



ELSEVIER

Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

Discrete Applied Mathematics 133 (2004) 1–2

**DISCRETE
APPLIED
MATHEMATICS**

www.elsevier.com/locate/dam

Preface

This special issue contains a selection of papers presented at the International Symposium on Combinatorial Optimisation (CO2000) held at the University of Greenwich, London, from July 12 to 14, 2000. The symposia were started in the UK and are usually held biennially. Because of their growing international reputation, since 1994 the symposia have been taking place alternately in the UK and in one of the countries of continental Europe. In 2000, the conference came back onto British soil, and since Greenwich was one of the major centers of celebration of the millennium year, the University of Greenwich had become an obvious choice as the most suitable venue for hosting it.

CO2000 attracted 93 participants from many European countries, as well as Brazil, Canada, China, Japan, Taiwan, Tunisia and the USA. The invited speakers for the symposium were Thomas Liebling (EPFL), Chris Potts (University of Southampton), David Shmoys (Cornell University) and Barbara Smith (University of Leeds). Their 1 h lectures covered the areas of applications of combinatorial optimisation to Biology, local search algorithms that use neighborhoods of exponential size, approximation algorithms for location problems, and modelling techniques for constraint propagation.

This issue contains six papers that address various areas of Combinatorial Optimization.

- Cappanera, Gallo and Maffioli consider the problem of simultaneously locating obnoxious facilities and routing the undesirable goods. A number of solution algorithms are presented (Lagrangian relaxation, branch-and-bound, bundle) and encouraging computational results are reported.
- Confessore, Dell'Olmo and Giordani study the complexity and approximability of scheduling multiprocessor tasks on dedicated machines, provided that the processors are organised as a ring and a task needs a number of consecutive processors.
- Kellerer and Strusevich present a number of complexity results and approximation algorithms for various scheduling problems on parallel dedicated machines subject to resource constraints.
- Petch and Sahli report on the successful computational performance of a constructive heuristic for a variant of the vehicle routing problem in which a vehicle is allowed to make more than one trip.
- Shenmaier provides conditions for the greedy algorithm to deliver an optimal solution for structures other than matroids.

- Van Hoesel, Koster, van de Leensel and Savelsbergh develop polyhedral results regarding the capacity installation problem in network design and offer a branch-and cut algorithm.

We express our appreciation to the authors for submitting their papers to this special issue, and to a large number of referees for their time and effort. We gratefully acknowledge the editorial staff of *Discrete Applied Mathematics*, especially Peter Hammer, the Editor-in-Chief, and his assistants Nelly Segal and Scott Alessi for their cooperation in the preparation of this issue.

Professor Richard W. Eglese
*Lancaster University, Department of Operational Research
Lancaster LA1 4YX, United Kingdom
E-mail address: R.Eglese@lancaster.ac.uk*

Professor Martin G. Everett
*University of Greenwich, School of Computing and Mathematical Sciences
London SE10 9LS, United Kingdom
E-mail address: M.G.Everett@gre.ac.uk*

Dr. Chris N. Potts
*University of Southampton, Faculty of Mathematical Studies
Southampton SO17 1BJ, United Kingdom
E-mail address: cnp@maths.soton.ac.uk*

Dr. Vitaly A. Strusevich
*University of Greenwich, School of Computing and Mathematical Sciences
London SE10 9LS, United Kingdom
E-mail address: V.Strusevich@gre.ac.uk*