



PREFACE

This Special Issue is devoted to flow-induced vibrations, in relation with the 7th International Conference on Flow Induced Vibration and Noise, which was held in June 2000, in Lucerne, Switzerland. This conference was a continuation of the very successful series of International conferences on Flow Induced Vibration, the first six of which were held in England (several in Keswick, and one each in Bowness-on-Widernere, Brighton and London) and the 8th conference is already in the planning phase and will be held in Paris in 2004.

Since the first conference in Keswick in 1973 with its focus on the needs of the nuclear industry, the scope of the papers presented in subsequent conferences has become successively wider. In the 7th Conference in Lucerne, 106 papers from 25 countries addressed numerous flow-induced vibration and noise phenomena relevant to a wide range of engineering applications, ranging from civil engineering and marine structures to power generations and chemical processing. This breadth of applications is exemplified by the major headings of the topics covered, which included

- Vortex-induced vibration
- CFD applications to fluid–structure interaction
- Advances in fluid–structure interaction theory
- Vibration of heat-exchanger tube bundles
- Flow–sound–structure interaction
- Oscillations of free shear layers and jets
- Thermo-acoustic instabilities
- Aeroelasticity
- Vibration of hydraulic structures
- Vibration of turbomachines and piping systems
- Flow-induced vibration related to rotors and paper machines
- Leakage flow-induced vibration
- Applications of fluid–structure interaction theory to biomedical engineering.

The aim of the conference was to bring together researchers working on the mechanisms and causes of vibration with those in industry, who are faced with either avoiding or solving flow-induced vibration and noise problems. The papers of this conference therefore constituted a ‘healthy mixture’ between papers from academia and papers from industry. All papers have been published in the proceedings available during the conference (Ziada, S. & Staubli, T. (eds.) 2000. *Flow-Induced Vibration*. Rotterdam: A. A. Balkema) and since then many also appeared in international journals, including this journal.

The papers presented in this special issue are up-dated versions of several papers presented in the conference that have not appeared yet in any journal, as well as other papers related to the field. The topics of these papers convey the diversity of the subjects and exemplify the very high quality of the papers presented in the conference. We would

like to thank all the authors for taking the time to up-date their papers and submit them for this Special Issue.

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