

EU CNC | 6G Summit

Poznan, Poland ■ 3-6 June 2025

Towards the 6G World

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CMP - Components, Microelectronics & Photonics

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The 2025 European Conference on Networks and Communications & 6G Summit builds on putting together two successful conferences: EuCNC, in its 34th edition of a series, supported by the European Commission; the 6G Summit, in its 7th edition, originated from the 6G Flagship programme in Finland, one of the very first in its area. The conference is sponsored by the IEEE Communications Society (ComSoc), the European Association for Signal Processing (EURASIP) and the European Association on Antennas and Propagation (EurAAP). The conference addresses various aspects of Beyond 5G/6G communications systems and networks. It brings together cutting-edge research and world-renown industries and businesses, globally attracting in the last years close to 1 000 delegates from more than 40 countries all over the world, to present and discuss the latest results, and an exhibition with more than 50 exhibitors, for demonstrating the technology developed in the area, namely within research projects from EU programmes.

PHY - Physical Layer and Fundamentals

Beyond 5G & 6G and THz communications
Reconfigurable radios and new radio heads
Massive, Ultra-Massive, extreme, and fluid MIMO
Cell-free and distributed massive MIMO
Propagation & channels at cm, mm Waves & THz
New air interfaces, waveforms, modulation&coding techniques
Next generation multiple access (SDMA, NOMA, RSMA)
Reconfigurable Intelligent Surfaces
Integrated sensing and communication

WOS - Wireless, Optical and Satellite Networks

Beyond 5G & 6G access, spectrum and core networks
Spectrum management and reutilisation
Advances in M2M, WSN, IoT networks
Novel architectures and protocols for passive optical networks
Control planes for access/metro/wireless (converged) networks
Optical wireless communications
3D RAN and non-Terrestrial Networking
VLEO satellite systems and networks
Communications for unmanned platforms (UxV)
TSN for industrial communications
Green wireless/optical/satellite networks
Sensing and optical performance monitoring techniques
Radio over fibre
RAN Slicing & QoS

NET - Network Softwareisation

Full-stack automation and orchestration
Programmable networking
Network and Connectivity as a Service
Network digital twin
Cloud-Native RAN, OAMs and Edge Computing
CI/CD/DevOps methodology for RAN
Open RAN and Realtime RAN Control
Event-driven network programming
Dynamic network slice management
Sustainability in networking
Zero-touch management of Beyond 5G/6G services
Cloud and Edge networking and infrastructure
Open-source virtualized service platforms
Blockchain in networking
Monitoring and analytics in softwareised networks

AIU - Applications, IoT, Use cases

Environmental sensing in rural and extreme environments
IoT architectures and management techniques
Critical communications and public safety
Digital health and wellbeing
Emerging Trends in IoT Applications
Augmented and mixed reality
Autonomous driving and V2X solutions
Factory automation and industrial IoT solutions

OPE - Operational & Experimental Insights

Beyond 5G and 6G trials and experiments
Open implementations, testbeds and experiments
Evaluation and analysis of experimental data
Deployment and integration insights from verticals
Plug-and-play deployments and experiments
Network forensics & network instrumentation

A14C - AI/ML Solutions for Communications

AI/ML in the PHY and MAC Layer
AI/ML for wireless/optical/satellite networks
Federated learning and distributed ML for communications
AI/ML-native communications
AI/ML-based resource and network optimization
Semantic communications
LLMs for wireless networks
GANs in networking
Network digital twins for AI/ML
Edge learning in wireless networks
RAN intelligence and data-driven networking
Observability and business intelligence in RAN
Datasets and frameworks enabling AI/ML in networks

SAQ - Security Aspects and Quantum Communications

Information theoretic security
Physical layer security
Network security and cybersecurity trends
Cross-layer and zero-touch security
Security threats for AI/ML
Post-Quantum security
Quantum communications & networks
Quantum error correction and mitigation

CMP - Components, Microelectronics & Photonics

Antenna & RIS system, design, packaging & integration
RF front-end and mmwave/THz techniques
Low power silicon RF, including wake-up
Next generations DSP, incl. RISC V & ASIP
Edge AI component technologies
Optoelectronic integration and fibre/wireless interfaces
Digital HW architecture for ultra-high speed & latency PHY
New component technologies, including photonics
MIMO, OTA and 6G antenna testing
Circuits, techniques and architectures for full-duplex
Transceivers and architectures for ICAS or full-duplex
Hardware design for sustainability and energy-efficiency

NVS - Next-generation Visions and Sustainability

Vision, use cases, associated requirements, and emerging technology trends for 6G
6G value indicators, performance indicators, interlock metrics
6G business studies and/or regulatory perspectives
6G environmental, social and/or economic sustainability aspects
6G coverage and resilience enhancing mechanisms and aspects

Key dates:

24 Jan. 2025 - Papers submission deadline

31 Mar. 2025 - Notification of acceptance

11 Apr. 2025 - Final paper submission

