



Real-time Photonic Measurements, Data Management, and Processing VIII (PA113)

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Real-time photonic measurement of fast non-repetitive events is arguably the most challenging problem in the fields of instrumentation and measurement. The challenge is performing fast continuous single-shot measurements for applications ranging from sensing, spectroscopy, and imaging. Some of the example applications include the study of optical rogue waves, detection of rare cancer cells in blood, industrial inspection and machine vision. Notwithstanding the sensitivity and speed limitations of single-shot real-time measurements, such instruments also create a big data problem. Owing to their high measurement rate, they produce a firehose of data that overwhelms even the most advanced computers. This necessitates innovations in data management and in-inline processing techniques.

The aim of this conference is to create a forum for presentation of the latest developments in real-time photonic instruments, data management and real-time processing, and to create a forum for exchange of ideas in this new and exciting field of photonic instrumentation. This conference intends to cover the following, and related topics:

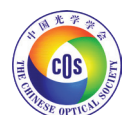
- real-time optical imaging and spectroscopy
- real-time process photonic monitoring
- ultrafast optical signal characterization
- real-time photonic data processing systems
- computationally efficient algorithms
- photonic data compression
- photonic techniques for big data visualization and analytics
- single-photon detection and imaging from vis to NIR.

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Present your research

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	29 May 2024
Author notified and program posts online	22 July 2024
Registration opens	August 2024
Submission system opens for manuscripts and poster PDFs*	12 August 2024
Poster PDFs due for spie.org preview and publication	18 September 2024
Manuscripts due	25 September 2024

*Registration is required for presentation and publication

What you will need to submit

- 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/pa113call
- You may submit more than one abstract but submit each abstract only once.
- Click 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

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 (attendees in Mainland China register with COS; attendees outside of Mainland China register with SPIE)
- 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 (may not be applicable at all SPIE events)
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- 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

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