Preface

With the Internet, bio-technology, video digital data processing, as well as global geometric data applications, the enormous sizes of datasets have been pushing our limits in data processing. Both theoreticians and practitioners are challenged to an extent that has never been seen before. Growing pressure has been put on different experts, such as computer scientists, combinatorics experts, and statisticians, dealing with their own large data processing problems, to reach out beyond their own disciplines, to search for ideas, methodologies, and tool boxes, to find better, faster and more accurate solutions.

The International Symposium on Combinatorics, Algorithms, Probabilistic and Experimental Methodologies (ESCAPE) is intended to provide an interdisciplinary forum for researchers across their discipline boundaries to exchange their approaches, to foster innovative ideas as well as to develop a research agenda of common interest. The novelty of ESCAPE is to study practical, large data processing problems with different, and eventually converging, methodologies from major important disciplines.

This volume contains the proceedings of the first ESCAPE symposium, which was held in Hangzhou, China, April 7–9, 2007. We received a total of 362 submissions, of which 184 (50.8%) entered the formal review process and the remaining 178 were declined at an initial screening process as being out-of-scope. Each of the submitted papers that entered the formal review process was reviewed by at least three members of the Program Committee or their deputies on the quality, originality, soundness, and significance of its contributions. Finally 56 papers were accepted: an overall acceptance rate of 15.5%. This proceedings volume contains the 46 papers that were presented at the symposium.

Of the accepted papers, four were selected by the Award Panel as finalists for the Best Paper Award, and these were presented in a special plenary session, after which the final winner was identified. The winner also received a cash prize of US$ 1,000. In this volume the winner’s paper appears first, followed by those of the other three finalists.

The huge success of the workshop resulted from the input of many people. We would like first of all to thank all the members of the Program Committee and the Award Panel for their expert evaluation of the submissions. Their service greatly helped raise the academic standard of the symposium.

The local organizers did an extraordinary job, for which we are very grateful. We thank the Department of Mathematics, Zhejiang University, and the National Natural Science Foundation of China for their financial support and for providing an excellent location for the symposium.

April 2007

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