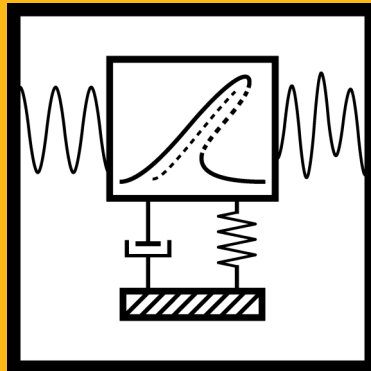


March 2016, Volume 4, Issue 1  
Pages (1-42), NoP (81-85)  
ISSN Print 2335-2124  
ISSN Online 2424-4635

# JME

Journal of  
Measurements in  
Engineering



**Editor in chief**

K. Ragulskis Lithuanian Academy of Sciences, (Lithuania) k.ragulskis@jve.lt,  
ragulskis.jve@gmail.com

**Managing Editor**

M. Ragulskis Kaunas University of Technology,  
JVE International, (Lithuania) minvydas.ragulskis@ktu.lt  
m.ragulskis@jve.lt

**Editorial Board**

T. C. Akinci Kirklareli University, (Turkey) cetinakinci@hotmail.com

S. V. Augutis Kaunas University of Technology, (Lithuania) vygantas.augutis@ktu.lt

R. Bansevicius Kaunas University of Technology, (Lithuania) ramutis.bansevicus@ktu.lt

M. Bayat Tarbiat Modares University, (Iran) mbayat14@yahoo.com

R. Burdzik Silesian University of Technology, (Poland) rafal.burdzik@polsl.pl

M. S. Cao Hohai University, (China) cmszhy@hhu.edu.cn

Lu Chen Beihang University, (China) luchen@buaa.edu.cn

S. Ersoy Marmara University, (Turkey) sersoy@marmara.edu.tr

H. C. Eun Kangwon National University, (Korea) heechang@kangwon.ac.kr

W. H. Hsieh National Formosa University, (Taiwan) allen@nfu.edu.tw

Li Jun Adv. Inst. of Science and Engg. Information, (China) lijun@aiseiac.org

V. Kaminskas Vytautas Magnus University, (Lithuania) v.kaminskas@if.vdu.lt

S. Kaušinis Kaunas University of Technology, (Lithuania) saulius.kausinis@ktu.lt

A. Kasparaitis Vilnius Gediminas Technical University, (Lithuania) albinas.kasparaitis@vgtu.lt

R. Kažys Kaunas University of Technology, (Lithuania) rymantas.kazys@ktu.lt

V. Klyuev Association Spektr – Group, (Russia) v.klyuev@spektr.ru

G. Laukaitis Kaunas University of Technology, (Lithuania) giedrius.laukaitis@ktu.lt

V. Lyalin Izhevsk State Technical University, (Russia) velyalin@mail.ru

R. Maskeliūnas Vilnius Gediminas Technical University, (Lithuania) rimas.maskeliunas@vgtu.lt

V. Ostasevičius Kaunas University of Technology, (Lithuania) vytautas.ostasevicus@ktu.lt

D. Pislă Technical University of Cluj-Napoca, (Romania) doina.pisla@mep.utcluj.ro

L. Qiu Nanjing University of Aeronautics and Astronautics,  
(China) lei.qiu@nuaa.edu.cn

S. Rakheja Concordia University, (Canada) subhash.rakheja@concordia.ca

J. I. Real Technical University of Valencia, (Spain) jureaher@tra.upv.es

S. Seker Istanbul Technical University, (Turkey) sekers@itu.edu.tr

A. El Sinawi The Petroleum Institute, (United Arab Emirates) aelsinawi@pi.ac.ae

G. Song University of Houston, (USA) gsong@uh.edu

B. Spruogis Vilnius Gediminas Technical University, (Lithuania) bronislovas.spruogis@vgtu.lt

S. Toyama Tokyo A&T University, (Japan) toyama@cc.tuat.ac.jp

D. Wang City University of Hong Kong, (China) dongwang4-c@my.cityu.edu.hk

Mao Yuxin Zhejiang Gongshang University, (China) maoyuxin@zjgsu.edu.cn

# JME Journal of Measurements in Engineering

## Aims and Scope

JME publishes articles describing contributions in the general field of measurements in/and engineering applications.

JME welcomes theoretical papers aimed at winning further understanding of fundamentals of measurements and associated technologies, including, but not restricted to, general principles of measurement and instrumentation, sensors and systems modelling, data acquisition, processing and evaluation.

JME covers practical aspects and applications with contributions on measurement technology and engineering applications, including, but not restricted to, non-destructive measurement of vibrations, thermal, acoustic, optical and laser based measurement of engineering systems in nano, micro and macro scales.

**All published papers are peer reviewed.**

## General Requirements

The authors must ensure that the paper presents an original unpublished work which is not under consideration for publication elsewhere.

The following structure of the manuscript is recommended: abstract, keywords, nomenclature, introduction, main text, results, conclusions and references. Manuscript should be single-spaced, one column 162×240 mm format, using Microsoft Word 2007 or higher. Margins: top 10 mm, bottom 10 mm, left 15 mm, right 10 mm, header 4 mm, footer 7 mm.

Font: Times New Roman. Title of the article 16 pt Bold, authors name 10 pt Bold, title of the institution 9 pt Regular, equations and text 10 pt Regular, indexes 5 pt Regular, all symbols Italic, vectors Bold, numbers Regular. Paragraph first line indentation 5 mm. Equations are to be written with Microsoft Office 2007 or higher Equation Tool.

Heading of the table starts with table number 9 pt Bold as “**Table 1.**”, then further text 9 pt Regular. Table itself 9 pt Regular.

Figure caption starts with figure number 9 pt Bold as “**Fig. 1.**”, then further text 9 pt Regular. Figure itself must be a single or grouped graphical item.

Tables and figures are placed after the paragraph in which they are first referenced.

List of references: reference number and authors 9 pt Bold, further information 9 pt Regular:

- [1] **Pain H. J.** The Physics of Vibrations and Waves. Chichester: John Wiley and Sons, 2005.  
[2] **Juška V., Svilainis L., Dumbrava V.** Analysis of piezomotor driver for laser beam deflection. Journal of Vibroengineering, Vol. 11, Issue 1, 2009, p. 17-26.

The authors are responsible for the correctness of the English language.

The authors are expected to cover partial costs of publication in JME.

JME annual subscription fees: 60 EUR (individual); 120 EUR (institutional).

## The journal material is referred:

**EBSCO:** Academic Search Complete;  
Computers & Applied Sciences Complete;  
Central & Eastern European Academic Source;  
Current Abstracts;  
TOC Premier.

**GALE Cengage Learning:** Academic OneFile Custom Periodical.

**INSPEC:** OCLC. The Database for Physics, Electronics and Computing.

**VINITI:** All-Russian Institute of Scientific and Technical Information.

**Internet:** <http://www.jvejournal.com>; <http://www.jve.lt>

**E-mail:** [m.ragulskis@jve.lt](mailto:m.ragulskis@jve.lt); [ragulskis.jve@gmail.com](mailto:ragulskis.jve@gmail.com)

**Address:** Geliu ratas 15A, LT-50282, Kaunas, Lithuania

**Publisher:** JVE International Ltd.

## Contents

81.	<b>THE MACHINING NOISE CONTROL OF LARGE SIZE EXTRUDED ALUMINUM UTILIZED IN HIGH-SPEED TRAINS</b>	1
	D. P. YANG, Q. F. WANG, H. C. ZHANG, H. W. SUN, T. FENG, H. Y. XU, X. H. ZHOU	
82.	<b>IMPACT BASE EXCITATION METHOD WITH STACKED PZT ACTUATOR FOR MEMS DYNAMIC CHARACTERIZATION</b>	7
	DONGSHENG SHE, YILIU YANG, ZEFEI WEI, ZHEN YU	
83.	<b>SUPERIMPOSED MOIRÉ MEASUREMENTS OF VIBRATIONS OF CIRCULAR STRUCTURES</b>	15
	R. MASKELIŪNAS, K. RAGULSKIS, P. PAŠKEVIČIUS, L. PATAŠIENĖ, L. RAGULSKIS	
84.	<b>RESEARCH ON CONDITION MONITORING SYSTEM OF HIGH SPEED RAILWAY CATENARY BASED ON IMAGE PROCESSING</b>	23
	DEQIANG HE, HELIANG WANG, JIAN MIAO	
85.	<b>AN IMPROVED NUMERICAL SIMULATION RESEARCH FOR PLUNGER PUMP IN THE CONDITION OF NEWTONIAN FLUID</b>	32
	MINGMING XING	

