



**SPIE.** PHOTONICS  
WEST  
OPTO

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

**CALL FOR PAPERS**

Submit abstracts by  
**17 July 2024**

## Vertical-Cavity Surface-Emitting Lasers XXIX (OE601)

*Conference Chairs:* **Kent D. Choquette**, Univ. of Illinois (United States); **Luke A. Graham**, Dallas Quantum Devices, Inc. (United States)

*Program Committee:* **Hamed Dalir**, Univ. of Florida (United States); **Aaron J. Danner**, National Univ. of Singapore (Singapore); **Deepa Gazula**, Coherent Corp. (United States); **Martin Grabherr**, Priolas GmbH (Germany); **James Guenter**, Dallas Quantum Devices, Inc. (United States); **Chun Lei**, Lumentum (United States); **James A. Lott**, Technische Univ. Berlin (Germany); **M. V. Ramana Murty**, Broadcom Inc. (United States); **Darwin K. Serkland**, Sandia National Labs. (United States); **Noriyuki Yokouchi**, Furukawa Electric Co., Ltd. (Japan)

Sustained research and development of vertical-cavity surface-emitting lasers (VCSELs) over the past thirty years has transformed VCSELs to viable components in the photonic marketplace for optical interconnects, optical sensing, and many other applications. Currently, VCSELs are being developed for a wide variety of applications, as well as being designed to conform to standard system architectures. This conference seeks to provide a forum for interaction between VCSEL researchers, product developers, and system engineers, and VCSEL component users to disseminate information about new advances and applications. Subjects of interest for this conference include the design, novel fabrication, and physical characterization of VCSELs. Papers concerning commercial VCSEL activity and new VCSEL applications are particularly solicited. Topics of interest include:

- high-performance VCSELs (low-threshold current, high-output power, high-speed modulation, etc.)
- VCSEL applications (position sensing, smart pixels, optical data links, print heads, display, scanning, sensors, etc.)
- VCSEL reliability (qualification, research)
- hybrid VCSEL integration with optics and/or microelectronics
- advances in fabrication technologies (selective oxidation, dry etching, wafer bonding, etc.)
- techniques and monitoring of VCSEL growth (uniformity, reproducibility)
- new materials for VCSELs
- 2D VCSEL arrays
- characterization and control of transverse optical modes and polarization
- new VCSEL devices including tunable VCSEL structures
- commercial VCSEL production techniques
- VCSEL packaging.

[www.spie.org/oe601call](http://www.spie.org/oe601call)

#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/oe601call](http://www.spie.org/oe601call)
- 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



**Ulrich T. Schwarz**  
Technische  
Univ. Chemnitz  
(Germany)



**Karin Hinzer**  
Univ. of Ottawa  
(Canada)

## SYMPOSIUM CO-CHAIRS



**Andrea Blanco-Redondo**  
CREOL, The College  
of Optics and  
Photonics, Univ. of  
Central Florida  
(United States)



**Georg von Freymann**  
Rheinland-Pfälzische  
Technische Univ.  
Kaiserslautern-  
Landau (Germany)

# 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 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.