



Sustainable Communications for Renaissance

Call for Papers

5th Workshop on
"ULMC6GN: Ultra-high speed, Low-latency and Massive Communication for futuristic 6G Networks"

SCOPE

The emergence of the Internet-of-Everything (IoE) paradigm, supporting smart applications over a single unified communication interface, has led to shifting the focus from rate-centric enhanced mobile broadband services to ultra-reliable low-latency communications (URLLC) and massive machine-type communications (MTC). The new spectrum of IoE services, including extended reality (XR), telemedicine, flying vehicles, and haptics, will introduce unprecedented requirements, such as delivering ultra-high reliability, extremely high data rates, and ultra-low latency simultaneously over uplink and downlink. This necessitates integrating the computing, control, sensing, and communication functionalities into a single network design. Moreover, there is a need to leverage sub-terahertz (THz) bands, provision flexibility in the network architecture, and design an intelligent holistic orchestration platform to coordinate all network resources in an efficient and sustainable manner. The conceptualization of futuristic 6G networks is envisioned to bring novel disruptive wireless technologies and innovative network architecture into perspective to realize the evolution from connected everything to connected intelligence, thus enabling "Human-Thing Intelligence" interconnectivity. This workshop aims at presenting the most prominent research outcomes and state-of-the-art advances of 6G related to URLLC communications.

TOPICS OF INTEREST

We seek original completed and unpublished work not currently under review by any other journal/ magazine/conference. Topics of interest include, but are not limited to:

- Key drivers and requirements for URLLC in 6G
- Information theoretic results for URLLC communications
- Digital twin-enabled URLLC for 6G
- Space-air-ground integrated networks for URLLC
- AI & data analytics for intelligent, adaptive, and efficient networks
- Ubiquitous 3D super-connectivity for future networks
- Predictive resource allocation and scheduling for 6G
- Novel and innovative multi-access solutions including NOMA, RSMA, etc.
- Edge computing for distributed future networking
- Cross-layer design and performance analysis for URLLC applications
- Network slicing and network functions virtualization with focus on low latency
- Novel approaches towards session management and protocol stack
- Green wireless solutions including reconfigurable intelligent surfaces
- High-frequency wireless technologies, e.g., optical and THz communications

PAPER SUBMISSION

All papers for Workshops should be submitted via EDAS.
Full instructions on how to submit papers are provided on the IEEE ICC 2023 website:
<https://icc2023.ieee-icc.org/>

WORKSHOP CO-CHAIRS

Lina Mohjazi
University of Glasgow, UK
Hanaa Abumarshoud
University of Glasgow, UK
Haris Pervaiz
Lancaster University, UK
Majid Butt
Nokia Standards, USA
Muhammad Ali Imran
University of Glasgow, UK

MAIN CONTACT

Lina Mohjazi
l.mohjazi@ieee.org

IMPORTANT DATES

Paper Submission Deadline:
20 January 2023
Paper Acceptance Notification:
6 March 2023
Camera Ready and Registration for accepted papers:
15 March 2023

WEBPAGE LINK

icc2023.ieee-icc.org