Incident Handling Automation	Roumen Trifonov, Radoslav Yoshinov, Slavcho Manolov, Georgi Tsochev, Galya Pavlova
Data Encoding and Reconstruction of Thermal Imaging Maps of Impact Damaged Composite Structures using Feature Space and Neural Networks	Mahmoud Iskandarani
Personalized Tour Recommender through Geotagged Photo Mining and LSTM Neural Networks	Chieh-Yuan Tsai, Gerardo Paniagua, Yu-Jen Chen, Chih-Chung Lo, Liguao Yao
Using Big Data Analytics to Develop Marketing Intelligence Systems for Commercial Banks in Egypt	Sara Mohamed Asaad El Banna, Nevine Makram Labib
A Hybrid Fuzzy-Neural Model for Pattern Detection to Predict the Egyptian Stocks Price Movement Direction	Abeer Badr Eldin

Monday 15th July 2019

**Conference Room: B**

**Time: 10:30-12:30**

**Title: Pure Mathematics, Applied Mathematics and Computational Methods**

**Chair: Hanna Mohammad Said, Jyrko Correa-Morris**

Business Intelligence in the World of IoT	Hanna Mohammad Said, Abdel-Badeeh M. Salem
Comparing Partitions: Shortest Path Length Metrics and Submodularity	Jyrko Correa-Morris
On the Length Spectrum for Compact, Odd-dimensional, Real Hyperbolic Spaces	Dzenan Gusic
The Use of Computational Intelligence Paradigms in Smart Software Engineering: Techniques and Applications	Kariman Ramzy El Helow, Abdel-Badeeh M. Salem
Arzela-Ascoli Type Theorems for Function Spaces	Lubica Hola, Dusan Holy
$\mu$ -symmetry Classification and Reductions of Nonlinear Heat Equation	Teoman Ozer, Ozlem Orhan

Monday 15th July 2019

**Conference Room: A**

**Time: 12:30-14:30**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Computers in Security, Systems and Control Engineering**

**Chair: Pavel Valášek**

Possibilities of using Virtual Reality as a Means for Therapy from Fear of Spiders	Miroslav Musalek, Lubomir Vasek
Methods of Personal Information Environment Evaluation	Pavel Valášek
Analysing EEG Signals for Mathematical Computations	Martin Strmiska, Zuzana Koudelkova
Use of Virtual Reality for the Therapy of Children with Attention Deficit Hyperactivity Disorder	Miroslav Musalek, Ivan Kovar, Tomas Sysala
The Design of a Process for Simplifying the Insertion of a New Scenario into the Virtual Simulator	Petr Svoboda, Jakub Rak, Václav Lošek
Algorithm of Conversion of Meteorological Model Parameters	David Šaur, Juan Carlos Beltrán-Prieto
The Possibility of using BCI Applications in Physiotherapy	Zuzana Koudelkova, Sarka Dankova, Michal Filip, Marcela Dabrovska
Using SW PRACTIS for Education and Training Purposes for the Integrated Rescue System – The Case Study	Jakub Rak, Petr Svoboda, Dusan Vicar

Monday 15th July 2019

**Conference Room: B**

**Time: 12:30-14:30**

**Title: Communications**

**Chair: Vladimir Edemskiy, Ivan Ganchev**

Designing an Ultra-Low-Power RTU for Use in NB-IoT Water Applications	Ivan Ganchev, Zhanlin Ji, Mairtin O'Droma
The Linear Complexity of New $q$ -ary Generalized Cyclotomic Sequences of Period $p^n$	Vladimir Edemskiy, Nikita Sokolovskiy
Networking Solutions for Connecting Bluetooth Low Energy Devices - A Comparison	Mostafa Labib, Atef Ghalwash, Sarah Abdulkader, Mohamed Elgazzar
Predicting Leaf State Effects on Radiowaves based on Propagation Loss Measurements	Mohammed Saleh H. Al Salameh
NDM: 1-Bit Delta-Sigma Converter with Non-Linear Loop	Miguel A. Lagunas, Ana Perez-Neira, José Rubio
An Analysis of a BJT High Frequency Phase Shift Oscillator by Root Locus of Current Consumption and Impedance Matching using MATLAB	Kittipong Tripetch
Resource Management Optimally in Non-Orthogonal Multiple Access Networks for Fifth-Generation by using Game-Theoretic	Nahid Ardalani, Mahsa Khodakhah

**14:30-15:00: Coffee Break**

Monday 15th July 2019

**Conference Room: A**

**Time: 15:00-17:00**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Logistics**

**Chair: Pavel Viskup**

Warehouse Design for Production Needs	Pavel Viskup, Kateřina Gálová
Application of Selected Marketing and Logistics Methods in the Czech Republic	Pavel Taraba, Tereza Belantová
International Trade Risks	Eva Hoke, Jan Marada, Romana Heinzová
Risk Management in the Logistics Projects	Tereza Belantová, Pavel Taraba
Case Study: Optimization of Production Processes	Pavel Viskup, Kateřina Gálová, Žaneta Pěrková
Introducing Green Logistics Elements into a Selected Company - Case Study	Marek Tomastik, Katerina Vichova, Eva Černošávková, Markéta Habrová



Monday 15th July 2019

**Conference Room: B**

**Time: 15:00-17:00**

**Title: Algorithms and Machine Learning**

**Chair: Ilyas Potamitis, Mihailo Lazarevic**

Deep Generative Model with Supervised Latent Space for Text Classification	Maciej Jankowski
Open-Closed Iterative Learning Control Algorithm for Exoskeleton Rehabilitation Purposes	Mihailo Lazarevic, Nikola Zivkovic, Darko Radojevc
A Novel Electronic Gate that Identifies and Counts Bees based on their RGB Backscattered Light	Ilyas Potamitis, Iraklis Rigakis, Nicolaos-Alexandros Tatlas, Spyros Kouzoupis
Peacock Motifs in Rig Vedic Hymns and Hungarian Folksongs	Peter Revesz
Application of the Genetic Algorithm for Cascade Control of a HVAC System	Donka Ivanova, Nikolay Valov, Martin Deyanov
Traffic Model using a Novel Sniffer that Ensures the User Data Privacy	Albert Espinal, Rebeca Estrada, Carlos Monsalve

### Poster Presentations

Skills and Competences of the Interventional Radiological Nurse in Preparing a Patient for an Invasive Cardiovascular Procedure - Condition in Bulgaria	Irinka Hristova, Despina Georgieva, Greta Koleva
Pedagogical Observation of Students for Applying Scales of Assessing Clinical States and Symptoms in Palliative Nursing Care	Greta Koleva, Despina Georgieva, Irinka Hristova

**20:00: Conference Dinner**

Tuesday 16th July 2019

Conference Room: A

Time: 09:00-09:30

Plenary Lecture:



**Augmented Virtuality; Enabling Technologies for Industry 4.0**

by Professor Badea Lepadatescu

Transylvania University of Brasov, Brasov, ROMANIA.

Conference Room: B

Time: 09:00-09:30

Plenary Lecture:



**Exploring the Impact of the Artificial Intelligence Technologies in the Learning Process**

by Professor Michele Della Ventura

Music Technologies, Music Academy 'Studio Musica', Treviso, ITALY.

Tuesday 16th July 2019

**Conference Room: A**

**Time: 09:30-11:30**

**Title: Applications of Systems**

**Chair: Calin Ciufudean, Javier Taboada**

Analysis of the Operation Process of a Training Aircraft-Cessna 150	Marta Woch, Justyna Tomaszewska, Grzegorz Kaminski, Kinga Kosciak, Tomasz Zienkiewicz, Mariusz Michalski, Mariusz Zieja
Roofing Tiles or Slates? A Network Analysis of Factors Influencing Architect Choice	Saki Gerassis, Ángeles Saavedra, Julio F. García, Javier Taboada, Santiago López
Innovative Technologies for New Materials using Micro/nano Elements	Dimitar Karastoyanov, Rosen Petrov, Milena Haralampieva
Discrete Event Controllers for Grids` Lines	Calin Ciufudean, Corneliu Buzduga
Initial Research for Passive and Energy Efficient Building Awareness in Bulgaria	Veneta Yosifova, Rosen Petrov, Milena Haralampieva
A Computational Study on Nanocomposites (a Matrix, Reinforced by Carbon Nanotubes)' Physic-Mechanical Properties	Katya Marinova Simeonova

**Tuesday 16th July 2019**

**Conference Room: B**

**Time: 09:30-11:30**

**Title: Education and Modern Educational Technologies and Humanities Sciences**

**Chair: Michele Della Ventura, Marios Poulos**

Mapping the Using 3D Printers and the Overview of Printed Models on the 3D Printers at Primary (Lower Secondary) Schools in the Czech Republic	Radek Nemecek, Petr Vobornik
Preschool Smart System for Autism Children	Maha Sabri Altememe, Abdel-Badeeh M. Salem
Addressing Key Global Technical Challenges by Designing Higher Education Models for ICT Security Study Programs	Antoanela Naaji
Minimisation of Terms to Describe a Knowledge Domain for Ontology Engineering and Linked Data Generation	Artemis Chaleplioglou, Sozon Papavlasopoulos, Marios Poulos
Some Problems in Interpreting and Applying the Institute – Constitution of an Accused under the Bulgarian Criminal Procedure Code	Lyuboslav Lyubenov
The Undertaking of the Insolvency Practitioner in Cross-border Insolvencies According to Regulation 2015/848	Vladislav Ivanov
Some Theoretical Aspects of Justification of Taxation	Vanya Panteleeva
Analysis of Closed Facebook Communities to Enhance Vocabulary Development in English as a Foreign Language through Flipped Classroom Method	Manuel Alejandro Salazar, German Enrique Perez, Diana Katherine Gonzalez, Gonzalo Romero Martinez

**11:30-12:00: Coffee Break**

Tuesday 16th July 2019

**Conference Room: A**

**Time: 12:00-14:00**

**Title: Computers in Applied Sciences**

**Chair: Andrey Kuleshov, Dimitar Karastoyanov**

Compressible Pipe Flow with Friction and Gravity	Etsuo Morishita
Data Assimilation Method, its Application and Stability	Konstantin Belyaev, Andrey Kuleshov, Ilya Smirnov, Natalia Tuchkova
Controlled High-Temperature Sintering of Boron Carbide	Nikolay Stoimenov, Bogomil Popov, Veneta Yosifova
Innovative Approach for 3D Presentation of Plane Culturally-Historical Objects by Tactile Plates for Disadvantaged Users (Low-Sighted or Visually Impaired)	Dimitar Karastoyanov, Nikolay Stoimenov, Stanislav Gyoshev
Stability and Mean Consistent of Fourier Solutions of Nonlinear Stochastic Heat Equations in 1D	Haziem M. Hazaimeh
Asset Management of Power Transformers based on Data Analytics and Statistical Studies	Ivan Silva, Rogério Flauzino, Danilo Spatti, Renato Bossolan, Bruno Trevisam, Saulo Trento
Optimization of Trajectory Planning using Distributed Particle Swarm Optimization	Ahmad Al-Qerem

Tuesday 16th July 2019

**Conference Room: B**

**Time: 12:00-14:00**

**Title: Electrical and Electronic Circuits**

**Chair: Cornelia A. Bulucea, Gabriel Nicolae Popa**

A Monolithic High-Voltage Driver Circuit based on a Dickson Charge Pump for MEMS Actuator Applications	Hui Peng, Herbert De Pauw, Pieter Bauwens, Jan Doutreloigne
Complex Electronic Protection for Low-Voltage Three-Phase Induction Motors	Gabriel Nicolae Popa, Corina Maria Diniş
A High-Efficiency and Compact Charge Pump with Charge Recycling Scheme and Finger Boost Capacitor	Hui Peng, Pieter Bauwens, Herbert De Pauw, Jan Doutreloigne
Three-phase Power Transformer Modelling in AC/DC Traction Substations	Cornelia A. Bulucea, Doru A. Nicola, Nikos E. Mastorakis, Carmen A. Bulucea
HV Multi-terminal DC Lines as the Backbone of the Energy Transmission System – A Research Plan to Tackle Challenges	Christos Christodoulou, Stavros Lazarou, Elias Zafiroopoulos, Vasiliki Vita, Lambros Ekonomou
Performance Evaluation of Heterogeneous Network via IEEE802.11.X and LTE Multi-homing Framework in VANETs using Estinet 8	Ghulam Yasin, Syed Fakhar Abbas, Waseem Iqbal
A T-branch Diplexer based on Directional Couplers and Resonant Cavities in Photonic Crystal	Amel Labbani, Imene Moumeni, Faiza Bounaas
Hybrid Electric Vehicle with Matrix Converter and Direct Torque Control in Powertrains Asynchronous Motor Drives	Sorin Ioan Deaconu, Marcel Topor, Gabriel Nicolae Popa, Feifei Bu

Tuesday 16th July 2019

**Conference Room: A**

**Time: 14:00-16:00**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Security and Crisis Management - Part I**

**Chair: Chair: Jiří Ševčík, Katerina Víchová**

Biological Weapons and Health Protection against Biological Terrorism	Marta Blahova
The Personal Crisis in the Selected Hospital and Impact to the Safety	Eva Hoke, Romana Heinzová, Jiří Konečný
Accelerometer-based Glass-Break Detector for Alarm Applications	Václav Mach, Jan Valouch, Jiří Ševčík, Rui Miguel Soares Silva
Security Forecasts of Terrorist Attack	Marta Blahova
Influence of Distance to Depth Shot of a CO <sub>2</sub> -Powered Airsoft Gun with Lead Shot Ammunition and Shape of the Temporary and Permanent Cavity in Ballistic Gelatine	Martin Ficek, Lukáš Pavlík, Rui Miguel Soares Silva, Michaela Mikuličová
The Possibilities of a Crisis Modeling in the Cyberspace of the System Security	Jiří Dvořák, Jiří Konečný, Marek Tomaščík

**Tuesday 16th July 2019**

**Conference Room: B**

**Time: 14:00-16:00**

**Title: Industrial Engineering**

**Chair: Badea Lepadatescu, Maria Brojboiu**

Concerning the Emitted Electromagnetic Radiation by the Electronic Devices	Mircea-E. Ardeleanu, Maria Brojboiu, Paul Nicoleanu
Model of Servo Drive System to Increase Performance of Machine Tools	Ioan Ghimbaseanu
Researches on Cutting Tools which Have the Cutting Surface Made of Polycrystalline Diamond	Mihaela Popescu
The Acceleration or Deceleration Curve of the Kinematical Linkage of the Numerical Control Machine	Ioan Enescu

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



Tuesday 16th July 2019

**Conference Room: A**

**Time: 16:30-18:30**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Security and Crisis Management - Part II**

**Chair: Chair: Jiří Ševčík, Katerina Víchová**

Security Design of Selected Soft Targets	Ondřej Zimek
The Impact of Naturogenic Threats to the Critical Infrastructure	Katerina Vichova
Virtual Reality – Level of Immersion within the Crime Investigation	Václav Mach, Jan Valouch, Milan Adámek, Jiří Ševčík
Risk Analysis of the Soft Targets According to the Methodology	Ondřej Zimek
The Software Methodology to the Soft Targets Assessment	Lucia Mrazkova Duricova, Pavel Valasek, Jan Mrazek, Hana Chudá

Tuesday 16th July 2019

**Conference Room: B**

**Time: 16:30-18:30**

**Title: Civil Engineering and Transportation Systems**

**Chair: Yi-Sheng Huang, Michal Strba**

Applying Cell Transmission Model for Solving Urban Traffic Jams	Yi-Sheng Huang, Chia-Che Ho, Bo-Yang Xie
Modelling as a Means of Improving the Organization of Movement of the City Traffic	Pavel Stoyanov, Asen Asenov
The Behavior of Composite Dowels Subjected to Four-Point Bending Test	Veronika Vaclavikova, Michal Strba
Seismicity in Bangladesh using Local Seismic Station	Md. Momenul Islam
Evaluation of the Operating Parameters of Taxi Cars in City of Rousse	Dimitar Grozev, Mihail Milchev, Ivan Georgiev
Road Safety Estimation in Bulgaria from 2010 to 2018	Filip Kirilov, Polina Atanasova

Wednesday 17th July 2019

**Conference Room: B**

**Time: 09:00-11:00**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Systems and Control Theory and Mathematics**

**Chair: Milan Hofreiter**

Use of the Shifting Method Results for PID Controllers Parameters Estimation	Alzbeta Hornychova, Milan Hofreiter
Statistical Analysis of Control Quality of MPC using Testing Hypothesis	Marek Kubalcik, Vladimir Bobal, Tomas Barot
The Finding of the Queuing Theory Models for Evaluation Throughput of the IRS Radio Network in the Czech Republic	Filip Večeřa, Lukáš Pavlík
Process Identification using Relay Shifting Method for Auto Tuning of PID Controller	Milan Hofreiter, Alžběta Hornychová
Hille-Nehari Type Oscillation and Nonoscillation Criteria for Linear and Half-Linear Differential Equations	Jana Rezníčková
Universal Approach to Derivation of Quaternion Rotation Formulas	Hana Chudá
The Dynamic Control of the Light Signalling Device in Real-Time	Jan Mrazek, Lucia Duricova Mrazkova, Martin Hromada, Jana Reznickova

Wednesday 17th July 2019

**Conference Room: C**

**Time: 09:00-11:00**

**Title: Applied Mathematics in Engineering Sciences**

**Chair: Irina Burova, Dženan Gušić**

Interval Estimation of Trigonometrical Splines	I. G. Burova, E. G. Ivanova, V. A. Kostin
Soundness and Completeness of Inference Rules for New Vague Functional Dependencies	Dženan Gušić
Spaces of Polynomial and Nonpolynomial Spline Wavelets	Yu. K. Dem'yanovich, I. G. Burova, T. O. Evdokimova, A. V. Lebedeva
A Mathematical Model of Movement in Virtual Reality through Thoughts	Radoslav Mavrevski, Metodi Traykov, Ivan Trenchev, Dinko Stoykov
Soundness of Inference Rules for New Vague Multivalued Dependencies	Dženan Gušić
The Discrete-Time Tracking Problem with $H_\infty$ Model Matching Approach Plus Integral Control	Murat Akın, Tankut Acarman

**11:00-11:30: Coffee Break**

Wednesday 17th July 2019

**Conference Room: B**

**Time: 11:30-13:30**

**Special Session CSCC '19: Informatics in Control Theory and its Applications**

**Title: Instrumentation, Measurement and Control Applications**

**Chair: Zora Košťalová Jančíková**

Utilization of Ceramic Materials in the Process of Electromagnetic Wave Conversion to Heat Usable for Space Heating of Residential Facilities	Pavel Košťal, Zora Košťalová Jančíková, Jozef Vlček, Hana Špačková, Pavel Klaus
Measurement of Visual and Auditory Stimuli using EEG Headset Emotiv EPOC+	Martina Zabcikova
The Possibilities of using Bluetooth to Control the Lift Platform used for People with Reduced Mobility	Milan Adamek, Martin Reznicek, Martin Pospisilik, Petr Neumann
Benefits of Night Temperature Setback in the Control Strategy of the District Heating System	Viliam Dolinay, Lubomir Vasek
Visual and Auditory Stimuli Response, Measured by Emotiv Insight Headset	Martina Zabcikova
The Automated System for Bandsaw Blade Properties Measurement	Tomas Sysala, Karel Stuchlik, Petr Neumann

Wednesday 17th July 2019

**Conference Room: C**

**Time: 11:30-13:30**

**Title: Management and Education Systems**

**Chair: Marius Minea, Nermeen Mekawie**

Enhanced Public Transport Management Employing AI and Anonymous Data Collection	Marius Minea, Cătălin Dumitescu
Applying CMMI Best Practices to Improve Processes	Sussy Bayona-Oré, Josselyn Chamilco, Dayvis Perez
Fuel Provider Evaluation using a Combined Decision Aid Model	Mehtap Dursun, Nazli Goker
Diagnose Current University Education from a Teacher's Perspective	Whe-Min Wang, Horng-Jinh Chang
Success Factors for Deploying Cloud Computing in eHealth	Nermeen Mekawie, Kesmat Yehia
Stress Optimization for Performance Improvement of Direct Workers from the Automotive Industry in Bulgaria	Krasimir Markov
The Assessment of Occupational Risks Factors	Dumitrascu A.-E.

Wednesday 17th July 2019

**Conference Room: B**

**Time: 13:30-15:30**

**Title: Automation & Information**

**Chair: Ventsislav Petkov Keseev, Eleonora Kirilova**

Study of Neurophysiological Metrics-Indexes, in order to Predict Learning Difficulties	Vasileios Stefanidis, Sozon Papavlasopoulos, Marios Poulos
Diagnostics and Maintenance Education Course for PLC based Automatic Machines	Ventsislav Petkov Keseev
Head Loss Analysis of Thermosyphon Heat Exchanger with Complex Geometry	Emilian Velkov, Angel Terziev, Iliya Iliev
Investigation of Possibilities for Prediction of Automobile Bio-oils Parameters by Color Image Analysis	Zlatin Zlatev, Eleonora Kirilova, Tsvetelina Georgieva, Plamen Daskalov
Assessment the Quality of Apricots in the Process of Drying with Neural Networks and Support Vector Machines	Martin Dejanov, Darinka Ilieva-Stefanova, Iva Chelik

**Wednesday 17th July 2019**

**Conference Room: C**

**Time: 13:30-15:30**

**Special Session CSCC '19: Supply Chain Management for Digital Age**

**Chair: Satya Shah**

An Overview of Digitalisation in Conventional Supply Chain Management	Sarath Menon, Satya Shah
Industry 4.0 and Autonomous Transportation: The Impacts on Supply Chain Management	Satya Shah, Ilias Logiotatopoulos, Sarath Menon
The Growing Adoption of Internet of Things on Supply Chains	Satya Shah, Keotshepile Mokakangwe, Keitumetes Bose, Sarath Menon
The Global Perception of Industry 4.0 for Reverse Logistics	Satya Shah, Galeboe Dikgang, Sarath Menon
To Examine the Impacts of IoT on Pharmaceutical Supply Chain Management in Zambia	Satya Shah, Thomas Musonda, Sarath Menon