ECIO - 23rd European Conference on Integrated Optics

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Title	ECIO - 23rd European Conference on Integrated Optics
When	Mi, 4. Mai 2022 - Fr, 6. Mai 2022

Description

ECIO - 23rd European Conference on Integrated Optics

The European Conference on Integrated Optics is a event dedicated to cutting-edge research and technological development in integrated photonics and nanophotonics, spanning from advanced materials and technologies to novel device concepts and emerging applications.

ECIO has reached in 2022 its 23rd edition.

The conference focuses on leading edge research on integrated optics, opto-electronics and nanophotonics. The meeting gathers experts from academia and industry to show their latest scientific and technical results, and to showcase their products and services. The application scope is broad: it ranges from telecom/datacom to optical imaging, sensing, metrology, up to more disruptive areas like quantum and neuromorphic computing.

The most recent advances in the wide-ranging field of photonic devices are among the main features of the conference. Conference topics cover waveguide theory and novel waveguide concepts; devices, photonic integrated circuits (PICs) and their applications; technology platforms and materials, such as silicon-based photonics and III-V optoelectronics; circuit design models and tools; assembly, packaging and testing; PIC exploitation in classical and emerging applications

Topics

Conference topics include, but are not limited to:

Integrated photonic technologies and platforms:

- Silicon photonics
- III-V optoelectronics
- Compound semiconductors
- Dielectric and polymer photonics
- LiNbO3 and other electro-optic materials
- Plasmonics
- Novel material integration
- Visible range, near-, mid-, far-infrared and THz waveguides and technologies
- Bio-photonic platforms for integrated devices
- Membrane photonics and photonic MEMs
- Wafer and die bonding technologies

- Hybrid & heterogeneous integration
- Electronic-photonic convergence
- Production methods and (generic) foundry concepts

Devices and Integrated Circuits:

- Waveguides, waveguide devices and on chip diffractive optical elements
- Functional devices: programmable filters, switches, buffers, large-scale circuits, polarization management
- Active devices: lasers and laser arrays, amplifiers and detectors
- Modulators: ultrafast, nano and low energy
- Nonlinear devices: wavelength converters, mixers and regenerators
- Plasmonic waveguides and devices
- Assembly, packaging and hybrid integration techniques
- Optical connectivity – coupling techniques to photonic integrated circuits
- Electronic connectivity
- Flip-chip bonding
- Testing and characterization techniques of waveguides and PICs

Novel physical insights and materials:

- Devices beyond conventional limits
- Enhanced light-matter interactions
- Inverse and computer aided design
- Computational analysis and methods
- Ultra compact and nanoscale devices
- Quantum and high precision photonics
- Novel devices based on magneto-optic, piezo-electric, and ferroelectric materials
- Nanophotonics, photonic crystals, subwavelength and metamaterials devices
- Raman and Brillouin gain
- Novel modeling and simulation techniques
- Unconventional materials for photonics
- 2D materials and phase change materials
- Energy-efficient photonics materials
- Non-linear materials and effects

Applications of PICs:

- Telecom and data communications, optical interconnects
- Control layer for PICs
- Programmable photonic circuits, neuromorphic, photonic processors
- Biological, chemical and other sensing transducers
- Optomechanical devices and micro- and nano-electro-mechanical systems
- Spectroscopy
- Quantum computing and PICs for quantum communications
- Free-space optical communications, LiDAR | Photonic A/D conversion, logic, memories
- Nonlinear functionalities

- Frequency combs and supercontinuum generation
- Generation, manipulation and detection of single photons in PICs

Learn more about this event by following link:

https://www.ecio-conference.org/

Venue - Mailand, Milan

Location	Mailand, Milan
City	Mailand
Country	IT

Description