

## Preface

The 11<sup>th</sup> International Conference of Hydroscience and Engineering (ICHE), which is held from September 28<sup>th</sup> to October 2<sup>nd</sup>, 2014, at the “Universität Hamburg” in Hamburg, Germany, is part of a series of bi-annual conferences started in 1993 in Washington, DC. Beijing hosted ICHE in 1995, followed by Cottbus (1998), Seoul (2000), Warsaw (2002), Brisbane (2004), Philadelphia (2006), Nagoya (2008), Chennai (2010) and Orlando (2012). All proceedings are available from ICHE conference archive (<http://mdi-de.baw.de/icheArchive/>).

These conferences have since served as a welcome forum to report and discuss the latest scientific advancements and practitioner’s solutions in hydroscience and engineering.

The Local Organizing Committee of ICHE 2014 has received 240 abstracts, of which 197 were considered to be aligned with the conference topics by the International Scientific Committee.

Under the motto “**Hydro-Engineering for Environmental Challenges**“ 141 papers of 347 authors and co-authors from all 5 inhabited continents could be collected in these proceedings. The proceedings are subdivided into 12 topics:

- Water Resources Planning and Management
- Experimental and Computational Hydraulics
- Groundwater Hydrology, Irrigation
- Urban Water Management
- River, Estuarine and Coastal Dynamics
- Sediment Transport and Morphodynamics
- Interaction between Offshore Utilisation and the Environment
- Climate Change, Adaptation and Long-Term Predictions
- Eco-Hydraulics and Eco-Hydrology
- Integrated Modeling of Hydro-Systems
- Remote Sensing and Field Monitoring
- Information Management and Decision Support Systems

and four mini-symposia:

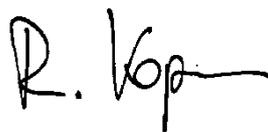
- CFD in the Nearfield of Structures
- Impacts of Climate Change on Inland and Coastal Waterways and Adaptation Strategies
- Data Management in Hydro-Engineering
- Advances of Modeling Methodology for Agricultural Research

The organizers would like to thank all authors, reviewers and participants for their exciting contributions to the International Conference of Hydroscience and Engineering 2014. The numerous articles and posters show the immense importance and complexity of the conference topics. Certainly the scientific and practical developments of these contributions will be a further step towards successfully facing the environmental challenges in the field of Hydro-Engineering.

Finally, the organizers are grateful to all those who have helped and supported the organization of this event, especially the *Federal Waterways Engineering and Research Institute* (BAW), which also financed these proceedings.



Rainer Lehfeldt,  
*Chair of Local Organizing Committee*



Rebekka Kopmann,  
*Secretary of Local Organizing Committee*

*September 2014, Hamburg, Germany*