Extrica Lournals Engineering

ISSN ONLINE 2538-8460 ISSN PRINT 1392-8716

> December 2024 VOLUME 26 ISSUE 8 PAGES 1730-1861

Mechanical Engineering

Materials Science and Technology

Journal of Vibroengineering





Editor in Chief

Minvydas Ragulskis **Editorial Board** Hoiiat Adeli Kouamana Bousson Jinde Cao Maosen Cao Joze Duhovnik Sezgin Ersoy Ke Fena Rafael Figueroa Piotr Folega Wen-Hsiang Hsieh David Hui Vassilios Kappatos Vitaliy Korendiy Chen Lu Abdollah Malekjafarian Phuoc Trong Nguyen Nicola Nisticò Ehsan Noroozinejad Vytautas Ostaševičius Lei Qiu

Subhash Rakheja Vinayak Ranjan Pouyan Roodgar Saffari G. Eduardo Sandoval-Romero

Miguel A. F. Sanjuan Gangbing Song Shigeki Toyama Vincentas Veikutis Jānis Vība Xiao-Jun Yang

Kaunas University of Technology, (Lithuania)

The Ohio State University, (United States) University of Beira Interior, (Portugal) Southeast University, (China) Hohai University, (China) University of Ljubljana, (Slovenia) Marmara University, (Turkey) University of British Columbia, (Canada) Instituto Tecnológico de Sonora, (Mexico) Silesian University of Technology, (Poland) National Formosa University, (Taiwan) University of New Orleans, (United States) Center for Research and Technology Hellas, (Greece) Lviv Polytechnic National University, (Ukraine) Beihang University, (China) University College Dublin, (Ireland) Ho Chi City Open University, (Vietnam) Sapienza University of Rome, (Italy) The University of British Columbia (UBC), (Canada) Kaunas University of Technology, (Lithuania) Nanjing University of Aeronautics and Astronautics, (China) Concordia University, (Canada) Rowan Uviversity, (United States) Thammasat University, (Thailand) The National Autonomous University of Mexico, (Mexico) University Rey Juan Carlos, (Spain) University of Houston, (United States) Tokyo A&T University, (Japan) Lithuanian University of Health Sciences, (Lithuania) Riga Technical University, (Latvia) China University of Mining and Technology, (China)

minvydas.ragulskis@ktu.lt

adeli.1@osu.edu bousson@ubi.pt jdcao@seu.edu.cn cmszhy@hhu.edu.cn joze.duhovnik@lecad.uni-lj.si sersoy@marmara.edu.tr ke.feng@outlook.com.au rafael.figueroad@itson.edu.mx piotr.folega@polsl.pl allen@nfu.edu.tw dhui@uno.edu vkappatos@certh.gr vitaliy.nulp@gmail.com luchen@buaa.edu.cn abdollah.malekjafarian@ucd.ie phuoc.nguyen@ou.edu.vn nicola.nistico@uniroma1.it ehsan.noroozinejad@gmail.com vytautas.ostasevicius@ktu.lt lei.qiu@nuaa.edu.cn

subhash.rakheja@concordia.ca vinayak.ranjan@bennett.edu.in rpouyan@engr.tu.ac.th eduardo.sandoval@ccadet.unam.mx

miguel.sanjuan@urjc.es gsong@uh.edu toyama@cc.tuat.ac.jp vincentas.veikutis@lsmuni.lt janis.viba@rtu.lv xjyang@cumt.edu.cn

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 |
| El Compendex: 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 |
| ResearchGate: https://www.researchgate.net |
| 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://kanalregister.hkdir.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.comE-mail:publish@extrica.comPublisher:Extrica

JVE Journal of Vibroengineering

DECEMBER 2024. VOLUME 26, ISSUE 8, PAGES (1730-1861), ISSN PRINT 1392-8716, ISSN ONLINE 2538-8460

Contents

MECHANICAL VIBRATIONS AND APPLICATIONS

| OPTIMAL TRAJECTORY CONTROL FOR THE YAW SYSTEM VIBRATION AND CRAWLING | 1730 |
|--|------|
| JITTER OF A WIND TURBINE | |
| Tingrui Liu, Qinghu Cui, Dan Xu | |

VIBRATION IN TRANSPORTATION ENGINEERING

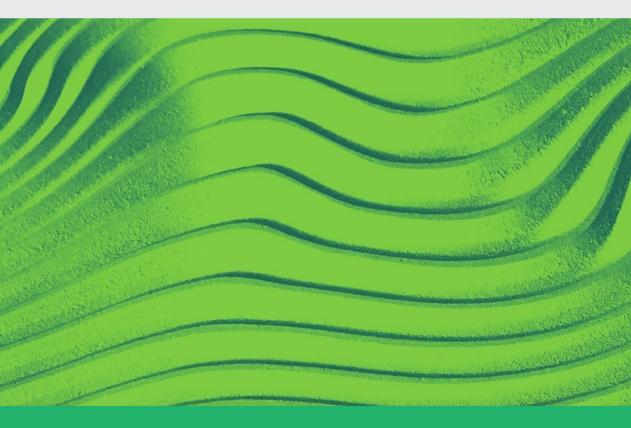
| VARIABLE DAMPING MECHANISM AND VERIFICATION OF THE TORSIONAL DAMPER FOR A PARALLEL-SERIES HYBRID ELECTRIC VEHICLE ZHONGYE ZHANG, XUMAO ZHAI, SHIBO CHENG, ZHIYONG WEN, MINGYAO YAO, ZHENGFENG YAN | 1746 |
|--|------|
| FLOW INDUCED STRUCTURAL VIBRATIONS | |
| STUDY ON DYNAMIC RESPONSE ANALYSIS AND VIBRATION CONTROL OF TV TOWER UNDER WIND-RAIN LOAD EXCITATION NA LI, ZHENGQUAN CHENG | 1763 |
| BIOMECHANICS AND BIOMEDICAL ENGINEERING | |
| ANALYSIS OF CHANGES IN LOWER LIMB JOINTS OF ATHLETES DURING THE MOVEMENT OF WILD HORSES' MANE PARTING BASED ON BIOMECHANICS JUAN HUANG | 1783 |
| DYNAMICS AND OSCILLATIONS IN ELECTRICAL AND ELECTRONICS ENGINEERING | |
| RESEARCH ON AN IMPROVED DEADBEAT MODEL PREDICTIVE CURRENT CONTROL OF DOUBLE THREE-PHASE OPEN-WINDING PERMANENT MAGNET MOTOR | 1791 |

OU SHA, HONGYU TANG

ACOUSTICS, NOISE CONTROL AND ENGINEERING APPLICATIONS

| MODEL STUDY ON TRANSMISSION LOSS OF THE SPLIT-STREAM RUSHING EXHAUST MUFFLER FOR DIESEL ENGINE HAIJUN ZHANG, HE SU | 1806 |
|---|------|
| A STUDY ON ACTIVE STRUCTURAL ACOUSTIC CONTROL USING FORCE RADIATION MODES Rongfu Mao, Haichao Zhu, Shanping Gao, Xing Zhang | 1825 |
| SYSTEM DYNAMICS IN MANUFACTURING SYSTEM MODELING | |
| RESEARCH ON INTELLIGENT CUTTING CONTROL TECHNOLOGY OF TRANSVERSE MOVING MACHINE FOR LARGE CROSS-SECTION ROADHEADER Wenguang Qin, Kai Cheng, Biao Wang | 1836 |
| ERRATUM: STUDY ON DYNAMIC CHARACTERISTICS AND WIND-VIBRATION CONTROL OF TRANSMISSION TOWER CONSIDERING LOCAL DAMAGE AND DESTRUCTION | 1861 |

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.





EXTRICA.COM