



Optical Trapping and Optical Micromanipulation XXI (OP104)

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This conference draws well over one hundred presentations and an even larger number of participants. In addition to an immersive program of oral presentations, our poster sessions have a tradition of ensuring an excellent level of interaction and feedback. Special sessions ensure that technical advances are widely shared. Participants are also well served by the special attention given to community-building activities. Early career researchers are especially encouraged and highlighted.

Joint sessions will be planned with the "Emerging Topics in Artificial Intelligence" conference.

Papers are solicited on (but not restricted to) the following areas:

- precision measurement, including testing fundamental physics
- "gonzo" trapping (i.e., trapping at extremes)
- cavity optomechanics
- high-sensitivity detectors
- toward (or in) the quantum limit of opto-mechanics
- photonic devices for optically induced forces
- shaping the flow of information: energy and momentum
- systems with broken symmetry, including optical angular momentum
- statistical mechanics of small systems
- virus and single-molecule biophysical studies and technologies
- using the photonic toolbox to study cells and their organelles
- studies of dynamical biophysical systems, including active swimmers and hydrodynamics
- optofluidics and optically shaped structures
- optically driven microrheology, mechanobiology, and micromechanical properties
- enhanced sensitivity and resolution of optical force actuators
- optical manipulation of matter through gaseous media
- approaches to optical force and momentum measurement
- radiation pressure, tractor beams, and solar sails

- near-field micromanipulation, plasmonic, and nanoparticle trapping
- beam shaping and aberration and wavefront correction
- optical sorting, optical lab-on-a-chip, and microfluidics
- optically manipulated robotics and novel samples
- next-generation fabrication technologies, including nanoscale assembly with optical forces
- optical tweezers coupled with novel forms of microscopy
- alternative and hybrid force systems (e.g., hybrid AFM-optical force systems, or combinations with acoustic, magnetic, or other forces)
- nonlinear optical responses mediated through forces (translation, electrostriction)
- optically bound matter
- holographic optical systems: from speckle to studies of neurons
- machine learning for designing relevant systems, for particle tracking, and for data analysis.

Present your research at SPIE Optics + Photonics

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	7 February 2024
Registration opens	April 2024
Authors notified and program posts online	29 April 2024
Submission system opens for manuscripts and poster PDFs*	17 June 2024
Poster PDFs due for spie.org preview and publication	24 July 2024
Manuscripts due	31 July 2024
Advance upload deadline for oral presentation slides**	16 August 2024

*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

- 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. 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/op104call
- 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
- 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. Each poster must have a unique presenter; one person may not present more than one poster per session
- 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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- 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 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
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- More publication information available on SPIDigitalLibrary.org

Contact information

For questions about your presentation, submitting an abstract, or the meeting, contact your [Conference Program Coordinator](#).

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