



VTC2022-Spring

Helsinki, Finland

19 - 22 June 2022



IEEE VTC2022-Spring Workshop on Integration of Sensing, Computing, and Communication in 6G Networks

Workshop Organizers

- **Kai Liang**, Xidian University, China
- **Mikko Uusitalo**, Nokia Bells Labs, Finland
- **Henk Wymeersch**, Chalmers University of Technology, Sweden
- **Xiaoli Chu**, University of Sheffield, UK

Technical Program Committee Chairs

- **Chih-Lin I**, China Mobile Research Institute, China
- **Liqiang Zhao**, Xidian University, China
- **Gan Zheng**, Loughborough University, UK

Keynote Speakers

- **Chih-Lin I.**
- **Henk Wymeersch.**

Main Contact

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Important Dates:

- Workshop paper submission due **24 February 2022**
- Acceptance notification: **17 April 2022**
- Final paper submission due: **1 May 2022**

Submission Link:

<https://vtc2022s-rr-wks.trackchair.com/track/2046>

Submission requirements:

5-page paper (without overlength charge) and up to 2 additional pages are allowed with the purchase of additional page charges in the amount of \$100 USD per additional page at the time of registration and final paper submission. The conference template can be downloaded here: <https://www.ieee.org/conferences/publishing/templates.html>. For more information, please see IEEE VTC2022-Spring official website: <https://events.vtsociety.org/vtc2022-spring/>

Call for Papers

The ever-increasing new scenarios and services, such as immersive experience, unmanned services, and digital twin, bring diverse and rigorous requirements for future networks, thereby propelling 6G extending its core function from information delivery to information acquisition, delivery and computing. The integration of sensing, computing and communication becomes one of the key features and development trends of 6G. It could be realized through the cooperation of cloud, network, edge, and terminal, in contrast to the separated design of terminal sensing, cloud/edge computing, and information delivery in traditional networks. Sensing, computing, and communication are complementary to each other, jointly improving the performance of 6G. Sensing can enhance the capacity of communication and the performance of computing models and algorithms. Communication can expand the dimension and depth of sense, and realize ubiquitous computing. Computing (especially distributed computing) can support large-scale and high-dimensional communication and sensing. Although the integration for sensing and communication, and the integration of computing and network have been discussed in recent years, jointly design the sensing, computing, and communication is still in its infant stage. This workshop invites quality submissions with innovative insights, methodologies, architecture, theory and modeling approaches, and industry developments on the integration of sensing, computing, and communication for 6G networks. The technical scope of this workshop includes, but is not limited to the following topics:

- Network architecture and protocol solutions for the integration of sensing, computing, and communication
- Theory and modeling approach for the integration of sensing, computing, and communication
- Multiple dimensional resource allocation methods for sensing, computing, and communication resources
- Performance analysis for the integration of sensing, computing, and communication
- Security and privacy of the integration of sensing, computing, and communication
- Unified design, the cooperation methods and performance analysis for wireless sensing, transmission and computing
- Novelty solutions for the cooperation of cloud, network, edge and terminal to support end-to-end information processing
- Distributed artificial intelligence (AI) approaches such as federated learning, and AI/machine learning splitting to enable the integration of sensing, computing, and communication
- Knowledge graph assisted sensing approach, such as scenario sensing, and services identification
- Application, real-world test, and industrial development of the integration of sensing, computing, and communication