

Call for Papers – IEEE ICCET 2025

Theme: Advancing the Internet of Nanothings from an Interdisciplinary Perspective

The Internet of Nanothings (IoNT) offers a transformative opportunity by integrating nanotechnology with advanced communication systems, opening unprecedented potential for applications in healthcare, environmental monitoring, smart cities, and beyond. However, the challenges posed by IoNT—ranging from nano-scale signal processing and communication protocols to energy efficiency and security—demand an interdisciplinary approach.

The goal of this theme is to advance IoNT research by combining diverse expertise and fostering collaboration to push the boundaries of nano-scale communication technologies. This interdisciplinary perspective will be crucial in realizing the potential of IoNT in solving complex, large-scale problems that span across industries.

Topics of Interest

We welcome submissions that address, but are not limited to, the following areas:

- Channel modeling, coding, and modulation for nano-networks.
- Nano-networks for targeted drug delivery and real-time diagnostics.
- Machine learning-based signal detection for nano-communication systems.
- Integrated sensing and communication (ISAC) for nano-networks.
- Terahertz communication for nano-scale and molecular networks.
- Semantic communication and efficient data processing in nano-networks.
- Security protocols and intrusion detection for nano-scale systems.
- Chemical localization methods in nano-communication systems.
- Nano-robotic systems for environmental monitoring and smart cities.
- Energy-efficient communication protocols for IoNT applications.

Submission Guidelines

Papers should present original interdisciplinary research work, practical innovations, or theoretical developments that address the challenges in multi-scale communication systems. Submissions must adhere to IEEE's standard conference template and should not exceed 9 pages in double-column format, including figures, tables, and references.

Track Chairs

Dr. Yu Huang, Guangzhou University

Dr. Xuan Chen, Guangzhou University

Dr. Yuankun Tang, Northwest Normal University