Operations Research Proceedings

Diethard Klatte
Hans-Jakob Lüthi
Karl Schmedders *Editors*

Operations Research Proceedings 2011

Selected Papers of the International Conference on Operations Research (OR 2011), August 30 - September 2, 2011, Zurich, Switzerland

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Preface

The German Operations Research Society, GOR, has a long-standing tradition to report on the progress in the field of Operations Research, as evidenced by presentations in their annual conference in the form of conference proceedings. About every four years the annual conference is hosted by one of the other two German-speaking OR societies: the Austrian society, ÖGOR, or the Swiss community, SVOR. The *International Conference on Operations Research (OR 2011)* took place at the University of Zurich from August 30 to September 2, 2011. This volume contains a selection of papers presented at this conference.

More than 840 scientists and students from over 50 different countries attended OR 2011 and presented 620 papers in 16 parallel topical streams, as well as special award sessions. These proceedings are organized around these streams and award sessions. The stream co-chairs organized the review process of submitted papers from their respective streams. The editors made the final selection based on recommendations by referees as well as the stream co-chairs. The final acceptance rate of submitted papers was about 50 percent.

Instead of a catchy mission statement or slogan for OR 2011, we, the organizers, committed ourselves to realizing a "Sustainable OR 2011". Efficiency of resource usage lies at the heart of Operations Research, and environmental protection has become an active academic topic at OR conferences. For example, at OR 2011 the stream "Energy, Environment and Climate" was prominently visible with 8 sessions dedicated to this topic. However, scientific and technological advances alone are not sufficient to achieve a sustainable way of living.

With the project "Sustainable OR 2011" we intended to increase the awareness of the conference's carbon footprint in the areas of travel, accommodation, catering, conference materials and infrastructure. Part of the conference's footprint has been compensated by supporting carbon offset projects with "myclimate", a nonprofit spinoff foundation of the ETH Zurich. We invite the conference participants and readers of these proceedings to join these efforts and to "do the best and offset the rest"!

The conference was designed according to our shared understanding of Operations Research as an interdisciplinary science focusing on modeling complex socio-

technical systems to gain insight into behavior under interventions by decision makers. Dealing with "organized complexity" lies at the core of OR and designing useful support systems to master the challenge of system management in complex environment is the ultimate goal of our professional societies. To this end, two fundamental competences need to be steadily improved, algorithmic techniques and systemic modeling. The editors hope that both aspects are as well-balanced in these proceedings as they were in the conference.

We thank the program committee and, in particular, the stream co-chairs for helping us during the review process of more than 800 papers submitted for presentation at OR 2011. Many thanks to all the anonymous reviewers who evaluated the papers submitted for these proceedings. We owe much gratitude to our colleagues Marco Laumanns, Michele Marcionelli and Marc Wiedmer who implemented and maintained the paper submission system and greatly helped us in preparing the LaTeXdocuments and optimizing the layout process. Thank you very much!

We are grateful to Christian Rauscher from Springer-Verlag for his support in publishing this proceedings volume.

Zurich, January 2012

Diethard Klatte
Hans-Jakob Lüthi
Karl Schmedders

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