

Special Issue on **Advanced Intelligent Fuzzy Systems Modeling Technologies for Smart Cities**

CALL FOR PAPERS

Smart cities constitute a new generation of information technology, considering Internet of Things (IoT), cloud computing, big data, and artificial intelligence (AI), which are fully used in all fields of life in the city. Based on comprehensive and thorough perception, wide-band ubiquitous interconnection, and intelligent integration of advanced forms of urban informationization, the deep integration of informationization, industrialisation, and urbanisation can be achieved. This can then alleviate the "big city disease" by improving the quality of urbanisation, realising fine and dynamic management, improving the effectiveness of urban management, and improving the quality of life of citizens. However, in the process of promoting smart cities, there are many challenges and opportunities to be solved urgently.

In particular, advanced intelligent fuzzy systems (AIFS) have found numerous successful applications in diverse fields, including infrastructure deployment and control, garbage sorting and recycling, traffic congestion prediction and dredging, smart medical and health monitoring, emergency disaster and first aid, smart city communication, and smart power transmission. Recently, design frameworks and diversity applications of AIFS have been investigated to cope with future smart cities, which have shown great potential in fuzzy multi-criteria decisions, road routing recommendation, intelligent control of energy consumption, fuzzy cognitive maps, and smart health. However, traditional fuzzy systems, neural network design, performance optimisation approaches, and application schemes are no longer sufficient and cannot satisfy and serve future smart cities effectively with regards to complex operations, intelligent multi-objective optimisation and advanced diversity form applications. There is therefore a need for a novel paradigm of reliable computational and neural models and optimisation programs to solve the challenges faced in smart cities.

The aim of this Special Issue is to pursue first-class research along this direction by promoting the scaling-up of design, optimisation, and applications of AIFS for smart cities, the development of fuzzy based smart city models, the fuzzy optimisation of wireless charging systems, the extension to self-supervised, multi-intelligent, and robust dynamic programming. We also welcome work relating to unmanned aerial vehicle (UAV)-based smart applications, smart city social networks, big data cognitive computing, security and privacy protection of smart cities, intelligent medical treatment, emergency care, and multidimensional modelling of urban environments. We invite researchers and experts worldwide to submit high-quality innovative research papers and critical review articles on the subsequent potential topics.

Potential topics include but are not limited to the following:

- ▶ Advanced AI-based algorithms for smart cities
- ▶ Genetic/Swarm advanced intelligence algorithms in intelligent fuzzy systems for smart cities
- ▶ Diversity applications with intelligent fuzzy computing in smart cities
- ▶ Multi-intelligent and robust smart city fuzzy systems
- ▶ Advanced intelligent fuzzy system design and networking optimisation for smart cities
- ▶ Fuzzy based advanced intelligent charging scheduling optimisation for smart cities
- ▶ Incentives for smart city video surveillance systems
- ▶ Advanced intelligent wireless charging systems for electric vehicle networks
- ▶ Deployment and management for smart cities with advanced intelligent fuzzy systems
- ▶ Advanced intelligence optimisation algorithms in fuzzy systems
- ▶ Advanced intelligent big data analytics in smart city-based fuzzy systems
- ▶ Security and privacy protection of smart cities
- ▶ Fuzzy based location privacy techniques deployed in electric vehicle networks
- ▶ Decision support systems for smart cities using advanced intelligent fuzzy systems

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=850146>.

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

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