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EDITORIAL

Sweet sixteen

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Abstract This is the traditional triennial note used by the editors to give the readers of *4OR* information on the state of the journal and its future. In the 3 years that have passed since the last editorial note (Liberti et al. in Q J Oper 13:1–13, 2015), three volumes (each containing four issues) of the journal have been published: vol. 13 (2015), vol. 14 (2016), and vol. 15 (2017).

1 What has happened since 2014?

Our journal just turned sixteen. We summarize in the present editorial the main events in its life since the end of 2014.

- *4OR* continues to be indexed by ISI Web of Science. The impact factors we had in this triennium are impressive (we remind that they were 0.323, 0.730, and 0.918 for 2011, 2012, and 2013, respectively):

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  - 1.000 for 2014, with 288 citations (published in June 2015);
  - 1.371 for 2015, with 337 citations (published in June 2016), and
  - 1.559 for 2016, with 482 citations (published in June 2017).

- Our current 1.559 impact factor is a great achievement for a relatively young and small journal: it is higher than that of well established journals like *Computational Optimization and Applications*, *INFORMS Journal on Computing*, *Journal of the Operational Research Society*, *Journal of Optimization Theory and Applications*, *Journal of Scheduling*, *Optimization Letters*, *Networks*, *Discrete Optimization*, *Operations Research Letters*, and *Mathematics of Operations Research*. It will not be easy to further improve such performance, but the Editors-in-Chief and the Associate Editors (whom we warmly thank) will try hard.
- Scopus reports, for *4OR*, a CiteScore (average citations received per published document) of 1.83.
- Scimago assigns the journal an H-index of 29. It classifies *4OR* in three subject areas: *Mathematics*, *Computer Science*, and *Business, Management and Accounting*. In all these areas *4OR* is in the first quartile.
- The quality of the invited surveys that we keep publishing led to a new (fourth) volume of the *Annals of Operations Research* (Liberti et al. 2016a), where updated versions of the 2012–2014 surveys have been republished.
- Along the triennium, the board of Associate Editors was enlarged, to better reflect the fields of Operations Research in which we receive many submissions. We would like to welcome all editors, and thank them for their effort towards the development of *4OR*.

2 Cheating attempts

Past editorials (Bouyssou et al. 2006, 2009) have highlighted attempts to publish plagiarized articles. The electronic Editorial Manager now automatically checks each submission through ©Ithenticate and makes the report available to the editors. This made the plagiarists' life less easy, but still we had some attempts: The authors have been banned from submitting to *4OR* and included in the list of banned authors in our web page http://www.4or.be/Plagiarism.html.

Delinquents have however a fertile imagination. Liberti et al. (2015) described a number of attempts that threatened the journal's scientific integrity, including hacking the electronic submission systems, tricking the refereeing process, or selling the authorship of accepted publications.

We recently unveiled a new "idea" experienced by our journal. Three Iranian researchers submitted a (weak) manuscript co-authored with a well-known Dutch economist. Upon contacting him, we learned that he was totally unaware of this submission, and we decided to play the game: We prepared fake reviews and communicated to the alleged authors that the manuscript was going to be accepted for publication subject to minor revisions. The revised manuscript came quite quickly, but this time the

name of the Dutch economist had disappeared from the authors' list. When we highlighted this to the authors, the answer was that he was responsible for the submission but, after revision, he didn't want to appear as an author any more. It was then clear that the objective was to to count on the reputation of the well known pretended author to ease acceptance. We wrote to the authors that their dishonest scientific conduct had been discovered and that they were banned from publishing in 4OR.

The story has a follow-up. After the publication of our editorial Crama et al. (2016), we got almost identical emails from the three authors, claiming that they were totally unaware of the submission, and that someone had fraudulently used names and mail addresses in order to damage them. The whole issue has then been taken in charge by the Springer's Publishing Ethics Team (in collaboration with corporate lawyers) and a central officer at the university in Teheran.

These facts have reached a wider audience. The well-known blog *Retraction Watch* has published an article by McCook (2016) that narrates the whole story and adds that, in the same period, Springer and BioMed Central retracted nearly 60 papers from authors based in Iran, citing - among other issues - adding extra authors. The name of one of the researchers named in our editorial is listed as a co-author on four of the papers pulled by Springer/BMC.

3 What has been published?

In addition to editorials like the present one, the journal considers papers for publication in five different sections, namely:

- invited surveys;
- research papers;
- industry papers;
- education papers;
- abstracts of Ph.D. theses.

All types of papers, except education papers, have been published in volumes 13–15. A synthetic overview appears in Table 1. The total number of published pages remains more or less stable over the last few years, but a persistent trend is that the percentage of pages devoted to research papers is on the rise (64.3% in 2015–2017, up from 53.7% in 2009–2011 and 56.9% in 2012–2014). This increase is at the expense of thesis abstracts (whose length has been voluntarily reduced) and, to some extent, of invited surveys. In subsequent sections, we detail which papers of each type have been published and how they were selected.

4 Invited surveys

Nine invited surveys were published in volumes 13–15. The average length of these papers was 35 pages (compared to 32 in volumes 1–3, 39 in volumes 4–6, 30 in volumes 7–9, and 31 in volumes 10–12) with a minimum of 19 pages and a maximum of 57 pages. Almost one fourth of the journal is devoted to these texts. These figures may appear quite high, but on the other hand our survey section is an established and

Table 1 Types of papers published (2015–2017)

Type of papers	Number of papers	Number of pages	Percentage of pages (%)
Editorials	2	17	1.3
Invited surveys	9	317	24.3
Research papers	40	837	64.2
Industry papers	3	82	6.3
Education papers	0	0	0.0
PhD thesis abstracts	25	50	3.8
Total	79	1303	100.0

Table 2 Country of origin of invited surveys published (2015–2017)

Country	Number of surveys	Percentage (%)
France	4	44.4
USA	3	33.4
Denmark	1	11.1
Spain	1	11.1
Total	9	100.0

appreciated feature of the journal. In addition, as survey articles are often referenced, the visibility of the journal is increased, which is beneficial to all authors in the long run. We publish surveys written by well-established scholars, presenting the state-of-the-art of relevant Operations Research areas. Papers in this section are solicited by the Editors-in-Chief and collectively reviewed by them. The countries of origin of the surveys are examined in Table 2, where we conventionally record the affiliation of the majority of authors, using that of the first author to break ties. We detail in Sect. 4.1 how the *Annals of Operations Research* volume containing the surveys published in volumes 10–12 saw light, while in Sect. 4.2 we summarize the contents of the invited surveys that were published in volumes 13–15.

4.1 The *Annals of Operations Research* volumes

The long standing collaboration between *4OR* and the *Annals of Operations Research* continues. Every 3 years, a volume of the annals collects the surveys published in the preceding 3 years by *4OR*. This collaboration started in 2006 at the suggestion of the late Peter L. Hammer (former Editor-in-Chief of the *Annals of Operations Research*), and is now being continued by Peter's successor Endre Boros. These volumes, that are guest-edited by the Editors-in-Chief of *4OR*, are very well received by the scientific community. The first volume appeared in Bouyssou et al. (2007), the second in Bouyssou et al. (2010), the third in Liberti et al. (2013), and the fourth in Liberti et al. (2016a). We summarize the contents of the latest volume here, referring the reader to Liberti et al. (2016b) for a more detailed description.

1. *Learning from conflicts in propositional satisfiability* (*4OR* 10/1, Hamadi et al. 2012) Youssef Hamadi, Saïd Jabbour, and Lakhdar Saïs discuss the application of machine learning techniques to SAT solving.
2. *The symmetric quadratic knapsack problem: approximation and scheduling applications* (*4OR* 10/2, Kellerer and Strusevich 2012) Hans Kellerer and Vitaly Strusevich discuss fully polynomial time approximation schemes for the Symmetric Quadratic Knapsack Problem and the Half-Product Problem, and their application to various scheduling problems.
3. *Relaxations of mixed integer sets from lattice-free polyhedra* (*4OR* 10/3, Pia and Weismantel 2012) Alberto Del Pia and Robert Weismantel give an introduction to a recently established link between the geometry of numbers and mixed integer optimization.
4. *Semidefinite relaxations for partitioning, assignment and ordering problems* (*4OR* 10/4, Rendl 2012) Franz Rendl introduces the field of semidefinite optimization for non-experts. The basic concepts are explained on a mostly intuitive level. A variety of semidefinite optimization models are presented on a selection of graph optimization problems.
5. *Bilevel programming and price setting problems* (*4OR* 11/1, Labbé and Violin 2013) Martine Labbé and Alessia Violin present the main concepts, models and solution methods of pricing optimization problems which can be modeled as bilevel programs.
6. *Combining metaheuristics with mathematical programming, constraint programming and machine learning* (*4OR* 11/2, Talbi 2013) El-Ghazali Talbi gives a rational, categorized view of the field of hybrid metaheuristics, discussing in particular the case of hybridization with mathematical programming and constraint programming.
7. *Using multi-objective evolutionary algorithms for single-objective optimization* (*4OR* 11/3, Segura et al. 2013) Carlos Segura, Carlos Coello Coello, Gara Miranda, and Coromoto León present the main methods that allow the use of multi-objective schemes for single-objective optimization, and discuss several open topics and some possible paths of future work in this area.
8. *Global optimization based on local searches* (*4OR* 11/4, Locatelli and Schoen 2013) Marco Locatelli and Fabio Schoen deal with the use of local searches within global optimization algorithms, and present how the associated issues have been faced in the existing literature.
9. *Merit functions: a bridge between optimization and equilibria* (*4OR* 12/1, Pappalardo et al. 2014) Massimo Pappalardo, Giandomenico Mastroeni, and Mauro Passacantando review the literature about merit functions for variational inequalities, quasi-variational inequalities and abstract equilibrium problems.
10. *On scheduling with the non-idling constraint* (*4OR* 12/2, Chrétienne 2014) Philippe Chrétienne gives an overview of the main results obtained on the complexity of scheduling under the non-idling constraint, i.e, when the jobs assigned to each machine must be processed with no intermediate delay.
11. *Deriving compact extended formulations via LP-based separation techniques* (*4OR* 12/3, Lancia and Serafini 2014) Giuseppe Lancia and Paolo Serafini intro-

duce a unified view of compact extended formulations applied to combinatorial optimization problems.

12. *Simulation optimization: a review of algorithms and applications* (*4OR* 12/4, Amaran et al. 2014) Simulation optimization refers to the optimization of an objective function subject to constraints, both of which can be evaluated through a stochastic simulation. Satyajith Amaran, Nick Sahinidis, Bikram Sharda, and Scott Bury review some of the diverse applications that have been tackled by these methods and speculate on future directions in the field.

4.2 Invited surveys: 2015–2017

The following surveys were published in volumes 13–15.

1. *Large-scale Unit Commitment under uncertainty* (*4OR* 13/2, Tahanan et al. 2015) Millad Tahanan, Wim van Ackooij, Antonio Frangioni, and Fabrizio Lacalandra provide a survey of the literature on methods for the Uncertain Unit Commitment problem, in all its variants. They start with a review of the main solution methods for the deterministic versions of the problem, and then present and categorize the approaches to the uncertain version.
2. *When polynomial approximation meets exact computation* (*4OR* 13/2, Paschos 2015) Vangelis Paschos outlines a relatively new research agenda aiming at building a new approximation paradigm by matching two distinct domains: the polynomial approximation and the exact solution of $\mathscr{NP}$-hard problems by algorithms with guaranteed and non-trivial upper complexity bounds.
3. *Shared mobility systems* (*4OR* 13/4, Laporte et al. 2015) Gilbert Laporte, Frédéric Meunier, and Roberto Wolfler Calvo consider several problems arising in the optimization of shared mobility systems for bicycles and cars. They classify the relevant literature under five main headings: station location, fleet dimensioning, station inventory, re-balancing incentives, and vehicle repositioning.
4. *Light on the infinite group relaxation I: foundations and taxonomy* (*4OR* 14/1, Basu et al. 2016a) Amitabh Basu, Robert Hildebrand, and Matthias Köppe review the infinite-dimensional relaxation of integer linear optimization problems introduced by Ralph Gomory and Ellis Johnson in their groundbreaking 1972 papers. Their survey presents the problem in the modern context of cut generating functions and focuses on the recent developments, such as algorithms for testing extremality and breakthroughs for the k-row problem for general $k \geq 1$.
5. *Light on the infinite group relaxation II: sufficient conditions for extremality, sequences, and algorithms* (*4OR* 14/2, Basu et al. 2016b) In the second part of their survey on the infinite group problem, Amitabh Basu, Robert Hildebrand, and Matthias Köppe focus on piecewise linear extreme functions with more than four different slopes. An interactive companion program, implemented in the open-source computer algebra package Sage, provides an updated compendium of known extreme functions.
6. *Vehicle routing problems with multiple trips* (*4OR* 14/3, Cattaruzza et al. 2016) Diego Cattaruzza, Nabil Absi and Dominique Feillet consider the multi-trip vehicle routing problem and related areas. They provide a unified view of mathematical

formulations and a survey of exact and heuristic approaches. Variants of the problem and other families of routing problems where multiple trips are sometimes allowed are also considered.

7. *Assigned and unassigned distance geometry: applications to biological molecules and nanostructures* (*4OR* 14/4, Billinge et al. 2016) Simon Billinge, Phillip Duxbury, Douglas Gonçalves, Carlile Lavor, and Antonio Mucherino introduce the body of knowledge called distance geometry, that has been originated by the seminal results found by Menger and Blumenthal. They review some recent developments for assigned and unassigned distance geometry and focus on two main applications: determination of three-dimensional conformations of biological molecules and nanostructures.
8. *Optimization in liner shipping* (*4OR* 15/1, Brouer et al. 2017) Berit Dangaard Brouer, Christian Vad Karsten, and David Pisinger give an overview of data-driven optimization problems in liner shipping. Starting from the liner shipping network design, they consider the problem of container routing and speed optimization. They also consider empty container repositioning, stowage planning, disruption management, and bunker purchasing. Future challenges and directions for further research are discussed.
9. *Recent contributions to linear semi-infinite optimization* (*4OR* 15/3, Goberna and López 2017) Miguel Angel Goberna and Marco Antonio López review the state-of-the-art in the theory of deterministic and uncertain linear semi-infinite optimization, presenting some numerical approaches and describing a selection of recent applications in a variety of fields. Extensions to related optimization areas, such as convex semi-infinite optimization, linear infinite optimization, and multi-objective linear semi-infinite optimization, are also commented.

5 Research papers

5.1 Research papers published

Regular papers are the core of the journal. We published 40 such papers in volumes 13–15, giving an average number of 3.33 research papers per issue. For volumes 1–12, we had an average of 2.875. Table 3 details the country of origin of the papers published (using the same convention as above). Belgium, France and Italy account for 22.5% of all papers (42% for volumes 9–12). Compared to previous volumes, there is a strong increase of papers from China.

The average length of the research papers published in volumes 13–15 is 20.6 pages with a minimum of 8 pages, a maximum of 31 pages and a median of 20 pages. This is detailed in Table 4. Compared with previous volumes, where the median was around 15, there is a slight increase in the length of the papers.

5.2 Selection of research papers

We give here information on the reviewing process of research papers for which a decision was made between 1 January 2015 and 31 December 2017.

Table 3 Origin of research papers published (2015–2017)

Country	Number of papers	Percentage (%)
China	9	22.5
France	6	15.0
Iran	4	10.0
Brazil	3	7.5
Germany	3	7.5
Algeria	2	5.0
Belgium	2	5.0
Australia	1	2.5
Canada	1	2.5
Czech Republic	1	2.5
Denmark	1	2.5
India	1	2.5
Italy	1	2.5
Portugal	1	2.5
Turquie	1	2.5
UK	1	2.5
United Arab Emirates	1	2.5
USA	1	2.5
Total	40	100.0

Table 4 Length in pages of research papers published (2015–2017)

Length	Number of papers	Percentage (%)
$x \leq 10$	2	5.0
$11 \leq x \leq 14$	5	12.5
$15 \leq x \leq 19$	7	17.5
$20 \leq x \leq 24$	14	35.0
$25 \leq x$	12	30.0
Total	40	100.0

Except for few cases of plagiarism that were fortunately detected and a couple of parallel submissions, the reviewing process of the papers was rather smooth. The collaboration between the three editors and the area editors proved effective and efficient.

5.2.1 Rejection rate

Submissions have been following a regular pace. Between 1 January 2015 and 31 December 2017, 652 decisions concerning research or industry papers were made (to be compared with 499 in the years 2012–2014, 219 in the years 2009–2011, 136 in the years 2006–2008, and 189 submissions before 31 December 2005).

A total of 47 research papers were accepted, meaning an overall rejection rate of 93% (same rate as in 2012–2014, 85% in 2009–2011, 79% in 2006–2008 and 71%

before 31 December 2005). In order to interpret this, rather high, rejection rate, one should consider that, unfortunately, many submissions either concern topics that are outside Operations Research or are clearly extremely weak: For such cases, in order to save the time of Associate Editors and referees, the Editors-in-Chief adopt a desk rejection policy. In addition, one should keep in mind that the editorial policy of the journal, in order to ensure a fast and fair processing of the manuscripts, is to reject all papers needing a major revision. After they have been revised, some of these papers are resubmitted to the journal, in which case they are considered as new submissions.

In order to discourage the submission of very weak manuscripts, in recent years the journal added to its editorial policy two relevant points:

- the journal does not publish articles that simply propose disguised variants of known methods without adequate validation (e.g., metaheuristics that are claimed to be "effective" on the sole basis of metaphorical comparisons with natural or artificial systems and processes). New methods must be presented in metaphor-free language by establishing their relationship with classical paradigms. Their properties must be established on the basis of scientifically compelling arguments: mathematical proofs, controlled experiments, objective comparisons, etc;
- the journal does not publish articles presenting complex variants of classical models (e.g., inventory, production planning or supply chain models) obtained by adding artificial features (multiple objectives, fuzzy parameters, ...), typically formulated as long and unsolvable MIPs, and finally solved through arbitrarily chosen metaheuristics. Such articles do not pass the "innovativeness" criterion, since the same incremental process can be indefinitely applied without bringing any new knowledge about the problem under consideration.

5.2.2 Time before decision

The mean time between the reception of the paper and the communication of the decision to the authors was 65 days, i.e., 2 months (to be compared with 51, 122, 144 and 142 days for papers with a decision in 2012–2014, 2009–2011, 2006–2008 and before 31 December 2005, respectively), with a median of 15 days, a minimum of 0 days and a maximum of 610 days. Information on the reviewing time of research papers is summarized in Table 5.

For the 605 papers that were rejected, the mean time before decision was 57 days (48, 99, 130 and 125 days for papers processed in 2012–2014, 2009–2011, 2006–2008 and before 31 December 2005, respectively) with a minimum time of 0 days (paper rejected the day it was received) and a maximum time of 610 days.

For the 47 papers that were accepted the average time before decision was 165 days, i.e., less than 6 months (92, 253, 198 and 183 days for papers processed in 2012–2014, 2009–2011, 2006–2008 and before 31 December 2005, respectively) with a minimum of 5 days (corresponding to a paper re-submitted after having been rejected because it needed a major revision) and a maximum of 518 days.

Table 5 Processing time (in days) of research papers (2015–2017)

Time in days	Number of papers	Percentage (%)
$0 \leq x \leq 20$	358	54.9
$21 \leq x \leq 40$	60	9.2
$41 \leq x \leq 60$	17	2.6
$61 \leq x \leq 80$	10	1.5
$81 \leq x \leq 100$	15	2.3
$101 \leq x \leq 200$	134	20.6
$201 \leq x \leq 300$	47	7.2
$301 \leq x$	11	1.7
Total	652	100.0

Table 6 Origin and selection of research papers (2015–2017)

Country	Percentage of papers received	Rejection rate (%)
Europe	15.2	81.8
Among which BIF[a]	6.1	77.5
UJTSASAAZ[b]	11.0	90.3
Rest of world	73.8	96.0
Total	100.0	86.3

[a]BIF: Belgium, Italy, France.
[b]UJTSASAAZ: USA, Japan, Taiwan, South America, South Africa, Australia, New Zealand

5.2.3 Origin of papers

Table 6 summarizes the country of origin of the submissions for which a decision was made between 1 January 2015 and 31 December 2017 (using the same convention as above; Table 7 gives more details).

The fact that the journal is attracting papers from outside the three promoting countries is more and more confirmed: 61 different countries, to be compared with 44 countries in 2012–2014, and 33 countries in 2009–2011. It should also be noticed that, within Europe, there is no significant difference between the rejection rate according to the country of origin of the authors: papers coming from Belgium, France or Italy obviously do not receive a special treatment when compared to papers received from other European countries.

A substantial number of papers is received from countries outside Europe and having quite well structured academic systems (mostly from Taiwan and the USA). The very high rejection rate observed for those papers perhaps indicates that researchers from those countries (mistakenly) view *4OR* as a possible outlet for their weaker papers.

Comparing Tables 6 and 7, it is clear that papers coming from outside Europe are mainly coming from countries in which academic institutions are still poorly structured and/or financed. We are sorry to say that, although we received many papers from such countries and in spite of our willingness to help colleagues doing good work under difficult conditions, we have only been able to accept very few of these papers.

Table 7 Origin of research papers received (2015–2017)

Country	Percentage (%)	Country	Percentage (%)
China	17.2	Macedonia	0.5
Iran	17.2	Portugal	0.5
India	15.6	Russia	0.5
Turkey	4.4	UK	0.5
Taiwan	3.8	Austria	0.3
USA	3.5	Bosnia	0.3
Algeria	2.8	Iraq	0.3
France	2.8	Morocco	0.3
Egypt	2.3	Netherlands	0.3
Mexico	2.1	New Zealand	0.3
Belgium	2.0	Norway	0.3
Brazil	1.8	South Africa	0.3
Pakistan	1.5	Sweden	0.3
Serbia	1.5	Switzerland	0.3
Italy	1.4	Azerbaijan	0.2
Nigeria	1.4	Canada	0.2
Vietnam	1.4	Colombia	0.2
Germany	1.2	Denmark	0.2
Saudi Arabia	1.2	Finland	0.2
Spain	0.9	Ireland	0.2
Poland	0.8	Kuwait	0.2
Tunisia	0.8	Libya	0.2
Australia	0.6	Luxembourg	0.2
Greece	0.6	Oman	0.2
Indonesia	0.6	Palestine	0.2
Malaysia	0.6	Qatar	0.2
United Arab Emirates	0.6	Romania	0.2
Czech Republic	0.5	Singapore	0.2
Japan	0.5	Sri Lanka	0.2
Jordan	0.5	Thailand	0.2
South Korea	0.5		
Total			100

6 Industry papers

Industry papers consist of case studies, state-of-the-art papers on the applications of OR techniques, or considerations on the practice of OR in industry. We published three such papers in volumes 13–15 (as compared with two papers in volumes 10–12, four in volumes 7–9, and six in volumes 4–6), namely:

1. *A GRASP metaheuristic for the robust mapping and routing of dataflow process networks on manycore architectures* (*4OR* 13/3, Stan et al. 2015) by O. Stan, R. Sirdey, J. Carlier, and D. Nace.
2. *Mathematical model applied to single-track line scheduling problem in Brazilian railways* (*4OR* 13/4, Nogueira and de Carvalho 2015) by Th. H. Nogueira and C. R. Venâncio de Carvalho.
3. *An application of support vector machines to sales forecasting under promotions* (*4OR* 14/3, Pillo et al. 2016) by G. Di Pillo, V. Latorre, S. Lucidi, and E. Procacci.

These papers have undergone the same reviewing process as regular research papers. The number of high-quality industry papers that the journal manages to attract is rather small, as *4OR* is mostly seen as a "pure" academic outlet by its readers. The editors would be happy to be able to publish more papers in this section of the journal, so as to reinforce the link between academics and practitioners of OR.

7 Education papers

The journal welcomes papers aimed at improving the quality of OR teaching, but very few papers have appeared in this section since its inception. In particular, none has been published over the period 2012–2017.

8 Ph.D. Thesis abstracts

The journal publishes two-page abstracts of Ph.D. theses defended in Belgian, French or Italian institutions, or by Belgian, French or Italian nationals who graduated abroad. Each abstract is published under the responsibility of the thesis adviser, who must validate it. Even though these abstracts cannot be viewed as actual "research publications", we believe that they play an interesting role in promoting the work performed by our Ph.D. students, and in increasing the visibility of our schools and universities.

In the period 2015-2017, *4OR* published 25 Ph.D. thesis abstracts. Six of the theses were defended in Italian universities or by an Italian national abroad, 6 came from France, and 13 from Belgium.

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References

Amaran S, Sahinidis N, Sharda B, Bury S (2014) Simulation optimization: a review of algorithms and applications. 4OR Q J Oper Res 12:301–333

Basu A, Hildebrand R, Köppe M (2016a) Light on the infinite group relaxation I: foundations and taxonomy. 4OR Q J Oper Res 14(1):1–40

Basu A, Hildebrand R, Köppe M (2016b) Light on the infinite group relaxation II: sufficient conditions for extremality, sequences, and algorithms. 4OR Q J Oper Res 14(2):107–131

Billinge SJL, Duxbury PM, Gonçalves DS, Lavor C, Mucherino A (2016) Assigned and unassigned distance geometry: applications to biological molecules and nanostructures. 4OR Q J Oper Res 14(4):337–376

Bouyssou D, Martello S, Plastria F (2006) A case of plagiarism: Dănuţ Marcu. 4OR Q J Oper Res 4(1):11–13
Bouyssou D, Martello S, Plastria F (2009) Plagiarism again: Sreenivas and Srinivas, with an update on Marcu. 4OR Q J Oper Res 7(1):17–20
Bouyssou D, Martello S, Plastria F (eds) (2007) Surveys in operations research (invited surveys from 4OR) volume 153 of Annals of Operations Research. Springer, New York
Bouyssou D, Martello S, Plastria F (eds) (2010) Surveys in operations research II (invited surveys from 4OR, 2006–2008), volume 175 of Annals of Operations Research. Springer, New York,
Brouer BD, Karsten ChV, Pisinger D (2017) Optimization in liner shipping. 4OR Q J Oper Res 15(1):1–35
Cattaruzza D, Absi N, Feillet D (2016) Vehicle routing problems with multiple trips. 4OR Q J Oper Res 14(3):223–259
Chrétienne P (2014) On scheduling with the non-idling constraint. 4OR Q J Oper Res 12:101–121
Crama Y, Grabisch M, Martello S (2016) A brand new cheating attempt: a case of usurped identity. 4OR Q J Oper Res 14:333–336
Del Pia A, Weismantel R (2012) Relaxations of mixed integer sets from lattice-free polyhedra. 4OR Q J Oper Res 10:221–244
Di Pillo G, Latorre V, Lucidi S, Procacci E (2016) An application of support vector machines to sales forecasting under promotions. 4OR Q J Oper Res 14 (3):309–325
Goberna MA, López MA (2017) Recent contributions to linear semi-infinite optimization. 4OR Q J Oper Res 15(3):221–264
Hamadi Y, Jabbour S, Saïs L (2012) Learning from conflicts in propositional satisfiability. 4OR Q J Oper Res 10:15–32
Kellerer H, Strusevich VA (2012) The symmetric quadratic knapsack problem: approximation and scheduling applications. 4OR Q J Oper Res 10:111–161
Labbé M, Violin A (2013) Bilevel programming and price setting problems. 4OR Q J Oper Res 11:1–30
Lancia G, Serafini P (2014) Deriving compact extended formulations via LP-based separation techniques. 4OR Q J Oper Res 12:201–234
Laporte G, Meunier F, Wolfler Calvo R (2015) Shared mobility systems. 4OR Q J Oper Res 13(4):341–360
Liberti L, Marchant T, Martello S (2015) The dirty dozen of 4OR. 4OR Q J Oper Res 13:1–13
Liberti L, Marchant T, Martello S (2016b) Twelve surveys in operations research. Ann Oper Res 240:3–11
Liberti L, Marchant T, Martello S (eds) (2013) Surveys in operations research III (invited surveys from 4OR, 2009–2011), volume 204 of Annals of Operations Research. Springer, New York
Liberti L, Marchant T, Martello S (eds) (2016a)Surveys in operations research IV (invited surveys from 4OR, 2012–2014), volume 240 of Annals of Operations Research. Springer, New York
Locatelli M, Schoen F (2013) Global optimization based on local searches. 4OR Q J Oper Res 11:301–321
McCook A (2016) A new way to fake authorship: submit under a prominent name, then say it was a mistake. *Retractionwatch*. http://retractionwatch.com/2016/11/28/new-way-fake-authorship-submit-prominent-name-say-mistake
Nogueira TH, de Carvalho CRV (2015) Mathematical model applied to single-track line scheduling problem in Brazilian railways. 4OR 13(4): 403–441
Pappalardo M, Mastroeni G, Passacantando M (2014) Merit functions: a bridge between optimization and equilibria. 4OR Q J Oper Res 12:1–33
Paschos V Th (2015) When polynomial approximation meets exact computation. 4OR Q J Oper Res 13(3):227–245
Rendl F (2012) Semidefinite relaxations for partitioning, assignment and ordering problems. 4OR Q J Oper Res 10:321–346
Segura C, Coello C, Miranda G, León C (2013) Using multi-objective evolutionary algorithms for single-objective optimization. 4OR Q J Oper Res 11:201–228
Stan O, Carlier J, Sirdey R, Nace D (2015) A GRASP metaheuristic for the robust mapping and routing of dataflow process networks on manycore architectures. 4OR Q J Oper Res 13(3):309–334
Tahanan M, van Ackooij W, Frangioni A, Lacalandra F (2015) Large-scale unit commitment under uncertainty. 4OR Q J Oper Res 13(2):115–171
Talbi EG (2013) Combining metaheuristics with mathematical programming, constraint programming and machine learning. 4OR Q J Oper Res 11:101–150