First GDN 2018 Virtual Issue

Group Decision and Negotiation: Selected Research Directions

The first virtual issue of Group Decision and Negotiation has been prepared on the occasion of the 18th International Conference on Group Decision and Negotiation organized under the auspices of the Nanjing University of Aeronautics and Astronautics in Nanjing, China, June 9-14, 2018. This is the first time that GDN Conference is taking place in Asia giving us an opportunity to take a closer look at the studies published earlier in the Journal that deal with GDN applications in Asia but which are also representative of typical GDN issues.

The articles’ selection was based on the following three constraints: (1) the article had to appear in an earlier issue of the Journal to which access was restricted (i.e., open access articles were excluded); (2) the article had to be published in the last five years, with priority given to articles published in 2016-2018; (3) the size of the virtual volume should be comparable with the regular issue. Eventually, eleven articles representing a range of topics and perspectives on group decision and negotiation were selected. Given the constraints, many important theoretical and applied studies could not be included in the virtual issue and not all of the Journal’s departments are represented.

No papers associated with the department Platforms, Systems and Tools are included, as the number of submissions has been relatively low recently. Computer Science and Artificial Intelligence related to GDN is one of the research priorities that is not present here, however, we expect that a special issue on this topic will be included in Volume 27 or 28. Papers from the Management Science Department are included but such important topics as preference elicitation, construction and validation of GD/N models and procedures, and multi-criteria decision making are not. Papers coming from the Applied Game Theory and Social Choice Department are included but again such important topics as voting, fair division, and competitive game theory are not part of the volume. Only two topics from Social Sciences are included; key topics such as communication, mediation and facilitation, crowdsourcing, emotion and power are not. And, while the departments of Behaviour, Modelling and Group Interaction are represented here, many key topics from behavioral operations research, conflict management, and qualitative modeling are not.

The selection process was based on several rather than a single criterion, instead, the criteria ranged from the importance of the paper’s contribution to GDN, its innovativeness and potential to stimulate further research, to its adequate representation of the GDN Journal’s typical issues. And thus, although our first Virtual Volume does not fully represent the Journal’s research priorities, it does, however, depict the breadth of research interests related to GDN.

This year, the preparation of the issue had to be done in a very short time and for that reason it was not possible to involve representatives from our GDN community. The preparation process for our future conferences will be more deliberate and Members of the Journal’s Editorial Board and the Conference Program Chairs will be invited to suggest articles for publication. I want to add that suggestions from the Conference participants regarding future issues are also very welcomed.

I hope that the readers find the included papers interesting and useful in their research. Below is a short overview of the articles included in this issue.
The first article by Zhenzhong Ma, Weiwei Dong, Jie Wu, Dapeng Liang, and Xiaopeng Yin [1] discusses the effects of benevolence (Ren), wisdom (Zhi), and courage (Yong) on Chinese negotiation behaviors. Benevolence, wisdom and courage are three components of the Confucian ideal personality and the authors asks if they affect behavior. Data obtained from negotiations conducted by business students show that while benevolence and courage was found to have significant impact, wisdom did not have such an impact. The study’s contribution is in its indigenous perspective; it investigates the negotiations between Chinese negotiators.

Zaiwu Gong, Chao Xu, Francisco Chiclana, and Xiaoxia Xu [2] discuss consensus measures that allow for fluctuating utilities. The authors propose tackling a socially difficult problem of urban demolition with a consensus model that aims at the achievement of high consensus level given limited budget for relocation. The model extends earlier models by taking into consideration several formats of utility functions that reflect different psychological preferences as well as the negotiation cost. The model allows to measure the influence of the total budget and the tolerance of the residents’ who are moved from the demolished houses and its impact on the consensus level.

In the third article, Hongyu Guan, Xianchen Zhu, and Ping Zhang [3] examine the relationship between rule preferences and cooperative preferences (conditional reciprocal preference) in order to explain the adjustments people had made when making repeated contributions to public goods (conditional cooperation behavior) from a rule preference perspective. The results of two experiments show that: (1) heterogeneous rule-inequality-aversion preferences are found in lab experiments; (2) the stronger the rule-inequality-aversion preference, the higher the probability for the individual to become a conditional cooperator in public goods experiment; (3) individuals who have stronger rule-inequality-aversion are more sensitive to the contributions that deviate from the norm.

The forth article, by Sean B. Walker and Keith W. Hipel [4] discusses the Graph Model for Conflict Resolution and its application to a potential climate negotiation between the United States of America (USA) and the People’s Republic of China (PRC). The authors analyze the key issues surrounding the potential implementation of a bilateral agreement between the USA and PRC. Based on the available information about the decision makers, the options that they can select, and their preferences, the authors develop GMCR model. The analysis of the model and the derived scenarios show how the model could be used to assess the negative attitudes of the negotiators as well as the kind of attitudes and degree of cooperation that are required in order to reach beneficial outcomes.

In the fifth article of this virtual issue, David A. Welch [5] explores the role of the justice motive in the context of the recent maritime and territorial disputes. The Author’s examination of three cases indicates that maritime or territorial disputes that stand as proxies for deeper identity conflicts and unresolved historical grievances may have important consequences. He points out that misperceptions of threat and faulty attributions keep alive animosities that should have abated long ago, while failures and pathologies may stand as obstacles to empathy, which is necessary for trust. The suggestion is that the only way to defuse justice conflicts and render them ripe for settlement is to cultivate habits of circumspection and mutual understanding.

Fran Ackermann, Colin Eden and Igor Pyrko [6] show how group support system workshops can be used to solve a dysfunctional relationship between organizations. They discuss two cases in which the
organizations were not able to resolve the conflict despite working hard for a long time yet the workshop allowed them to do it in about an hour. The system used in the workshop was Group Explorer GSS which allows those involved in conflict resolution process to draw causal maps that represent their understanding of the situation. The structured engagement in the map led to the participants’ visualization of the ‘whole picture’, making sense of the situation and identifying the neutral ground upon which to build a settlement. It also aided the participants in developing systemic and meaningful relationships between their different types of views.

The eight article is authored by Sujin Lee, Wendi L. Adair and Seong-Jee Seo [7] who introduce the concept of constructing a cultural perspective in negotiation, that is, active consideration of the other party’s culturally-normative negotiation behaviors prior to the negotiation. The authors compare the effect of cultural perspective taking with alternative-focused perspective taking in cross-cultural negotiation laboratory experiments that involve students of North-American and East Asian ethnicity. The results indicate that negotiators who engage in cultural perspective taking tend to claim more value than those who engage in perspective taking. When both East Asian and North American negotiators engaged in cultural perspective taking, then East Asian negotiators claimed more value. The results also suggest that learning about the counterparts’ culture before a cross-cultural encounter, benefits value claiming, but not necessarily value creation.

Mara Olekalns and Philip L. Smith [8] study the factors that influence their satisfaction with both social and economic outcomes, in particular, satisfaction with own outcome, impact on self-image, and counterpart’s perceived willingness to negotiate again in the future. The authors hypothesized that motivational orientation and feedback influenced negotiators’ satisfaction. The experiment results show that joint outcome more strongly influenced the satisfaction of cooperatively-oriented negotiators and those who received outcome-satisfaction feedback. The results show also that outcome difference more strongly influenced the satisfaction of individualistically-oriented negotiators and those who received outcome-only feedback. As joint gains increased, negotiators with a cooperative orientation or who received outcome-satisfaction feedback rated the likelihood of subsequent negotiations as increasingly likely. As outcome differences increased, negotiators with an individualistic orientation or who received outcome-only feedback rated the likelihood of subsequent negotiations as increasingly unlikely.

In the tenth article, Gregory E. Kersten, Tomasz Wachowicz and Margaret Kersten [9] experimentally compare multi-attribute reverse auctions and multi-bilateral negotiations mechanisms. Both exchange mechanisms are implemented in an online system and the case involves a multi-attribute service contract that a buyer wants to purchase from one of several service providers. Two variants of the negotiation mechanism are implemented: verifiable negotiations in which the best offer is automatically shown to every participant, making it similar to auctions; and non-verifiable negotiations which is a typical negotiation mechanism. The results confirm that buyers do better using auctions than negotiations. Interestingly, non-verifiable negotiations produced better results than verifiable negotiations. However, when social welfare is considered, the results are not clear cut; negotiations have much greater potential to produce higher social welfare than auctions and this undermines the theoretical result that auctions are efficient mechanism.

The last two papers have been selected to represent studies in fuzzy sets and their application to group decision-making negotiations. The Journal has received a number of high-quality papers in this area. Accepting a larger number of these papers would lead to the change of perception of the Journal as a
venue for publishing applications of fuzzy-logic and fuzzy-systems rather than a venue to publish papers representing theories, methods, and case studies coming from all areas of psychology, social, organizational and economic sciences as well as mathematics and computer science. The two papers included here are indicative of most of the papers in this area in that they propose a new or improved model and explain its applicability with examples or case studies that are based on real-life situations.

Erick González, Rafael Alejandro Espín, Eduardo Fernández [10] consider real-life problems that can be represented in terms of a cooperative game. The authors focus on the use of an approach called ‘fuzzy negotiation solution by knowledge engineering’ that could be used to give advice about what the decision makers should do in every phase of the negotiation. The approach provides decision support for the negotiation participants. The approach has been compared with other approaches using two real-life case studies and one text-book example.

The eleventh article, authored by Jianjun Zhu, Shitao Zhang, Ye Chen and Lili Zhang [11] closes the first Group Decision and Negotiation virtual issue. The authors propose a hierarchical clustering approach which is based on three-dimensional gray relational analysis. The method is used to determine cluster centres based on the reference information (i.e., about decision alternatives) and preference information expressed by multiple decision-makers. The proposed method measures the degree of correlation of views held by pairs of decision makers with double information on the basis of three vectors: the alternative decision vector, attribute decision vector and alternative preference vector. It allows to determine the correlation and difference between a large group of decision makers with double information through three-dimensional gray relational analysis. The authors propose a heuristic algorithm to determine the classification of the group and the determination of clustering centers.

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References

