

SmartCom 2026 Committee:

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- Sumei Sun, Institute of Advanced Intelligence and Computing, A*STAR, Singapore

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SmartCom 2026

2026 International Workshop on
Smart Wireless Communications
19th -21st Oct, 2026, A*STAR, Singapore



SmartCom is a workshop on smart wireless communications covering radio technologies, spectrum management, wireless networks, communication theory, flexible hardware, and related topics. With recent advances in wireless technologies, ubiquitous connectivity is expected to become a reality in the near future. However, this progress also drives tremendous growth in wireless data traffic, creating increasing demands for higher data rates. Therefore, smart radio technologies are urgently needed to meet these demands and sustain future wireless ecosystems. This workshop focuses on solutions targeting not only the near future but also the era beyond 5G and 6G. Expected candidate solutions include ultra-high-data-rate communication systems, microwave/millimeter-wave/terahertz-wave devices, dynamic spectrum management, smart IoT systems, and the application of artificial intelligence (AI) to wireless networks, among others. The organizing committee also expects the workshop to provide an excellent opportunity for networking, fostering collaborative research, and initiating joint proposals. The topics covered by SmartCom 2026 include, but are not limited to:

Topics:

Dynamic spectrum access, sharing, and management

- Spectrum sensing and measurement
- MAC and networking protocols for DSA
- Dynamic spectrum access and sharing for IoT, 5G, and Beyond 5G systems
- Energy efficient technologies for DSA
- Standards, regulatory policies
- Green cognitive radio

Heterogeneous wireless networks

- Ultra broadband small cell deployment
- C/U splitting, common pilot channel, mobility management
- Dynamic cell structuring, virtual cell, ghost cell, phantom cell
- Backhaul/fronthaul architecture, cloud-RAN, centralized-RAN, AI-RAN
- Resource control and management in HetNets
- Traffic offloading in HetNets

Wireless distributed network, MAC protocol, and network management

- Cross layer design for wireless networks
- Wireless sensor networks in IoT
- Wireless communications and networks for IoT
- Wireless LAN and mesh networks
- Ultra-dense wireless networks
- Wireless network virtualization and virtual network management
- Software defined networks (SDN)
- Network controlled D2D communication
- Mobile-edge cloud computing

Hardware architecture and implementations

- Broadband and multiband antennas
- Multiband and multimode RF/analog circuits
- Reconfigurable baseband circuits
- Transceiver architecture for software defined radio, especially for higher frequency bands
- Implementation of testbeds and prototypes, especially for higher frequency bands
- Wireless equipment for smart radio, 5G, and Beyond 5G

Wireless communication theory and its application

- Network information theory
- Coding theory
- Physical-layer security
- Compressed sensing

Advanced wireless technologies

- AI in wireless communications and networks
- Non-terrestrial and hybrid satellite/terrestrial networks for Beyond 5G
- Aerial communications and networks for Beyond 5G
- Integrated communication and sensing
- Reconfigurable intelligent surfaces
- Fundamental wireless technologies for Beyond 5G
- Local 5G networks
- Advances in mmWave and terahertz wireless communications
- Wireless network technologies based on wireless power transfer

Technical exhibitions

- Implementation, prototype, and wireless equipment for smart radio
- Applications and related works of wireless communications

Topics of Special Sessions: AI-native Communications, Integrated Communications and Sensing (ISAC), NTN/TN Integrated Networks, High-Frequency and Optical Wireless Communications (including Sub-THz and VLC), Smart Applications (e.g., V2X, Smart City) and related topics.

Important Dates:

Abstract submission deadline:

Type I: 18th Aug. 2026 (IEICE-style paper is required and will be included in IEICE archives and SmartCom 2026 proceedings).

Type II: 11th Sept. 2026 (1-page PDF paper or Poster material is required and will be included only in SmartCom 2026 proceedings.)

IEICE-style paper (Type I) and 1-page PDF paper or poster material (Type II) submission deadline: :

28th Sept. 2026

Participant registration deadline:

30th Sept. 2026

Registration fee payment deadline:

5th Oct. 2026

Registration of paper submission:

In SmartCom 2026, all regular papers will be presented in poster sessions. Note that papers will not be peer reviewed.

SmartCom 2026 Website: <https://www.ieice.org/cs/sr/jpn/smartcom/>

Contact Information: sr_ac-smartcom2026-jp@mail.ieice.org

SmartCom 2026 is organized by IEICE Technical Committee on Smart Radio (SR), co-sponsored by IEICE Technical Committee on Radio Communication Systems (RCS) and jointly hosted by A*STAR Institute of Advanced Intelligence and Computing.