CALL OF PAPERS
Journal of Low Frequency Noise, Vibration and Active Control

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Special Issue on
Acoustics and Vibration Based Structural Health Monitoring of Piping Systems

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Objective

Structural health monitoring (SHM) is a method/process used to examine the condition and quality of the structure without disassembling the components of structure. Regular inspection of critical structures is necessary to avoid catastrophic failures. Using techniques like vibration response and acoustic emission sensing, one can identify precise location and nature of anomalies and take preventive measures. Regular inspection of cross-country pipelines carrying natural gas, oil, water etc. is very important as in the past many disasters/losses have occurred due to unavailability of information about the condition of pipelines. These pipelines are also susceptible to more damage because of the nature of their service. Most of these pipelines are laid under the ground making access very difficult for inspection. Continuous efforts have been made to improve the efficiency and precision of autonomous inspection. Hence, it is important to develop methods which are more accurate, faster, cheaper and with long operational range. Vibration based SHM is already a well-established non-destructive testing technique and currently used in the aerospace and automotive industries. Extension of such approach is also being considered for application to piping systems to help the industry determine health and life assessment of long and inaccessible pipelines.

The objective of the special issue is to report on the latest vibration/sound based health monitoring methods and systems for efficient detection of defects in conduits/pipelines.

Scope

Prospective authors are encouraged to consider the following non-exhaustive list of topics as a guide to submit their work for possible publication in this issue:

- Analytical approaches of damage detection in piping systems based on noise and vibration measurements
- Computational Methods for Vibration based Damage Prediction in Piping System
- Real-time processing of data and data mining for such applications
- Sensors and actuators for conduit health monitoring
- Wireless communication technology related to noise and vibration measurements
- Multi-sensor data fusion for such applications
- Smart materials for intelligent pigging system

Submission/acceptance schedule:

All papers submitted for consideration with view of publication in this issue will be subject to the normal peer review process of the Journal of Low Frequency Noise, Vibration and Active Control. It is envisaged that accepted papers will be published in the March, 2016 issue of the journal. Prospective authors are advised to adhere to the following schedule

01 May 2015:	Deadline for submission of initial 2-4 (A4) pages extended abstract of intended paper
01 June 2015:	Notification of acceptance of abstract and invitation for submission of full paper
15 August 2015:	Deadline for submission of full paper
01 November 2015:	Notification for acceptance/revision of full paper
15 November 2015:	Submission of final paper

Submission of papers

Authors are advised to consult the guide to authors on the journal's web-site at (http://www.multi-science.co.uk/lowfreq.htm) for preparation of their paper.

Authors are further advised to submit the initial extended abstract of their intended paper to the Guest Editors (bishakh@iitk.ac.in and ssgupta@iitk.ac.in), and if invited for full-paper submission to submit their full paper to the Editor-in-Chief of the journal either via the journal's web-site or directly at (o.tokhi@sheffield.ac.uk) according to the key dates above.

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