COASTAL ENGINEERING 2020

Proceedings of the virtual International Conference

COASTAL ENGINEERING 2020

6 October -9 October, 2020

Edited by **Patrick Lynett**University of Southern California, USA

Abstract: This *Proceedings* contains 311 papers from the virtual International Conference on Coastal Engineering, which was held through an online platform from October 6th-9th, 2020. The *Proceedings* is divided into six parts: Papers; Waves; Swash, Nearshore Currents, and Long Waves; Sediment Transport and Morphology; Coastal Structures; and Coastal Management, Environment, and Risk. The "Papers" sections includes full length Proceedings papers, covering a broad range of topics including theory, numerical and physical modeling, field measurements, case studies, design, and management. The other sections include abstract and recorded presentation links, as presented at the conference. These submissions provide engineers, scientists, and planners state-of-the-art information on coastal engineering and coastal processes.

Foreword

The virtual International Conference on Coastal Engineering (vICCE) was held online from October 6th-9th, 2020. This was a most unusual ICCE, organized over a few short months in response to the required postponement of ICCE 2020 in Sydney to 2022. The vICCE program was planned on a 24-hour schedule, so that presenters from across the globe might participate in their local time zones. Over 3,500 people registered for the vICCE to discuss research and applications in coastal engineering. The papers and presentations contained in this *Proceedings* cover a wide range of topics including waves; swash, nearshore currents, and long waves; coastal management, risk, and environmental restoration; sediment transport and morphology; and coastal structures. The authors have provided state-of-the-art contributions, and this volume could not be produced without their commitment to solving coastal engineering challenges. The members of the ASCE/COPRI Coastal Engineering Research Council (CERC) and the ICCE 2020 Technical Review Committee reviewed 930 abstracts and accepted ~60% of these to be orally presented at the conference. The dedication of the Council members has led to the continued high quality and popularity of the International Conference on Coastal Engineering.

Preparation of these proceedings would not be possible without the assistance of many colleagues. Thank you to Dr. Jane Smith, CERC Chairman, Dr. Ron Noble, CERC Vice Chairman, and the entire CERC for their guidance and encouragement. Additional thanks go to Tom Chase and Sean Herpolsheimer at ASCE for answering many requests for information and organizing a successful conference in Baltimore.

Patrick Lynett
University of Southern California
Sonny Astani Department of Civil and Environmental Engineering
plynett@usc.edu

Acknowledgments

VIRTUAL LOCAL ORGANIZING COMMITTEE

Chair

Patrick Lynett, University of Southern California

Technical Committee

Giorgio Bellotti, University Roma Tre Daniel T. Cox, Oregon State University Nobuhito Mori, Kyoto University Ioan Nistor, University of Ottawa

Charitha Pattiaratchi, University of Western Australia

Ad Reniers, Delft University of Technology

Jane McKee Smith, U.S. Army Corps of Engineers, Engineer Research & Development Center

Coastal Engineering Research Council (ASCE/COPRI)

Jane McKee Smith, Chairman, U.S. Army Corps of Engineers, Engineer Research & Development Center

Ronald M. Noble, Vice Chairman, Noble Consultants, Inc.

Patrick Lynett, Secretary, University of Southern California

Daniel T. Cox, Oregon State University

Jennifer Irish, Virginia Tech

David L. Kriebel, U.S. Naval Academy

Iñigo J. Losada, IH Cantabria, University of Cantabria

Jeff Melby, U.S. Army Corps of Engineers, Engineer Research & Development Center

Robert J. Nichols, University of Southampton

Ad Reniers, Delft University of Technology

Shinji Sato, Tokyo University

Technical Abstract Review Committee

Patricio Catalan, Universidad Tecnica Federico Santa Maria

Lesley Ewing, California Coastal Commission

Leopoldo Franco, University Roma Tre

Tori Tomiczek, U.S. Naval Academy

James Kaihatu, Texas A&M University

Ioan Nistor, University of Ottawa

Nobuhito Mori, Kyoto University

Yalçın Yüksel, Yildiz Technical University

Sponsorship

The Local Organizing Committee of the virtual International Conference on Coastal Engineering is pleased to acknowledge the significant financial, organizational, and administrative support from the **American Society of Civil Engineers.**