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Evolutionary Multi-Criterion Optimization

4th International Conference, EMO 2007
Matsushima, Japan, March 5-8, 2007
Proceedings

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Preface

Multicriterion optimization refers to problems with two or more objectives (normally in conflict with each other) which must be simultaneously satisfied. Evolutionary algorithms have been used for solving multicriterion optimization problems for over two decades, gaining an increasing attention from industry.

The 4th International Conference on Evolutionary Multi-criterion Optimization (EMO2007) was held during March 5–8, 2007, in Matsushima/Sendai, Japan. This was the fourth international conference dedicated entirely to this important topic, following the successful EMO 2001, EMO 2003 and EMO 2005 conferences, which were held in Zürich, Switzerland in March 2001, in Faro, Portugal in April 2003, and in Guanajuato, México in March 2005. EMO2007 was hosted by the Institute of Fluid Science, Tohoku University. EMO2007 was co-hosted by the Graduate School of Information Sciences, Tohoku University, the Japan Aerospace Exploration Agency (JAXA), and the Policy Grid Computing Laboratory, Kansai University.

The EMO2007 scientific program included four keynote speakers: Hirotaka Nakayama on aspiration level methods, Kay Chen Tan on large and computationally intensive real-world MO optimization problems, Carlos Fonseca on decision making, and Gary B. Lamont on design of large-scale network centric systems.

In response to the call for papers, 124 papers from 30 countries were submitted, each of which was independently reviewed by at least three members of the Program Committee. This volume contains the 65 papers that were accepted for presentation at the conference, together with contributions based on the invited talks. It is worth noting that the number of submissions to the EMO conference has steadily increased over the years. For EMO 2001, 87 papers were submitted (from which 45 were accepted). For EMO 2003, 100 papers were submitted (from which 56 were accepted). For EMO 2005, 115 papers were submitted (from which 59 were accepted). This is a clear indication of the growing interest in this research field.

We would like to express our appreciation to the keynote speakers for accepting our invitation. We thank all the authors who submitted their work to EMO 2007, and the members of the Program Committee for their thorough reviews. We wish to thank the Air Force Office of Scientific Research, Asian Office of Aerospace Research and Development for their contribution to the success of this conference. The organizers are particularly thankful to industrial sponsors, CD-adapco JAPAN Co., Ltd., Engineous Japan, Inc. and Honda Research Institute Japan Co., Ltd. for Dinner Sponsorship, Itochu Techno-Solutions Corporation and Sumisho Computer Systems Corporation for Lunch Sponsorship, BestSystems Co., Ltd. Fujitsu Limited, Hitachi, Ltd., Mitsubishi Heavy Industries, Ltd., SGI Japan, Ltd., for Refreshment Sponsorship, and Honda Research Institute Europe GmbH., Platform Computing Inc. and Microsoft Co., Ltd. for Student Support Sponsorship.

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March 2007

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