

Title : Computational Intelligence for Intelligent Systems: IoT, AI, Machine Learning, Fuzzy Aggregation and Decision Making

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Abstract

Rapid advances in the Internet of Things (IoT), artificial intelligence (AI), machine learning (ML), graph theory, and computational intelligence are creating new opportunities for modeling complex systems, extracting knowledge from heterogeneous data, and supporting intelligent decision-making. IoT environments generate large volumes of dynamic and uncertain information, while AI and ML provide powerful tools for prediction, classification, pattern recognition, and adaptive intelligence. Fuzzy sets, fuzzy logic, and aggregation operators offer complementary mechanisms for representing uncertainty, integrating information from multiple sources, and developing robust decision-support models. This symposium aims to bring together researchers working at the intersection of these fields and to promote hybrid computational intelligence approaches for real-world problems. Particular emphasis will be placed on fuzzy aggregation and decision-making methodologies, including OWA-based and generalized aggregation operators, fuzzy multi-criteria decision making, data fusion, and uncertainty-aware AI/ML systems. The symposium will also explore graph-based intelligence, IoT-enabled smart systems, intelligent risk assessment, and applications in healthcare, finance, transportation, agriculture, manufacturing, and social sciences. The symposium seeks to foster interdisciplinary research leading to explainable, trustworthy, adaptive, and reliable intelligent systems for complex real-world environments.

Key Themes and Topics

- Intelligent IoT, Smart Systems and Edge Intelligence
- Artificial Intelligence, Machine Learning and Hybrid Computational Intelligence
- Fuzzy Sets, Fuzzy Logic and Fuzzy Data Analytics
- Fuzzy Aggregation Operators, Information Fusion and Decision Making
- OWA, HOWA, IHOWA, IGHOWA and Generalized Aggregation Methods
- Uncertainty-Aware, Explainable and Trustworthy AI
- Optimization, Intelligent Decision Support and Multi-Criteria Decision Making

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