

Call For Papers

Special Session: The Second Workshop on Integration of Communications and Sensing towards 6G
Conference: The 2023 International Conference on Cyber-physical Social Intelligence (ICCSI)

Date: October 20-23, 2023

Meeting mode: In-person

Location: Xi'an, China

Web site: <https://agist.org/iccsi2023>

The evolution from 5G to 6G networks embracing many new emerging technologies, among which integration of communications and sensing (ISAC) brings new vigor in the research community. Specifically, integration of communications and sensing motivates multiple promising research topics empowering functions of the mobile networks. For example, integration of communications and sensing enable dual functions of data communications together with radar for object detection, which can sufficiently make use of the precious wireless resources. From the wide sense, the sensing functions can provide valuable information to enhance the performances of communications, and the innovative design for communications systems can significantly assist sensing functions. By harmonizing the originally competing relationship between sensing and communications, smarter networks can be devised in supporting diverse services nowadays as well as inspiring new applications in future. Moreover, the concept of ISAC is not limited to sensing and communications. The interaction between storage, computing, sensing, and communications will become the inevitable tendency to equip 6G networks with comprehensive intelligence. In this respect, this workshop intends to embrace the efforts and contributions from both researchers and practitioners in relevant areas to raise discussions regarding the techniques, applications, implementations, etc., related to ISAC with the generic sense.

Interested topics include (but not limited to):

- Architecture study and design of ISAC;
- Information theoretical analysis on ISAC;
- Physical layer technique for ISAC, including the waveform, coding, signal, etc.;
- Channel measurement and modeling for ISAC;
- Antenna and antenna array design for ISAC;
- Spectrum analysis and management for ISAC;
- Network protocols towards ISAC;
- Co-design of ISAC with existing standards, such as 5G, WLAN, etc.;
- Co-design of ISAC in sub-6G and mmWave communications;
- Resource allocation and management for ISAC;
- Security and privacy issues for ISAC;
- Physical layer security technique for ISAC;
- ISAC with reconfigurable intelligent surfaces;
- ISAC in space-air-ground integrated networks;
- ISAC in vehicular to everything (V2X) networks;
- ISAC with artificial intelligence-based approaches;
- Prototype or implementation of ISAC;
- Field test or simulation of ISAC;
- Hardware design and system of ISAC.

Important Dates:

March 31, 2023,	Letter of intent for paper contribution
May 15, 2023,	Full paper submission
July 1, 2023,	Acceptance/Rejection notification
August 31, 2023,	Final camera-ready papers due

Selected high-quality papers can be recommended to special issues of SCI-indexed journals (e.g., Electronics (IF: 2.69) Special Issue "Big Data Technology in Wireless Networks"). Note that the recommended papers still need to go through rigorous peer review processes and the journal version of the paper needs to have evident improvement and expansion over the conference version.

Special Session Co-chairs:

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All inquiries about the session, including the letter of intent, should be sent to any of the co-chairs above