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**Theoretical and  
Computational  
Acoustics 2005**

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# Theoretical and Computational Acoustics 2005

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Hangzhou, China

19 – 22 September 2005

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## PREFACE

The seventh International Conference on Theoretical and Computational Acoustics (ICTCA) was held September 19–23, 2005 in Hangzhou, China. This meeting was sponsored by the China Hangzhou Association for International Exchange of Personnel (China), the U.S. Office of Naval Research (ONR), the U.S. Naval Undersea Warfare Center (NUWC), Columbia University (U.S.A.), Zhejiang University (China), Istituto Nazionale di Oceanografia e di Geofisica Sperimentale (Italy), Hangzhou Applied Acoustics Research Institute (China), the Key Laboratory of Geophysical Exploration (CNPC, China), and the Hangzhou Municipal Government (China).

The objective of this conference was, as usual, to provide a forum for active researchers to discuss state-of-the-art developments and results in theoretical and computational acoustics and related topics. It brought together researchers from numerous areas of science to exchange ideas and stimulate future research. The website is located at: [www.ictca2005.com](http://www.ictca2005.com).

Approximately one hundred scholars, scientists, and engineers from numerous countries participated in this event. The presented lectures examined topics in Underwater Acoustics, Mathematics, Scattering and Diffraction, Seismic Explorations, Genetic Algorithms, Reverberation, IFEM, Radon Transforms, Wavelet Statistics, Applications to the Oil Industry, Visualization, Shallow Water Acoustics, Gaussian Beams, Ocean Acoustic Inversion, and the Parabolic Equation (PE) with special emphasis on the work of the late Frederick D. Tappert.

The conference committee wishes to particularly thank Dr. Ding Lee (NUWC and Yale University) as the founder and Honorary Chair of the conference. Dr. Lee continues to be the primary person in charge of where, when, and how these meetings will take place. Additionally, we would like to send special thanks to Anna Mastan for her tireless help in administrative tasks. Special thanks also go to the local organizing chairs: Xianyi Gong, Yonggusang Mu, Yu-Chiung Teng, and Sean Wu. We also would like to thank our three keynote speakers: Profs. Dan Givoli (“High-Order Absorbing Boundary Conditions for Exterior Time-Dependent Wave Problems”), Oleg Godin (“Sound Propagation in Moving Media”), and Michael Buckingham (“Inversions for the Geoacoustic Properties of Marine Sediments Using a High-Doppler, Airborne Sound Source”).

The special sessions were of particular interest, and we gratefully acknowledge Drs. Sean Wu, Ding Lee, and E.C. Shang for the PE sessions. Additionally, there were sessions by Drs. Marburg and Nolte (FEM), Borovikov (Noise), Hui-Lian Ge (Scattering), J.M. Chiu (Seismic Acoustics), Godin (Shallow Water), Chapman (Applications), Taroudakis (3-D), Wu (Inverse Problems), Bjorno & Bradley (Wave Interactions), Gong (Modeling), Hanyga (Inversion), Chen (Underwater), Mo (Computational Acoustics), and Wang (Environmental Acoustics).

We look forward to the eighth meeting scheduled in 2007 for Iraklion, Greece to be organized by Prof. Michael Taroudakis.



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