



UDC: 621

ISSN 1451-2092

University of Belgrade
Faculty of Mechanical Engineering

FME TRANSACTIONS

New Series, Volume 43, Number 1, 2015

Editor:
Boško Rašuo

University of Belgrade

Associate Editor:
Stevanović Vladimir

University of Belgrade

Editorial Board:
Avellan François

Swiss Federal Institute of Technology, Zurich, Switzerland

Bojić Milorad

University of Kragujevac

Dulikravich S. George

Florida International University, Miami, USA

Đorđević Vladan

University of Belgrade

Ehmann F. Kornel

Northwestern University, Evanston IL, USA

Felix Hong

Wayne State University, Detroit, USA

Gabi Martin

Karlsruher Institut für Technologie (KIT), Germany

Gajić Zoran

Rutgers University, USA

Jakirlic Suad

Technische Universität Darmstadt, Germany

Jovanović Jasmina

University of Belgrade

Kartnig Georg

Technische Universität Wien, Austria

Klimenko A. Sergei

National Academy of Sciences, Kiev, Ukraine

Komatina Mirko

University of Belgrade

Meerkamm Harald

Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany

Mester Gyula

University of Szeged, Szeged, Hungary

Nedić Novak

University of Kragujevac

Plančak Miroslav

University of Novi Sad

Putnik Goran

University of Minho, Portugal

Radovanović Miroslav

University of Nis

Sedmak Aleksandar

University of Belgrade

Soutis Constantinos

The University of Manchester, Manchester, UK

Stamenović Dimitrije

Boston University, Boston, USA

Technical Editor:
Dinulović Mirko

University of Belgrade

Published by:

University of Belgrade

Faculty of Mechanical Engineering

CONTENTS
PAGE

Nikola N. Gavrilović, Boško P. Rašuo, George S. Dulikravich, Vladimir B. Parezanović <i>Commercial Aircraft Performance Improvement Using Winglets</i>	1
Goran M. Mladenovic, Ljubodrag M. Tanovic, Kornel F. Ehmann <i>Tool Path Generation for Milling of Free Form Surfaces With Feedrate Scheduling</i>	9
Nevena D. Stevanovic, Vladan D. Djordjevic <i>An Exact Analytical Solution for the Second Order Slip-Corrected Reynolds Lubrication Equation</i>	16
Đorđe Vuković, Dijana Damljanović <i>On the Use of Load-Transformation Matrices When Working with Internal Wind Tunnel Balances</i>	21
Vladan Kuzmanovic, Ljubodrag Savic, Nikola Mladenovic <i>Thermal-Stress Behaviour of RCC Gravity Dams</i>	30
Nikola Jaćimović, Mirjana Stamenić, Petar Kolendić, Dimitrije Đorđević, Branka Radanov, Ljubiša Vladić <i>A Novel Method for the Inclusion of Pipe Roughness in the Hazen-Williams Equation</i>	35
Sudarmadji Sudarmadji <i>A New Correlation for Pressure Drop in the Cooling Process of AL_2O_3-Water Nanofluid in Pipes, strane</i>	40
Branko Karan <i>Calibration of Kinect-type RGB-D Sensors for Robotic Applications</i>	47
Miloš M. Živanović, Mihailo P. Lazarević <i>Conditions for Dynamic Balance of a Rigid Body With Heavy Foot</i>	55
Ramesh Chand, G. C. Rana, S. K. Kango <i>Effect of Variable Gravity on Thermal Instability of Rotating Nanofluid in Porous Medium</i>	62
Jovana Jovanova, Viktor Gavriloski, Marjan Djidrov, Goce Tasevski <i>Model Based Vibration Control of Smart Flexible Structure Using Piezoelectric Transducers</i>	70
Marinko Ugrčić, Stevan M. Maksimović, Dragi P. Stamenković, Katarina S. Maksimović, Khetrou Nabil <i>Finite Element Modeling of Wing Bird Strike</i>	76
Aleksandar Zunjic, Goran Papic, Bozica Bojovic, Lidija Matija, Goran Slavkovic, Petar Lukic <i>The Role of Ergonomics in the Improvement of Quality of Education</i>	82

On line service:
<http://www.mas.bg.ac.rs/transactions>