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EDITORIAL

Editorial

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The rapid development of information technique provides great opportunities for average users as well as professionals. The powerful computer hardware and software enable us to model and solve more complex economic, financial and management systems. In the past decades, great efforts have been made by researchers and practitioners from the areas of mathematics, computer science, economics, financial and management science. Their common interests are the computational aspects of economics, finance and management. In fact, a series of cross-disciplines driven by information technique has come into being. Computational economics, computational finance and computational management are three compelling topics. The special issue on computational finance and management aims to provide the readership with the recent and significant researches on the computational modeling and the computational solution of analytically and statistically formulated economic, financial and management problems.

After we released the CFP in late February, 2012, many researchers showed great interests to the special issue. Before the deadline, we received more than 40 submissions, which went beyond our expectation. Through a rigorous review process, we have selected 13 papers to be included in this special issue. The first paper by Yaodong Ni and Zhi-Qiang Liu presented the optimistic criterion for solving bounded-parameter POMDPs. By representing a policy explicitly as a finite-state controller, they proposed a policy iteration approach that converges to an optimal policy under the optimistic optimality criterion. The second paper by Baoding Liu discussed the extreme value theorem for uncertain independent increment process and applied it to an uncertain insurance risk problem. The third paper by Jinwu Gao and Yueshan Yu investigated a finite extensive game with fuzzy payoffs. They defined the solution concepts of credibilistic equilibria and credibilistic subgame perfect equilibria, and used several examples to demonstrate the significance of their new solution concepts. The fourth paper by Yankui Liu and Xuejie Bai studied two-stage fuzzy minimum risk problem and two-stage fuzzy value-at-risk problem as well as their relationships. The fifth paper by Guoli Wang et al. investigated an uncertain price discrimination problem in labor market, in which the employee's capability is his/her private information and characterized by an uncertain variable. The sixth paper by Hui Jiang and Bo Zhang proposed a dynamical memory control strategy based on projection technique for kernel-based online regression. They gave a theoretical analysis of the strategy and a performance test on four benchmark data sets. The seventh paper by Xiaowei Chen and Jinwu Gao derived the term-structure equation as well as its analytic solution under the assumption that the short interest rate follows uncertain process. A comparison showed that their results are better than those via classical stochastic approach. The eighth paper by Lixing Yang et al. considered robust rescheduling plan under irregular traffic conditions. They formulated a two-stage fuzzy optimization model and employed a scenario-based representation to characterize fuzzy recovery time durations on a double-track railway line. The numerical experiments demonstrated the effectiveness of the proposed approaches. The ninth paper by Yufu Ning et al. established chance

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maximization model for a multiproduct aggregate production planning problem, in which the market demand, production cost and subcontracting cost are characterized by uncertain variables. The tenth paper by Yuhan Liu introduced a new concept of uncertain random variable to describe phenomena with both human uncertainty and objective randomness. She also proposed the concepts of chance measure, chance distribution, expected value and variance of uncertain random variable. The eleventh paper by Minghu Ha et al. suggested the support vector machine based on intuitionistic fuzzy number and kernel function. They demonstrated the effectiveness and superiority of the proposed method by simulation results. The twelfth paper by Lean Yu and Xiao Yao proposed a total least squares version of proximal support vector machines for credit risk evaluation. The thirteen paper by Xiang Li et al. studied the stochastic train energy-efficient operation problem, which aims to find the optimal train control strategy between successive stations such that the energy consumption is minimized.

We would like to thank the Co-Editor-in-Chief, Prof. Vincenzo Loia, for giving us the opportunity to publish these papers as a special issue of the journal. We would also like to thank all the reviewers who have contributed with their friendly collaboration and prompt and rigorous reviews. We hope that our sincere gratitude also goes to all the authors who submitted their papers to the special issue, especially those whose papers were rejected for limited capacity of the special issue.