

# EuCNC | 6G Summit

Gothenburg, Sweden ■ 6-9 June 2023

## 6G for a Green and Digital Transition

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# CALL FOR PAPERS

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#### PHY - Physical Layer and Fundamentals

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#### RAS - Radio Access and Softwarisation

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Italo Atzeni, U. Oulu, FI  
Melike Erol-Kantarci, U. Ottawa/Ericsson, CA

#### WOS - Wireless, Optical and Satellite Netw.

Marija Furdek Prekratic, U. Chalmers, SE  
Mohamed El Jaafari, Thales, FR  
Zhisheng Niu, Tsinghua U., CN

#### NET - Network Softwarisation

Panagiotis Demestichas, Wings ICT, GR  
Marina Petrova, T.U. Aachen, DE  
Christian Esteve Rothenberg, U. Campinas, BR

#### AIU - Applications, IoT, Use cases

Bjoern Richerzhagen, Siemens, DE  
Stefan Brueck, Qualcomm, DE  
Tomoaki Otsuki, U. Keio, JP

#### OPE - Operational & Experimental Insights

Florian Kaltenberger, EURECOM, FR  
Daniel Kilper, Trinity College Dublin, IE  
Sundeeep Rangan, NYU, US

#### CMA - Components, Microelectronics & Antennas

Christian Fager, U. Chalmers, SE  
Björn Debaillie, IMEC, BE  
Josep Jornet, Northeastern U., US

#### 6VS - 6G Visions and Sustainability

Marja Matinmikko-Blue, U. Oulu - 6G Flagship, FI  
Volker Ziegler, Nokia, FI  
Sudhir Dixit, Basic Internet Foundation, US

### Panels Co-Chairs

Mikko Uusitalo, Nokia, FI  
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### Special Sessions Co-Chairs

Henk Wymeersch, U. Chalmers, SE  
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### Workshops Co-Chairs

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Emilio Calvanese Strinati, CEA/LETI, FR  
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### Tutorials Co-Chairs

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### Exhibitions Co-Chairs

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### URSI Liaison

Sana Salous, Durham U., UK

### Key dates:

**27 Jan. 2023** – Papers submission deadline

**03 Apr. 2023** – Notification of acceptance

**14 Apr. 2023** – Final paper submission

The 2023 EuCNC & 6G Summit builds on putting together two successful conferences in the area of telecommunications: EuCNC, in its 32<sup>nd</sup> edition of a series, supported by the European Commission; the 6G Summit, in its 5<sup>th</sup> edition, originated from the 6G Flagship programme in Finland, one of the very first in its area. The local organizer is Chalmers University of Technology in Gothenburg, Sweden, and the conference is sponsored by the IEEE Communications Society (ComSoc), the European Association for Signal Processing (EURASIP), the European Association on Antennas and Propagation (EurAAP) and supported by the European Commission.

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 more than 1 300 delegates from more than 40 countries all over the world, to present and discuss the latest results, and an exhibition with more than 70 exhibitors, for demonstrating the technology developed in the area, namely within research projects from EU R&I programmes.

We invite submissions on the following Tracks with a wide range of topics including, but not limited to:

#### PHY - Physical Layer and Fundamentals

Beyond 5G & 6G and THz communications  
Reconfigurable radios and new radio heads  
Massive and Ultra-Massive MIMO  
AI/ML in the PHY Layer  
Propagation & channels at mm Waves & THz  
New air interfaces, waveforms, modulation & coding techniques

Reconfigurable Intelligent Surfaces  
Semantic communications  
Radio based localization, sensing and mapping  
Physical layer security  
6G Spectrum

#### RAS - Radio Access and Softwarisation

Spectrum management and reutilisation  
Cognitive/ intelligent and green radio  
Configurable radio, resources & SDR  
Energy efficient RRM, radio slicing and virtualisation  
Wireless edge caching  
Radio access architectures

#### WOS - Wireless, Optical and Satellite Nets.

Beyond 5G & 6G access and core networks  
Advances in M2M, WSN, IoT networks  
Next generation passive optical networks  
Satellite and terrestrial networks convergence  
VLEO satellite systems and networks  
Communications for unmanned platforms (UxV)  
TSN for industrial communications  
Communications for navigation and observation  
Green wireless/optical/satellite networks  
AI/ML for wireless/optical/satellite networks  
Novel network architectures

#### NET - Network Softwarisation

Cognitive network management  
Programmable networks  
Software defined networking  
AI/ML in service provisioning  
Data aware networks and overlays  
Network operating system  
Quality (QoE and QoS) aware networking  
Security, trust and privacy  
Quantum Cryptography  
Blockchain technology in mobile networks

#### Mobile edge computing

ML/AI for autonomous systems optimisation

#### AIU - Applications, IoT, Use cases

Factory automation and industrial IoT solutions  
Autonomous driving and V2X solutions  
Critical communications and public safety  
Smart farming and environmental monitoring  
Digital health and wellbeing  
Emerging business models  
IoT service management  
Telepresence and mixed reality

#### OPE - Operational & Experimental Insights

Beyond 5G and 6G trials and experiments  
Large-scale open testbeds and experiments  
Evaluation and analysis of experimental data  
Deployment insights from verticals  
Plug-and-play deployments and experiments  
Network forensics & network instrumentation  
Next Generation Internet architectures and experimentation

#### CMA - Components, Microelectronics & Antennas

Novel MIMO & wideband mm Wave devices  
Components for mm Wave and beyond  
Antenna design & integration  
Antenna systems and architectures  
Design and technologies for array antennas  
RIS components & integration  
RF front-end and THz techniques  
Low power silicon RF, including wake up  
Next generations DSP, incl. RISC V & ASIP  
Edge AI component technologies  
Digital HW architecture for ultra-high speed and/or ultra-low latency PHY

#### New component technologies and materials

6VS - 6G Visions and Sustainability  
Key performance and key value indicators  
Life cycle assessment techniques for 6G techniques and use cases  
Stakeholder groups are invited to submit thought-provoking 6G visions. Both extended abstracts (not included in IEEE Xplore) and full papers are welcome.

