



Nonlinear Optics and its Applications 2024 (PE115)

Conference Chairs: **John M. Dudley**, Institut Franche-Comte Electronique Mecanique Thermique et Optique (France); **Anna C. Peacock**, Univ. of Southampton (United Kingdom); **Birgit Stiller**, Max-Planck-Institut für die Physik des Lichts (Germany); **Giovanna Tissoni**, Institut de Physique de Nice (France)

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This conference will highlight advances in all fields of nonlinear optics and applications. Contributions are welcome that describe advances in any aspect of nonlinear optics and/or applications that exploit nonlinearity in an optical or photonic context. The overall objective is to provide a welcoming and constructive forum in which to present and discuss the latest results in the field. Topics of interest will include, but are not limited to:

- fundamental nonlinear processes and nonlinear light-matter interactions
- nonlinear optical processes in diverse physical systems e.g. gases, plasmas, fluids, soft matter, dynamic materials
- nonlinear materials, properties, and characterization methods
- stimulated nonlinear processes: Raman and Brillouin interactions, parametric amplification, etc.
- efficient nonlinear materials with emphasis on green photonics applications
- highly nonlinear and emerging waveguides, nanowaveguides etc.
- nonlinear effects in nanostructures, metamaterials, plasmonic systems, topological photonics
- nonlinear propagation in fibres, planar waveguides, photonic crystals, microresonators, amplifiers etc.
- nonlinearity in spatiotemporal and multimode systems
- solitons and nonlinear localization effects, including in laser systems, instabilities, rogue waves etc.
- nonlinear optics for photonic emulation and analogy etc.
- optoacoustics and related effects, applications in sensing and quantum photonics

- nonlinear optics for imaging systems, microscopy etc.
- nonlinear optics in quantum photonics and quantum technologies
- nonlinear dynamics and applications in photonic machine learning including hardware development
- machine learning for analyzing fundamental nonlinear optical processes
- machine learning for optimizing nonlinear propagation and frequency conversion including laser systems
- supercontinuum generation, frequency combs, Kerr combs, optical clocks, related applications
- nonlinearity in all-optical processing and high-capacity communications, terahertz/microwave photonics etc.
- nonlinear optics for source development in bulk and fiber systems: ultrafast sources, OPOs, OPAs, OPCPAs
- ultrafast nonlinear optics, ultrafast measurements and characterization etc.
- nonlinear propagation, filamentation, nonlinear optics with structured beams, UV and X-ray generation, extreme light.

Present your research at SPIE Photonics Europe

Below are abstract submission instructions, the accompanying submission agreement, conference presentation guidelines, and guidelines for publishing in the Proceedings of SPIE on the SPIE Digital Library. Submissions subject to chair approval.

Important dates

Abstracts due	30 November 2023
Authors notified and programme posts online	25 January 2024
Registration opens	8 January 2024
Submission system opens for manuscripts and poster videos/PDFs*	5 February 2024
Manuscripts due	20 March 2024

*Contact author or speaker must register prior to uploading

What you will need to submit

- Presentation title
- Author(s) information
- Speaker biography (1000-character max including spaces)
- Abstract for technical review (200-300 words; text only)
- Summary of abstract for display in the programme (50-150 words; text only)
- Keywords used in search for your paper (optional)
- Check the individual conference call for papers for additional requirements (i.e. extended abstract PDF upload for review or instructions for award competitions)

Note: Only original material should be submitted. Commercial papers, papers with no new research/development content, and papers with proprietary restrictions will not be accepted for presentation.

How to submit your abstract

- Visit the conference page: www.spie.org/pe115call
- You may submit more than one abstract, but submit each abstract only once
- Submit by clicking the "Submit an Abstract" button on the conference page
- Sign in to your SPIE account, or create an account if you do not already have one
- Follow the steps in the submission wizard until the submission process is completed
- If your submission is related to an application track below, indicate the appropriate track when prompted during the submission process

Submission agreement

All presenting authors, including keynote, invited, oral, and poster presenters, agree to the following conditions by submitting an abstract:

- Register and pay the author registration fee
- Oral presenters: recording and publication of your onsite presentation (slides synched with voice) for publication in the Proceedings of SPIE in the SPIE Digital Library
- Poster presenters: submit a poster PDF by the advertised due dates for publication in the Proceedings of SPIE in the SPIE Digital Library; poster PDFs may also be published and viewable in the spie.org programme during and immediately after the event. Each poster must have a unique presenter; one person may not present more than one poster
- Email messaging for the conference series
- Submit a manuscript by the advertised due date for publication in the Proceedings of SPIE in the SPIE Digital Library
- Obtain funding for registration fees, travel, and accommodations
- Attend the meeting
- Present at the scheduled time

Review and programme placement

- To ensure a high-quality conference, all submissions will be assessed by the conference chair/editor for technical merit and suitability of content
- Conference chairs/editors reserve the right to reject for presentation any paper that does not meet content or presentation expectations
- Final placement in an oral or poster session is subject to chair discretion

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