Preface

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Real life is usually full of ambiguity. How to handle problems in ambiguity environment is an important research topic. Probability is a powerful tool for solving problems with indeterminate information. However, the use of probability is conditional upon there being enough historical data about the parameters. Due to the complexity of the reality, the condition is not met now and then. Therefore, schools explored using other tools to handle ambiguity. This section of the Journal of Intelligent & Fuzzy Systems is a selection of some best papers of ICMOR 2016, which presents the recent explorations and developments in the area. In the section, some authors studied fuzzy problem solving and membership function formulation, some studied interval non-radial DEA model solution, and some proposed a dynamic grey target decision making method. Since security portfolio selection and project portfolio selection are two of the hottest research problems in application, this section includes 6 papers on the topic. In these papers, the authors employed uncertainty theory to have solved portfolio selection problems in the situation where some or all the inputs are experts’ estimations, or have handled project selection problems with project parameters given by men’s evaluations from different perspectives. Especially, the paper “A review of uncertain portfolio selection” presented a clear review on the achievements of uncertain portfolio selection that uses human estimates as inputs and applies uncertainty theory to select portfolios, and pointed out the future research directions.

This section aims to provide latest developments on the approaches for handling ambiguities. The proposed methods in the included problems will be helpful for broadening the research thoughts in handling problems in the other areas.

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