vibration

an Open Access Journal by MDPI

IMPACT FACTOR 1.9

CITESCORE 3.2

Aeroacoustics and Advanced Noise Control

Guest Editors:

Prof. Dr. Atef Mohany
Department of Mechanical and Manufacturing Engineering, Faculty of Engineering and Applied Science, University of Ontario Institute of Technology, Oshawa, ON L1G 0C5, Canada

Prof. Dr. Marwan Hassan
Mechanical Engineering, School of Engineering, University of Guelph, Guelph, ON N1G 2W1, Canada

Deadline for manuscript submissions:
closed (31 August 2023)

Message from the Guest Editors

Separated shear flows and wakes behind bluff bodies generate pressure perturbations with frequencies that vary linearly with the flow velocity. Under certain conditions, these pressure perturbations can be amplified, and they often result in acute noise levels and/or excessive vibrations. It is sometimes very challenging to predict the conditions under which such a scenario occurs and, therefore, it becomes imperative to develop active and passive techniques for noise control.

This Special Issue is dedicated to covering all aspects related to aeroacoustics in various flow configurations, with emphasis on the advanced techniques that can be used to alleviate their undesirable effects. The following topics are just some of the examples that will be covered:

- Experimental aeroacoustics
- Computational aeroacoustics
- Flow-excited acoustic resonance
- Fluid–structure interaction
- Howe's analogy for aerodynamic sound
- Flow control
- Wake structures over bluff bodies
- Acoustic damping devices
- Vortex dynamics
- Flow over cavities and side branches
- Flanking noise
- Acoustics of pumps and compressors

mdpi.com/si/97679

Special Issue