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PROCEEDINGS OF THE FOURTH INTERNATIONAL SYMPOSIUM WAVES 2001

Volume One

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Abstract: These proceedings, *Ocean Wave Measurement and Analysis,* consist of 180 papers presented at WAVES 2001: the Fourth International Symposium, which was held in San Francisco, California, September 2–6, 2001. The symposium explored the major advances in wave measurement and quantification of ocean and lake waves, including technical knowledge and applications in wave theory, characteristics, design, and techniques. The topics addressed in these proceedings are national and international in scope and include practical examples and case histories on wave transformation, data analysis and reliability, wave modeling, design applications, long waves and tides, wave measurement techniques and instruments, extreme wave statistics, and other topics relating to wave research over the years since the conference in 1997. These proceedings will provide anyone involved with coastal technology a primary reference to the latest information in the field of wave measurement and analysis.

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Foreword

WAVES 2001, the Fourth International Symposium on ocean wave measurement and analysis, was held in San Francisco, California, USA, September 2–6, 2001. The measurement and quantification of ocean and lake waves for verifying wave theory, understanding wave characteristics, and producing economically and environmentally sensitive design are important needs in modern coastal technology. This symposium provided a forum for designers, researchers, and instrument manufacturers to discuss the latest innovations in method and measurement strategies. It is hoped that the symposium will help promote and improve communications, technology transfer, theory, and design. It is anticipated that this publication will become a primary reference in the field of wave measurement and analysis research.

This proceedings, *Ocean Wave Measurement and Analysis,* includes 180 papers amounting to about 2000 pages. This publication includes papers on wave transformation, theory and statistics, measurement, numerical and physical modeling, and application, as well as on long waves, remote sensing, and data analysis. It contains information on measurement projects and programs and provides practical national and international examples and case histories.

To this end, *Ocean Wave Measurement and Analysis* continues the forum for exchange of wave measurement and analysis research and development that was begun 27 years ago. The First International Symposium on Ocean Wave Measurement and Analysis was held in 1974 in New Orleans. It was organized by Orville T. Magoon and Dr. Billy Edge and produced a then state-of-the-art publication on wavea. Because of advances in wave measurement and analysis in the 1980s and 1990s and a need to extend the scope to include the formulation of wave statistics for design, a second symposium on ocean wave measurement and analysis was essential. Orville T. Magoon and J. Michael Hemsley organized the Second International Symposium on Ocean Wave Measurement and Analysis, **WAVES 93,** which was held in 1993 in New Orleans. That symposium expanded the focus of the first symposium and became the first of what is intended to be a series of symposia scheduled every four years. The third international symposium, **WAVES 97,** was held in Virginia Beach, Virginia, USA, in November 1997.

The next scheduled international symposium, **WAVES 2005,** is currently being planned for Madrid, Spain. It will continue the exchange of ideas and data in modern coastal wave theory, measurement and analysis, and technology. For more information, please contact Professor Billy L. Edge, Ocean Engineering Program, Department of Civil Engineering, Texas A&M University, College Station, Texas 77843-3136 USA or b-edge@tamu.edu.

The **WAVES 2001** conference co-chairs would like to acknowledge the diligent work of the Organizing and Technical Committees. Their work lead to a very successful program and a smoothly functioning conference. The ASCE and COPRI staff helped to organize the conference to provide as much opportunity for interaction as possible including a pre-conference short course and a post-conference fieldtrip to local sights of technical interest around San Francisco Bay.

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