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Transactions Editor

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D. Emmanouloudis

Technical Education Institute of Kavala, Greece

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G. Lorenzini

Alma Mater Studiorum-University of Bologna, Italy

C. A. Brebbia

Wessex Institute of Technology, UK

D. Emmanouloudis

Technical Education Institute of Kavala, Greece

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Preface

This book contains papers presented at the First International Conference on Monitoring, Simulation, Prevention and Remediation of Dense and Debris Flows held in Rhodes, Greece, in 2006 and organised by the Wessex Institute of Technology in collaboration with the University of Bologna and the Technological Education Institute of Kavala. The objective of the meeting was to bring together engineers, scientists and managers from laboratories, industry, government and academia to interchange knowledge in the field of dense and hyperconcentrated flows. The contents stress the importance and possibilities of numerical simulation and experimental measurements on all those environmental flows that affect our environment, sometimes dramatically.

The basic concept of dense flow relates to a great variety of natural phenomena that occur both in-field and in the laboratory. A full understanding of them can lead not only to a better description of what happens in nature but also to the development of more effective countermeasures to limit the negative effects or even to predict their dynamics in order to minimise any potential damage.

The Conference aimed to be very specialised but not too restrictive in the topics allowed, so as to explore any possible synergies among all those scientists and professionals working on what can be called environmental flows. This made the First International Conference on Monitoring, Simulation, Prevention and Remediation of Dense and Debris Flows, a unique event.

This book, which is an important addition to the literature, contains the following sections: Debris-flow modelling; Debris-flow phenomenology; Debris and hyperconcentrated flows; Debris flow and landslides phenomena after extreme events; Debris-flow mobilisation; Debris-flow disaster mitigation; Case studies.

The Editors are grateful to the members of the International Scientific Advisory Committee who have helped in the selection of the papers included in this book. The quality of the material makes this volume a most valuable tool for scientists and research workers in the field to appreciate the state-of-the-art developments in this important discipline and to seek new techniques and approaches to prevent and control natural disasters of this kind.

The Editors
Rhodes, 2006

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