FOREWORD

On behalf of the Technical Program Committee, it is our pleasure to welcome participants from all over the world to the ISOPE-2009 Conference. We greatly appreciate the excellent responses and help we have received from colleagues around the world in the successful organization of the 19th Annual International Offshore and Polar Engineering Conference (ISOPE-2009), Osaka, Japan, June 21–26, 2009.

The technical program committee received some 945 abstracts. The 2009 Conference features 121 sessions of peer-reviewed plenary papers and 543 peer-reviewed papers in the proceedings, 1 award lecture, 7 plenary sessions and 25 oral presentations without peer-reviewed papers in the proceedings, representing more than 50 countries. The conference program also includes the symposia of the 1st ISOPE Sloshing Dynamics and Design (SDD-2009), the 7th ISOPE HPM, and the 3rd ISOPE SBD-2009.

Since 2002, we have published ISOPE conference proceedings exclusively on CD-ROM from the high-quality PDF files of the peer-reviewed papers on ISOPE conference template: All peer-reviewed and paginated. The annual conference proceedings for 1991–2002 were printed in hard copies.

The purposes of the ISOPE conference are to:

- Promote technological progress and activities; international technological transfer and cooperation; and opportunities for engineers to maintain and improve technical competence.
- Provide a timely international forum for technical activities, cooperation, opportunity and fellowship among researchers and engineers through the development of focused session topics. High-quality papers, expressing technical originality and significance, are accepted only after
rigorous review. ISOPE strives to maintain high international standards for publication and worldwide distribution; and the promotion of interdisciplinary interaction between academia and industry.

The International Society of Offshore and Polar Engineers (ISOPE) already has held 42 successful international meetings:

- The Annual ISOPE conferences, starting in Edinburgh, 1991 were held in San Francisco, Singapore, Osaka, The Hague, Los Angeles, Honolulu, Montréal, Brest, Seattle, Stavanger, Kitakyushu, Honolulu, Toulon, Seoul, San Francisco, Lisbon and Vancouver. Since 1992, the annual ISOPE Conference has been held with the world's largest technical program of its kind with refereed papers;
- The 1st (2007) ISOPE SBD Symposium, Lisbon, 2007; SBD-2008 Vancouver; SBD-2009 to be held in Osaka
- The 1st ISOPE Sloshing Dynamics and Design (SDD) Symposium to be held in Osaka

The ISOPE TPC has recently expanded the number of papers on emerging topics of importance such as nanomaterials, strain-based design, risk-based design, frontier energy resources, offshore wind energy, advanced natural gas transport, high-performance materials, composites and smart structures and gas hydrates. We shall continue to encourage the presentation and discussion of other emerging topics at future conferences.

On behalf of all the individual TPC members (listed in General Information), we would like to thank the reviewers (listed in General Information) for their help in upholding the technical accuracy and quality of papers. We extend our great appreciation for the help of colleagues around the world, particularly the authors and reviewers in meeting the deadlines.

We would like to take this opportunity to announce that the ISOPE-2010 Conference will be held in Beijing, China, June 20–26, 2009. Click on www.isope.org for the call for papers.

Co-chairmen of the ISOPE-2009 Conference

Jin S Chung, USA
A JNA Sarmento, Portugal
Shigeru Naito, Japan
Cuneyt Capanoglu, SA
Michael Isaacson, Canada
Ro-sik Park, Korea
Acknowledgement

The success of The Annual 19th International Offshore and Polar Engineering Conference (ISOPE-2009 Osaka), Osaka, Japan, June 21–26, 2009 is attributable to the teamwork of the members of the Technical Program Committee (TPC), the cooperating organizations and the reviewers (listed in General Information).

The TPC would like to express its sincere appreciation to the TPC members’ organizations for their support, which has been crucial to the successful organizing of the conference and to Local Organizing Committee and Profs. Shigeru Naito and Naoki Osawa and Osaka University staff for their efficient handling of the local organization, support and coordination and to the ISOPE staff.

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Namura Shipbuilding Co., Ltd
Nippon Steel Corporation
Nippon Steel Engineering Co., Ltd
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Sumitomo Heavy Industries Marine & Engineering Co., Ltd
Toa Corporation
Toyo Construction Co., Ltd
Universal Shipbuilding Corporation