

ISSN 2065-2119

TRANSILVANIA UNIVERSITY OF BRAȘOV

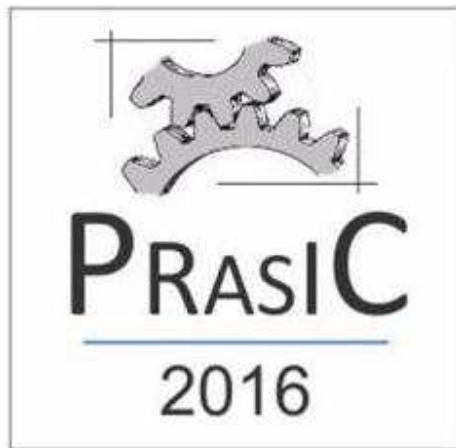
BULLETIN
OF THE
TRANSILVANIA UNIVERSITY
OF
BRAȘOV

Proceedings of the IXth International Conference on
Product Design, Robotics, Advanced Mechanical &
Mechatronic Systems and Innovation – PRASIC

November 10–11, 2016
BRAȘOV, ROMANIA

VOL. 9 (58) SERIES I, NO. 2 SPECIAL ISSUE - 2016
ISSN 2065-2119

Published by
Transilvania University Press
Brașov, Romania
2016



IXth Product Design, **R**obotics,
Advanced Mechanical & Mechatronic
Systems and **I**nnovation **C**onference

PRASIC`16

November 10–11, 2016, BRAȘOV, ROMÂNIA

HONORARY COMMITTEE

Petre ALEXANDRU
Emil CHIȘU
Florea DUDIȚĂ
Aurel JULA

SCIENTIFIC COMMITTEE

Ioan ABRUDAN (Romania)
Stelian ALACI (Romania)
Cătălin ALEXANDRU (Romania)
Ioan ARDELEAN (Romania)
Mihaela Ioana BARITZ (Romania)
Corina BÂRLEANU (Romania)
Iulian BÂRSAN (Romania)
Carlos Lopez CAJUN (Mexico)
Iosif CĂRĂBAȘ (Romania)
Sorin CĂNĂNĂU (Romania)
Marco CECCARELLI (Italy)
Sorin CIORTAN (Romania)
Predrag ĆOSIĆ (Croatia)
Radu COTEȚIU (Romania)
Diana COTOROS (Romania)
Luciana CRISTEA (Romania)
Predrag DASIĆ (Serbia)
Ioan DOROFTEI (Romania)
Goran DUKIĆ (Croatia)
Valeriu DULGHERU (Rep. Moldavia)
Nicolae DUMITRU (Romania)
Vicenc FERNANDEZ (Spain)
Radu FLOREA (Romania)
Ștefan Sorinel GHIMISI (Romania)
Grigore GOGU (France)
Antoni GRONOWICZ (Poland)
Codruța JALIU (Romania)
Teun KOETSIER (Holand)
Mihai LATEȘ (Romania)
Erwin Christian LOVASZ (Romania)
Marius Cristian LUCULESCU (Romania)

Elena MEREUȚĂ (Romania)
Gheorghe Leonte MOGAN (Romania)
Ilie MUSCĂ (Romania)
Constantin OCNĂRESCU (Romania)
Dumitru OLARU (Romania)
Gabor PAY (Hungary)
Doina PISLĂ (Romania)
Victor PETUYA (Spain)
Angela REPANOVICI (Romania)
Adrian RIENACKER (Germany)
Jim RITCHIE (Great Britain)
Ileana Constanța ROȘCA (Romania)
Alexandru RUS (Romania)
Dan SĂVESCU (Romania)
Francesco SORGE (Italy)
Ionel STAREȚU (Romania)
Daniela TARNIȚĂ (Romania)
Ioan ȚARCĂ (Romania)
Hidetsugu TERADA (Japan)
Andrei TUDOR (Romania)
Miroslav VACLAVIK (Czech Republic)
Radu VELICU (Romania)

LOCAL ORGANIZING COMMITTEE

Luciana CRISTEA
Codruța JALIU
Dan SĂVESCU
Gheorghe Leonte MOGAN
Cătălin ALEXANDRU
Ionel STAREȚU
Radu VELICU
Elena EFTIMIE
Mihai LATEȘ
Ion BARBU
Cornel Cătălin GAVRILĂ
Adrian BUDALĂ
Viorel SIȘMAN
Monica BALAȘ
Radu PAPUC

CONTENT

Alaci, S., Ciornei. F.C., Mihai, F., Amarandei. D., Siretean, S.T.: <i>Some Considerations Concerning Axodes Outlining During The Motion Of Bodies With Multiple Contacts</i>	1
Alexandrescu, I., Cotețiu, R., Cotețiu, A.: <i>The Dynamic Circumferential Pressure Distribution to the Sliding Radial Bearing Working under Hard Shocks</i>	7
Alexandru, C., Țoțu. V., Alexandru, P.: <i>Improving The Dynamic Behaviour Of A Vehicle Suspension System By Statistical Tools</i>	13
Anagnostakis, D., Ritchie, J., Lim, T., Sung, R., Dewar, R.: <i>Towards Automated Capturing Of CMM Inspection Strategies</i>	19
Barbu, I., Luculescu, M.C., Cristea, L., Zamfira, S.: <i>Some Concepts for New Technology in Precision Agriculture</i>	27
Baritz, M.I., Mosoi, A.A.: <i>Posture Video Analysis Of Athletes With Locomotor Disabilities, In Tennis Game</i>	33
Baritz, M.I.: <i>Highlighting the Modifications of Gait Biomechanics under Oculus Rift Influences</i>	39
Bârsan, A., Bârsan, L., Papuc, R., Cașcaval R.: <i>The Cardboard Rolls Chair – An Example Of Extending A Product Useful Life</i>	45
Bostan, I., Dulgheru, V.: <i>Analytical Description of Precessional Nonstandard Tooth Profile</i>	51
Braun, B.: <i>Assisted Procedure for Monitoring and Improving Oculo-Motor Behavior for Preschool Children</i>	57
Braun, B.: <i>Statistical Procedure for Evaluation of Stability Evolution for Tennis Players</i>	63
Butnariu, S., Gîrbacia, T.: <i>An Analysis On The Prostate Deformation During Brachytherapy Needle Insertion</i>	69
Ciupitu, L.: <i>Adaptive Balancing Of Robot Mechanisms</i>	77

Dašić, P., Dašić, J., Crvenković, J.R.: <i>Service Models For Cloud Computing: Video Surveillance as a Service (Vsaas)</i>	83
Dašić, P., Dašić, J., Crvenković, J.R.: <i>Applications of the Search as a Service (Saas)</i>	91
Dehelean, N.M., Dehelean, L.M.: <i>On Solar Panel Orientation</i>	99
Druga, C., Şerban, I., Repanovici, A.: <i>Active Orthoses for the Lower-Limbs</i>	107
Druga, C., Serban, I., Roşca, I.C.: <i>Intelligent Cervical Collar - Selection and Testing of Materials</i>	113
Enescu, M.(Balaş): <i>Finite Element Analysis of an Industrial Robot Within the Msc.Adams Software</i>	119
Georgescu, M., A. Petcu, A., Tarniţă, D.: <i>Nonlinear Movement of Human Knee Overground & On Treadmill</i>	125
Gîrbacia, T., Gîrbacia, F., Butnariu, S., Gherman, B., Vaida, C., Pîslă, D.: <i>Development of a Virtual Reality Application for Planning of Robotic Prostate Transperineal Biopsy</i>	133
Ghimişi, S.: <i>The Role Of Community Of Practice In Higher Education</i>	139
Graur, I., Munteniţă, C., Ungureanu, C., Bria, V.: <i>Friction Coefficient of Potassium and Sodium Dichromate Doped Epoxy</i>	145
Ivanus, G., Repanovici, A.: <i>Sme's Innovation Strategy for Business Continuity and Crisis Management</i>	155
Jurj, L., Velicu, R.: <i>Short Plane Bearings Lubrication Applied On Silent Chain Joints</i>	163
Mereuţă, V., Ciortan, S.: <i>The Influence of Superficial Layer Parameters on Fatigue Strength</i>	169
Mirică, R.F., Cănanău, S.: <i>Some Aspects of Embodiment Design</i>	175
Niculescu, M., Andrei, L.: <i>Noncircular Gears with Transmission Ratio as Hybrid Function</i>	181
Oprea, D.A.: <i>Sensors Study in Stem Education</i>	189
Papuc, R., Gavrilă, C., Lateş, M.: <i>Modeling the Pressure Distribution in the Contact between Guide and Chain</i>	197

Content

Petcu, A., Calafeteanu, D., Georgescu, M., Tarniță, D.: <i>Kinematics and Kinetics of Healthy and Osteoarthric Knee During Walking Stairs</i>	203
Puiu, C., Puiu, V.: <i>Estimates on measuring the consumer's satisfaction</i>	209
Rădulescu, I.: <i>Industrial Management Research Concerning the Achievement of an Eco-Innovation Library</i>	217
Răileanu, M., Rădulescu, A.V., Rădulescu, I.: <i>Study of the Influence of the Type of Fuel used in Internal Combustion Engines over the Rheological Properties of Lubricants</i>	225
Roșca, I.C., Drugă, C., Șerban, I.: <i>Stiffening Plates for Cervical Column</i>	231
Roșca, I.C., Drugă, C., Șerban, I.: <i>Training System for Brain Activity Monitoring</i>	237
Săulescu, R., Ciobanu, D., Jaliu, C.: <i>Kinematic and Static Modelling of the Adjustable-Blade Mechanism used in Kaplan Turbines</i>	243
Săvescu, D., Grama, D.: <i>Some Aspects Regarding the Competitive Innovation Management</i>	251
Siretean, S.T., Alaci, S., Ciornei, F.C., Musca, I.: <i>Hertzian Point Contact - Sliding And Rolling Aspects</i>	259
Sorge, F.: <i>Swerve Correction Of Heavy-Duty Articulated Lorries</i>.....	267
Starețu, I.: <i>Mechanisms With CAM: Structural and CAD Models</i>	275
Suciu, A., Cotoros, D., Repanovici, A.: <i>Specific Methods of HIP Implant non-Invasive Assessment</i>	281
Tudor, A., Vlase, M., Cerbu, N., Wahad, H.S., Ahmed, K.A.S.: <i>Effect Of Friction on Transmissibility in Coulombian Damper</i>	287
Authors Index.....	295