Extrica ↘ Conferences

ISSN ONLINE 2538-8479
ISSN PRINT 2345-0533

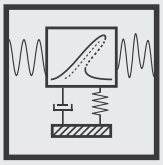
May 2025
VOLUME 58

Mechanical Engineering

Multidisciplinary Engineering

Materials Science and Technology

Vibroengineering Procedia



OPEN ACCESS PROCEEDINGS

VP Vibroengineering PROCEDIA

Vibroengineering PROCEDIA Volume 58 contains papers presented at the 72nd International Conference on Vibroengineering in Almaty, Kazakhstan, May 15-16, 2025. The main theme of the Conference is “ML and AI in Transport, Aerospace, and Mechanical Engineering”.

Aims and Scope

Journal publishes original papers presenting the state of the art in vibroengineering of dynamical systems. The list of principal topics:

- Measurements in engineering
- Mathematical models in engineering
- Acoustics, noise control and engineering applications
- Mechanical vibrations and applications
- Fault diagnosis based on vibration signal analysis
- Vibration control, generation and harvesting
- Seismic engineering and applications
- Modal analysis and applications
- Vibration in transportation engineering
- Flow induced structural vibrations
- Oscillations in biomedical engineering
- Chaos, non-linear dynamics and applications
- Oscillations in electrical engineering
- Fractional dynamics and applications
- System dynamics in manufacturing system modeling
- Dynamics of smart and functionally graded materials

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

More information is available online https://www.extrica.com/journal/vp

Vibroengineering PROCEDIA is referred in:

Scopus: ELSEVIER Bibliographic Database.
EI Compendex: ELSEVIER Bibliographic Database.
EBSCO: Academic Search Complete;
Computers & Applied Sciences Complete;
Central & Eastern European Academic Source;
Current Abstracts;
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
CORE: https://core.ac.uk
Ulrich’s Periodicals Directory: https://ulrichsweb.serialssolutions.com
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
WorldCat Discovery Services: https://www.oclc.org/en/worldcat-discovery.html
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
Publisher: Extrica

ISSN PRINT 2345-0533, ISSN ONLINE 2538-8479

72nd International Conference on VIBROENGINEERING
May 15-16, 2025, in Almaty, Kazakhstan

The main theme of the conference: **ML and AI in Transport, Aerospace, and Mechanical Engineering**

General Topics of the Conference:

- ML and AI in vibration engineering
- Noise and vibration in transport, aerospace, and mechanical engineering
- Vibration control and fault diagnosis in transport, aerospace, and mechanical engineering
- Engineering problems in manned/unmanned aviation and aerial systems
- Engineering problems in airport operation and management
- AI integrated robotics and engineering applications
- Sustainable development and engineering applications
- Advanced approaches in telecommunications and signal processing
- Materials science and engineering: modern trends and current issues

Chairs:

Saltanat Nuradilovna Amirgaliyeva	President-Rector of ALT University
Gani Sergazin	ALT University

Honorary Organizing Committee Members

Akhylbek Kurishbaev	National Academy of Sciences of the Republic of Kazakhstan
Bahodir Turayev	Tashkent State University of Transport
Almazbek Arzybaev	Kyrgyz State Technical University named after I. Razzakov

Scientific Organizing Committee Members

Zhang Wei	Chang'an University
Jeong-Won Kang	Professor, Korea National University of Transportation
Juriy Plotkin	Professor at Hochschule für Wirtschaft und Recht Berlin
Prashant Jamwal	Professor at Nazarbayev University
Teodor Iliev	Professor at University of Rousse

Local Organizing Committee Members

A. B. Seriktegi	Chairman of the board of directors of ALT University
Gulzana Beibitkyzy Serikova	Board of directors of ALT University
M. S. Zharmaganbetova	Vice Rector, ALT University
Andrey Alexandrovich Ivanov	Vice Rector, ALT University
Shamsigul Kobdikova	Acting Vice Rector, ALT University
Ruslan Kassym	Director, ALT University
Zhanna Suimenbayeva	Head of the Office, ALT University
Zhanna Beisakhmetova	Head of the Office, ALT University
Temirbekova Marzhan	International Information Technology University

ISSN PRINT 2345-0533, ISSN ONLINE 2538-8479

VP Vibroengineering PROCEDIA

MAY 2025. VOLUME 58, PAGES (1-422), ISSN PRINT 2345-0533, ISSN ONLINE 2538-8479

Contents

MECHANICAL VIBRATIONS AND APPLICATIONS

VIBRATION CONTROL, GENERATION AND HARVESTING

SEISMIC ENGINEERING AND APPLICATIONS

MODAL ANALYSIS AND APPLICATIONS

VIBRATION IN TRANSPORTATION ENGINEERING

MATERIALS AND MEASUREMENTS IN ENGINEERING

MATHEMATICAL MODELS IN ENGINEERING

SYSTEM DYNAMICS IN MANUFACTURING SYSTEM MODELING

SHORT DESCRIPTION ABOUT THIS CATEGORY

Vibroengineering is an abbreviation of two words: vibration and engineering. Vibration phenomena play an important role in a wide range of mechanical, structural, electromechanical systems. Vibration engineering covers such topics as mechanical vibrations and applications, fault diagnosis based on vibration signal analysis, seismic engineering, acoustics and noise control, energy harvesting and vibration generation.

Every consecutive Volume of Vibroengineering Procedia is dedicated to a separate conference in the series of International Conferences on Vibroengineering.