



Recent advances in optimization theory and applications (RAOTA-2016)

Pankaj Gupta¹ · Riccardo Cambini² · S. S. Appadoo³

Published online: 23 July 2018

© Springer Science+Business Media, LLC, part of Springer Nature 2018

This special volume of the *Annals of Operations Research* is brought out on the occasion of the International Conference on Recent Advances in Optimization Theory and Applications (RAOTA-2016), held during 30–31 January 2016, at the Satyakam Bhawan, University of Delhi, North Campus, Delhi, India. The conference was jointly organized by the Mathematical Programming Group (MPG), Delhi, Department of Operational Research, University of Delhi, and Department of Mathematics, University of Delhi. It was dedicated to the late Professor Dr M. C. Puri, a pioneer member of the MPG, Delhi.

This volume focuses on new international research in theoretical and computational techniques of optimization and related applications to try to solve emerging and complex decision making problems. Extended versions of papers presented at the conference RAOTA-2016 as well as other papers were submitted to the special volume. Of 59 papers, 35 were accepted after a rigorous review process.

The papers are classified into two broad categories, theoretical advancements and new methodological developments, and cover the following areas:

- Convex functions and generalizations
- Vector optimization
- Set-valued optimization
- Variational principles
- Variational-type inequality
- Data envelopment analysis based applications
- Decision making under uncertainty
- Heuristics and meta-heuristics
- Twin support vector machine
- Stochastic modelling

✉ Pankaj Gupta
pgupta@or.du.ac.in

Riccardo Cambini
riccardo.cambini@unipi.it

S. S. Appadoo
SS.Appadoo@umanitoba.ca

¹ Department of Operational Research, University of Delhi, Delhi, India

² Department of Economics and Management, University of Pisa, Pisa, Italy

³ Asper School of Business, University of Manitoba, Winnipeg, Canada

- Software reliability modelling
- Scheduling problems
- Fuzzy optimization
- Portfolio optimization
- Grey mathematical programming
- Transportation problem
- Quadratic fractional programming

Many people helped us in selecting and preparing the contributions to this special volume and we would like to take this opportunity to thank them. We first thank the participants of the International Conference on Recent Advances in Optimization Theory and Applications, especially those coming from abroad. We are very thankful to the *Annals of Operations Research* and the publishing house of Springer for the honor of hosting this special volume dedicated to RAOTA-2016. Our special gratitude is conveyed to the Editor-in-Chief, Professor Endre Boros, for his interest, confidence, and support of the proposal for the special volume; to the Managing Editor, Mrs. Katie D'Agosta, for her continued advice and guidance and her precious support in every respect; and to Ms. Anandhi Sankar, for her helpful service and positive attitude during the reviewing stages. We sincerely thank all the referees for their efforts to maintain the high publication standards of the *Annals*. We also thank all the authors for their readiness to share their newest results with the research community, and we hope that their insights will stimulate collaboration and advances of the highest quality at a global level.