

Call for Papers

Themed Series of APSIPA Trans. on Signal and Information Processing on “Emerging Wireless Sensing Technologies for Smart Environments”

Sensing acts as an important foundation for smart environments. With the pervasiveness of wireless networks and mobile devices, wireless signals are already everywhere, which encourages researchers to enable sensing capabilities using wireless signals. Compared with traditional sensing techniques based on cameras or wearable devices, wireless sensing enables applications in a contactless and privacy-friendly way. The emerging wireless sensing technologies have achieved various new applications, including vital signs estimation, gesture recognition, pose estimation, etc.

While promising results have been achieved in certain conditions, challenges still exist in many aspects. At present, the theoretical analysis of the performance of wireless sensing needs to be more comprehensive. The impact of complex interferences in practical environments still requires more investigation. Though the breakthroughs in deep neural networks have enabled impressive new applications, their practical robustness still needs to be improved. This themed series aims to provide a venue for researchers and practitioners in related fields to communicate and share ideas and achievements of emerging wireless sensing technologies for smart environments. Interesting topics include but are not limited to:

- Theoretical Analysis
 - Information theory for wireless sensing.
 - Performance analysis for wireless sensing.
 - Signal propagation and sensing models.
 - Design of Integrated Sensing and Communication frameworks.
- Signal Processing and Perception
 - Beamforming and signal extraction.
 - Noise and interference suppression.
 - Target detection and tracking.
 - Parameter estimation for wireless sensing.
- AI for Wireless Sensing
 - Deep learning for wireless sensing.
 - New datasets and evaluation methodologies.
 - Domain adaption for wireless sensing.
 - Explainable AI for wireless sensing.
- Applications
 - Novel applications of wireless sensing.
 - New system design and implementation.
 - Experiences of practical deployments.

Each paper submitted to this series will be reviewed on a first come, first served basis. The initial decision for each paper will be made within four weeks of submission. Once the submission window has closed, accepted papers ready for publication will be published online. The series will be

accompanied by an editorial written by the guest editorial team. If a paper cannot be accepted within the publication window, it will be considered as a regular paper. If you are interested in paper submission, please refer to the following: <https://nowpublishers.com/Journal/AuthorInstructions/SIP>

If you have further questions, please get in touch with Dr. Yan Chen (eecyan@ustc.edu.cn).

Submission Period: **June 1 to September 30, 2023**

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