Marine Systems & Ocean Technology

FOREWORD

The Brazilian ship construction industry has experienced a tremendous growth owing to the increasing demand for ships and offshore platforms to meet the needs of the oil and gas industry at the turning of this century. This growth trend was further enhanced by the government decision to allow the exploitation of oil and gas reserves at the Brazilian pre-salt. Although the Brazilian offshore industry is well developed, the challenges put before the country by this decision, in terms of new technologies, human resources training and investments are no less than huge. One of the strategies adopted by the government was to create a number of shipyard clusters all over the country, among them the Rio Grande Naval Cluster which is located at the town of Rio Grande in the southern state of Rio Grande do Sul.

The Rio Grande Naval Cluster has made an enormous impact in the local economy by creating a range of new business opportunities on one hand and by demanding the necessary infrastructure in the other. In order to address such matters, local authorities, academic community and related companies gathered to set up the first Rio Grande Naval Fair, with the aim of creating a positive business atmosphere as well to discuss technical issues related to the ocean. The technical issues were addressed at the International Conference on Offshore and Marine Technology: Science and Innovation - NAVTEC-2012.

In its first edition, NAVTEC addressed major technological challenges associated with shipbuilding and offshore industries and has presented itself as a new forum for discussion of issues related research, innovation and ongoing practices. The conference programme has included topics such as: Technical Sessions covering major topics of interest to the maritime industry; Panels discussions on topics most relevant to the current scenario with the participation of experts; Lectures presented by renowned experts; Exhibition of products and services marine and offshore - First Naval Cluster Fair - 2012 and Workshops in various areas of interest to the shipbuilding and offshore industry. NAVTEC-2012 proceedings published 18 of the 24 scientific papers submitted by researchers from major research centers in Brazil and of several other locations around the world. Each article was accepted after a review process by at least two reviewers.

NAVTEC-2012 was chaired by Prof. Segen Estefen from Federal University of Rio de Janeiro and co-chaired by Profs. Nelson Duarte and Sílvia Botelho, both from Federal University of Rio Grande and called for extended abstracts which were accepted based on at least two peer reviews. Authors of the best abstracts have been invited to submit full version papers that compose this Special Edition of MS&OT. The seven papers have gone through the regular peer reviewing process of MS&OT. These papers address some of the key issues of naval and ocean engineering problems such as ship construction, subsea riser technology, wave energy conversion devices and underwater robotics. This broad range of relevant subjects stresses the multidisciplinary nature of the ocean engineering problems

Finally, the guest editors would like to express their gratitude to MS&OT Chief Editor Prof. Marcelo Neves for the support for the organization of this Special Edition and to acknowledge the *ad hoc* reviewers from the technical program for their collaboration in the reviewing process. Also we are indebted to the secretarial staff of MS&OT.

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