CALL FOR PAPERS

IEEE Journal of Selected Areas in Sensors Special Section on

**AI Empowered Sensors in Edge: Enabling
Technologies, Services and Tools**

With the development of the Internet of Things, 5G and artificial intelligence technology, more and more sensors are involving in our daily life. From simple small size sensors, such as humidity, temperature, pressure sensors, to complex middle size sensors, like cameras, gesture sensors, industry sensors. The sensors are applied in many fields including health-care, smart cities, automobiles, smart home, Industrial Internet. Edge computing, as a new computing paradigm where resources like computation and storage are placed closer to data and information source, is proposed. It brings new possibilities for complex applications and intelligent services, especially for complicated multi-sensor applications. However, with the sensor numbers increasing and the high requirements of modern applications and services, there are still many challenges when applying such a huge amount of heterogeneous advanced sensors. For instances, due to the heterogeneity and complexity of sensors, it is hard for users to install/replace sensors, the cooperation of sensors is also a problem. Besides, the data generated by modern sensors are too much to be transmitted to the cloud for real-time processing. Moreover, data privacy and sensor system reliability are also questionable.

In this special issue, we aim to stimulate a comprehensive discourse on the challenges and innovations in the multilingual and multimodal field, with a focus on Enabling Technologies, Services and Tools for AI Empowered Advanced Sensors in Edge. Original research contributions, tutorials and review papers are sought in advanced edge sensors related areas including (but not limited to):

- MIMO-based networking for Edge Sensor
- Edge/Fog/Cloud Computing for Edge Sensor
- Wireless security and privacy for Edge Sensor
- Datasets and Data Management for Edge Sensor
- Multimodal Knowledge Graph for Edge Sensor
- Information Centric Networking for Edge Sensor
- Sustainable and Green Computing for Edge Sensor
- Network and Information Security for Edge Sensor
- Sensor Discovery and Self-Organizing for Edge Sensor
- Green Communications and Computing for Edge Sensor
- Signal Processing for Communications for Edge Sensor
- Intelligent Services with Deep Learning for Edge Sensor
- Formal Method-based System Reliability for Edge Sensor
- Pattern Recognition and Data Processing for Edge Sensor
- Communication QoS, Reliability and Modelling for Edge Sensor
- Smart Task Scheduling and Few-shot Learning for Edge Sensor

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 "AI Empowered Sensors in Edge: Enabling Technologies, Services and Tools" Special Section. Authors are particularly encouraged to **suggest names of potential reviewers** for their manuscripts in the space provided for these recommendations in *Manuscript Central.* For manuscript preparation and submission, please follow the guidelines in the *Information for Authors* at IEEE Journal of Selected Areas in Sensors web page, https://ieee-jsas.org/

Deadlines:

- · Manuscript Submission Due: Apr 30th, 2024
- · First Round of Reviews Completed: May 31st, 2024
- · First Revision Due: June 30th, 2024
- · Final Decision: July 31st, 2024
- · Expected Publication: Sept, 2024

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