Submission Deadline: 01 June 2021

Be part of as one of the largest global conferences on optical communication technology, ECOC 2021, and ensure that your research is seen by an influential and international audience of optical communication experts.

Europe is a leading player in the global photonics market and the connections you make at ECOC may be able to help propel your work and/or research projects. The event brings together academia and industry to discuss, promote and push forward the latest innovations and emerging developments in the field of photonics.

We understand that there is uncertainty about what 2021 will bring. ECOC'21 is committed to ensuring that your paper, if accepted, will be presented whether in-person, virtual or a hybrid of both. You can have confidence that there will be an audience for your talk, demo or poster.

Authors of accepted papers are guaranted to benefit from

- A presentation slot in the conference programme
- Publishing in the Conference Proceedings
- Submission for indexing on IEEE Xplore
- Selected papers have the chance to submit an extended version for publication in the IEEE Journal of Lightwave Technology (JLT) or in the Journal of Optical Communications and Networking (JOCN)

Authors should submit their papers via the online submission system by June 1st, 2021.
Instructions and templates are available at **www.ecoc2021.org**

ABOUT ECOC

ECOC is the largest conference on optical communications in Europe, and one of the most prestigious and long-standing events in this field worldwide.

ECOC 2021 will be the 47th edition, showing the unbroken attractiveness of this conference.

The outbreak of the global health crisis of 2020 acted as a global eye-opener that the digital infrastructure had become one of the essential fluids of everyone's professional and personal lives. Never before had it become as widely clear that the digital infrastructure had turned altogether into an essential marketplace for food and goods, the facilitator of our children's education, the enabler of teleworking, the storehouse of our culture, the warrant of some of our civil rights, and the intercessor to our friends and family. Overall, COVID-19 triggered an intense wave of digital transformation and digital expansion, with light as propellant.

This wave reinforces ECOC as a unique, vibrant place for global opportunities, a place for knowledge sharing, stimulating creativity, steering innovation and building collaborations. In the conference as well as in the associated exhibition, companies and institutions from all over the world will share the latest news and scientific breakthroughs from materials and devices, to systems and networks. Expect to meet analysts, media, government bodies, vendors and users - as well as peers, colleagues or customers.

After the Brussel 2020 virtual edition, ECOC returns to France for its 47th edition, seven years after Cannes. The ECOC 2021 conference, along with the exhibition, will take place in the city of Bordeaux, in the heart of the wine region, less than 2 hours away from most European capitals.

ECOC 2021 is supported by Systematic, French cluster for digital and Deep Tech, which leads Paris Region ecosystem with 900 members, including nearly 600 Start-up, SMEs and ISEs, 140 major industrial players, 140 academics, an investors group and a group of about 20 local authorities.

Important dates

Regular papers
- Open submission **February 15th**
- Submission deadline **June 1st**

Post-deadline papers
- Open submission **August 1st**
- Submission deadline **September 3rd**

Conference starts
- **September 12th**

Organisation

- **ECOC 2021 Conference Chairs**
  Jean-Pierre HAMAIDE, III-V Lab, France
  Christian LERMINIAUX, Chimie ParisTech-PSL, France
- **ECOC 2021 Technical Programme Chairs**
  Philippe CHANCLOU, Orange Labs, France
  Pierre SILLARD, Prysmian Group, France
- Supported by

Systematic
Paris Region Deep Tech Ecosystem

For more information please contact

- E-mail: contact@ecoc2021.org
- Website: www.ecoc2021.org
- Follow us on

@ECOC_Conference
ECOC 2021

ECOC 2021 Technical Scopes

SC1 NOVEL FIBRES, FIBRE DEVICES AND FIBRE AMPLIFIERS

- Physics of light propagation in optical fibres
- Optical fibre design, fabrication and characterisation
- Specialty optical fibres for improved transmission performance
- Low-latency fibres and fibres for new wavelength ranges
- Fibre-based devices
- Fibre amplifiers and fibre lasers
- Multimode & multicore fibre and fibre amplifiers
- Highly nonlinear fibres and their applications

SC2 OPTOELECTRONIC DEVICES AND TECHNOLOGIES

- Novel material platforms and structured materials
- Integrated III-V devices
- Design, fabrication and characterisation of novel integrated devices and functionalities
- Detectors and sources, directly modulated lasers and VCSELs
- Silicon and hybrid III-V/silicon photonics
- Nanophotonics

SC3 INTEGRATED AND CO-INTEGRATED CIRCUITS

- Large-scale photonic integrated circuits
- Packaging of devices, testing of performance and reliability
- Co-packaged optical and electronic ICs (2D, 2.5D and 3D)
- System-on-a-chip (SoC) and on-chip networks
- Advanced analog and digital electronic/optical co-integrated circuits
- Photonic circuits for Neuromorphic applications
- Sources and detectors for quantum communication systems
- Nonlinear waveguides for optical signal processing

SC4 TECHNIQUES FOR DIGITALLY ENHANCING OPTICAL COMMUNICATION

- Algorithms for DSP in optical transmission systems
- Modelling, design, and implementation of digital signal processing
- Design, implementation & implications of reduced complexity DSP algorithms
- Optical MIMO DSP
- Machine Learning based DSP for optical transmission

SC5 OPTICAL TRANSMISSION SYSTEMS

- PLab/field demonstrations of optical transmission links deploying novel fibres, devices, subsystems and multiplexing techniques
- Link system demonstrations using novel signal modulation techniques
- Analog and nonlinear signal processing subsystems demonstrating transmission enhancements
- Multiplexing and demultiplexing subsystems for improved transmission
- Demonstration of spatially multiplexed transmission links

SC6 THEORY OF OPTICAL COMMUNICATIONS AND QUANTUM COMMUNICATIONS

- New transmission system modelling methods
- Capacity, reach, flexibility limits of optical transmission systems
- System level implications of physical impairments and impairment mitigation techniques
- Novel error correction coding
- Advanced data encoding and signal shaping
- Information theory for optical communications
- Quantum communication system theory
- Network demonstrations of quantum communication systems
- Quantum cryptography lab/field demonstration

SC7 PHOTONICS FOR RF AND FREE SPACE OPTICS APPLICATIONS

- Microwave Photonics subsystems
- Millimetre-wave and THz photonics signal generation/detection
- Demonstration of optics-based THz wireless subsystems
- Demonstration of analog radio-over-fibre systems for 5G and beyond
- Optical wireless communication (susystems and networks
- LiFi and VLC communication networks
- Satellite photonic communication links
- Lab/field demonstration of free-space optical wireless transmission
- Photonic wired/wireless communication network solutions

SC8 CORE AND METRO NETWORKS

- Core, metro and converged networks
- Long reach and high capacity transport optical networks
- Underwater networks and cable deployment
- High connectivity node architectures including protection and failure recovery
- Network deployments and field trials
- Inter data centres interconnect networks
- Subsystems for network functionalities (2R/3R regeneration, OADMs, OXCs, ...)
- Optical performance monitoring techniques and subsystems
- Optical switching and routing in long haul and core networks

SC9 ACCESS, INDOOR, SHORT REACH FOR DATA CENTERS AND MOBILE NETWORKS

- Fibre-to-the-premises (FTTx) and optical access networks
- Passive optical networks
- In-building optical networks
- Intra data centre interconnect networks
- High performance computer networks
- Backhaul, midhaul and fronthaul networks for mobile applications
- Highly parallel network and interconnect demonstrations
- Photonics for Cloud and low latency servicesOptical switching and routing in short-reach networks

SC10 ARCHITECTURE, CONTROL AND MANAGEMENT OF OPTICAL NETWORKS

- Control, orchestration, and management of optical networks
- Optical network architectures, design and modelling
- Planning and scaling of hybrid optical/optoelectronic networks
- Machine learning and artificial intelligence for advanced optical networking, performance monitoring and advanced network troubleshooting
- Integration of optical transmission network layers with higher-layer network services
- Network reliability, survivability, security and disaster recovery
- Driven optical layers for network functions virtualization and software defined network applications