CALL FOR PAPERS
IEEE Journal of Selected Areas in Sensors Special
Section on

Emerging Technologies in Sensor Networks II

Sensor network is a fundamental building block of IoT applications, enabling reliable communication, while it is undergoing significant transformation through the integration of emerging technologies such as AI/ML, 6G and beyond, edge computing, quantum computing, blockchain, digital twin, AR, and VR. The integration of AI/ML algorithms into sensor networks is a rapidly growing research area, and its benefits include real-time data analysis, improved network reliability and accuracy, reduced manual intervention, and optimized sensor and network performance. Additionally, these algorithms can detect potential security threats, which is critical for improving network security. To fully explore the potential of AI/ML algorithms in sensor networks, extensive theoretical and practical research is necessary to design and develop new techniques and approaches that can enable even more efficient, accurate, and secure data collection and analysis.

It is intended that this Special Section of IEEE Journal of Selected Areas in Sensors (JSAS) will show the state-of-the-art in "Emerging Technologies in Sensor Networks". Original research contributions, tutorials and review papers are sought in "Emerging Technologies in Sensor Networks" related areas including (but not limited to):

- Emerging sensor technologies
- AI and ML in sensor networks
- Explainable AI for sensor networks
- Quantum sensing and quantum communication
- Blockchain and decentralized systems
- Edge intelligence in sensor networks
- Emergence of AR/VR and metaverse
- Digital twins for IoT networks
- Human-centric sensing and interaction
- Energy harvesting and sustainable sensor networks
- Cybersecurity and resilience
- Advanced sensing modalities
- Novel QoS requirements
- Novel system architectures
- New communication paradigms
- New hardware and system design
- 5G/6G-IoT integration
- Security and privacy
- Interoperability in heterogeneous networks
- Mobility management and handoff mechanisms
- Cognitive computing in sensor networks
- Simulations and real-world experiments
- Modeling, analysis and deployment
- Testing, evaluation and verification of sensor networks
- Sensors for emerging applications

Solicited and invited papers shall undergo the standard IEEE Journal of Selected Areas in Sensors (JSAS) peer review process. All manuscripts must be submitted on-line, via the *IEEE Author Portal,* see https://ieee.atyponrex.com/journal/jsas. When submitting, please indicate in the "Manuscript Type" roll down menu that the paper is intended for the "**Emerging Technologies in Sensor Networks II**" Special Section. Authors are particularly encouraged to **suggest names of potential reviewers** for their manuscripts in the space provided for these recommendations. For manuscript preparation and submission, please follow the guidelines in the *Information for Authors* at IEEE Journal of Selected Areas in Sensors web page, http://ieee-jsas.org/

Deadlines:

- Manuscript Submission Deadline: July 31, 2026
- Completion of First Review: Oct 1, 2026
- Revised Manuscript: Oct 25, 2026
- Completion of Final Review: Dec 30, 2026
- Publication: Q1 2027

Guest Editors:

Lead GE: Hossein Fotouhi
Mälardalen University, Sweden
Hossein.fotouhi@mdu.se

GE1: Reza Malekian
Malmö University, Sweden
Reza.malekian@mau.se

GE2: Maria de Fatima Domingues
Khalifa University, UAE
maria.domingues@ku.ac.ae

GE3: Mohammadreza (Iman) Amini,
University of Ottawa
mamini6@uottawa.ca

GE4: Ali Abedi,
University of Wisconsin-Madison
aabedi@wisc.edu

GE5: Oana Iova
INSA Lyon, France
oana.iova@insa-lyon.fr

GE6: Luca Leonardi
University of Catania, Italy
luca.leonardi@unict.it

GE7: Pedro M. Santos
University of Aveiro, Portugal
pss@ua.pt