

Special Issue on **Multi-Objective Intelligent Decision-Making Methods Driven by Big Data**

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The rapid development and application of emerging technologies in the mobile Internet environment (e.g., Internet of Things, cloud computing, artificial intelligence, augmented/virtual reality, Industry 4.0, etc.) has given rise to new business models as well as new industries. This trend has been injecting new vitality into social and economic life, further enriching and expanding the field of big data application innovation and bringing many new and important topics for both academia and practitioners. Data-driven management and decision-making present characteristics such as high-frequency, real-time, deep customization, full-cycle immersive interaction, cross-organizational integration, and multi-subject decision-making.

In the era of big data, the massive amount of data generated by every industry is ultra-high dimension, which requires innovative solutions to discover the required patterns. Solutions based on big data analysis and intelligent computing are increasingly used to reduce the complexity and cognitive burden of processing such large amounts of data. Specifically, the bio-inspired optimization algorithms and computational neuroscience algorithms are increasingly proving to be optimal solutions for many complex problems.

This Special Issue focuses on data-driven management and decision making in multidisciplinary cooperation research in management, information, mathematics, science, and medicine, focusing on the theoretical paradigm of decision making driven by bio-inspired and computational neuroscience algorithms applied to multi-objective data, especially big data. We aim to provide a forum for discussion on data-driven multi-objective decision-making studies based on these new emerging intelligent algorithms. Original research and review articles are welcome.

Potential topics include but are not limited to the following:

- ▶ Explainable multi-objective decision making
- ▶ Applications of multi-objective decision making
- ▶ Multi-objective decision-making methods and applications
- ▶ Multi-criteria decision-making methods and applications
- ▶ Multi-attribute decision-making methods and applications
- ▶ Shifting paradigms and theoretical extensions of new decision-making paradigms
- ▶ Bio-inspired algorithms for intelligent decision making (e.g., Genetic Bee Colony (GBC) Algorithm, Fish Swarm Algorithm (FSA), Cat Swarm Optimization (CSO), Whale Optimization Algorithm (WOA), Artificial Algae Algorithm (AAA), Elephant Search Algorithm (ESA), Chicken Swarm Optimization Algorithm (CSOA), Moth flame optimization (MFO), and Grey Wolf Optimization (GWO) algorithm)
- ▶ Computational modeling techniques from systems neuroscience, cognitive neuroscience, computational/theoretical neuroscience, cognitive science, and cognitive psychology to model the neural mechanisms responsible for perception, cognition, and behavior applied to intelligent decision making
- ▶ Evolutionary algorithms for autonomous agents and multi-agent systems
- ▶ Reinforcement learning for multi-objective decision making
- ▶ Multi-objective game theory
- ▶ Multi-objective expert systems and decision support systems
- ▶ Neuroscience and cognitive science (e.g., neural coding, brain-computer interfaces)
- ▶ Social aspects of intelligent decision making (e.g., fairness, privacy, interpretability)

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=258103>.

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

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