

Preface

This book celebrates the 10 years of CPAIOR, the International Conference on the integration of Artificial Intelligence (AI) and Operations Research (OR) techniques in Constraint Programming (CP). CPAIOR started in 1999 as a workshop series. It was first held in Ferrara, (Italy) and was co-organized by the Italian Association of Artificial Intelligence (AI*IA) and the Italian Association of Operations Research (AIRO). The workshop success went far beyond the expectations and received around 40 submissions and 70 participants from all over Europe and US. Such a large and lively community motivated researchers to organize the workshop for the following four editions, respectively, in Paderborn (Germany) in 2000, Ashford (United Kingdom) in 2001, Le Croisic (France) in 2002, and Montreal (Canada) in 2003. In 2004, CPAIOR became an International Conference with formal proceedings published as Springer LNCS. It was organized in Nice (France) with more than 100 participants. CPAIOR was then organized in Prague (Czech Republic) in 2005, Cork (Ireland) in 2006, Brussels (Belgium) in 2007, Paris (France) in 2008, Pittsburgh (USA) in 2009, while the upcoming meeting in 2010 will take place in Bologna (Italy). CPAIOR achieved in Paris the record number of 150 participants. CPAIOR main aim is to provide a forum for researchers in combinatorial optimization that exploits the hybridization of CP, AI, and OR techniques.

Constraint programming was always an integration technology as the original constraint programming languages already featured linear programming and satisfiability solvers. However, CP research in the early 1990s increasingly focused on the deep integration of OR techniques in finite domain solvers, which had become the essence of constraint programming. This cross-fertilization led to exciting results and have changed the way we look at combinatorial optimization. It led to new alleys for research, produced innovative optimization systems, provided more effective solutions to complex optimization problems, and enabled new application areas for optimization. This book glances through these exciting developments with the hope to draw readers to learn more and pursue this line of research.

The next 10 years of CPAIOR are likely to be interesting: They will certainly build on the foundations established in the last decade but will likely feature innovative, and far-reaching contributions that cannot be anticipated now.

The authors of the book chapters are eminent and well known researchers and have significantly contributed to the success story of the CPAIOR research field.

They come from Universities, Research Centers, and industry. We would like to thank all of them for their contribution.

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