

Preface

The Fourth International Conference on Theoretical and Computational Acoustics (ICTCA'99) was held on 10–14 May 1999, at the Stazione Marittima Congress Centre in Trieste, Italy. The conference was hosted by the Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (OGS, Italy) and jointly sponsored by the Charles University of Prague (Czech Republic), the Dept. of Applied Mathematics and Theoretical Physics (DAMTP) of Cambridge University (UK), the IACM-Foundation for Research & Technology (Crete, Greece), the Roma Tre University (Italy), the Tel Aviv University (Israel), the Technion–Israel Institute of Technology (Israel), the Yale University (USA), the Columbia University (USA), the Boston University (USA), the University of Colorado (USA), the Scripps Institution of Oceanography of the University of California (USA), the U.S. Naval Undersea Warfare Center Division (NUWC), the U.S. Office of Naval Research (ONR), the U.S. Naval Research Laboratory (NRL), the NATO SACLANT Undersea Research Center (Italy), the Society of Exploration Geophysicists (USA), the Acoustical Society of America (USA), and STATOIL (Norway).

The objective of the conference was to provide an interdisciplinary forum for active researchers in academia and industry and of varying backgrounds to discuss state-of-the-art developments and results in theoretical and computational acoustics and related topics. About 280 papers have been presented at the meeting, covering acoustical problems of common interest across disciplines and their accurate mathematical and numerical modelling. It was a very successful conference with five parallel morning and afternoon sessions on various topics, from fundamental research to practical applications, among which we want to mention the specific mini-symposia on computational seismology, on finite element for wave problems, on geoacoustics inversion in shallow water, and on ultrasonic field synthesis and modelling.^a A large number of the lectures, converted to full papers, have been submitted for publication in the *Journal of Computational Acoustics* and, after

^aBollettino di Geofisica teorica ed applicata: an International Journal of Earth Sciences, OGS, Trieste (Italy), Vol. 40-1 *Supplement: ICTCA'99*.

a full revision process that was longer than expected, about 110 of them were printed in various JCA issues from Vol. 8(1) to Vol. 11(1). All the contributions are collected in this book in the hope that a larger number of scientists in the field can take advantage of them for their own studies. This was possible with the help of Prof. Robert Vichnevetsky, from IMACS, whom we wish to thank for granting us the reprint permission.

This book and the CD-Rom^b are the final result of a cooperative effort of many individuals that contributed to the organization of ICTCA'99 conference: the organizing and scientific committees, the session organizers and all the personnel of the conference office. We gratefully wish to acknowledge and thank all of them for their generous help. Special thanks go to Angela Marchetto, the conference secretary, for her continuous diligent efforts in assisting in all arrangements for the conference.

Géza Seriani, Chairman of ICTCA'99
Ding Lee, Co-chairman of ICTCA'99

^bCD-Rom System requirement: files are in PDF format. Acrobat Reader or a similar PDF file reader is required.