Preface

The ISFMA Symposium on Mathematical Models for Surface and Subsurface Hydrosystems was held on September 13—17, 2004 at Hohai University, Nanjing, China. With the increasing awareness of the heavy burden placed on environmental resources and the need of industry and public institutions to cope with more stringent regulations, the scope of the Symposium was to focus on some specific, but very important, environmental problems, namely surface and subsurface hydrosystems. The purpose was to present state-of-the-art techniques to model such systems, to promote the exchange of scientific ideas between French and Chinese experts, and to foster new collaborations between France and China in this field. Approximately 70 participants, including five French representatives attended the Symposium.

The activities of the Symposium included five 3-hour keynote lectures elaborating from the basics to recent advances in hydrosystem modeling and several contributed presentations dealing with more specific problems. This volume collects the material presented in the keynote lectures and some selected contributed lectures. The topics covered include mixed finite element method, finite volume formulation, sharp front modeling, biological process modeling, red tide simulation, and contaminant transfer in coastal waters. As such, this volume should be useful to graduate students, post-graduate fellows and researchers both in applied mathematics and in environmental engineering.

As organizers of this Symposium, we would like to express our gratitude to various institutions for their supports: National Nature Science Foundation of China, Mathematical Center of Ministry of Education of China, Hohai University, French Embassy in Beijing, Consulate General of France in Shanghai, ISFMA (Institut Sino-Français de Mathématiques Appliquées) and SOGREAH. We also thank all the lecturers and participants for their contributions. Our deepest appreciation goes to Professor Li Tatsien for his support in launching this Symposium. Special thanks also to Matthieu Jouan for his instrumental help in the organization.

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October 2005