

PNPA 2024

3rd Workshop on Progress in Nonlinear Photonics and Applications

The third Workshop on **PROGRESS IN NONLINEAR PHOTONICS AND APPLICATIONS (PNPA 2024)** is being organized in the frame of **ICTON 2024** Conference (<https://www.gov.pl/web/instytut-lacznosci/icton-2024>) and will be held in the same venue (Politecnico di Bari, Bari, Italy,) and within the same week (July 14-18, 2024).

The area of nonlinear photonics and its applications is gaining an increasing attention, with regard to both the fundamental aspects and the devices' design and implementation. It was therefore considered worthwhile to specifically devote a Workshop, in the frame of the general ICTON 2024 Conference, to these topics.

The present Workshop aims to gather international experts for discussion of the latest advances and trends in the fields of both fundamental and applied nonlinear photonics. The current state of the art and the prospects for further development, with special attention to topics that can lead to technological and scientific breakthroughs, will be reviewed.

Topics of relevance include but are not limited to:

- *Fundamental nonlinear optical processes*
 - wavelength conversion, harmonic generation and frequency mixing
 - parametric processes, active and dissipative effects – e.g. spontaneous parametric down-conversion
 - Raman and Brillouin scattering
 - frequency combs
 - supercontinuum physics
 - temporal and spatiotemporal effects, instabilities and chaos
 - nonlinear optics with singular beams
 - optical soliton physics
 - nonlinear pulse propagation in optical fibers
 - ultrafast nonlinear optics
 - nonlinear interactions and non-classical light
 - quantum nonlinear photonics
- *Nonlinear optical materials and structures*
 - inorganic (e.g. glasses, glass-ceramics, crystals), organic and hybrid nonlinear materials
 - nonlinear effects in microstructures and, microcavities.
 - optical nonlinearities in nanostructures
 - optical nonlinearities in poled and high dielectric constant materials
 - saturable absorption, mode-locking and Q-switching in lasers
 - nonlinear optical effects in semiconductors and 2D materials, above and below bandgap
- *Nonlinear optical devices, systems and applications*
 - all-optical photonic devices
 - nonlinear effects and dispersion management in fiber optical networks
 - chip-scale nonlinear photonic devices
 - parametric oscillators and amplifiers, parametric sources of quantum light

High-quality, original papers for oral-only presentation are welcome.

Being the PNPA Workshop part of the ICTON2024 Conference, the submission occurs as for the main Conference. Authors, therefore, are cordially encouraged to submit the contributions (recommended length 4 pages in MS Word accompanied by a PDF version) for PNPA Workshop by sending an e-mail to icton@itl.waw.pl in pdf and editable WORD or LaTeX. The regular submission deadline is March 31, 2024, and notification on the acceptance will be communicated by April 30, 2024. **Please do not forget to write "PNPA Workshop" in the subject of your mail.**

Registration for PNPA 2024 is included in the general ICTON 2024 registration, and the registrant is entitled to attend all the sessions of ICTON 2024, as well as to enjoy the rich program of social events.

We are delighted to invite all the interested researchers to attend ICTON 2024 and submit their relevant research to PNPA 2024 Workshop.

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