

# FUTURE SENSING TECHNOLOGIES

COLLOCATED WITH  
OPIC—Optics and Photonics International Congress  
and the OPIE industry exhibition

22–24 April 2024  
Pacifico Yokohama  
YOKOHAMA, JAPAN

Submit abstracts by 6 December 2023



## Plan now to participate in the SPIE Future Sensing Technologies conference

This program is a specialized meeting where researchers, scientists, engineers, and product developers converge to discuss important and ongoing research in the field of sensor systems, related technologies, and specialized application areas.

### CONFERENCE CHAIRS



**Osamu Matoba**  
Kobe Univ.  
(Japan)



**Joseph A. Shaw**  
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(United States)



**Christopher R. Valenta**  
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(United States)

Sensors are integral components of modern infrastructure, scientific research, and industry. Devices and systems used in research and applications from medicine to aerospace now depend on complex sensing and imaging systems to relay information and interact with the world. Autonomous vehicles, for example, rely on a multi-sensor suite to safely navigate a vehicle through urban and rural areas in a variety of meteorological conditions. Sensor systems are also critical for environmental monitoring and to help protect human health and safety. These expanding fields require ongoing collaboration between researchers, government agencies, and industry companies as these sensors and their relevant data products evolve.

In order to keep up with the latest techniques and application areas, Future Sensing Technologies will cover topics that are especially significant to the industry today. Leading experts will deliver invited presentations on the latest advancements and industry trends. Papers are solicited on advanced sensing, related technologies, and application areas for industry and research. Submit your latest work and plan to join your colleagues for this exciting event.

The conference focus is on sensors and sensing applications that are based on optical and photonic technologies or related RF technologies. Potential topics are organized into 4 themes. Topics include, but are not limited to:

#### NEXT-GENERATION TECHNOLOGIES

- XR (MR/AR/VR)
- Photonic sensing/component technology
- Quantum sensing
- Space-based sensing

#### IMAGING AND SENSING

- Cameras and imaging systems
- Multispectral and Hyperspectral imaging
- LIDAR technology
- Polarization sensing and imaging
- EO/IR/SWIR sensing and imaging
- RADAR systems (SAR, etc.)
- Computational methods for sensing

#### APPLICATION AREAS OF OPTICAL AND PHOTONIC SENSING

- UAV applications
- Environmental remote and proximal sensing
- Food/water/waste safety and inspection
- Sensing for safety and security/Disaster response
- Autonomous vehicle sensing
- Sensor-based sorting & quality control
- Biomedical sensing

#### ALGORITHMS

- Artificial intelligence and Machine learning
- Signal and image processing
- Data and sensor fusion
- Sensor information processing

### PROGRAM COMMITTEE

**Joshua B. Broadwater**, Johns Hopkins Univ.  
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### Present your research at SPIE Future Sensing Technologies

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	6 December 2023
Registration opens	January 2024
Authors notified and program posts online	6 February 2024
Submission system opens for manuscripts and poster PDFs*	20 February 2024
Poster PDFs due for spie.org preview and publication	28 March 2024
Manuscripts due	4 April 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 program (50-150 words; text only)
- Keywords used in search for your paper (optional)

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/fstcall](http://www.spie.org/fstcall)
- 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 program during and immediately after the event
- 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 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

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