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Integration of AI and OR Techniques in Constraint Programming for Combinatorial Optimization Problems

9th International Conference, CPAIOR 2012
Nantes, France, May 28 – June 1, 2012
Proceedings

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Preface

The 9th International Conference on Integration of Artificial Intelligence and Operations Research Techniques in Constraint Programming was held in Nantes, France, May 28-June 1, 2012.

The aim of the CPAIOR conference series is to bring together interested researchers from constraint programming (CP), artificial intelligence (AI), and operations research (OR) to present new techniques or new applications in combinatorial optimization and to provide an opportunity for researchers in one area to learn about techniques in the others. A main objective of this conference series is also to give these researchers the occasion to show how the integration of techniques from different fields can lead to interesting results on large and complex problems.

Therefore papers that actively combine, integrate, or contrast approaches from more than one of the areas were especially solicited. High-quality papers from a single area were also welcome. Finally, application papers showcasing CP/AI/OR techniques on innovative and challenging applications or experience reports on such applications were strongly encouraged.

Submissions for this year were 64 papers. Each paper received at least three independent peer reviews which formed the basis for the acceptance of 26 papers. These papers are published in full in these proceedings. The Program Committee made a good job of providing thorough reviews and discussions.

CPAIOR 2012 included three invited talks from:

- Michel Habib, Université Paris Diderot, France
- Helmut Simonis, 4C, Cork, Ireland
- Laurence Wolsey, Université Catholique de Louvain, Belgium

As usual, a one-day Master Class and one day of workshops were held this year. The Master Class, intended for PhD students, researchers, and practitioners, was held on scheduling including presentations from Nicolas Beldiceanu, Claude-Guy Quimper, Petr Vilím, Emmanuel Hébrard, Michele Lombardi, and Christian Artigues.

The one-day workshop program consisted of three workshops:

- *Combinatorial Optimization in Logistics and Production Systems*
organized by Éric Pinson and Jorge Mendoza.
- *Search Strategies and Non-standard Objectives*
organized by Christian Artigues, Emmanuel Hébrard, Marie-Josée Huguet, and Deepak Mehta.
- *Bin Packing and Placement Constraints*
organized by Nicolas Beldiceanu and François Fages.

The staff of the École des Mines de Nantes did an outstanding job providing administrative support and general organization help to make this conference work. In particular, we would like to thank Mireille Méchineau and Thierry Petit.

A special thanks goes to Michela Milano, who did a wonderful job in gathering all the sponsors who made this conference possible:

École des Mines de Nantes, Région Pays de la Loire, Nantes Métropole, LINA UMR CNRS, INRIA, Université de Nantes, ACP, National ICT Australia, SAS, IBM Research, Institute for Computational Sustainability, Jeppesen, AIMMS, ROADEF, LigéRO, Google.

June 2012

Nicolas Beldiceanu
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Mireille Méchineau, Delphine Clenet, Anaïs Marotte, and the members of the TASC INRIA/CNRS/École des Mines de Nantes team.

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