

ISSN 1027-5851

International Journal of Acoustics and Vibration

June 2026

Volume 31, Number 2

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2026) by The International Institute of Acoustics and Vibration (IIAV)
All rights reserved.

Printed with permission by Curran Associates, Inc. (2026)

For permission requests, please contact The International Institute of Acoustics and Vibration (IIAV)
at the address below.

The International Institute of Acoustics and Vibration (IIAV)
Department of Mechanical Engineering
Auburn University
1418 Wiggins Hall, Auburn AL
36849, USA

Phone: +1 334 844 3248
Fax: +1 334 844 3306

www.iiav.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

EDITORIAL OFFICE

EDITOR-IN-CHIEF

Jorge P. Arenas

EDITOR EMERITUS

Malcolm J. Crocker

MANAGING EDITOR

Marek Pawelczyk

PRODUCTION EDITOR

Teresa Glowka

ASSOCIATE EDITOR

Zhuang Li

ASSISTANT EDITORS

Sara Bysko

Bartłomiej Hrapkowicz

Karol Jablonski

Oliwia Krauze

EDITORIAL ASSISTANT

Linwood Stevens

Linda Holms

EDITORIAL BOARD

Cesar Vasques, Porto, Portugal

Cheuk Ming Mak, Hong Kong

Corrado Schenone, Genoa, Italy

Davide Borelli, Genova, Italy

Diego Ledezma-Ramirez,
Monterrey, Mexico

Francisco D. Denia, Valencia, Spain

Guoyong Jin, Harbin, China

Han Zhang, Beijing, China

Jian Kang, London, United Kingdom

Jingtao Du, Harbin, China

Jon Blotter, Provo, United States

Konstantinos Vogiatzis,
Wolos, Greece

Lars Hakansson, Växjö, Sweden

Lei Wang, Beijing, China

Luis Bento Coelho, Lisbon, Portugal

Luis Campos, Lisbon, Portugal

Peter W. Tse, Hong Kong

Roger Serra, Blois, France

Samir N. Y. Gerges,
Santa Catarina, Brazil

Silviu Nastac, Galati, Romania

T. J. S. Jothi, Calicut, India

Triantafillos Koukoulas,
Ottawa, Canada

W. S. Gan, Singapore

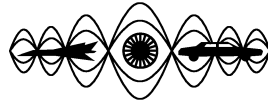
Wojciech Rdzanek, Rzeszow, Poland

Xiaojun Qiu, Sydney, Australia

Xiaoli Zhao, Nanjing, China

Zhanhui Liu, Chengdu, China

Zhushi Rao, Shanghai, China



International Journal of Acoustics and Vibration

A quarterly publication of the International Institute of Acoustics and Vibration

Volume 31, Number 2, June 2026

EDITORIAL

ICSV32 Istanbul: Acoustics from Heritage Sites to Future Cities

Konca Şaher and Papatya Nur Dökmeçi Yörükoğlu 162

ARTICLES

**End-to-End Recognition Method for Vehicle Interior Sound Annoyance
Based on Neural Network with Multiple Auditory Attention**

Zhao Tang, Shuang Li, Rui Li, Kean Chen, Ruiqian Wang and Qiang Xu 164

**Particle Damping for Underframe Equipment: Effects on Low-Frequency
Vibration Suppression in Railway Car Bodies**

*Baoan Zhang, Yu Zhou, Jing Zheng, Dawei Chen, Zhiqin Cai, Wei Xue
and Wangqiang Xiao* 176

**A Multisensor Fault Diagnosis Method for Rolling Bearings Based on
Improved Feature Mode Decomposition and Feature-Fused Images**

Qiang Li, Jieyu Cui, Tao Nie, Jiayi Liu, Jiayi Wang and Jiahao Jiang 186

**Research on Vibration Reduction Mechanism and Parameter Optimization
of a Piecewise Stiffness Energy Sink**

Xuan Zhao, Jun Wang and Jian-Chao Zhang 195

**How Green Landscape Factors Influence Soundscape Evaluation in Urban
Fringe Residential Areas**

Jiaming Gao, Zhiyu Zhou, Yongfang Zhou and Jian Kang 211

**Frequency and Phase Calculation Method of Rotating Machinery
Vibration Signal Based on Adaptive Notch Filter**

Xudong Guan, Hao Peng, Sihai Yu and Lidong Sun 229

**Dynamics of a Random Vibration Excited Discrete Packaging System with
Hyperbolic Tangent Nonlinearity**

Songping Yang and Peichang Deng 240

**Nonlinear Dynamic Analysis of Automotive Seat Rails: Experimental
Insights for Enhanced Modal Testing Design**

Philipp Wagner, Patrick Langer, Marcus Maeder and Steffen Marburg 253

**A Hybrid Vibration Reduction Strategy for Mistuned Blisks Using
Intentional Mistuning of Hard-Coating Damping**

Feng Gao and Jingjun Li 270

About the Authors 284