

Thursday

August 14

8:00 am	Registration	Session Chairs: Dr. Václav Tesář
9:00 am – 9:20 am	Official Opening of Conference	
9:20 am – 10:20 am	Keynote Lecture I: <i>Internal Combustion Engine – the Oldest Object of Mechatronics System Application?</i> Jan Macek Czech Technical University, Czech Republic	
10:20 am – 10:40 am	Coffee Break	
10:40am – 12:00pm		
Session Name: Robotics		Session Chairs: Dr. Valery Y. Glizer & Dr. Carlos Avila
10:40am – 11:00am	Paper 138: <i>An Improved ZMP-based CPG Model Considering Pitch and Roll Inclinations</i> H.F. Yu, E.H.K Fung , X.J. Jing The Hong Kong Polytechnic University, China	
11:00am -11:20am	Paper 65: <i>Enhancing Wheelchair Mobility Through Dynamics Modeling</i> Avi Weiss, Gideon Avigad, Uri Ben Hanan Braude College of Engineering, Israel	
11:20am – 11:40am	Paper 158: <i>Multispectral Texture Mapping for Telepresence and Autonomous Mobile Robotics</i> Petra Kocmanova, Frantisek Burian, Ludek Zalud Brno University of Technology, Czech Republic	
11:40am – 12:00pm	Paper 170: <i>Adaptive Humanoid Robot Arm Motion Generation by Evolved Neural Controllers</i> Genci Capi , Zulkufli Mohamed University of Toyama, Japan	
12:00pm – 1:00pm	Lunch	

1:00pm – 2:20pm	
Session Name: Mechatronics	Session Chairs: Dr. Alvaro Aguinaga & Dr. Mahir Hassan
1:00pm – 1:20pm	Paper 62: <i>Limit Behaviour of LQG Control Problem with Small Noise in Observation and Some Aerospace Application</i> Valery Y. Glizer , Vladimir Turetsky Ort Braude College of Engineering, Israel
1:20pm – 1:40pm	Paper 107: <i>Contactless Sheet Metal Feeder for Metal-forming Machines</i> Sergej Teichrib , Richard Krimm, Bernd-Arno Behrens Leibniz Universität Hannover, Germany
1:40pm – 2:00pm	Paper 140: <i>Simple and Effective OCV Predication Mechanism for VRLA Battery Systems</i> Alessandro Mariani , Thomas Stockley, Kary Thanapalan, Jonathan Williams University of South Wales, UK
2:00pm – 2:20pm	Paper 166: <i>PZT-based Model Sensing and Compensation for Vibration Control of Moving Flexible Links</i> Xuping Zhang, J.K. Mills, W.L. Cleghorn
2:20pm – 2:40pm	Coffee Break
2:40pm – 4:00pm	
Session Name: Design and Manufacturing	Session Chairs: Dr. Omar Koura & Dr. Xuping Zhang
2:40pm – 3:00pm	Paper 102: <i>Examination of the Relationship between the Average Surface Roughness and the Average Edge Chipping Rate of Milled Granite Products</i> István Gábor Gyurika Budapest University of Technology and Economics, Budapest
3:00pm – 3:20pm	Paper 151: <i>A Multi-layer Based Architecture for the Development of an Open Source CAD/CAM Integration Virtual Platform for the Training of Professional Skills in Engineering Students</i> Álvaro Aguinaga, Carlos Ávila, Edgar Cando Escuela Politécnica Nacional, Ecuador

3:20pm – 3:40pm	Paper 164: <i>Cost Modeling of Laser and Abrasive Water Jet Cutting Processes</i> Saeed Rismani Yazdi , Abdolrasoul Torkzadeh, Carlo Alberto Biffi Politecnico di Milano, Italy
3:40pm – 4:00pm	Paper 176: <i>Hard Cutting of AISI D2 Steel</i> Marton Takacs , Balazs Zsolt Farkas Budapest University of Technology and Economics, Budapest

Friday

August 15

9:00am – 10:00am	Keynote Lecture II: <i>FEniCS - A Free Software Framework for Efficient Solution Of Differential Equations, with Applications in Mechanics</i> Mikael Mortenson University of Oslo, Norway	Session Chairs: Dr, Marton Takacs
10:00am – 10:20am	Coffee Break	
10:20am – 12:00pm	Poster Session ⁱ	
10:20am - 12:00pm		
Session Name: Dynamics and Vibration		Session Chairs: Dr. Uri Ben-Hanan & Dr. Eric Fung
10:20am – 10:40am	Paper 163: <i>Hyderdeform Polymers Materials Vibration Analyses Set of Machines</i> Piotr Żach Warsaw University of Technology, Poland	
10:40am – 11:00am	Paper 68: <i>Tuned Liquid Damper</i> Jitaditya Mondal, Harsha Nimmala , Shameel Abdulla, Reza Tafreshi Texas A&M University Qatar, Qatar	
11:00am – 11:20am	Paper 145: <i>Effects of Different Tire Pressures on Vibrational Transmissibility in Cars</i> Abdelrahman Abdelghaffar , Abdelrahmann Hendy, Osama Desousky, Youssed Badr, Shameel Abdulla, Reza Tafreshi Texas A&M University Qatar, Qatar	
11:20am – 11:40am	Paper 67: <i>Cryogenic Throttle Valve Driven by BLDC Motor for Thrust Control of a Liquid Rocket Engine</i> Taekyu Jung , SangYeop Han Korea Aerospace Research Institute, Republic of Korea	

11:40am – 12:00pm	Paper 78: <i>Assessing Spur Gear Quality Using Virtual Rolling Gear Testing Machine</i> Omar Monir Koura Modern University for Technology & Information, Egypt
12:00pm – 1:00pm	Lunch
1:00pm – 2:00pm	
Session Name: Simulation and Modeling	Session Chairs: Dr. Yaekyu Jung & Dr. Piotr Zach
1:00pm – 1:20pm	Paper 139: <i>Simulation, Prediction and Compensation of Transient Thermal Deformations of a Reciprocating Linear Slide for F8S Motion Error Separation</i> E.H.K. Fung , N.J. Hou, H.F. Yu, W.O. Wong The Hong Kong Polytechnic University, Hong Kong
1:20pm – 1:40pm	Paper 162: <i>Numerical Modelling of Large Elastic-plastic Deformations</i> Lenar Sultanov , Ruslan Dabydov Kazan Federal University, Russian Federation
1:40pm – 2:00pm	Paper 161: <i>Simulation of Filtration Flow Towards Hydraulically Fractured Vertical Wall</i> Evgeniy Kalinin, Alexander Mazo, Konstantin Potashev Kazan Federal University, Russian Federation

Poster Session

August 15

10:20am – 12:00pm	
Paper 61: <i>A New Method for Vibration Energy Harvesting from Shock Absorbers</i> Chuan Li, Rongrong Zhu, Miang Liang , Shuai Yang University of Ottawa, Canada	
Paper 37: <i>Bearing Fault Detection by Resonant Frequency Band Pursuit Using a Synthesized Criterion</i> Chuan Li, Ming Liang , Tianyang Wang University of Ottawa, Canada	

Paper 60: *An Enhanced Energy Operator for Bearing Fault Detection*
Ming Liang, Hamid Faghidi
University of Ottawa, Canada

Paper 71: *Simulation Robot for Expression of the Emotion Extracted from SMS Messages*
Dong Yup Choi, Junkyu Park
Daelim University College, Korea

Paper 152: *Micofluidic Fuel Cell Harnessing Osmosis-driven Passive Pump*
Sung-Hwan Kim, Gi-Hun Lee, Gi-Hun Ahn, Joong Yull Park
Chung-Ang University, Korea