

Preface

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Biographical notes: Agostinho Agra received his PhD in Operations Research from the University of Lisbon, Portugal. His main research interests include real applications of operations research and mixed integer programming problems with a particular emphasis on lot-sizing and inventory routing problems. Currently, he is an Assistant Professor of the Mathematics Department at the University of Aveiro.

Cláudia Neves is currently an Assistant Professor at the Department of Mathematics of the University of Aveiro, Portugal. She received her PhD in Statistics and Operational Research from the Faculty of Sciences, University of Lisbon. Her main focus of research is on extreme value statistics.

Delfim F. M. Torres is an Associate Professor of Mathematics at the University of Aveiro, Scientific Coordinator of the Systems and Control Group of CIDMA, and Editor-in-Chief of *IJMS* and *IJAMAS*. He received his Licenciatura from the University of Coimbra, and MSc and PhD from the University of Aveiro. He has written more than 200 scientific and pedagogical publications, and held positions of Invited and Visiting Professor in several countries in Europe, Africa, Caucasus and the USA. His research interests include various topics in the areas of the calculus of variations and optimal control.

The 74th European Study Group with Industry (ESGI) was held in Portugal at the Department of Mathematics of the University of Aveiro. This meeting was part of the series of European Study Groups that started in the UK nearly 40-years ago. The

purpose of these meetings is to strengthen the links between mathematics and industry by using mathematics to tackle industrial problems which are proposed by industrial partners.

More information on study groups and related aspects is available at the International Study Groups website, <http://www.maths-in-industry.org/>, the Smith Institute and the European Consortium for Mathematics in Industry.

The 74th ESGI counted with the participation of six-organisations: five-companies and the Food Bank of Lisbon, and with more than 60-academic participants, who were a diverse group of people with expertise in the mathematical sciences, including masters and PhD students, researchers and professors.

On the first day of the meeting, a representative from each company presented the industrial/organisational problem to the participants. The academic participants allocated themselves to a group, each of which worked in one of the proposed problems with the industrial partner. The work was developed on full-time basis over the remainder days of the meeting. On the last day, however, each group gave a presentation of their results and/or findings. Afterwards, a report on each problem was sent to the corresponding industrial company. The authors of those reports were asked to submit an improved and extended version to this special issue on mathematics and industry of the *International Journal of Mathematical Modelling and Numerical Optimisation (IJMMNO)*. All submitted papers have passed the standard referee process, and six-papers were accepted, after revision, together with one invited paper by Professor Alfredo Bermúdez from University of Santiago de Compostela, Spain. We trust that the present volume will help to promote research and collaboration between mathematics and industry.