

Editorial

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Today, optimization problems arise everywhere. Our society, with advanced technology and competitive businesses, needs to take best possible decisions, which involve the best possible use of resources with the objective of maximizing revenue or minimize production or design cost.

The large amount of applications, combined with the development of fast computers, has led to massive innovation in optimization and in particular in its computational aspects. For instance, in 2002, Robert E. Bixby, in ‘Solving Real-World Linear Programs: A Decade and More of Progress. *Operations Research* 50, 3–15’, wrote about linear programming that “A model that might have taken a year to solve 10 years ago, can now solve in less than 30 seconds”. Important improvements from a computational point of view are continuously achieved not only in linear programming, but also in any area of optimization. Larger and more difficult problems are solved faster.

This matter of fact has motivated the Association of European Operational Societies (EURO) to dedicate one to its three new journals, that were launched during the IFORS 2011 conference in Melbourne, to computational optimization.

The aim of the EURO Journal on Computational Optimization is to contribute to the many areas in which Operations Research and Computer Science are tightly connected with each other. More precisely, the common element in all contributions is the use of computers for the solution of optimization problems. Both methodological contributions and innovative applications are considered, but the emphasis is set on computational aspects. The journal publishes three types of articles (i) research articles,

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(ii) tutorials, and (iii) surveys. A research article presents original methodological contributions. A tutorial provides an introduction to an advanced topic designed to ease the use of the relevant methodology. A survey provides a wide overview of a given subject by summarizing and organizing research results.

This inaugural issue presents nine papers by distinguished scientists. The subjects of these papers, namely cutting planes, decomposition methods, heuristics, bilevel programming, direct search in nonlinear optimization, and optimization applications are just a small sample of topics that interest the EURO Journal on Computational Optimization.

We hope that, thanks to the extremely efficient help and excellent work of its Editorial board and the strong support of EURO, the EURO Journal on Computational Optimization will soon establish itself as a major journal in the field of Operations Research.