

## Guest Editorial

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The 2nd International Conference on Vibro-Impact Systems was held on 6-9 January 2010 in Sanya, on the tropical Hainan Island, China. The Conference was organised by Northeastern University, Shenyang, China and the International Centre of Vibro-Impact Systems (ICoVIS), with its headquarters at Loughborough University, UK. The conference was co-sponsored by the National Natural Science Foundation of China, Ministry of Education of the People's Republic of China, the Japan Society of Mechanical Engineers and the Applied Mechanics Group of the Institute of Physics.

The aim of the conference was to bring together academic and industrial experts from the fields of non-linear and structural dynamics, continuum mechanics, materials science, physics, applied mathematics, and mechanical, aerospace, civil and systems engineering to facilitate the mutual understanding of theory and applications of vibro-impact systems. The areas covered by this Conference included: excitation, synchronisation and stabilisation of vibro-impact processes; dynamics of vibro-impact machines and technological processes; vibration protection of operators and structures in harsh environment; synergistic effects of repeated impacts on solids and granular media; nonlinear fluid-solid interactions; analytical, experimental and numerical methods for the analysis of vibro-impact systems and processes; synthesis and optimisation of vibro-impact systems; measurements and applications of vibro-impact processes.

In total, 56 papers were presented at the Conference, covering various aspects of the vibro-impact systems. The plenary talks were given by Prof. Vladimir Babitsky (Loughborough University, UK), Prof. Bangchun Wen (Northeastern University, Shenyang, China), Prof. Weidong Zhu (University of Baltimore, Maryland, USA), Prof. Yimin Zhang (Northeastern University, Shenyang, China), Prof. Masaaki Okuma (Tokyo Institute of Technology, Japan), Prof. Vadim Silberschmidt (Loughborough University, UK) and Prof. Fulei Chu (Tsinghua University, Beijing, China).

This Special Issue contains a selection of papers, presented at the 2nd International Conference on Vibro-Impact Systems; in parallel, several conference papers, chosen by the International Scientific Committee, are published in a Special Section of Journal of Sound and Vibration.

The guest editors highly appreciate enthusiasm of participants in preparation of manuscripts as well as wide participation of international community in reviewing these manuscripts. We would also like to thank Prof. Dan Inman and the editorial team of *Shock and Vibrations* for their support of this Special Issue.

Chairmen of the Conference:

Q. Han & B. Wen, Northeastern University, P.R. China

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