FOREWORD

On behalf of the Technical Program Committee, it is our pleasure to welcome participants from all over the world to the ISOPE-2013 Anchorage Conference. We greatly appreciate the excellent responses and help we have received from colleagues around the world in the successful organization of the 23rd Annual International Offshore and Polar Engineering Conference (ISOPE-2013), Anchorage, Alaska, USA, June 30–Jul 5, 2013.

The technical program committee received some 1196 abstracts. The 2012 Conference features 152 sessions of 646 peer-reviewed papers in the proceedings, 1 award lecture, 3 plenary sessions, 6 keynote presentations and 36 oral presentations without peer-reviewed papers in the proceedings, representing more than 52 countries. The conference program also includes the following symposia as part of the Conference:

- 1st Manganese Steel
- 2nd Tsunami & Safety
- 2nd Asset Integrity
- 4th Arctic Science & Technology
- 3rd Arctic Materials
- 4th Renewable Energy & Environment
- 5th Sloshing Dynamics & Design
- 5th Frontier & Clean Energy Tech
- 11th High-Performance Materials
- 6th Strain-Based Design
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 1991~2001 were printed in hard copies. Conference proceedings ISOPE-1997, 1999, 2000 and 2001 are available in CD-ROM.

The individual papers are also available in PDF files for global online subscription:

- The International Journal of Offshore and Polar Engineers
- The annual International Offshore (or Ocean) and Polar Engineering Conference
- The European Offshore Mechanics Symposium
- The Pacific-Asia Offshore Mechanics Symposium
- Ocean Mining (& Gas Hydrates) Symposium, and
- International Deep Ocean Technology Symposium.

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) has already held 53 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, Vancouver, Osaka, Beijing, Maui, Rhodes. Since 1992, the annual ISOPE conference program has been the world’s largest of its kind with peer-reviewed papers;
- ISOPE ANGT Symposium: Seoul 2005;
- The 1st ISOPE Sloshing Dynamics and Design (SDD) Symposium, Osaka 2009, Beijing 2010; Maui 2011; Rhodes 2012.
- The 1st ISOPE Arctic Science and Technology Symposium, Beijing 2010; Maui 2011; Rhodes 2012
The ISOPE TPC has recently expanded the number of papers on emerging topics of importance such as LNG sloshing, Arctic materials, manganese steel, asset integrity, nanomaterials, strain-based design, Arctic, frontier energy resources, clean energy, renewable energy and environment, 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-2014 Conference will be held in Busan, Korea, June 15–June 20, 2014. Click on www.isope.org for the call for papers.

Co-chairmen of the ISOPE-2013 Conference

Jin S Chung, USA  
Raghavan Ayer, USA  
Demos Angelides, Greece

Ronald H Knapp, USA  
Xizhao Jiang, China  
Shigeru Naito, Japan

Acknowledgement

The success of the 23rd Annual International Offshore and Polar Engineering Conference (ISOPE-2013), Anchorage, Alaska, USA, June 30–July 5, 2013 is attributable to the teamwork of the members of the Technical Program Committee (TPC), the cooperating organizations, the reviewers (listed in General Information), the host committee and ISOPE office.

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 Host Committee (Prof. Angelides and his team) for their efficient handling of the local organization, support and coordination and to the ISOPE staff members for their outstanding coordination of the conference.

Special Acknowledgement

The ISOPE-2013 participants, Host Committee, ISOPE Technical Program Committee and ISOPE board of directors would like to thank for the sponsorship from:

ExxonMobil  
POSCO  
ONR Global

COSL  
NIOT  
PNG-MRA