2026 IEEE 26th International Conference on Communication Technology

OCTOBER 16-18, 2026 | **ZHUHAI, CHINA**

Special Session 9

Age of Information and Timeliness in Communication Systems

This special session focuses on Age of Information (AoI) and timeliness as critical performance metrics in next-generation communication systems. As 5G evolves toward 6G and emerging applications such as autonomous driving, industrial automation, and tactile Internet demand ultra-reliable and timely data delivery, traditional throughput and latency metrics are no longer sufficient to capture the freshness requirements of real-time status updates. This session solicits original contributions on theoretical foundations, analytical models, and practical optimization strategies for AoI in wireless networks, IoT systems, edge computing, vehicular networks, and UAV communications. Topics include AoI-oriented resource allocation, scheduling and caching, peak AoI and violation probability analysis, semantics-aware and goal-oriented timeliness optimization, as well as AoI-driven machine learning and federated learning. We welcome papers that bridge information theory, communication protocols, and network intelligence to address the challenges of maintaining information freshness in complex, dynamic communication environments.

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Topic of Interest

- AoI Analysis and Optimization in 5G/6G Networks
- AoI-Aware Resource Allocation and Scheduling
- Age of Information in IoT and Sensor Networks
- Timeliness in Vehicular Networks and V2X Communications
- AoI in UAV and Aerial Communication Systems
- Peak AoI and AoI Violation Probability Analysis
- AoI in Edge Computing and Caching Systems
- Timeliness in Semantic and Goal-Oriented Communications
- AoI-Driven Machine Learning and Federated Learning
- Age of Information in Industrial IoT and Tactile Internet

Important Dates

Submission Due:	2026-July 1st
Notification Due:	2026-July 25
Camera-ready Due:	2026-August 10

Submission

Submission Link:
https://easychair.org/conferences/?conf=icct2026
(Please choose Special Session 9)

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