Special Issue

Intelligent Edge Computing: Algorithms, Security, and Artificial Intelligence-Driven Applications

Message from the Guest Editor

The exponential growth of IoT devices and latency-sensitive applications demands a paradigm shift beyond traditional cloud computing. Edge intelligence (EI) emerges as a critical solution by bringing computation, data storage, and AI capabilities closer to data sources—enabling responsive, intelligent services. This Special Issue seeks cutting-edge research at the intersection of algorithms, security, and AI driving the next-generation cloud-edge consortium. We welcome contributions addressing challenges and opportunities within EI, including but not limited to:

- •Resource-efficient AI/ML models for edge deployment, distributed learning (federated, split), lightweight inference, task scheduling, offloading, and optimization for constrained edge environments
- Robust security architectures, privacy-preserving techniques, intrusion detection/prevention, secure firmware updates, trust management, and resilience to edge-specific threats
- Innovative use cases in smart cities, IIoT, autonomous vehicles, healthcare, AR/VR, precision agriculture, and real-time analytics

Guest Editor

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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