

# IEEE GLOBECOM 2023

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## CALL FOR PAPERS

*Intelligent Communications for Shared Prosperity*

# SAC Symposium: Terahertz Communications

## Co-Chair

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## Scope and Motivation

Terahertz (THz)-band (0.1-10 THz) communication is envisioned as a key wireless technology of the next decade. The THz band will help overcome the spectrum scarcity problems and capacity limitations of current wireless networks, by providing an unprecedentedly large bandwidth. In addition, THz-band communications will enable a plethora of long-awaited applications, both at the nano-scale and at the macro-scale, ranging from wireless massive-core computing architectures and instantaneous data transfer among non-invasive nano-devices, to ultra-high-definition content streaming among mobile devices and wireless high-bandwidth secure communications. Nevertheless, there are many challenges from the device, communication and networking perspectives, which require fundamentally new solutions.

## Topics of Interest

Original research articles are solicited in, but not limited to, the following topics:

- Transceivers for terahertz communications
- Antenna and antenna arrays for Terahertz communications
- Information theoretic analysis of Terahertz communications
- Channel models for Terahertz communications
- Channel estimation techniques for Terahertz communications
- Ultra-broadband modulation and waveform design for Terahertz communications
- Beamforming, precoding and space-time coding schemes for Terahertz communications
- MAC layer design for Terahertz communications
- Interference management for Terahertz communications
- Relaying and routing in Terahertz communications
- System-level modeling and experimental demonstrations for Terahertz communications
- Coexistence of Terahertz with millimeter wave and sub-6GHz transmissions
- Terahertz for space communications
- Terahertz for nano-networks
- Terahertz for industrial IoT

## Biography of the Co-Chair

**Chong Han** received Ph.D. degree in Electrical and Computer Engineering from Georgia Institute of Technology, USA in 2016. He is currently an John Wu & Jane Sun Endowed Associate Professor with the Terahertz Wireless Communications (TWC) Laboratory, University of Michigan–Shanghai Jiao Tong University (UM-SJTU) Joint Institute, Shanghai Jiao Tong University, China. He is the recipient of 2018 Elsevier NanoComNet (Nano Communication Network Journal) Young Investigator Award, 2017 Shanghai Sailing Program 2017, and 2018 Shanghai ChenGuang Program. He is the vice-chair and co-founder of IEEE THz SIG. He is an editor with IEEE Journal of Journal on Selected Topics in Signal Processing (JSTSP), IEEE Open Journal of Vehicular Technology etc., and is a TPC chair to organize multiple IEEE and ACM conferences and workshops. His research interests include Terahertz and Millimeter-wave Communications, and Smart Connected Systems. He is a member of the IEEE and ACM.

## How to Submit a Paper

All papers for technical symposia should be submitted via EDAS. Full instructions on how to submit papers and important deadlines are posted at <https://globecom2023.ieee-globecom.org/>