



IEEE GLOBAL COMMUNICATIONS CONFERENCE

8–12 December 2024
Cape Town, South Africa

Call For Papers

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Selected Areas in Communications (SAC) - Backhaul/Fronthaul Communications

SYMPOSIUM CHAIRS AND CO-CHAIRS

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SCOPE AND MOTIVATION

Transport networks, including backhaul/fronthaul, link components of a radio access network (RAN) and connect RANs to core networks, and thus have a significant impact on the overall network performance. Backhaul/fronthaul communications intersect with many other important communication and networking technologies (satellite networks, Open RAN, and time-sensitive networking, to name a few). Advancing toward 6G, backhaul/fronthaul technologies will play an important role in meeting the challenges of supporting disruptive use cases, transcending connectivity and coverage capabilities, and satisfying unprecedentedly stringent network performance requirements.

To cope with the increasing network heterogeneity and dynamics, backhaul/fronthaul communications need to explore new paradigms such as integrated access and backhaul, exploit network architectural advancements such as functional split, and adopt emerging tools such as machine learning. To become intelligent, energy-efficient, and secure, backhaul/fronthaul communications require multifaceted innovations - the synergy of new designs in network architecture, resource management, signal processing, networking protocols, etc.

The purpose of this SAC is to bring together researchers all over the globe for new designs, techniques, and solutions in backhaul/fronthaul communications, thereby contributing to the theme of this conference “Connecting the Intelligent World through Africa”.

TOPICS OF INTEREST

The SAC-Backhaul/Fronthaul Symposium seeks original contributions in the following topical areas, plus others that are not explicitly listed but are closely related:

- Backhaul/Fronthaul Innovations for New Radio Access Networks (RAN) Architecture
- Integrated Access and Backhaul (IAB) for 5G and Beyond
- Backhaul/Fronthaul Solutions via Non-terrestrial Networks (e.g., Satellite Networks or High-Altitude Platforms)
- Physical-layer Techniques for Backhaul/Fronthaul (Massive MIMO, Reconfigurable Intelligent Surfaces, mmWave/THz, etc.)
- Resource Management for Backhaul/Fronthaul Communications
- Machine Learning-empowered Backhaul/Fronthaul Solutions for 6G

- Security Issues in Backhaul/Fronthaul Networks
- Energy-efficient Backhaul/Fronthaul Techniques and Designs
- Functional Splits and Fronthaul Performance
- Time-Sensitive Networking in Backhaul/Fronthaul Communications
- Demonstrations and Tests of Backhaul/Fronthaul Techniques and Designs

IMPORTANT DATES

Deadline for paper submission: 1 April 2024

Date for notification: 1 August 2024

Deadline for final paper submission: 1 September 2024

SUBMISSION INSTRUCTIONS

All papers for technical symposia should be submitted via EDAS through the following link:

<https://edas.info/N31420>