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EDITORIAL

Editorial

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The earth's surface is almost entirely covered with larger or smaller amounts of cohesive sediment, or mud as it is generally known, with the exception perhaps of some deserts and parts of the ocean bed. Mud is, and has been throughout time, both a blessing and a curse to mankind. It is a valuable resource, both for mankind and the ecosystem. On the other hand, accumulation of mud in harbors and navigation channels may hamper navigation, and, worse, contaminants may adhere to the fine cohesive particles, endangering the environment.

In spite of its importance, the physical processes of cohesive sediment in the natural environment are still poorly understood, though research into this topic started almost half a century ago. Therefore, in 1981, Dr. Reg Parker and Prof. Ashish Mehta formed an international platform where young, experienced and world leading scientists and engineers can meet and discuss the latest progress in the area of cohesive sediment properties, dynamics, and modeling. The first meetings were held in Florida, USA. Since then, this platform has evolved in a regular biennial conference series known as INTERCOH (International Conference on Cohesive Sediment Transport), with emphasis on the physical and engineering aspects of the behavior of cohesive sediments.

Since 1981, ten conferences were organized. The 11th conference was held in 2009 in Rio de Janeiro and Paraty, Brazil, focusing on:

- Physical processes of cohesive and mixed sediments: erosion, deposition, flocculation, liquefaction, and consolidation
- Mud deposit characterization: rheological approaches, biological and chemical processes affecting fine sediment dynamics
- Numerical modeling of cohesive and mixed sediment transport
- Field and lab observations on the behavior of fine sediments in the water column (including the benthic boundary layer)
- Fine sediment and mixture behavior on estuaries and tidal flats
- Fine sediment and mixture behavior on the continental shelf and slope
- Fine sediment and mixture behavior on lakes and reservoirs

Following this program, a special session on fine sediment processes in ports and navigation channels was organized. More than 90 delegates participated in the conference, with 44 oral and 24 poster presentations. The scientific papers of INTERCOH-2009 are collected in this volume of *Ocean Dynamics* containing 15 manuscripts.

The INTERCOH-2009 conference could not be held without the financial support of Capes, FAPERJ, CPRM, Bank of Brazil, Secirm, UFRJ, ASA South America, Husky Duck, and C&C Technologies. Furthermore, we gratefully acknowledge the animated and skillful help of Marcos Gallo, Luana Freire, Carla Vilela, Rodrigo Duarte, Betina Lima, Debora Machado, Iranilson Silva, Edgard Villarinho, Diego Fonseca, Gustavo Melo, Bernardo Costa, and Cristiano Moura, a group of enthusiastic students from the Coastal & Oceanographic Engineering Department, at UFRJ. We also would like to commemorate Leonardo Veloso Dardengo, passenger on flight AF447, which disappeared over the Atlantic Ocean only 3 weeks after the conference. Leonardo was also among the enthusiastic staff of students and became legendary by winning the mud race.

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