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Edited by J. G. Carbonell and J. Siekmann

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Ian F. C. Smith (Ed.)

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Preface

Providing computer support for tasks in civil engineering and architecture is hard. Projects can be complex, long and costly. Firms that contribute to design, construction and maintenance are often worth less than the value of their projects. Everyone in the field is justifiably risk adverse. Contextual variables have a strong influence making generalization difficult. The product life cycle may exceed one hundred years and functional requirements may evolve during the service life. It is therefore no wonder that practitioners in this area have been so reluctant to adopt advanced computing systems.

After decades of research and industrial pilot projects, advanced computing systems are now being recognized by many leading practitioners to be strategically important for the future profitability of firms involved in engineering and architecture. Engineers and architects with advanced computing knowledge are hired quickly in the market place. Closer collaboration between research and practice is leading to more comprehensive validation processes for new research ideas. This is feeding development of more useful systems, thus accelerating progress. These are exciting times.

This volume contains papers that were presented at the 13th Workshop of the European Group for Intelligent Computing in Engineering. Over five days, 70 participants from around the world listened to 59 paper presentations in a single session format. Attendance included nearly everyone on the Scientific Advisory Committee, several dynamic young faculty members and approximately ten doctoral students. The first paper is a summary of a panel session on the Joint International Conference on Computing and Decision Making in Civil and Building Engineering that finished in Montreal nine days earlier. The remaining papers are listed in alphabetical order of their first author.

Organizational work began with requests for availability and funding in September 2004. This was followed by tens of personal invitations to experts from around the world during 2005. I would like to thank the Organizing Committee, and particularly from January 2006 its Secretary, Prakash Kripakaran, for assistance with the countless details that are associated with running meetings and preparing proceedings. The meeting was sponsored primarily by the Swiss National Science Foundation and the Centro Stefano Franscini. Additional support was gratefully received from the Ecole Polytechnique Fédérale de Lausanne (EPFL), the Technical Council on Computing and Information Technology of the American Society of Civil Engineers and the Ecole de Technologie Supérieure, Montréal.

July 2006 Ian F.C. Smith

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