2025 IEEE 25th International Conference on COMMUNICATION TECHNOLOGY

25th IEEE ICCT

SPECIAL SESSION 01

Multiple Access Technologies for 6G Communication Networks

Non-orthogonal multiple access (NOMA), as a typical multiple access technology in the 5G area, has been widely researched due to its ability to achieve higher spectral efficiency than traditional orthogonal multiple access (OMA). With the commercialization of 5G communication networks, both academia and industry are actively promoting the research and strategic layout of 6G. 6G aims to achieve unprecedented leaps in connectivity performance and reliability improvement, which means that more reliable multiple access technologies are needed to achieve higher efficiency and massive connectivity capabilities. In recent years, a series of novel multiple access technologies represented by rate-splitting multiple access (RSMA) are proposed on the basis of traditional NOMA, which can not only achieve higher spectral efficiency and robustness, but also collaborate with the other frontier technologies such as massive MIMO (mMIMO) and reconfigurable intelligent surface (RIS) for the research on resource optimization and physical layer security (PLS), etc.

SPECIAL SESSION ORGANIZERS

Tianming Ma

Jie Jin

Wenjing Lv

Nannan Zhang

School of Electronic & Electrical Engineering (SEEE), Shanghai University of Engineering Science (SUES)

TOPICS

The aim of this special session is to show the latest multiple accesses for 6G communication networks. The scope of this special session includes, but is not limited to the following topics:

- Rate-splitting multiple access (RSMA);
- Grant-free multiple access (GFMA);
- Multi-dimensional multiple access (MDMA);
- Holographic-pattern division multiple access (HDMA);
- Hybrid-mode multiple access (HMMA);
- Hierarchical multiple access (HiMA);
- Identical code cyclic shift multiple access (ICCSMA);
- Index modulation multiple access (IMMA);
- Bit-interleaved multiple access (BIMA);
- Gain division multiple access (GDMA);
- Time reversal division multiple access (TRDMA);
- Rateless multiple access (RMA);
- Tandem spreading multiple access (TSMA);
- Polar-coded multiple access (PCMA);
- Fluid antenna multiple access (FAMA);
- Location division multiple access (LDMA);
- Power-frequency multiple access (PFMA);
- Delay-Doppler domain multiple access (DDMA);
- semantic feature division multiple access (SFDMA);
- Code-hopping multiple access (CHMA);
- Angle domain multiple access (ADMA);
- Adaptive channel gain multiple access (ACGMA);
- Unsourced sparse multiple access (USMA).

Submission

Easychair Submission System: *https://easychair.org/conferences/?conf=icct2025*
Template: *https://www.ieee-icct.org/IEEEtemplate-word.doc (Word)*
https://www.ieee-icct.org/ieee-conference-latex-template.zip (Latex)

Important Date

Submission Due	2025-May 25
Notification Due	2025-June 25
Registration Due	2025-July 10

Co-Sponsored by: IEEE Beijing Section; IEEE China Council 中国联合会

Hosted by: Northeastern University

Conference co-Organizers

Patrons: Digital Communications and Networks

CONTACT Ms. Mia Xue icct_contact@163.com