



The 8<sup>th</sup> International Conference

**INTER-ENG 2014**  
Interdisciplinarity in Engineering



**2014**

**CONFERENCE PROGRAM**

„Petru Maior” University of Tîrgu - Mureş  
Faculty of Engineering  
[www.inter-eng.upm.ro](http://www.inter-eng.upm.ro)

9 - 10 October 2014  
Tîrgu - Mureş, România

## Committees

### President of the Conference

**Călin ENĂCHESCU**

Rector of „Petru Maior” University of Tîrgu - Mureş, Romania

### Scientific Committee Members

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President of Scientific Committee, Vice-rector of the „Petru Maior” University of Tîrgu -Mureş

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Dana-Adriana ILUŢIU-VARVARA

Ionuţ MUNTEAN

## Local Organizing Committee

### Nicolae CHIRILĂ

President of Local Organizing Committee, Dean of the Faculty of Engineering,  
„Petru Maior” University of Tîrgu - Mureş

### Adrian GLIGOR

Executive director,  
„Petru Maior” University of Tîrgu - Mureş

## Local Organizing and Scientific Committee Members

Gabriela STRNAD	Barna IANTOVICS	Liana-Claudia ŞOAITA
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Stelian OLTEAN	Sorina MOICA	Szidónia LEFKOVITS
Adrian DUKA	Florica MORAR	Traian TURC

## Conference Secretariat

Maria BOTEZAN  
Cristina SOPORAN  
Elena RĂDULESCU

## Contact Information

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## **Opening Ceremony**

Thursday, October 9<sup>th</sup>; 9:00 – 10:45

Aula Magna

## **Honorary Award Ceremony**

Ceremony for awarding the title of Doctor Honoris Causa to

Professor dr. eng. dr. h. c. Ioan CURTU from "Transilvania" University of Braşov

## **Welcome Addresses:**

Prof. dr. Călin ENĂCHESCU - Rector of „Petru Maior” University of Tîrgu - Mureş

Prof. dr. ing. Liviu MOLDOVAN - Vice-rector of „Petru Maior” University of Tîrgu - Mureş

Conf. dr. Nicolae CHIRILĂ - Dean of the Faculty of Engineering, „Petru Maior” University of Tîrgu - Mureş

## **Plenary Session**

Thursday, October 9<sup>th</sup>; 11:00 – 13:00

Aula Magna

## **Rheology in Engineering Sciences**

Professor dr. eng. dr. h. c. Ioan CURTU - "Transilvania" University of Braşov, Full member of Romanian Academy of Technical Sciences, Department of Technical Mechanics

## **Ironability in a Precoated Steel: New Method to Reduce VOC Emissions in Can Manufacturing**

Dr. Miguel Ángel SELLÉS CANTÓ - Universitat Politecnica de Valencia, Spain, Department of Mechanical and Materials Engineering

## **Status and Analysis of Reference Journals Indexed in SCI, SCI-E and SCI Citation Databases from Serbia and Romania**

Professor Dr. eng. Predrag DAŠIĆ, High Technical Mechanical School of Professional Studies in Trstenik, Serbia

## **Parallel Sessions and Virtual Panel Sessions**

**Thursday, October 9<sup>th</sup>; 15:00 – 16:30**

Rooms: Aula Magna, A103, A209, A307, A308, A309, A310, A316, A412

## **Parallel Sessions and Virtual Panel Sessions**

**Thursday, October 9<sup>th</sup>; 17:00 – 19:30**

Rooms: Aula Magna, A103, A307, A308, A310, A316, A412

## **Plenary Session**

**Friday, October 10<sup>th</sup>; 9:00 – 10:45**

Aula Magna

### **Cyber-Physical Smart Grid Systems**

Professor Dr. Yan ZHANG - Simula Research Laboratory, Norway

### **Non-Intrusive Techniques for Vulnerability Assessment of Services in Distributed Systems**

Dr. Béla GENGE, Network and Information Security Center, Marie Curie Fellow and Senior Lecturer at “Petru Maior” University of Tîrgu-Mureş

### **Representation of Uncertainty in Concept Modeling**

Dr. habil. László KOVÁCS, University of Miskolc, Department of Information Technology

## **Parallel Sessions and Virtual Panel Sessions**

**Friday, October 10<sup>th</sup>; 11:00 – 13:00**

Rooms: Aula Magna, A308, A309, A316

## **Closing Ceremony**

**Friday, October 10<sup>th</sup>; 13:00**

Rooms: Aula Magna

## **Advanced Mechanical Manufacturing and Design Technologies**

Room A308

Thursday, October 9<sup>th</sup> 2014; 15:00 – 16:45, 17:00 – 19:30

### **Session chairs:**

Vasile Boloş – “Petru Maior” University of Tîrgu - Mureş

Khalil Khalili – University of Birjand, Iran

Zoltán Forgó – Sapientia University, Tîrgu - Mureş

### **A New Optimization CAD/CAM/CAE Technique for the Processing of the Complex 3D Surfaces on 5 Axes CNC Machines**

Erika Wagner

### **Mixed CAD Method to Develop Gear Surfaces Using the Relative Cutting Movements and Nurbs Surfaces**

Ferenc Tolvaly-Roşca, Zoltán Forgó

### **Evaluation of a CAD Mixed Gear Modeling Method from Generating Time and Precision Point of View**

Ferenc Tolvaly-Roşca, Zoltán Forgó

### **Anlytical and Numerical Model of Low DOF Manipulators**

Zoltán Forgó, Ferenc Tolvaly-Roşca

### **Improving Crack Length Measuring Accuracy and Precision by Machine Vision Techniques**

Khalil Khalili, Mojtaba VahidniaGeetha Manivasagam

### **Electro-Thermo-Mechanical Modeling of V-Beam Actuators**

Radu Stefan Chiorean

### **Studying and Generation of Saffron Flower's 3D Solid Model**

Khalil Khalili, Mojtaba Zeraatkar, Abolfazl Foorginejad

### **Study the Hydraulic Bulge Test in T-Shape Hydroforming Die**

Amir Ashrafi, Khalil Khalili

### **Rheology in Wood Engineering**

Ioan Curtu, Mariana Domnica Stanciu, Rodica Nicoleta Dates

**Experimental Study Regarding Variation of Force in Inverse Extrusion Using Active Friction**

Teodor Socaciu

**Ultrasonic Tube Hydroforming, a New Method to Improve Formability**

Seyyed Ehsan Eftekhari Shahri, Seyyed Yousef Ahmadi Boroughani, Khalil Khalili, Beomsoo Kang

**Determination of Tool Wear in Turning Process Using Undecimated Wavelet Transform and Textural Features**

Mahdi Danesh, Khalil Khalili

**Iterative Mesh Segmentation Using Approximated Voronoi Diagram**

Amir Reza Miandarhoie, Khalil Khalili

**Employing Nelder-Mead and Gravitational Search Algorithm Methods in Point Clouds Registration Process**

Mohammad Khosravi, Khalil Khalili, Hossien Amirabadi

**Experimental Research Concerning Relation between Contact Patch and Lapping Operation of Worm Face Gear**

Ion Gavrilă, Vasile Boloş

**Aspects of the Roughing Process by Milling with the Milling Heads with Removable Plates on NC Lathe of the Worms**

Sorin-Cristian Albu, Vasile Bolos

**Drill Hole Sets Manufacturing on CNC Machines**

Ioan Mocian, Razvan Cazacu

**Aspects on Manufacturing Technology of Dual Front Wheels**

Margareta Ciotea, Vasile Boloş

**New Geometrical Aspects about ZPA Worms**

Alexandru Pozdircă

**New Technological Approach Regarding ZPA Worms Manufacturing**

Alexandru Pozdircă

**Development of the Integral Complex of Optimal Control of Heavy Machine Tools Adaptive Technological System for Wind-Power Engineering Parts**

Viktor Kovalov, Yana Vasilchenko, Predrag Dašić

## **Advanced Mechanical Manufacturing and Design Technologies**

Room A308

Friday, October 10<sup>th</sup> 2014; 11:00 – 13:00

### **Session chairs:**

Ligia Brezeanu – “Petru Maior” University of Tîrgu - Mureş

Ionel Stareţu – Transilvania University, Braşov

Márton Maté – Sapientia University, Tîrgu – Mureş

### **The Influence of Corner Gussets over Static and Buckling Behaviour of the Lightweight Tubular Latticed Beams**

Gabriel Dima

### **Method for Lightweight Optimization for Aerospace Milled Parts – Case Study for a Helicopter Pilot Lightweight Crashworthy Seat Side Struts**

Gabriel Dima, Ion Balcu, Mircea Zamfir

### **Contact Stresses between Two Cylindrical Bodies: Cylinder and Cylindrical Cavity with Parallel Axes – Part I: Theory and FEA 3D Modeling**

Ligia Cristina Brezeanu

### **Contact Stresses between Two Cylindrical Bodies - Cylinder and Cylindrical Cavity with Parallel Axes - Part II: 2D and 3D FEA Comparative Study**

Ligia Cristina Brezeanu

### **Implementation of an Overall Design of a Flexible Manufacturing System**

M. Emin Erdin, Alper Atmaca

### **An OOP Matlab Extensible Framework for the Implementation of Genetic Algorithms**

Razvan Cazacu, Lucian Grama, Ioan Mocian

### **Theoretical Peculiarities Regarding the Definition and Representation of the Rolling Surfaces for Roller Chain Wheel**

Constantin Bucur

### **Structural Synthesis, Work Spaces and Direct Kinematic of the One Serial Kinematic Chain with 8 Axes for Industrial Robots**

Ionel Stareţu

### **Automated Concept of Potato Sizing Equipment**

Filip Vladimir Edu, Diana Cazangiu, Carol Csatlos



**Redesigning a Product Using Modern CAD-CAM Software**

Andrei Adam, Cristian Cosma, Alexandru Comsa, Adrian Pop

**Experimental Research Regarding Rigidity Improvement of Hollow Machine Tools Structures Using Aluminum Foam**

Mihai Simon

## **New and Advanced Materials**

**Room A103**

**Thursday, October 9<sup>th</sup> 2014; 15:00 – 16:45, 17:00 – 19:30**

### **Session chairs:**

Gabriela Strnad – “Petru Maior” University of Tîrgu - Mureş

Ionuț Vasile Crîșmaru – Continental Automotive Romania, Iași

Mihai Șimon – “Petru Maior” University of Tîrgu - Mureş

### **Effect of Finishing and Polishing Techniques on Microhardness of Composite Restorative Materials**

Gabriela Strnad, Monika Kovacs, Edina Farkas, Liana Bereşescu

### **RT500/RT800 Sandwich Composite Laminate with Coremat Subjected to Bending Tests**

Botond-Pál Gálfi, Raluca Dora Ionescu, Renata Munteanu, Eugenia Secara

### **The Behavior of a 1.4301 Stainless Steel Subjected to Cryogenic Temperatures**

Ionuț Vasile Crîșmaru, Daniel Dragomir-Stanciu, Marius Vasile Atanasiu, Geanina Laura Pintilei

### **Glass Fabric-Reinforced PolyLite 440-M888 Composite Laminated Subjected to Tensile Load on Warp Direction**

Ioan Száva, Arina Modrea, Botond-Pál Gálfi, Aneta Reká Munteanu

### **Soundproofing Performance Evaluation of Panels Made of Fibers of Acrylonitrile Butadiene Styrene Copolymer (ABS)**

Mariana Domnica Stanciu, Ioan Curtu, Camelia Cosereanu, Dumitru Lica

### **Mechanical Characterization of the Flax/Epoxy Composite Material**

Camelia Cerbu

### **Simulation Software Development for Analysis of the Mechanical Behaviour of the Composite Materials**

Diana Cazangiu, Razvan Dragan, Ileana Rosca

### **The Characterization of an 99,5% Al<sub>2</sub>O<sub>3</sub> Coating Deposited on a Ti Alloy and Subjected to Thermal Shock**

Geanina Laura Pintilei, Marioara Abrudeanu, Corneliu Munteanu, Daniel Dragomir-Stanciu,

Ionuț Vasile Crîșmaru

**Tensile Tests on Four Layers CSM600 Glass Fibers-Reinforced PolyLite 440-M888 Polyester Resin**

Arina Modrea, Florin Teodorescu, Dorin Roşu

**Innovative Materials Made by Adding Cellulose Ethers to Cement Mortars**

Elena Jumate, Daniela Lucia Manea, Claudiu Aciu, Luminița Molnar, Radu Fechet

**Innovative Plastering Mortars Based on Recycled Waste Glass**

Luminita Monica Molnar, Daniela Lucia Manea, Claudiu Aciu, Elena Jumate

**Aluminum Foil Based Fatigue Sensor for Structural Health Monitoring of Carbon Fiber Composites (Virtual panel)**

Mikhail Burkov, Sergey Panin, Pavel Lyubutin, Alexander Eremin, Pavlo Maruschak, Abdellah Menou

**Surface Layer Modification of 12Cr1MoV and 30CrMnSiNi2 Steels by Zr<sup>+</sup> Ion Beam to Improve the Fatigue Durability (Virtual panel)**

Ilya Vlasov, Sergey Panin, Viktor Sergeev, Pavel Lyubutin, Oleg Bogdanov, Pavlo Maruschak

**Theoretical Modeling & Experimental Verification of Mechanical Properties of Natural Fiber Reinforced Thermoplastics (Virtual panel)**

Yashwant Munde, Ravindra Ingle

**Fiber Bragg Grating Sensor for Cutting Speed Optimization and Burr Reduction in Micro-Nano Scratching (Virtual panel)**

Soumen Mandal, Sritama Roy, Kalyan Chatterjee, Saurav Halder, Vijay Vijay, Naga Hanumaiah

## **Sustainable Development**

**Room Aula Magna**

**Thursday, October 9<sup>th</sup> 2014; 15:00 – 16:45, 17:00 – 19:30**

### **Session chairs:**

Dumitru Șoaita – “Petru Maior” University of Tîrgu - Mureș

Dana - Adriana Iluțiu - Varvara – Technical University of Cluj-Napoca

Răzvan Cazacu – “Petru Maior” University of Tîrgu - Mureș

### **Raising the Enterprises Environmental Performance by Taking Advantage of Business Process Modeling**

Elena Fleaca, Bogdan Fleaca, Olivia Negoita, Florin Danalache

### **Modeling Vehicular CO Emissions for Time Headway-Based Environmental Traffic Management System**

Ahmed Elkafoury, Abdelazim Negm, Mahmoud Bady, Mohamed Hafez, Tejiro Ichimura

### **Environmental Life Cycle Assessment of a Residential Building in Egypt: a Case Study**

Ahmed Abdelmonteleb Mohammed Ali, Abdelazim Mohammed Negm, Mahmoud Farghly Bady, Mona Gamal El-Dein Ibrahim

### **High-Tech Sector Innovation Performance in Europe: a Panel Data Analysis**

Ioana Harpan, Claudiu Tiberiu Albulescu, Anca Draghici

### **Design Optimization of Diaphragm Walls**

Nicoleta Maria Ilies, Marius Pop, Vasile Stelian Farcas

### **Improving the Stability of Slopes with the Aid of Underground Houses**

Nicoleta Maria Ilies, Ioana Madalina Moldovan, Silivan Valentin Moldovan

### **Determinants of the High-Tech Sector Innovation Performance in the European Union: a Review**

Viorica Baesu, Claudiu Tiberiu Albulescu, Zoltan-Bela Farkas, Anca Draghici

### **Analysis of the Existence of Size Effect on Different Concrete Types**

Nazim Manić, Mirsad Tarić, Veis Šerifi, Aleksandar Ristovski

### **Modern Aspects of Mining in Function Correlation Risk and Environmental Sustainability**

Slobodan Radosavljević, Predrag Dašić, Milan Radosavljević, Jovana Radosavljević

**Determination of Calculation for the Shape of Blades Trace in the Concrete Mixer Truck**  
Ivica Ristic, Jan Kral Jr., Jan Kral, Gabriel Fedorko, Vierslav Molnar

**The Assessment and Reduction of Carbon Oxides Emissions at Electric Arc Furnaces - Essential Factors for Sustainable Development**

Dana - Adriana Iluțiu - Varvara, Carmen Maria Mârza, Ioana - Monica Sas - Boca, Liviu Brândușan, Vasile Adrian Ceclan

**Human and Professional Sustainable Development by Using the EFI ROM Creative Method**

Avram Tripon

**A Study on Romania Sustainable Development (Virtual panel)**

Roxana-Mihaela Sirbu, Anca-Diana Popescu, Cristina Borca, Anca Draghici

**3D City Modelling with Oblique Photogrammetry Method**

Guler Yalcin, Osman Selcuk

**SIA'S Contribution to Interdisciplinary Projects in Engineering (Virtual panel)**

Andreea OGREZEANU

**A Look in Electric/Hybrid Cars from an Ecological Perspective (Virtual panel)**

Andrea Aurora Racz, Ionut Muntean, Sergiu-Dan Stan

**An Analysis of WEEE Remanufacturing (Virtual panel)**

Alexandra Antonia Busu, Ionut Muntean, Sergiu-Dan Stan

## **Waste Management and Development Strategies**

**Room A209**

**Thursday, October 9<sup>th</sup> 2014; 17:00 – 19:30**

### **Session chairs:**

Nicolae Chirilă – “Petru Maior” University of Țirgu - Mureș

Claudiu Aciu – Technical University of Cluj – Napoca

Florica Morar – “Petru Maior” University of Țirgu - Mureș

### **Copper Content in the Surface Waters of the County of Mures**

Florica Morar

### **Innovative Building Materials Using Agricultural Waste**

Dana Maria Andres, Daniela Lucia Manea

### **Defining the System and Plan Drafting Process for the Waste Management**

Veis Šerifi, Mirsad Tarić, Milutin Milosavljević

### **A Predictive Model of Innovation in Rural Entrepreneurship**

Elena Harpa, Sorina Moica, Dana Rus

### **Wastewater Treatment Plant, Using a New Type of Coagulant**

Emil Nuțiu

### **Requirements on Management Practices for the Development of Entrepreneurial Creativity in a Global Social-Ecological System - Case Study**

Avram Tripon

### **The Ecomat Program for the Selection of Ecological Materials in Order to Ensure a Healthy Built Environment**

Claudiu Aciu, Daniela Lucia Manea, Cosmin Strilețchi

### **Recycling of Polystyrene Waste in the Composition of Ecological Mortars**

Claudiu Aciu, Daniela Lucia Manea, Luminita Monica Molnar, Elena Jumate

### **Investigation of the Natural Puzzolans for Usage in Cement Industry**

Nicoleta Cobirzan, Anca-Andreea Balog, Emilia Mosonyi

### **Optimal Technologies for External Thermal Insulation with Polystyrene Panels for Different Support Materials**

Adrian Bojan, Claudiu Aciu

## **Control and Intelligent Systems**

Room A316

Thursday, October 9<sup>th</sup> 2014; 15:00 – 16:45, 17:00 – 19:30

### **Session chairs:**

Mircea Dulău – “Petru Maior” University of Tîrgu – Mureş

Iulia Clitan – Technical University of Cluj-Napoca

Adrian Gligor – “Petru Maior” University of Tîrgu-Mureş

### **ANFIS Based Solution to the Inverse Kinematics of a 3DOF Planar Manipulator**

Adrian-Vasile Duka

### **Conventional Control vs. Robust Control on Heat-Exchangers**

Mircea Dulau, Stelian Oltean, Adrian Gligor

### **Daylight Control System**

Horatiu Stefan Grif

### **The Control of an Industrial Manipulator’s Positioning System Using Dahlin Algorithm**

Iulia Clitan, Mihail Abrudean, Vlad Muresan

### **Fault Detection of the Electrical Motors Based on Vibration Analysis**

Katalin Agoston

### **EMI Reduction Techniques in Digitally Controllable Power Supplies**

Laszlo Turos, Géza Csernáth, Iuliu Szekely

### **Modeling the Workpiece Heating on a Plasma Nitriding Equipment Using Neural Networks**

Stelian-Emilian Oltean

### **Design and Simulation of Fuzzy Logic Based Temperature Control for a Plasma Nitriding Process**

Stelian-Emilian Oltean, Mircea Dulau

### **The Modeling and Simulation of Bipolar Hybrid Stepper Motor by Matlab/Simulink**

Morar Alexandru

### **Using Web Services in SCADA Applications**

Traian Turc

**Drive System Based on Five-Phase Stepping Motor under Microstepping/Nanostepping Mode**

Alexandru Morar

**Fuzzy Logic Control Strategy for Maximum Power Point Tracking for Horizontal Axis Wind Turbine (Virtual panel)**

Yassine Lakhal, Fatima Zahra Baghli, Larbi El Bakkali

**Multi-Input Multi-Output Fuzzy Logic Controller for Complex System: Application on Two-Links Manipulator (Virtual panel)**

Fatima Zahra Baghli, Larbi El Bakkali, Yassine Lakhal

**Intelligent Control of Photovoltaic Grid Connected Using Fuzzy Logic Based Incremental Conductance (Virtual panel)**

Mohamed Louzazni, Elhassan Aroudam

**Non Destructive Method for Ripening Prediction of Papaya (Virtual panel)**

Ajit Bhosale, K Sundaram



## **Power and Energy Systems**

**Room A412**

**Thursday, October 9<sup>th</sup> 2014; 15:00 – 16:45, 17:00 – 19:30**

### **Session chairs:**

Dorin Bică – “Petru Maior” University of Tîrgu-Mureş

Pavel Atănăsoae – “Stefan cel Mare” University of Suceava

Claudiu Damian – Electrica Distribuție Transilvania Sud, SDEE Mureş

### **Long Term Energy Strategies and Policy: Challenges**

Cristina Țărean

### **The Optimal Distribution of Reactive Power on Synchronous Generators in Power Plants**

Pavel Atanasoae, Radu Pentiu

### **Object-Oriented Modelling Applied to Electricity Critical Infrastructure**

Olga Bucovetchi, Cristina Petronela Simion, Stanciu D. Radu

### **Design of Robust Control for Single Machine Infinite Bus System**

Mircea Dulău, Dorin Bică

### **SCADA Simulation of a Distributed Generation System with Storage Technologies**

Lucian Ioan Dulău, Mihail Abrudean, Dorin Bică

### **Optimal Power Flow Analysis of a Distributed Generation System**

Lucian Ioan Dulău, Mihail Abrudean, Dorin Bică

### **The Direct Dependence of SCADA Systems**

Claudiu Damian, Radu Tîrnovan, Alexandru Hotea, Sorin Sava

### **The Monitoring and Control Processes of a Renewable Energy Management System**

Karoly Ronay, Cristian-Dragos Dumitru

### **Software solution design for photovoltaic solar applications**

Claudiu Pasc, Cristian-Dragoş Dumitru

### **Smart Energy--Intelligent solutions for your home (Virtual panel)**

Cristina Mihaela Marinescu

**Hydroponic greenhouse powered by renewable energy sources**

Karoly Ronay, Cristian-Dragoş Dumitru

**Innovative Solution of Vertical Axis Wind Turbine, Suitable for Naval Industry Implementation (Numerical Methods and Analytical Calculus)**

Raluca Dora Ionescu, Ioan Szava, Sorin Vlase, Mircea Ivanoiu, Renata Munteanu

**Innovative Solutions for Portable Wind Turbines, Used on Ships**

Raluca Dora Ionescu, Ioan Szava, Sorin Vlase, Mircea Ivanoiu, Renata Munteanu

**The Influence of the Flame Stabilization Air Intake Holes Diameter on the NO Production in an Industrial Gas Turbine**

Ionuț Vasile Crîșmaru, Daniel Dragomir-Stanciu

**Optimization of Heat Exchange in a Heat Accumulator with Latent Heat Storage**

Constantin Luca, Daniel Dragomir-Stanciu, Ionuț Vasile Crîșmaru

**Development of Intelligent Façade Based on Outdoor Environment and Indoor Thermal Comfort**

Mostafa M.S. Ahmed, Ali K. Abel-Rahman, Ahmed Hamza H. Ali

**A Mathematical Model of Chopped Miscanthus Briquetting Process**

Iulian Voicea, Gheorghe Voicu, Petru Cardei, Valentin Vladuț, Sorin Biriș

## **Information Systems Technology and Mathematics**

**Room A310**

**Thursday, October 9<sup>th</sup> 2014; 15:00 – 17:00**

### **Session chairs:**

Marius Muji – “Petru Maior” University of Tîrgu - Mureş

Ajay James – Calicut University, India

Szidonia Lefkovits – “Petru Maior” University of Tîrgu - Mureş

### **A Novel Approach for Document Image Binarization Using Bit-Plane Slicing**

Karthika M, Ajay James

### **Human Gesture Mouse**

Horaţiu-Ştefan Grif

### **Offline Recognition of Malayalam Handwritten Text (Virtual panel)**

Shanjana C, Ajay James

### **Distance Based k-NN Classification of Gabor Jet Local Descriptors**

Szidonia Lefkovits, Laszlo Lefkovits

### **Remarkable Properties of Positive Measures on Borel Sets**

Diana Marginean Petrovai

### **The Lebesgue Measure on $R_n$**

Diana Marginean Petrovai

### **Schur Type Inequalities for Five Variables**

Béla Finta

### **Homomorphic embeddings in n-groups**

Mona Cristescu

### **Logical Operators for the Data-Oriented Design of the User Interfaces**

Marius Muji

### **Metadata Repositories in Database-Driven Information Systems**

Marius Muji

**Information Systems Technology**  
**Room Aula Magna**  
**Friday, October 10<sup>th</sup> 2014; 11:00 – 13:00**

**Session chairs:**

Bogdan Crainicu – “Petru Maior” University of Tîrgu - Mureş  
Margit Antal – Sapientia University, Tîrgu – Mureş

**Keystroke Dynamics on Android Platform**

Margit Antal, László Zsolt Szabó, Izabella László

**Semantic Data Extraction**

Katalin Tünde Jánosi-Rancz, Árpád Lajos

**Denial of Service Attack Detection in Case of Tennessee Eastman Challenge Process**

István Kiss, Piroska Haller, Adela Beres

**Performance Analysis of Wireless Sensor Networks**

Hunor Sándor, Piroska Haller, Zoltán Gál

**On Invariance Weakness in the KSA<sub>m</sub> Algorithm**

Bogdan Crainicu

**A Brief Survey on Smart Grid Data Analysis in the Cloud**

Adela Beres, Bela Genge, Istvan Kiss

**Software Component Clustering and Classification Using Novel Similarity Measure**

Srinivas Chintakindi, Radhakrishna Vangipuram, C.V. Guru Rao

**Multi-Levels AH-MPPM Coding for Indoor Optical Wireless Communications Systems**

Mehdi Rouissat, Riad Borsali

**A Novel Gaussian Based Similarity Measure for Clustering Customer Transactions Using Transaction Sequence Vector**

M.S.B. Phridviraj, C. Srinivas, V.R. Krishna, C.V. Guru Rao

**Quality Assessment Parameters for Iterative Image Fusion Using Fuzzy and Neuro Fuzzy Logic and Applications (Virtual panel)**

Srinivasa Rao Dammavalam, Seetha M, Krishna Prasad Mhm

## **Biomedical Technology and Biotechnology**

Room A307

Thursday, October 9<sup>th</sup> 2014; 15:00 – 16:45, 17:00 – 19:30

### **Session chairs:**

Mircea Suciú – University of Medicine and Pharmacy, Tîrgu - Mureş

Sorina Moica – “Petru Maior” University of Tîrgu - Mureş

Monica Dora Baloş – University of Medicine and Pharmacy, Tîrgu - Mureş

### **Biomechanical Reactions Due to Orthodontic Forces. A Finite Element Study**

Cristina Bică, Ligia Brezeanu, Dorin Bică, Mircea Suciú

### **Displacement-Stress Distribution in a Femoral Bone by Optical Methods**

Ioana Alexandra Takács, Adrian Ioan Botean, Mihail Hărdău

### **Corrosion Rate of Sand Blasted and Acid Etched Ti6Al4V for Dental Implants**

Gabriela Strnad, Nicolae Chirilă

### **A Study on the Mandibular Arc of Closure Reproducibility Using the T-Scan III Computerized Occlusal Analysis System**

Monica Dora Baloş, Claudia Şoaita, Diana Cerghizan, Sorin Popşor

### **Modeling Human Femoral Neck Using a 2D Structure**

Adrian-Ioan Botean

### **The Analysis of Biomechanics and Ocular Motilities through Dynamic Image Processing Methods**

Dan Gabor, Mihaela Baritz, Luciana Cristea, Angela Repanovici

### **Determining the Correlation between the Mathematical Model of Bone Resorption and the Model Obtained in Vivo in Patients with Lateral Mandibular Bone Augmentation. Concept and Literature Review.**

Mircea Suciú, Răzvan Cazacu, Radu Ionuţ Grigoraş, Cristina Ioana Bică

### **Prevalence of Inherited Ichthyosis in Romania**

Dalila Maier, Rodica Cosgarea, Sorina Moica

### **Dental Implants Analysis by Means of Video Image Correlation Method (Virtual panel)**

Daniel-Tamás Száva, Bálint Bögözi, Botond-Pál Gálfi, Ioan Száva, Raluca Dora Ionescu, Renata Ildikó Munteanu

**Bacillus Sp.R2 Chitinase: Affinity Purification and Immobilization (Virtual panel)**

Ben Amar Cheba, Taha Ibrahim Zaghoul, Ahmad Rafik El-Mahdy, Mohammad Hisham El-Massry

**Influence of Chitinous Waste on Soil Bacterial Community: Biofertilizer Effect and Antifungal Activity (Virtual panel)**

Djamel Eddine Aizi, Ben Amar Cheba

**Bacillus Sp. R2 and Bacillus Cereus Immobilized Amylases for Glucose Syrup Production (Virtual panel)**

Slimane Choubane, Omar Khelil, Ben Amar Cheba

**Co-Production of Cellulases and Manganese Peroxidases by Bacillus Sp. R2 and Bacillus Cereus 11778 on Waste Newspaper: Application in Dyes Decolourization (Virtual panel)**

Omar Khelil, Slimane Choubane, Ben Amar Cheba

## **Quality Control Technology**

Room A309

Thursday, October 9<sup>th</sup> 2014; 17:00 – 19:30

### **Session chairs:**

Liviu Moldovan – “Petru Maior” University of Tîrgu - Mureş

Valentin Ciotea – Dimitrie Cantemir University of Tîrgu - Mureş

Mihaela Bucur – “Petru Maior” University of Tîrgu - Mureş

### **Innovative Training Solutions for Quality Managers**

Liviu Moldovan

### **Practical Method for Risk Determination in Management of Organization**

Ciotea Valentin, Moldovan Ioan, Ciotea Margareta

### **A Study on Business Communication on Corporate Social Responsibility in Romania**

Mihaela Bucur

### **Improving Product Quality by Implementing ISO/TS 16949**

Liviu Dorin Pop, Elod Nagy

### **Bridging the Gap between Technology and Languages**

Virginia-Maria Bordas

### **The Implementation of Total Quality Management in Order to Improve Production Performance and Enhancing the Level of Customer Satisfaction**

Snežana Topalović

### **Improving a Measuring System According to ISO/TS 16949**

Liviu Dorin Pop, Liviu Marian, Elod Nagy

### **Computer Solutions of Management for the Development Process of New Products**

Cătălin - George Alexe, Cătălina - Monica Alexe

### **Research Regarding the Connections between Risks and Processes within Small and Medium Enterprises**

Andreea Dumitrescu, Anca Alexandra Purcarea, Olivia Doina Negoita, Octavian Negoita

### **Software Solutions for the Analysis of the Innovation Capability of the Company**

Cătălin - George Alexe, Cătălina - Monica Alexe

**Theoretical and Practical Considerations Regarding the Risk Factors in Organizational Communication**

Simion Cecan, Liviu Marian

**Applying Social Network Analysis on Rural Manufacturing of the Savannah of Bogota (Virtual panel)**

Sandra Molano, Andrés Polo, César López

**A Review Paper on E-Service: Technology Concept (Virtual panel)**

Hamed Taherdoost, Shamsul Sahibuddin, Neda Jalaliyoon



**Educational Evaluation Technology**  
**Room A309**  
**Friday, October 10<sup>th</sup> 2014; 11:00 – 13:00**

**Session chairs:**

Nicolae Chirilă – “Petru Maior” University of Tîrgu - Mureş  
Dana Rus – “Petru Maior” University of Tîrgu – Mureş  
Arina Modrea – “Petru Maior” University of Tîrgu – Mureş

**New Evaluation Model by Means of Mobile Technology**

Liviu Moldovan

**The Study of Stimulated Visual Behavior Related to Non-Verbal Communication**

Dan Gabor, Mihaela Baritz, Angela Repanovici

**A Methodological Approach to Language Functions in Teaching Technical English**

Dana Rus

**Developing Technical Writing Skills to Engineering Students**

Dana Rus

**Education Evaluation – a Proposed Approach for the Technical Schools in Romania**

Viorica Baesu, Liviu Marian, Zoltan-Bela Farkas

**Expert Systems with Applications in the Legal Domain**

Ana-Maria Cornelia, Cristinel Ioan Murzea, Bogdan Alexandrescu, Angela Repanovici

**Theory-Practice, a Nonfunctional Tandem in Romanian Technical Higher Education**

Felicia Veronica Banciu, Eugen Pamintas

**Technical Evaluation of Remote Laboratories in an Engineering Educational Network**

Zoltan German-Sallo, Adrian Gligor, Horatiu-Stefan Grif

**Aspects Concerning the Use of the Moodle Platform - Case Study (Virtual panel)**

Luminita-Maria Gogan, Roxana Sirbu, Anca Draghici

**Media Convergence and Diversification - the Meeting of Old and New Media (Virtual panel)**

Jasmina Arsenijević, Milica Andevski

**Cultural Diversity Evaluation in Educational Learning Groups (Virtual panel)**

Anca-Diana Popescu, Sorin Suciu, Cristina Borca, Adela Nodea, Lauren Ayotte

**Evaluation System Juridical Staff Working in Companies with Technical Activity**

Adrian Mocanu, Angela Repanovici, Mihai Barsan

**The Actual Study of the Negotiating Meaning in Technical Discourse**

Arina Modrea