Discrete Dynamics in Nature and Society

Special Issue on
Multi-Goal Decision Making for Applications in Nature and Society

CALL FOR PAPERS

In practical applications in nature and society, semi-structured and unstructured decision-making issues involve multiple criteria (or goals) that may conflict with each other. The success of decision-making lies in whether mangers, administrators, supervisors, and other decision makers can comprehensively consider and understand the insight into the future for making the best decision-making planning and choice. Multiple-criteria decision making (MCDM), multiple-objective decision making (MODM), and multiple-attribute decision making (MADM) are used to lead decision makers to analyze multiple-goal optimization issues from various perspectives.

The evaluation and selection methods (e.g., analytical hierarchy process (AHP), fuzzy AHP, analytical network process (ANP), fuzzy ANP, decision making trial and evaluation laboratory (DEMATEL), fuzzy DEMATEL, Choquet integral, etc.) are important tools for MCDM, MODM, and MADM. The Choquet integral with respect to a symmetric fuzzy measure becomes the ordered weighted averaging function that can be defined without referring to fuzzy measures. The Choquet integral can model the interaction in an interpretable way for MCDM, MODM, and MADM methods. Furthermore, these evaluation and selection methods can be employed to explore the relationship structure among criteria for a variety of related issues arising from the nature and society fields. For instance, MCDM, MODM, and MADM methods can be applied to the evaluation of new technology adoption based on limited resources, the evaluation of new development investments, the priority of resource allocation, etc.

The aim of this Special Issue is to solicit original research articles on various disciplines of multi-goal decision making applications, as well as review articles discussing the current state of the art.

Potential topics include but are not limited to the following:

- Applications of multiple-criterium/multiple-objectives/multiple-attribute decision making methods

- Applications of other multiple goal optimization methods

- Optimization of multiple-criterium/multiple-objectives/multiple-attribute decision making methods

- Optimization of other multiple-goal optimization methods

- Combination of fuzzy methods and multiple-criterium/multiple-objectives/multiple-attribute decision making methods

- Combination of fuzzy methods and other multiple goal optimization methods

- Combination of Choquet integral and multiple-criterium/multiple-objective/multiple-attribute decision making methods

- Combination of Choquet integral and other multiple goal optimization methods

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/ddns/mdman/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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