



**SPIE.** PHOTONICS  
WEST  
BIOS

25 - 30 January 2025  
The Moscone Center  
San Francisco, CA, USA

**CALL FOR PAPERS**

Submit abstracts by  
**17 July 2024**

## Ophthalmic Technologies XXXV (BO108)

**Conference Chairs:** **Daniel X. Hammer**, U.S. Food and Drug Administration (United States); **Derek Nankivil**, Johnson & Johnson Vision Care, Inc. (United States); **Yuankai K. Tao**, Vanderbilt Univ. (United States)

**Program Committee:** **Kostadinka Bizheva**, Univ. of Waterloo (Canada); **Ralf Brinkmann**, Medizinisches Laserzentrum Lübeck GmbH (Germany); **Wolfgang Drexler**, Medizinische Univ. Wien (Austria); **Sina Farsiu**, Duke Univ. (United States); **Katharine F. Grieve**, Institut de la Vision (France); **Arthur Ho**, Brien Holden Vision Institute (Australia); **Yali Jia**, Casey Eye Institute (United States); **Karen M. Joos**, Vanderbilt Univ. Medical Ctr. (United States); **Anthony N. Kuo M.D.**, Duke Univ. School of Medicine (United States); **Kirill V. Larin**, Univ. of Houston (United States); **Zhuolin Liu**, U.S. Food and Drug Administration (United States); **Fabrice Manns**, Univ. of Miami (United States); **Ezra Maguen M.D.**, American Eye Institute (United States); **Donald T. Miller**, Indiana Univ. (United States); **Daniel V. Palanker**, Stanford Univ. (United States); **Ygal Rotenstreich**, The Chaim Sheba Medical Ctr., Tel Hashomer (Israel); **uigi Rovati**, Univ. degli Studi di Modena e Reggio Emilia (Italy); **Marco Ruggeri**, Bascom Palmer Eye Institute (United States); **Georg Schuele**, Tesseract Health (United States); **J. Sebag**, VMR Institute for Vitreous Macula Retina (United States); **Per G. Söderberg**, Uppsala Univ. (Sweden); **Ji Yi**, Johns Hopkins Univ. (United States); **Robert J. Zawadzki**, Univ. of California, Davis (United States)

### SPECIAL ABSTRACT REQUIREMENTS: PEER REVIEW

Submissions to this conference are due no later than 11 August 2024 (after the main BiOS due date) and must include the following:

- 100-word text abstract (for online program)
- 250-word text abstract (for technical review)
- 2-page extended abstract (for committee review only). The extended abstract must be submitted as a separate document limited to two pages, including tables and figures. Include author names and affiliations; text; any figures, tables, or images; and sufficient data to permit peer review.

All submissions will be peer-reviewed by the Program Committee to determine acceptance. The best extended abstracts will be nominated for the Pascal Rol Award. Extended abstracts will be used only for the purpose of peer review and will not be published.

You are invited to submit papers to Ophthalmic Technologies XXXV — the premier international meeting on therapeutic and diagnostic technology in the field of ophthalmology. The conference brings together engineers, scientists, and clinicians and practitioners working to develop and extend innovative ophthalmic technology.

Some recent topics covered include:

- ophthalmic diagnostics
- ophthalmic applications of OCT
- adaptive optics
- retinal prosthesis, bionic vision, and vision restoration
- wavefront sensing and wavefront-guided surgery
- ophthalmic laser surgery and therapy
- artificial cornea and keratoprostheses
- intraoperative, microscope integrated, and remote systems
- high-speed, full-field, and volumetric devices
- handheld and miniature devices
- functional and molecular imaging of the eye
- imaging of retinal and choroidal vasculature and flow
- optics of the eye and vision correction
- ocular biomechanical properties and biometrics
- ocular diagnostics of neural diseases
- oculomics
- virtual/augmented/extended reality in ophthalmology
- machine learning and artificial intelligence in ophthalmology
- image processing and segmentation algorithms
- ophthalmic drug delivery systems.

### NOTE ON DUPLICATE ABSTRACTS

Authors should not submit identical or nearly identical abstracts to another BiOS conference and or they risk rejection from both conferences.

### NOTE ON SPECIAL ANNIVERSARY SESSION

This year we will celebrate the 35th anniversary of the Ophthalmic Technologies conference with a special session where we will hear from past chairs and thought leaders in OCT, refractive surgery, vision restoration, and adaptive optics on the evolution of technologies that impact the field of ophthalmology.

### PASCAL ROL AWARD 2025

Outstanding extended abstracts submitted to the Ophthalmic Technologies conference will be nominated for the Pascal Rol Award for Best Paper in Ophthalmic Technologies. The award and prize will be presented after the last scientific session of the conference to recognize the best paper and presentation. The 2024 recipient of the Pascal Rol Award was Viacheslav Mazlin, Samer Alhaddad, and their colleagues from PSL Research University and Quinze Vingts National Ophthalmology Hospital for their presentation and paper: "Optical transmission tomography (OTT) in health and disease: uniting micro and macro worlds" (see <https://sites.google.com/site/pascalrolfoundation/>).

### PASCAL ROL KEYNOTE ADDRESS: UNMET OPHTHALMIC TECHNOLOGY NEEDS

The Pascal Rol keynote presentation was established to promote the exchange of ideas between clinicians with a technological need and engineers interested in solving problems in ophthalmology. The invited lecture is sponsored by the Pascal Rol Foundation (<https://sites.google.com/site/pascalrolfoundation/>). The 2025 Pascal Rol keynote address will be given by Dr. Jeffrey Goldberg of the Byers Eye Institute at Stanford University.

[www.spie.org/bo108call](http://www.spie.org/bo108call)

#PhotonicsWest

CONTINUED NEXT PAGE →

**SPIE.**

# Present your research at SPIE Photonics West

Follow the instructions below to develop a successful abstract for submission to a conference and review policies for publication in the Proceedings of SPIE in the SPIE Digital Library. Submissions subject to chair approval.

## Important dates

Abstracts due	17 July 2024
Registration opens	October 2024
Authors notified and program posts online	7 October 2024
Submission system opens for manuscripts and poster PDFs*	25 November 2024
Poster PDFs due for spie.org preview and publication	2 January 2025
Manuscripts due	8 January 2025
Advance upload deadline for oral presentation slides**	23 January 2025

\*Contact author or speaker must register prior to uploading

\*\*After this date slides must be uploaded onsite at Speaker Check-in

## 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 program (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., special abstract requirements 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/bo108call](http://www.spie.org/bo108call)
- Choose one conference that most closely matches the topics of your abstract. You may submit more than one abstract, but submit each abstract only once
- Click the title of the conference to view the full description and submit by clicking the "Submit an Abstract" button on that 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

## Application track

Listed below are the application tracks available for this meeting. Application tracks aggregate presentations and focus on emerging technical and societal needs that require a multidisciplinary approach.

- **AI/ML:** Papers that highlight the use of artificial intelligence, machine learning, and deep learning to create and implement intelligent systems across multiple sectors, technologies, and applications
- **Sustainability:** Papers that highlight the use of optics and photonics for renewable energy, natural resource management, sustainable manufacturing, and greenhouse gas mitigation in support of the UN Sustainable Development Goals
- **Brain function:** Papers that highlight the development of innovative optics and photonics technologies that increase our understanding of brain physiology and function
- **Translational research:** Papers that highlight the transition from bench to bedside using the latest photonics technologies, tools, and techniques for healthcare
- **3D printing:** Papers that highlight the innovative use of optics and photonics in multidisciplinary applications for multidimensional manufacturing
- **Photonic chips:** Papers that highlight advances in materials, design, fabrication, integration, testing and packaging of photonic components at the chip level

## 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 conference registration fee
- Agree to receive email messaging for the conference series
- 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: one person may not present more than two posters in a poster session; poster presenters may submit an optional poster PDF available for preview in the online program (web and app) and for publication in the Proceedings of SPIE in the SPIE Digital Library
- 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 program 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

## Publication of Proceedings in the SPIE Digital Library

Increase your professional visibility and publish in the world's largest collection of optics and photonics research. Your peers access approximately 18 million papers, presentations, and posters from the SPIE Digital Library each year.

- Only manuscripts, presentations, and posters presented at the conference and received according to publication guidelines and due dates will be published in the Proceedings of SPIE in the SPIE Digital Library
- Manuscripts, presentations, and posters will be officially published after the event in the SPIE Digital Library
- Conference chairs/editors or SPIE staff may require revision before approving publication and reserve the right to reject for publication any manuscript or presentation that does not meet acceptable standards for a scientific publication
- Conference chair/editor and/or SPIE staff decision to accept or reject a manuscript, presentation, or poster for publication is final
- Authors must be authorized to provide a suitable publication license to SPIE; authors retain copyright of all scientific material
- SPIE retains rights to distribute and market the official SPIE recording of the presentation and/or submitted poster
- SPIE partners with relevant scientific databases and indexes to enable researchers to easily find papers published in the Proceedings of SPIE. The databases that abstract and index these papers include Astrophysical Data System (ADS), Ei Compendex, CrossRef, Google Scholar, Inspec, Scopus, and Web of Science
- More publication information available on the [SPIE Digital Library](http://SPIEDigitalLibrary)

# ABSTRACT SUBMISSION GUIDELINES

## SYMPOSIUM CHAIRS



**Sergio Fantini**  
Tufts Univ.  
(United States)



**Paola Taroni**  
Politecnico di  
Milano (Italy)

## SYMPOSIUM CO-CHAIRS



**Rainer Leitgeb**  
Medizinische Univ.  
Wien (Austria)



**Laura Marcu**  
Univ. of California,  
Davis (United States)

# SPIE. DIGITAL LIBRARY

**SPIE WILL PUBLISH YOUR RESEARCH GLOBALLY**

[www.SPIEDigitalLibrary.org](http://www.SPIEDigitalLibrary.org)

Your work will live far beyond the conference room—all proceedings from this meeting will be published in the SPIE Digital Library. Promote yourself, your ideas, and your organization to millions of key researchers from around the world through this web-based repository of the latest technical information.

## Contact information

### QUESTIONS?

Contact the coordinator listed in your [spie.org](http://spie.org) account.

For questions about your presentation, submitting an abstract or the meeting, contact your conference program coordinator.

For questions about publication or the SPIE Digital Library, contact your proceedings coordinator.

# SPIE. PHOTONICS WEST