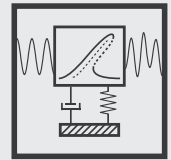


Mechanical Engineering

Materials Science and Technology

# Journal of Vibroengineering



## Editor in Chief

Minvydas Ragulskis Kaunas University of Technology, (Lithuania) minvydas.ragulskis@ktu.lt

## Editorial Board

Hojjat Adeli The Ohio State University, (USA) adeli.1@osu.edu

Kouamana Bousson University of Beira Interior, (Portugal) bousson@ubi.pt

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

Jinde Cao Southeast University, (China) jdcao@seu.edu.cn

Joze Duhovnik University of Ljubljana, (Slovenia) joze.duhovnik@lecad.uni-lj.si

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

Algimantas Fedaravičius Kaunas University of Technology, (Lithuania) algimantas.fedaravicius@ktu.lt

Rafael Figueroa Instituto Tecnológico de Sonora, (México) rafael.figueroa@itson.edu.mx

Piotr Folęga Silesian University of Technology, (Poland) piotr.folega@polsl.pl

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

David Hui University of New Orleans, (USA) dhui@uno.edu

Vassilis Kappatos Center for Research and Technology Hellas, (Greece) vkappatos@certh.gr

Vitaliy Korendiy Lviv Polytechnic National University, (Ukraine) vitaliy.nulp@gmail.com

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

Abdollah Malekjafarian University College Dublin, (Ireland) abdollah.malekjafarian@ucd.ie

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

Luis E. Muñoz Universidad de los Andes, (Colombia) lui-muno@uniandes.edu.co

Phuoc Trong Nguyen Ho Chi City Open University, (Vietnam) phuoc.nguyen@ou.edu.vn

Nicola Nisticò Sapienza University of Rome, (Italy) nicola.nistico@uniroma1.it

Ehsan Noroozinejad The University of British Columbia (UBC), (Canada) ehsan.noroozinejad@gmail.com

Vytautas Ostasevičius Kaunas University of Technology, (Lithuania) vytautas.ostasevicius@ktu.lt

Grigory Panovko Mechanical Engineering Research Institute of the Russian Academy of Sciences, (Russia) gpanovko@yandex.ru

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

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

Vinayak Ranjan Bennett University, (India) vinayak.ranjan@bennett.edu.in

Pouyan Roodgar Saffari Thammasat University, (Thailand) rpouyan@engr.tu.ac.th

G. Eduardo Sandoval-Romero The National Autonomous University of Mexico, (Mexico) eduardo.sandoval@ccadet.unam.mx

Miguel A. F. Sanjuan University Rey Juan Carlos, (Spain) miguel.sanjuan@urjc.es

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

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

Piotr Vasiljev Lithuanian University of Educational Sciences, (Lithuania) piotr.vasiljev@leu.lt

Vincentas Veikutis Lithuanian University of Health Sciences, (Lithuania) vincentas.veikutis@ismuni.lt

Jānis Vība Riga Technical University, (Latvia) janis.viba@rtu.lv

Xiao-Jun Yang China University of Mining and Technology, (China) dyangxiaojun@163.com

Krzysztof Kamil Żur Bialystok University of Technology, (Poland) k.zur@pb.edu.pl

# **JVE Journal of Vibroengineering**

## **Aims and Scope**

Journal publishes research papers presenting the latest results in the general area of vibration engineering. Mechanical vibrations and applications, fault diagnosis based on vibration signal analysis, seismic engineering, acoustics, and noise control are typical examples of the core areas of the Journal. The Journal is devoted to the publication of original research papers of a high technical standard representing theoretical and experimental aspects of engineering problems related to vibrations.

**All published papers are peer reviewed and crosschecked by plagiarism detection tools.**

More information is available online <https://www.extrica.com/journal/jve>

## **The journal material is referred:**

### **Clarivate Analytics:**

Emerging Sources Citation Index (ESCI)  
Journal Citation Reports / Science Edition

**Scopus:** ELSEVIER Bibliographic Database

**EI Compindex:** ELSEVIER Bibliographic Database

**EBSCO:** Academic Search Complete

Computers & Applied Sciences Complete  
Central & Eastern European Academic Source  
Current Abstracts  
Shock & Vibration Digest  
TOC Premier

### **Gale Cengage Learning:**

Academic OneFile Custom Periodical  
Science in Context

**Scilit:** <https://www.scilit.net>

**Dimensions:** <https://www.dimensions.ai>

**Semantic Scholar:** <https://www.semanticscholar.org>

**Google Scholar:** <https://scholar.google.com>

**JGate:** <https://jgateplus.com>

**CORE:** <https://core.ac.uk>

**BASE (Bielefeld Academic Search Engine):** <https://www.base-search.net>

**Ulrich's Periodicals Directory:** <https://ulrichsweb.serialssolutions.com>

**ERIH PLUS:** <https://dbh.nsd.uib.no/publiseringskanaler/erihplus>

**CNKI Scholar:** <http://eng.scholar.cnki.net>

**cnPLINKer (CNPIEC):** <http://cnplinker.cnpeak.com>

**WanFang Data:** <https://www.wanfangdata.com.cn>

**TDNet:** <https://www.tdnet.io>

**JournalTOCs:** <https://www.journaltoCs.ac.uk>

**WorldCat Discovery Services:** <https://www.oclc.org/en/worldcat-discovery.html>

**MyScienceWork:** <https://www.mysciencework.com>

**Crossref:** <https://search.crossref.org>

Content is archived in **Martynas Mazvydas National Library of Lithuania**

**Internet:** <https://www.extrica.com>

**E-mail:** [publish@extrica.com](mailto:publish@extrica.com)

**Publisher:** JVE International Ltd., Geliu ratas 15A, LT-50282, Kaunas, Lithuania

# JVE Journal of Vibroengineering

MARCH 2023. VOLUME 25, ISSUE 2, PAGES (226-455), ISSN PRINT 1392-8716, ISSN ONLINE 2538-8460

## Contents

### MECHANICAL VIBRATIONS AND APPLICATIONS

**VIBRATION-COLLISION MECHANISM OF DUAL-STABILIZER BOTTOM HOLE ASSEMBLY SYSTEM IN VERTICAL WELLBORE TRAJECTORY** 226

PAN FANG, KANG YANG, GAO LI, QUNFANG FENG, SHUIE DING

**RESEARCH STATUS AND DEVELOPMENT TREND OF ENERGY FINITE ELEMENT ANALYSIS: A REVIEW** 247

MIAOXIA XIE, FEILONG YAO, LING LI, YUEMING LI

### FAULT DIAGNOSIS BASED ON VIBRATION SIGNAL ANALYSIS

**FAULT FEATURE EXTRACTION METHOD FOR ROLLING BEARING BASED ON MVMD AND COMPLEX FOURIER TRANSFORM** 269

CHUANJIN HUANG, HAIJUN SONG

**DYNAMIC RESPONSE AND CONTACT CHARACTERISTICS OF SHAFT-BEARING-PEDESTAL SYSTEM WITH LOCALIZED DEFECT USING 2-D EXPLICIT DYNAMICS FINITE ELEMENT MODEL** 290

HUILONG LI, CHANGFENG YAN, JUNBAO YANG, JIADONG MENG, LIXIAO WU

**BEARING FAULT FEATURE SELECTION METHOD BASED ON DYNAMIC TIME WARPED RELATED SEARCHES** 311

GUANGBIN WANG, TENGQIANG WANG, JINHUA CHEN, SHUBIAO ZHAO

### SEISMIC ENGINEERING AND APPLICATIONS

**ANALYSIS AND OPTIMIZATION OF SEISMIC PERFORMANCE OF HIGH-RISE RESIDENTIAL BUILDING** 325

NA WANG, XUEMIN CHANG, FANNA KONG, YONGKANG SHEN

<b>ANALYSIS ON THE SEISMIC WAVE CAUSED BY LOW FREQUENCY SOUND SOURCE IN SHALLOW SEA BASED ON MULTI-TRANSMITTING FORMULA ARTIFICIAL BOUNDARY</b> ZAIHUA LU, YUN MA, DANDAN CHEN	<b>337</b>
<b>SHAKING TABLE TESTS OF LARGE CROSS-SECTIONAL MULTI-CRACK TUNNEL LININGS</b> DONGMEI YOU, FENG GAO	<b>347</b>
<b>VIBRATION IN TRANSPORTATION ENGINEERING</b>	
<b>DAMPING TRANSFORMATION MODELING ON WHEEL SUSPENSION USING PNEUMATIC CYLINDER THRUST FORCE AS A SUBSTITUTE FOR VEHICLE WEIGHT</b> SIMON KA'KA, DANIEL KAMBUNO, ABRAM TANGKEMANDA	<b>363</b>
<b>ANALYSIS OF ELECTROMECHANICAL COUPLING CHARACTERISTICS OF ELECTRICS VEHICLE ELECTRIC DRIVE SYSTEM CONSIDERING CURRENT HARMONIC EXCITATION</b> SHUAISHUAI GE, YUFAN YANG, ZHIGANG ZHANG, YAOZE YANG, RUIZHI SHU	<b>377</b>
<b>VEHICLE STATE AND PARAMETER ESTIMATION BASED ON ADAPTIVE ROBUST UNSCENTED PARTICLE FILTER</b> YINGJIE LIU, DAWEI CUI, WEN PENG	<b>392</b>
<b>MOVING HORIZON ESTIMATION OF VEHICLE STATE AND PARAMETERS</b> YINGJIE LIU, DAWEI CUI, WEN PENG	<b>409</b>
<b>DYNAMICS AND OSCILLATIONS IN ELECTRICAL AND ELECTRONICS ENGINEERING</b>	
<b>AUTOMATIC COORDINATION CONTROL TECHNOLOGY OF INTERCONNECTED MEDIUM VOLTAGE DIRECT CURRENT (MVDC) DISTRIBUTION NETWORK BASED ON FREQUENCY DEVIATION</b> KUNYANG JI	<b>428</b>
<b>DISCRIMINATION METHOD OF LOW-CURRENT GROUNDING FAULT OF PRIMARY AND SECONDARY INTEGRATED EQUIPMENT UNDER THREE-PHASE ASYMMETRIC HARMONIC POWER FLOW CALCULATION</b> YUE ZUO, BO ZHANG, WEI YANG	<b>443</b>



## SHORT DESCRIPTION ABOUT THIS CATEGORY

The major objective of vibration engineering is to protect people, instruments, machines, and structures from the effect of harmful vibration. Mechanical vibrations and applications, fault diagnosis based on vibration signal analysis, seismic engineering, acoustics, and noise control are typical examples of the core areas of the Journal. The aim of the Journal is to present theoretical and experimental aspects of engineering problems related to vibrations.

