



GEORGE EMIL PALADE  
UNIVERSITY OF MEDICINE,  
PHARMACY, SCIENCE, AND  
TECHNOLOGY OF TARGU MURES

Faculty of Engineering and  
Information Technology

The 13<sup>th</sup> International Conference

**INTER-ENG 2019**

**Interdisciplinarity in Engineering**



**2019**

**CONFERENCE PROGRAM**

“George Emil Palade” University of Medicine, Pharmacy, Science  
and Technology of Târgu Mureş  
Faculty of Engineering and Information Technology

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3 - 4 October 2019  
Târgu Mureş, Romania

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### Mircea DULĂU

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### Adrian GLIGOR

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Cristina VEREȘ  
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## Conference Secretariat

Nicoleta SABĂU  
Arina MODREA

## Contact Information

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## **Opening Ceremony**

**Thursday, October 3<sup>th</sup>; 10:00 – 10:30**

Aula Magna – A200, Faculty of Engineering and Information Technology

## **Welcome Addresses:**

Prof. dr. Călin ENĂCHESCU – Vice Rector

Prof. dr. eng. Liviu MOLDOVAN – Vice Rector

Assoc. Prof. dr. eng. Mircea DULĂU

- Dean of the Faculty of Engineering and Information Technology

## **Special Invited talks:**

### **Electrification the Way of Bosch**

Arnold Dirk – Technical Plant manager, Bosch Plant Blaj, România

### **Digital Agriculture**

Mihai Anitei, General Manager, Azomureş S.A., Târgu Mureş, România

## **Plenary Session**

**Thursday, October 3<sup>th</sup>; 10:30 – 12:00**

Aula Magna – A200, Faculty of Engineering and Information Technology

### **Fusion 360 - Learning in Clouds**

Dr. Anna Grabowska– Gdańsk University of Technology, Authorized Academic Partner, Gdańsk, Poland

### **Statistically 3D Shaped Models for Medical Analysis**

Prof. Khalil Khalili – Department of Health Sciences and Technology, ETH Zurich, Switzerland

### **Customised Manufacturing and Pricing: Seeking for Participation based Intelligent Systems for Industry 4.0**

Birutė Mikulskienė, PhD – Institute of Leadership and Strategic Planning of the Faculty of Public Governance in Mykolas Romeris University, Vilnius, Lithuania

### **Smart Mantles for Advanced Electromagnetic Cloaking Applications**

Assoc. Prof. Ladislav Matekovits, PhD. – Department of Electronics and Telecommunications, Politecnico di Torino, Italy

### **Coffee Break**

**Thursday, October 3<sup>th</sup>; 12:00 – 12:10**

### **Plenary Session**

**Thursday, October 3<sup>th</sup>; 12:10 – 13:00**

Location: Aula Magna – A200, Faculty of Engineering and Information Technology

### **Laser Technology in Plastic Recycling**

Prof. dr. eng. Alexandru Sover – Faculty of Engineering, Ansbach University of Applied Sciences, Germany

### **Connectivity Between University Green Environment and Industry 4.0**

Prof. dr. eng. Abdelazim M. Negm – Professor and Executive Manager of Zagazig University Crisis and Disaster Center, Egypt

### **Management Approaches for Industry 4.0: The Organizational Culture Perspective**

Prof. Ahmed Hussein Ibrahim, PhD. – Zagazig University, Egypt

### **Conference Break - Lunch**

**Thursday, October 3<sup>th</sup>; 13:30 - 14:30**

### **Parallel Sessions**

**Thursday, October 3<sup>th</sup>; 15:00 – 19:00**

Location: Conference Rooms - Faculty of Engineering and Information Technology

### **Gala dinner**

**Thursday, October 3<sup>th</sup>; 19:00**

### **Virtual Panel Sessions**

**Friday, October 4<sup>th</sup>; 9:00 – 13:00**

Location: Conference Rooms - Faculty of Engineering and Information Technology

### **Closing Ceremony, Lunch, Social and Cultural Event**

**Friday, October 4<sup>th</sup>; 13:00**

Location: Aula Magna– A200, Faculty of Engineering and Information Technology

## **iNduce 4.0 - Final valorisation conference in Romania Work-based training approach in the field of Industry 4.0 for competitive European Industry**

**Room: Aula Magna – A200, Faculty of Engineering and Information Technology  
Thursday, October 3<sup>th</sup> 2019; 15:00 – 16:30**

### **Session chairs:**

Samir Cheriaa – European Association of Institutes for Vocational Training, Germany  
Liviu Moldovan – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România

### **Workbased Learning: The iNduce Approach.**

Samir Cheriaa - European Association of Institutes for Vocational Training, Germany

### **Knowledge and Skills Gaps in Industry 4.0.**

Admira Boshnyaku – European Center for Quality, Bulgaria

### **Smart Robotics in Industry 4.0.**

Jacek Zieliński - Industrial Research Institute for Automation and Measurements, Poland

### **The Induce 4.0 Online Tool.**

Yiannos Gregoriou - PCX Computers & Information Systems, Cyprus

### **Vertical and Horizontal Networking of Smart Production Systems in Industry 4.0.**

Paulo Morais - Institute for Technology and Quality, Portugal

### **3D Printing a Basic Tool in Industry 4.0.**

Liviu Moldovan – „George Emil Palade” University of Medicine, Pharmacy, sciences and Technology of Târgu Mureș, România

### **Industry 4.0 State of the Art in România.**

Anca Giurgiu - Chamber of Commerce and Industry Mureș, România

**Advanced Manufacturing Technologies and Materials**  
**Room: A307 – Faculty of Engineering and Information Technology**  
**Thursday, October 3<sup>th</sup> 2019; 15:00 – 16:45, 17:00 – 19:00**

**Session chairs:**

- Gabriela Strnad – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureş, România  
Khalil Khalili – ETH Zurich, Switzerland  
Ildiko Peter – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureş, România  
Daniel Lateş – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureş, România

**Invited keynote: The Role of Additive Manufacturing in Smart Factories**

Prof. Dr. Mo Elbestawi – McMaster W Booth School of Engineering Practice and Technology (SEPT), Canada

**Corrosion Resistance of Electrodeposited Coatings, Using a Zn-Ni Based Electrolyte, Improved with Tri-, Tetra- and Pentavalent Elements**

Mihail Chira, Andreea Hegyi, Adrian Victor Lazarescu, Henriette Szilagyi, Horatiu Vermesan

**A Technical Version of Achieving a Brass Surface on Steel Wires**

Marius Tintelecan, Dana-Adriana Iluţiu-Varvara, Oscar Rodriguez Alabanda, Ioana Monica Sas-Boca

**Mechanical Properties of Lime Based Composites**

Tünde-Orsolya Dénes, Daniela-Roxana Tămaş-Gavrea

**Synthesis of Ti-Ni-O Modified Surfaces on Shape Memory Alloys for Biomedical Applications**

Gabriela Strnad, Leonard Ciurezu, Andrei Constantin Berbecaru, Oana Gingu

**Composition for Anticorrosive Cooling and Protection Emulsion**

Emil Nutiu, Sorin Albu

**Technological Support of Abrasive Manufacturing of Products on a Flexible Basis by Evaluating Performance Indicators**

Nelli Syreyshchikova, Danil Pimenov, Tadeusz Mikołajczyk, Liviu Moldovan

**An Innovative Method for Reducing Process Costs in Electrostatic Field Powder Coating**

József Boér, Petruta Blaga

**Rubber as a Vital Component of Railway Tracks**

Szabolcs Attila Kollo, Attila Puskas, Gavril Kollo

**Experimental Analysis of The Vertical Vibration of the Railway Bogie During Braking**

Madalina Dumitriu, Marius Alin Gheti, Ioan Cristian Cruceanu

**Development of the Technological Indicator of the Grain Bonding Strength for Coated Abrasives**

Nelli Vladimirovna Syreyshchikova, Victor Ivanovich Guzeev, Dmitrii Valerievich Ardashev

**Concept of Designing High-Speed Processing Operations Based on Complex Process Simulation**

Leonid Victorovich Shipulin, Dmitrii Valerievich Ardashev

**Behaviour of Laminated Wooden Beam with Variable Section Subjected to Bending**

Violeta Mihaela Munteanu, Mariana Domnica Stanciu, Arina Modrea

**Stresses in a Water Supply Network'S Elbow in Case of Burial in Ground and Anchorage in Concrete**

Dumitru Daniel Scărlătescu, Călin Itu, Arina Modrea, Hektor Hebert

**Liaison Forces Eliminating and Assembling of the Motion Equation in the Study of Multibody System with Elastic Elements**

Maria Luminita Scutaru, Eliza Chircan, Marin Marin, Horațiu-Ștefan Grif

**Determination of the Dynamic Young'S Modulus and Poisson'S Ratio Based on Higher Frequencies of Beam Transverse Vibration**

Victor Alexeevich Chirikov, Diyan Minkov Dimitrov, Yordan Simeonov Boyadjiev

**Low Velocity Impact Response of Laminate Rectangular Plates Made of Carbon Fiber Reinforced Plastics**

Marius Nicolae Baba, Florin Dogaru, Maria Violeta Guiman



## **Innovative Technologies, Design and Materials in Civil Engineering**

**Room: A308 – Faculty of Engineering and Information Technology**

**Thursday, October 3<sup>th</sup> 2019; 15:00 – 16:45, 17:00 – 18:45**

### **Session chairs:**

Răzvan Cazacu – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România

Abdelazim M. Negm – Zagazig University Crisis and Disaster Center, Egypt

Mihai Simon – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România

### **Cost Efficiency of a Two Layer Reinforced Concrete Beam**

Cristian Butean, Bogdan Heghes

### **Flexure Behavior of a Two Layer Reinforced Concrete Beam**

Cristian Butean, Bogdan Heghes

### **The Influence of Infill Walls Made of Different Types of Clay Units on Structural Behavior of Framed Buildings Placed in Different Seismic Areas**

Dinet Andrei, Nicoleta Cobirzan, Marcel Maghiar

### **Durability of Fly Ash Eco-Friendly Concrete in Severe Environment**

Raphaele Malheiro, Aires Camões, Gibson Meira, João Pinto

### **Assessment of Recycling Potential of the Steel Mill Scale in the Composition of Mortars for Sustainable Manufacturing**

Dana - Adriana Iluțiu - Varvara, Claudiu Aciu, Marius Tintelean, Ioana - Monica Sas – Boca

### **Lightweight Concrete with Waste - Review**

Gabriel Bejan, Marinela Barbuta, Robert Stefan Vizitiu, Andrei Burlacu

### **Microscopic and Macroscopic Characterization of Recycled Clay Bricks to Assess the Possibility to Re-Use in Buildings**

Nicoleta Cobirzan, Anca Andreea Balog, Gyorgy Thalmaier, Constantin Munteanu, Florin Babota

### **Opportunities Regarding Use of the Adobe-Bricks Within Contemporary Architecture**

Gabriela Calatan, Andreea Hegyi, Carmen Dico, Henriette Szilagyi

**Study of Self-Healing Engineered Cementitious Composites for Durable and Sustainable Infrastructure**

Anamaria Catalina Mircea, Henriette Szilagyi, Andreea Hegyi, Cornelia Baera

**Influence of Natural Organic Polymers Upon Plaster Mortar Workability**

Alexandra Olga Pinte, Daniela Lucia Manea

**Influence of Natural Organic Polymers Upon the Mechanical Properties of Plaster Mortars**

Alexandra Olga Pinte, Daniela Lucia Manea

**Determination of the Harmonic Response of a Railway Wheelset Using the Finite Element Analysis Method**

Ioan Cristian Cruceanu, Ștefan Sorohan

**The Effect of the Use of Fungi in the Biorepair of Concrete**

Carolina Martuscelli, Aires Camões, Nelson Lima

**Mix Design Approach of Supplementary Cementitious Materials Portland Cement- Based Mortars for Anchoring Post-Installed Reinforcement Bars into Hardened Concrete**

Bogdan Rosca, Vladimir Corobceanu

**Influence of Blast Furnace Slag on the Durability Characteristic of Road Concrete Such As Freeze-Thaw Resistance**

Liliana Maria Nicula, Ofelia Corbu, Iliescu Mihai

**Motion Equation of a Rectangular Finite Element with a Two-Dimension Motion in a Membrane State**

Eliza Chircan, Maria Luminita Scutaru, Ana Toderita, Arina Modrea

**Using the Symmetries in the Civil Engineering. An Overview**

Arina Modrea, Violeta-Mihaela Munteanu, Iulian Pruncu

**Improving Safety and Traffic Conditions on National Roads Passing Through Towns Without Bypass**

Mircea Rosca, Cristina Oprea, Rely Petrescu, Stefan Burciu, Armand Stere

**Solutions for Improving Transit Through Intermodal Passenger Terminals**

Mircea Rosca, Cristina Oprea, Anamaria Ilie, Sergiu Olteanu, Oana Dinu

**Management and Education for Sustainable Manufacturing**  
**Room: A309 – Faculty of Engineering and Information Technology**  
**Thursday, October 3<sup>th</sup> 2019; 15:00 – 16:45, 17:00 – 18:45**

**Session chairs:**

Liviu Moldovan – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureş, România  
Birutė Mikulskienė – Mykolas Romeris University, Vilnius, Lithuania  
Ahmed H. Ibrahim – Zagazig University, Egypt  
Mihaela Bucur – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureş, România

**Conceptual Model for Introducing Lean Management Instruments**

Cristina Veres

**Digitalization of the System of Data Analysis and Collection in An Automotive Company**

Liviu Dorin Pop

**Case Study Regarding the Implementation of One-Piece Flow Line in Automotive Company**

Dumitrita Ioana Apafaian, Diana Maria Egri, Cristina Veres

**Diagnosis on Improving the Quality of the Wiring Product Using the Technical Level Method**

Cristina Havadtöi, Liviu Moldovan

**Development of a Risk Management Technique in Strategic Planning of Universities. Case Study of a Polytechnical Institute**

Nelli Syreyshchikova, Danil Pimenov, Tadeusz Mikolajczyk, Liviu Moldovan

**A Tool for Continuous Evaluation of Competences and Approaches to Employment Support**

Liviu Moldovan

**A Reference Framework for Continuous Improvement of Employability Assessment**

Liviu Moldovan

**The Sustainability and Durability of the Building Seen Through Relationship Education-Business**

Mihaela Dumitran, Ovidiu Gavris, Raluca Istoan, Nicoleta Roman, Ioan Aschilean

**The Importance of Human Resources in the Continuous Improvement of the Production Quality**

Petruta Blaga

**Occupational Health and Safety Education: the Prevention and Protection Plan in University Chemical Laboratories**

Corina Monica Dufour, Ana-Maria Pană, Gabriela-Alina Dumitrel

**Eco-Innovation and the Contribution of Companies to the Sustainable Development**

Lucretia Dogaru

**Continuous Vocational Training for Sustainable Work Practices in Forestry**

Maria-Ana Georgescu, Crina Gliga

**Designing Functional ESP Courses**

Nicoleta Aurelia Marcu

**Labour Productivity and Wages in the Romanian Manufacturing Sector**

Emilia Herman

**Aspects of the Population Awareness Strategy for Improving the Quality of the Environment. Case Study in the Rural Area.**

Andreea-Daniela Bucur, Bogdan Bucur

**The Importance of the Concept of Communication Among Future Engineers - a Comparative Study**

Andreea Ban, Mihaela Bucur

**Creative Methodologies in Teaching English for Engineering Students**

Dana Rus

**The Influence of ICT Sector on Romanian Labour Market in the European Context**

Emilia Herman

**Lean Six Sigma in the Energy Services Sector: a Case Study**

Mihnea Dorin, Sorina Moica, Cristina Veres

## **Power Systems, Energy Efficiency and Renewable Technologies**

**Room: A211 – Faculty of Engineering and Information Technology**

**Thursday, October 3<sup>th</sup> 2019; 16:45, 17:00 – 18:45**

### **Session chairs:**

Daniel Dragomir-Stanciu – "George Emil Palade" University of Medicine, Pharmacy,  
Science and Technology of Târgu Mureș, România

Pavel Atănăsoae – "Ștefan cel Mare" University of Suceava, România

Catalin Daniel Galatanu – "Gheorghe Asachi" Technical University, Iași, România

Cristian-Dragoș Dumitru – "George Emil Palade" University of Medicine, Pharmacy,  
Science and Technology of Târgu Mureș, România

### **The Influence of Condensing Temperature on the Efficiency of Solar Power Systems with ORC**

Daniel Dragomir-Stanciu, Seyed .Mahdi Sagheblian, Anil Kurchania

### **The Development of a New Interface for Intelligent Control of Energy Supply in Dynamic Environment with Process Digitization**

Adela-Ioana Borzan, Bogdan Jurchiș, Doru-Laurean Băldean

### **The Efficient Use of Natural Gas in Cogeneration Applications for Small Consumers**

Pavel Atănăsoae

### **Effects of Electric Vehicles on Power Networks**

Lucian Ioan Dulău, Dorin Bică

### **On / Off Optimization of Public Lighting Systems Depending on the Road Class**

Catalin Daniel Galatanu

### **Power Demand Forecast for Optimization of the Distribution Costs**

Adrian Gligor, Ilie Vlăsa, Cristian-Dragoș Dumitru

### **Practical Aspects Regarding Obtaining a Green Energy Source Using the Pyrolysis Method of Biodegradable Waste**

Andreea-Daniela Bucur, Bogdan Bucur

### **Studying and Measuring System for Motor Base Unbalance**

Katalin Agoston

**The Main Goals of Fourth Industrial Revolution. Renewable Energy Perspectives**

Lucretia Dogaru

**Mechanical, Thermal, and Acoustical Properties of An Innovative Lime-Wool Composite**

Daniela-Roxana Tămaș-Gavrea, Tünde-Orsolya Dénes

**Sheep Wool Thermal Insulating Mattresses Behavior in the Water Vapors Presence**

Andreea Hegyi, Carmen Dico, Henriette Szilagyí

**Embedded Sensors Positioning in Thermal Insulation for Buildings**

Catalin Daniel Galatanu, Cristian Gyozo Haba, Liviu Breniuc

**An Interesting Approach for Icing Prevention of Walkways for Romania'S Climatic Conditions**

Robert Ștefan Vizitiu, Andrei Burlacu, Neculai Eugen Seghedin

**Numerical Simulation of the Squatting of Floating Bodies Moving in Shallow Water**

Adrian Lungu

**Reliability Study on Pur Injection Machine**

Ana Toderita

**Locomotive Diesel Engine Operation with Optimal Specific Fuel Consumption**

Gabriel Popa, Marius Alin Gheti

**Nonlinear Phenomena Specific to Cyclic Dispersion of Laser Ignition Engines**

Bogdan George Done, Ion Copae

**New Research and Design to Obtain a Compressed Air Driven Prototype Vehicle**

Mihai Simon, Maria Ioana Simon

## **Automation, Robotics, Biomedical Technologies and Intelligent Systems**

**Room: A316 – Faculty of Engineering and Information Technology**

**Thursday, October 3<sup>th</sup> 2019; 15:00 – 16:45, 17:00 – 18:45**

### **Session chairs:**

Mircea Dulău – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România

Ladislau Matekovits – Politecnico di Torino, Italy

Ionel Staretu – Transilvania University of Brașov România

Stelian-Emilian Oltean – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România

### **Invited keynote: Autonomous Robotic Self-Driving Cars 2019**

Prof. Dr. Gyula Mester – Óbuda University, Doctoral School of Safety and Security Sciences, Budapest, Hungary

### **Simulation of the Hydraulic Turbine Control as a System Affected by Parameter Uncertainties**

Mircea Dulau, Stelian Oltean

### **Analysis of Behavior and Movement of the Upper Limb in the Weights Handling Activities**

Mihaela Ioana Baritz

### **Video System Correlated with Force Plate Recordings for Vertical Jump Biomechanics Analysis**

Mihaela Ioana Baritz

### **Collaborative Robotics Research: Subiko Project.**

Daniel Tokody, Laszlo Ady, Luca Hudasi F., Péter János Varga, Péter Hell,

### **A Numerical Study of the Roll Damping for Double-Symmetric Bodies**

Adrian Lungu

### **Torque Control During Bone Insertion of Cortical Screws**

Flaviu Moldovan, Tiberiu Bataga

### **Grasp and Micromanipulation with Human Hand – a New Experimentation and Systematization**

Ionel Staretu

**Prediction of the Gait Recovery of Patients in the Post Surgery Period Using Non-Invasive Method**

Violeta Mihaela Munteanu, Mariana Domnica Stanciu, Sorin Vlase

**Multidisciplinary Investigations on the Use of TiNb Alloy Orthopedic Device Equipped with Low Profile Antenna as Smart Sensor**

Ildiko Peter, Ladislau Matekovits

**Unconventional Drive System of a 3D Printed Wheeled Mobile Robot**

Dariusz Mrozik, Tadeusz Mikolajczyk, Liviu Moldovan, Danil Pimenov

**A New Compliant Microgripper and Study for Flexure Hinges Shapes**

Simona Noveanu, Daniel Lates, Lacramioara Fusaru, Calin Rusu

**Automation of Production Activities of an Industrial Enterprise Based on the ERP System**

Nelli Syreyshchikova, Danil Pimenov, Tadeusz Mikolajczyk, Liviu Moldovan

**An Algorithm to Calculate the Inverse Matrix of a Symmetric and Positive Definite Infinite Matrix**

Bela Finta

**Algebraic Time-Rate Condition for Logistic Growth Models**

Marcel Bogdan

**Probabilistic Methods to Assess the Fire Risk of An Industrial Building**

Ruxandra Dârmon

**Fault Detection Based on Entropy Indices**

Zoltan German-Sallo

**Measuring the Complexity of Discrete Time Signals**

Zoltan German-Sallo

**Randadminsuite: a New Privacy-Enhancing Solution for Private Blockchains**

Adam Gergely, Bogdan Crainicu

**An Important Lebesgue Nonmeasurable Function**

Diana Marginean Petrovai

**Formal Model Based Automated Decision Making**

Calin Avram, Adrian Gligor, Eleonora Laura Avram



## **Different Types of Exoskeletons for Improving the Life of Patients with Spinal Cord Injury– a Meta-Analysis**

Chiş Liviu Cristian, Copotoiu Monica, Ursaciuc Viorica, Liviu Moldovan

**Virtual Panel Session - Sustainable Development Technologies**  
**Room L14 – Faculty of Engineering and Information Technology**  
**Friday, October 4<sup>th</sup> 2019; 9:00 – 13:00 (*10 min/talk*)**

**Session chairs:**

- Gabriela Strnad – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România  
Răzvan Cazacu – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România  
Mihai Șimon – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România

**Overview of Information Security Standards in the Field of Special Protected Industry 4.0 Areas & Industrial Security**

Miklos Kiss, Gabor Breda

**From Industry 4.0 to Robotics 4.0 - a Conceptual Framework for Collaborative and Intelligent Robotic Systems**

Zhen Gao, Tom Wanyama, Ishwar Singh, Anoop Gadhri, Reiner Schmidt

**CFD Sloshing Analysis of a Heterogeneous Viscous Liquid in Immovable Tank Under Pitching Excitation**

Jalal El Bahaoui, Larbi El Bakkali, Hilal Essaouini

**Defect Indicators in a Rail Based on Ultrasound Generated by Laser Radiation**

Sara Teidj

**Using a Support Vector Machine for Building a Quality Prediction Model for Center-Less Honing Process**

Abha Gejji, Shruti Shukla, Siddhi Pimparkar, Tamanna Pattharwala, Anand Bewoor

**Use of Taguchi DOE for CFD Simulation to Maximize the Reusability of Working Fluids of Centrifugal Filter**

Pooja Tambolkar, Aishwarya Ponshe, Vrushali Mulay, Anand Bewoor

**Optimization of Conditions Study of Environmental Silicate Phases for a Direct Observation in VP-SEM**

Mohamed El Azzouzi, Abdelfattah Achahbar, Lahcen Khouchaf

**Computational Thinking in Secondary and Higher Education**

Katalin Harangus, Zoltán Kátai

**Evaluation of the Effect of Contact and Friction on Deep Drawing Formability Analysis for Lightweight Aluminum Lithium Alloy Using Cylindrical Cup**

Kenza Bouchaâla, Mohamad Fathi Ghanameh, Mustapha Faqir, Mohamad Mada, Elhachmi Essadiqi

**Influence of Temperature and Strain Rate on Microstructure and Fracture Mechanism of Mild Steel**

Ioana Monica Sas-Boca, Dan Frunza, Florin Popa, Dana Adriana Ilutiu-Varvara, Marius Constantin Tintelecan

**Enterprise Architecture Framework Design in It Management**

Dan Dumitriu, Mirona Ana-Maria Popescu

**Artificial Intelligence Solutions for Digital Marketing**

Dan Dumitriu, Mirona Ana-Maria Popescu

**Considerations on Traffic Efficiency in Large Urban Areas**

Maria Claudia Surugiu, Razvan Andrei Gheorghiu, Valentin Iordache

**Phytosynthesis, Kinetics and Antioxidant Activity of Waltham Butternut Squash Aqueous Extracts and Metallic Nanoparticles Thereof**

Ana-Alexandra Sorescu, Alexandrina Nuta, Rodica-Mariana Ion, George Ionut Radu, Cristina Lavinia Nistor

**Chitosan: Properties, Modifications and Food Nano-Biotechnology**

Ben Amar Cheba

**Bacillus Sp. R2 Chitinase: Substrates Specificity, Shelf-Life Stability, and Antifungal Activity**

Ben Amar Cheba, Taha Zaghloul

**Development of Technological Processes of Cold Bending with Pipe Rolling From Corrosion-Resistant Steels**

Evgeny Khaliulin, Alexander Kozlov

**An Empirical Examination of Manufacturing Improvement Practices on Performance of Indian Manufacturing Firms**

Saumyaranjan Sahoo, Sudhir Yadav

**Eco-Mechanical Index of Lightweight Concrete Mixtures with Recycled Materials**

Ligia Hanuseac, Laura Dumitrescu, Marinela Bărbuță, Irina Baran, Gabriel Bejan

**Virtual Panel Session – Intelligent Systems and Technologies**  
**Room L12 – Faculty of Engineering and Information Technology**  
**Friday, October 4<sup>th</sup> 2019; 9:00 – 13:00 (*10 min/talk*)**

**Session chairs:**

- Dulău Mircea – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România  
Adrian Gligor – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România  
Adrian Duka – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România  
Stelian-Emilian Oltean – "George Emil Palade" University of Medicine, Pharmacy, Science and Technology of Târgu Mureș, România

**Digital Signal Processing Flexed-Point Representation**

Bogdan-Stefan Gheorghe, Cătălin-Bogdan Vișan

**Selection Features and Support Vector Machine for Credit Card Risk Identification**

Naoufal Rtayli, Nourddine Enneya

**A Review of the Evolution of Deep Learning Architectures and Comparison of Their Performances for Histopathologic Cancer Detection with Large-Scale Dataset**

Jingpeng Zhai, Weiran Shen, Ishwar Singh, Tom Wanyama, Zhen Gao

**Thermal Performance and Characterization of a Clay-Sawdust Composite Material**

Mouatassim Charai, Sghiouri Haitham, Ahmed Mezrhah, Mustapha Karkri, Kamal Elhammouti, Hicham Nasri

**Comparative Study of Five Different Methods of Adjustment by the Weibull Model to Determine the Most Accurate Method of Analyzing Annual Variations of Wind Energy in Tetouan - Morocco.**

Mohamed Hatim Ouahabi, Farid Benabdelouahab, Abdellatif Khamlichi

**Design and Optimization of Wind Turbine with Axial Induction Factor and Tip Loss Corrections.**

Imane Echjjem, Abdelouahed Djebli

**Control of an Off-Grid PV System Based on the Backstepping MPPT Controller**

Hanane Yatimi, Youness Ouberrri, Sara Chahid, Elhassan Aroudam

**Comparison of Power Production for Different Photovoltaic Technologies in Delta Nil, Egypt**

Mohamed Louzazni, Ahmed Khouya, Heba Mosalam

**Two-Stage Design of High Power UWB Monocycle Generator for Radar Sensor Applied in the Four Industry Revolution**

Younes Ahajjam, Otman Aghzout, José M. Catala-Civera, Felipe Peñaranda-Foix, Abdellah Driouach

**Solar Potential Assessment Using PVSYST Software in the Northern Zone of Morocco.**

Brahim Belmahdi, Abdelmajid El Bouardi

**Simulation and Optimization of Microgrid Distributed Generation: a Case Study of University Abdelmalek Essaâdi in Morocco**

Brahim Belmahdi, Abdelmajid El Bouardi

**Analysis of Signal Propagation in Vehicular Communications**

Maria Claudia Surugiu, Ionel Petrescu, Razvan Andrei Gheorghiu

**Circular Planar Antenna with Reconfigurable Radiation Pattern Using Pin Diodes**

Faouzi Rahmani, Naima Amar Touhami, Abdelmounaim Belbachir Kchairi, Nihade Taher

**Substrate Integrated Waveguide Bandpass Filter for MM-Wave Applications**

Soufiane Achraou, Hanae Elftouh, Abdelkrim Farkhssi, Alia Zakriti, Souhaila Ben Haddi

**Industrial Automation PLC Based Modeling and Simple Geometrical Five Parameters Estimation of One-Diode PV Module**

Youness Ouberri, Hanane Yatimi, Elhassan Aroudam

**Efficiency Study of the Bridge Rectifier at 2.4Ghz**

Intissar Hamzi, Moustapha El Bakkali, Mohamed Aghoutane, Naima Amar Touhami

**The Unequal Wilkinson Power Divider 2:1 for Wlan Application**

Elftouh Hanae, Elbakkali Moustapha, Amar Touhami Naima, Zakriti Alia, Mchbal Aicha, Dkiouak Aziz

**Design of CPW-Fed Mimo Antenna for Ultra-Wideband Communications**

Aziz Dkiouak, Alia Zakriti, Mohssine El Ouahabi, Hanae Elftouh, Aicha Mchbal

**Design of a Band-Stop Planar Filter for Telecommunications Applications**

Souhaila Ben Haddi, Asmaa Zugari, Alia Zakriti, Soufiane Achraou

**A Compact UWB Bandpass Filter with WLAN Band Rejection Using Hybrid Technique**

Hamza El Omari El Bakali, Hanae Elftouh, Abdelkrim Farkhsi, Alia Zakriti

**Reconfigurable Antenna for Wi-Fi and 5G Applications**

Doea El Hadri, Alia Zakriti, Asmaa Zugari

**The Wave Concept Iterative Process Method in Spherical Coordinates**

Zaid El Haddad, Asmaa Zugari, Mohsine Khalladi

**Broadband SIW Antenna for X-Band Application**

Dahbi Elkhamli, Naima Amar Touhami, Tajeddin Elhamadi, Imane Badaoui

**Design of a High Gain Substrate Integrated Waveguide Cavity Backed Circular Patch Antenna**

Mariam El Gharbi, Soukaina Sekkal, Noura Aknin, Saida Ahyoud

**Microwave Frequency Tripler Using InGaAs HEMT Transistor**

Moustapha El Bakkali, Naima Amar Touhami, Taj Eddin Elhamadi

**A Tri-Band-Notched Antenna for UWB Communication Systems**

Nihade Taher, Alia Zakriti, Naima Amar Touhami, Faouzi Rahmani