

## Special Issue

# Advances in Communication Protocols for Wireless Sensor Networks

### Message from the Guest Editor

We invite original contributions on, but not limited to, the following topics:

- **Classification of Communication Protocols:**
  - MAC, routing, transport, and cross-layer protocols.
- **Energy-Efficient Communication Protocols:**
  - Duty cycling and sleep scheduling;
  - Clustering techniques for energy savings;
  - Advanced protocols for ultra-low-energy networks.
- **Security in Communication Protocols:**
  - Secure routing protocols;
  - Cryptographic techniques for secure communication;
  - Detection and mitigation of attacks.
- **Protocol Adaptation for Specific Applications:**
  - Real-time communication protocols for critical systems;
  - Protocols for IoT integration;
  - Machine learning-based protocol enhancements.
- **Scalability and Heterogeneity:**
  - Handling dense networks;
  - Protocols for heterogeneous sensor nodes.
- **Performance Metrics and Evaluation:**
  - Theoretical, simulation, and real-world implementation case studies.
- **Future Directions and Emerging Trends:**
  - Integration with 5G and beyond;
  - AI-driven and machine learning techniques in communication protocols;
  - Protocols for underwater and aerial WSNs.

### Guest Editor

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## Sensors

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## About the Journal

### Message from the Editor-in-Chief

*Sensors* is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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