

Special Issue on
Structural Health Monitoring of Complex Equipment

CALL FOR PAPERS

Structural health monitoring (SHM) is a critical field that plays a vital role in ensuring the safety, reliability, and efficiency of complex equipment across various industries, including civil engineering, manufacturing, energy, and in particular the aerospace industry. It serves as the cornerstone of safety and operational excellence in these sectors, where even minor structural anomalies can lead to catastrophic consequences, financial losses, or operational disruptions.

The continuous evolution of technology and the increasing complexity of equipment demand innovative approaches to monitor and assess their structural integrity. In today's rapidly changing technological landscape, with materials and designs becoming much more intricate, SHM serves as an indispensable tool for adapting to these advancements. It offers a proactive means to identify potential issues before they escalate into costly problems, thus minimizing downtime and maintenance expenses.

This Special Issue aims to gather cutting-edge research and methodologies focused on advancing SHM techniques for complex equipment, with a focus on aerospace engineering. By providing a platform for researchers and industry experts to share their groundbreaking findings and practical insights, this Special Issue aspires to catalyze the development of next-generation SHM solutions that can effectively address the unique challenges posed by the growing complexity and diversity of modern equipment. We welcome both original research and review articles.

Potential topics include but are not limited to the following:

- ▶ Novel sensor technologies and data acquisition methods for complex equipment
- ▶ Data analytics and machine learning techniques for SHM data interpretation
- ▶ Integration of Internet of Things (IoT) and wireless sensor networks for real-time monitoring
- ▶ Non-destructive testing methods and their applications in SHM
- ▶ Practical applications of SHM in various industries
- ▶ Risk assessment and decision support systems based on SHM data
- ▶ Advances in computational modeling and simulation for predicting equipment behavior

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.wiley.com/submit?specialIssue=739384>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Editor

Yongchao Zhang, Northeastern University, Shenyang, China
zhangyongchao@mail.neu.edu.cn

Guest Editors

Kun Yu, China University of Mining and Technology, Xuzhou, China
kunyu9198@cumt.edu.cn

Zihao Lei, Xi'an Jiaotong University, Xi'an, China
zihaolei@stu.xjtu.edu.cn

Junchi Bin, University of British Columbia, Kelowna, Canada
junchibin@alumni.ubc.ca

Submission Deadline

Friday, 26 July 2024

Publication Date

November 2024