Preliminary Call for Papers

Announcing an Issue of the IEEE

JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS on

High Density Integrated Multipurpose Photonic Circuits

Submission Deadline: February 1, 2022
Hard Copy Publication: November/December 2022

The IEEE Journal of Selected Topics in Quantum Electronics (JSTQE) invites manuscript submissions in **High Density Integrated Multipurpose Photonic Circuits.** The emerging field of **programmable photonics** is one of the fastest growing fields in photonics with applications including optical signal processing, computing and quantum photonics. The growing maturity of integrated photonic technology makes it possible to build increasingly large and complex photonic circuits on the surface of a chip, enabling a generation of photonic circuits that can be programmed using software for a wide variety of functions. Within this framework, the ***IEEE Journal of Selected Topics in Quantum Electronics*** invites manuscript submissions in the area of **integrated programmable photonics**. The purpose of this issue of JSTQE is to highlight the recent progress and trends in developing leading-edge large-scale integrated optics technologies. Areas of interest include (but are not limited to):

Novel reconfigurable circuit and system architectures focused on high-performance and scalable circuits.
- Large-scale feedfoward waveguide mesh arrangements and their applications.
- Large-scale general-purpose waveguide meshes and their applications / Field Programmable Photonic Gate Arrays.
- Reconfigurable photonic integrated circuits and their applications (Coupled resonators, Reconfigurable multiplexer, optical switches…)
- Reconfigurable systems enabling mode, polarization, and wavelength multiplexing.
- Large-scale photonic integrated circuit packaging for dense electrical and optical interconnections.

Advanced component design focused on large-scale integration: monitoring, phase actuators and fault tolerant components.
- Alternative phase tuning mechanisms.
- Phase change materials.
- Novel design, fabrication and packaging techniques for scalable building blocks.

Advanced programming and control routines.
- Complex circuit modelling.
- System reconfiguration and stabilization algorithms.
- Control system architectures.

The Primary Guest Editor for this issue is **Dr. Daniel Pérez-López,** Photonics Research Labs, Universitat Politècnica de Valencia, Valencia, Spain. The Guest Editors are: **Dr. Alexander Tait**, NIST, USA; **Dr. Leimeng Zhuang**.

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Unedited preprints of accepted manuscripts are normally posted online on IEEE Xplore within 1 week of the final files being uploaded by the author(s) on ScholarOne Manuscripts. Posted preprints have digital object identifiers (DOIs) assigned to them and are fully citable. Once available, the preprints are replaced by final copy-edited and XML-tagged versions of manuscripts on IEEE Xplore. This usually occurs well before the hardcopy publication date. These final versions have article numbers assigned to them to accelerate the online publication; the same article numbers are used for the print versions of JSTQE.

For inquiries, please contact:
IEEE Photonics Society JSTQE Editorial Office - Chin Tan Lutz (Email: c.tanlutz@ieee.org)

The following documents located at http://mc.manuscriptcentral.com/jstqe-pho are required during the mandatory online submission.

1) PDF or MS Word manuscript (double column format, up to 12 pages for an invited paper, up to 8 pages for a contributed paper). Manuscripts over the standard page limit will have an overlength charge of $220.00 per page imposed. Biographies of all authors are mandatory, photographs are optional. See the Tools for Authors link: www.ieee.org/web/publications/authors/transjnl/index.html.
JSTQE uses the iThenticate software to detect instances of overlapping and similar text in submitted manuscripts and previously published papers. Authors should ensure that relevant previously published papers are cited and that instances of similarity are justified by clearly stating the distinction between a submitted paper and previous publications.