

Call for Papers

Announcing an Issue of the IEEE
JOURNAL OF SELECTED TOPICS IN QUANTUM ELECTRONICS on
Nonlinear-Optical Signal Processing

Submission Deadline: November 14, 2010

The *IEEE Journal of Selected Topics in Quantum Electronics* invites contributions of original papers in the area of nonlinear-optical signal processing.

All-optical processing of high-speed signals, enabled by nonlinear-optical devices, is a critical function for future optical communication, computing, and military applications. Progress in nonlinear materials, such as highly nonlinear fibers, photonic-crystal structures, silicon and chalcogenide waveguides, quasi-phase-matched crystals etc., has led to the reduction of the powers required for nonlinear-optical signal processing down to levels compatible with compact semiconductor lasers, and has paved the way to on-chip integration of such processing devices and systems. These advances enable the development of novel optical signal processing architectures and schemes that can bring nonlinear-optical signal processing to practical deployment. The purpose of this issue of *JSTQE* is to document the state of the art and recent developments in the field, from both experimental and theoretical perspectives. Solicitation topics include (but are not limited to):

Nanophotonic nonlinear-optical devices
Nonlinear-optical applications of plasmonics
Nonlinear processing systems on-a-chip
Quantum information processing
Phase-sensitive amplification
Phase conjugation
Wavelength conversion
Frequency translation
Frequency comb generation
Nonlinear pulse shaping

Optical data format conversion
Optical limiting
2R and 3R regeneration
All-optical clock recovery
All-optical switching / gating
Parallel multi-wavelength processing
Optical buffering
Optical burst / packet switching
All-optical OTDM multiplexing / demultiplexing / sampling
Optical bi-stability

The Guest Editors for this issue are: **Michael Vasilyev** (University of Texas at Arlington, USA), **Yikai Su** (Shanghai Jiao Tong University, China), and **Colin J. McKinstrie** (Alcatel-Lucent Bell Labs, USA).

The deadline for submission of manuscripts is **November 14, 2010**; printed publication is scheduled for **November/December 2011**. *JSTQE* aims for rapid time from submission to online publication. **Ideally, accepted papers will be posted online at the IEEE Xplore website within 6 weeks after the authors have uploaded their Final Files, if there are no page proof corrections.**

Online submission is mandatory at: <http://mc.manuscriptcentral.com/pho-ieee>. Please select the Journal of Selected Topics in Quantum Electronics from the drop down menu.

All submissions will be reviewed in accordance with the normal procedures of the Journal.

For inquiries regarding this special Nonlinear-Optical Signal Processing Issue, please contact:

***JSTQE* Editorial Office - Chin Tan Lutz**
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The following supporting documents are required during manuscript submission:

- 1) PDF or MS Word manuscript (double-columned, 12 pages for an Invited Paper, 8 pages for a Contributed Paper). Manuscripts over the standard page limit will have an overlength charge of \$220.00 imposed per page. Biographies of ALL authors are mandatory, photos are optional. You may find the Tools for Authors link useful: <http://www.ieee.org/web/publications/authors/transjnl/index.html>
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