

**PROCEEDINGS OF THE  
20<sup>TH</sup> INTERNATIONAL CONFERENCE  
ON GROUP DECISION AND NEGOTIATION**



Ryerson University, Toronto, Ontario, Canada  
June 7 to 11, 2020

Edited by

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## Preface

The 20th International Conference on Group Decision and Negotiation (GDN 2020) was scheduled to take place at Ryerson University, Toronto, Canada, from June 7th to 11th, 2020. Because of the COVID-19 pandemic, an unprecedented global health crisis, GDN 2020 was most regretfully cancelled on March 25, 2020. When making the cancellation decision, the Council of the Group Decision and Negotiation (GDN) Section, Institute for Operations Research and the Management Sciences (INFORMS), and GDN 2020 General and Program Chairs placed the safety and wellbeing of our GDN community members and their families as paramount.

The series of the Annual International Conferences on Group Decision and Negotiation has taken place every year since 2000 (with one exception, in 2011). The previous conferences have been held at Glasgow, UK (2000); La Rochelle, France (2001); Perth, Australia (2002); Istanbul, Turkey (2003); Banff, Canada (2004); Vienna, Austria (2005); Karlsruhe, Germany (2006); Mont Tremblant, Canada (2007); Coimbra, Portugal (2008); Toronto, Canada (2009); Delft, The Netherlands (2010); Recife, Brazil (2012); Stockholm, Sweden (2013); Toulouse, France (2014); Warsaw, Poland (2015); Bellingham, USA (2016); Stuttgart, Germany (2017); Nanjing, China (2018); and Loughborough, UK (2019). The 20th International Conference on Group Decision and Negotiation (GDN 2020) was scheduled to be a truly international conference, with submissions from 26 countries located in the Americas, Asia, Africa, and Europe. At the time of conference cancellation, the preparation for GDN 2020 came almost to the final stage. Notwithstanding unprecedented circumstances, we remained committed to the publication of conference proceedings.

GDN 2020 received 74 submissions and the conference proceedings are published in two volumes. The first volume contains the 14 full papers selected in a rigorous blind review process [1]. The current second volume contains 44 full and short papers also selected in a rigorous blind review process. Please notice that Springer holds copyright to the papers published in [1] and the authors retain copyright to the papers published in this volume.

The current volume is organized according to eight streams of the conference that show the wide variety of research that was submitted to GDN 2020.

- The *Collaborative Decision Making Processes* stream includes research supporting interorganizational coordination and safety.
- The stream on *Conflict Resolution* presents research advances on the development of formal approaches to conflict resolution with insightful applications in a range of domains.
- The *General Topics* stream contains papers covering a wide range of topics from the GDN field, from foundations to practical applications.
- The stream on *Intelligent Group Decision Making and Consensus Process* includes papers on various approaches for group decision making and consensus reaching processes.
- The *Negotiation Support Systems and Studies (NS3)* stream presents research on bridging the gap between the work on face-to-face negotiations and online negotiations and on decision and negotiation aids embedded in negotiation processes.
- The stream on *Preference Modeling for Group Decision and Negotiation* focuses on methodological and application issues for supporting groups of decision makers and negotiators in eliciting preferences.
- The *Risk Evaluation and Negotiation Strategies* stream includes papers on various risk evaluation models and their applications to negotiation in the context of complex systems.
- The stream on *Doctoral Consortium* contains two papers on smart contracts using blockchain technologies and a scenario-based approach for analyzing a water resources conflict from a system of systems point of view.

Organizing GDN 2020 and preparing for conference proceedings certainly requires the efforts and collaboration of many people. In particular, we would like to thank this opportunity to thank

- the authors of the 74 papers for their submissions to the conference;
- all of the Stream Organizers: Pascale Zaraté (Collaborative Decision Making Processes), Liping Fang, Keith W. Hipel, and D. Marc Kilgour (Conflict Resolution), Bilyana Martinovski (Emotion in Group Decision and Negotiation), Zhen Zhang, Yucheng Dong, Francisco Chiclana, and Enrique Herrera-Viedma (Intelligent Group Decision Making and Consensus Process), Mareike Schoop, Philipp Melzer, and Rudolf Vestchera (Negotiation Support Systems and Studies (NS3)), Tomasz Wachowicz and Danielle Costa Morais (Preference Modeling for Group Decision and Negotiation), and Haiyan Xu, Shawei He, and Shinan Zhao (Risk Evaluation and Negotiation Strategies), for organizing splendid streams;
- the members of the GDN 2020 Program Committee and the reviewers, for their timely and informative reviews and feedback on all papers;
- Professor Fuad Aleskerov, Professor Sabine T. Koeszegi, and Professor Dawn Parker, for accepting our invitations to deliver keynote addresses;
- the Honorary Chair of GDN 2020, Gregory Kersten, and the General Chairs of GDN 2020, Keith W. Hipel, Adiel Teixeira de Almeida and Rudolf Vetschera, for their contributions to the GDN Section and GDN 2020.

On March 25, 2020, the GDN Council also announced that the next year's GDN conference, 21<sup>st</sup> International Conference on Group Decision and Negotiation (GDN 2021), will be held at Ryerson University, Toronto, Canada, from June 6 to 10, 2021. We welcome authors, whose submissions are accepted by GDN 2020, to attend GDN 2021 and present their work. Submissions accepted for GDN 2020 are automatically accepted for GDN 2021. We look forward to meeting you in person at GDN 2021 in Toronto in June 2021.

Liping Fang, Danielle Costa Morais, and Masahide Horita

May 2020

- [1] Danielle Costa Morais, Liping Fang, and Masahide Horita (Eds.), **Group Decision and Negotiation: A Multidisciplinary Perspective**. Lecture Notes in Business Information Processing, LNBIP 388, Springer, Cham, Switzerland, 2020.

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