

IEICE Transactions on Communications announces that it will publish a special section entitled “Special Section on Technologies and Proof-of-Concept Activities for 5G Advanced and 6G” in the September 2023 issue. The 5th generation (5G) cellular communication systems are just launched in 2019 and it is expected to provide various services utilizing 5G technology such as enhanced mobile broadband (eMBB), ultra-reliable and low latency communications (URLLC), and massive machine type communication (mMTC). In the 5G standardization, key enabling technologies such as massive MIMO, beamforming, radio access technology, and frame designs are specified and related advanced technologies are still being developed. Meanwhile, new technology concepts for the next generation mobile communications including 5G advanced and 6G are about to be investigated in many research entities. On top of that, research and development activities of key technologies for next generation mobile communications are about to be initiated. In these regards, this special section is aiming to provide opportunities to present the latest technologies and the proof-of-concept activities for next generation mobile communications.

## 1. Scope

This special section aims at timely dissemination of research in the following areas. Possible topics include, but are not limited to:

- Advanced interference coordination and mitigation techniques
- Advanced MIMO technologies
- Advanced modulation and coding schemes
- Advanced multiple access technologies
- Advanced relay
- Advanced retransmission control
- Advanced technologies for flexible duplex
- Capacity/coverage split system design
- Device to device (D2D) communications/vehicle to everything (V2X) communications
- Energy-efficient radio access technologies
- Hardware implementation issues of the 5G advanced and 6G systems
- Heterogeneous access networks
- High altitude platform station (HAPS)/non-terrestrial network (NTN)
- Massive MIMO techniques, distributed MIMO/cell-free massive MIMO technologies
- New waveform design
- Proof-of-concept activities for the 5G advanced and 6G systems
- Radio interface design
- Reconfigurable intelligent surface (RIS)/intelligent reflective surface (IRS)
- Small cell technologies
- System concept and architecture
- Technologies for higher frequency bands
- Technologies for massive connectivity
- Technologies for small packet transmission
- Technologies for ultra-low latency
- Validation of technology for the 5G advanced and 6G systems
- Wireless fronthauling and backhauling

## 2. Submission Instructions

The standard number of pages is 8. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the “Information for Authors.” The latest version is available at the web site, [https://www.ieice.org/eng/shiori/mokuji\\_cs.html](https://www.ieice.org/eng/shiori/mokuji_cs.html). The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept papers only by electronic submission. Submit a manuscript and electronic source files (LaTeX/Word files, figures, authors' photos and biographies) via the IEICE Web site [https://review.ieice.org/regist/regist\\_baseinfo\\_e.aspx](https://review.ieice.org/regist/regist_baseinfo_e.aspx) by [7th October 2022 (JST)]. Authors should choose the “Technologies and Proof-of-Concept Activities for 5G Advanced and 6G” as a “Journal/Section” on the online screen. Do not choose “Regular EB”.

Contact point:

Kazushi Muraoka (NEC Corporation)/Tetsuya Yamamoto (Panasonic Holdings Corporation)  
Tel: +81 80-8847-7139/+81 50-5491-3122, Email: eb-tpoc5ga6g@mail.ieice.org

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