Optics and Biophotonics in Low-Resource Settings VII (BO302)

Conference Chairs: David Levitz, MobileODT Ltd. (Israel); Aydogan Ozcan, Univ. of California, Los Angeles (USA)

Program Committee: David Erickson, Cornell Univ. (USA); Gerard L. Coté, Texas A&M Univ. (USA); Wolfgang Drexler, Medizinische Univ. Wien (Austria); Matthew D. Keller, Intellectual Ventures Lab. (USA); Avi Rasooly, National Institutes of Health (USA); Anita Mahadevan-Jansen, Vanderbilt Univ. (USA); Chetan A. Patil, Temple Univ. (USA); Eric A. Swanson, Acacia Communications, Inc. (USA); Sebastian Wachsmann-Hogiu, McGill Univ. (Canada); Ian M. White, Univ. of Maryland, College Park (USA)

SPECIAL ABSTRACT REQUIREMENTS

Submissions to this conference must include:
- 100-word text abstract (for online program)
- 250-word text abstract (for abstract digest)
- An optional figure (for committee review only). The figure, if provided, must be submitted as a separate PDF document.

Approximately 85% of the world’s population (6 billion people) lives outside OECD nations, where resources and facilities available to deliver medical care are limited. Optical technologies are uniquely positioned to enable emerging economies to improve the delivery of healthcare of their people. Optical methods can non-invasively assess the microstructure, function, and composition of tissues, as well as deliver targeted therapies. The revolution in digital electronics has significantly reduced both the price and size of components (sensors, light sources, computing units) critical to most optical systems. Integrating such optical components with compact microfluidics and low-cost biomarkers allows for building robust optical systems that are inexpensive and scalable.

This conference is designed to serve as a forum for those engineers, scientists, clinicians, and aid workers who are developing and delivering biophotonics-based solutions for healthcare delivery in low-resource settings. An emphasis is placed on mobility, cost-effectiveness, energy efficiency, and scalability, in pursuit of the ultimate goal of clinical validation and transitioning to the field.

Topics include:
- smartphone-based imaging, sensing and diagnostics systems
- mobile and miniature optical systems
- design adaptation for low-resource settings
- integrated optics and microfluidics
- translational research in low-resource settings
- low-cost optical and optically-guided therapeutics
- spectroscopy and spectral imaging
- low-cost optomechanical design
- energy efficient systems
- algorithms for mobile image analysis
- machine learning and computer vision for mobile imaging and sensing systems
- contrast agents for field-use or point-of-care
- mobile confocal and coherence-domain imaging
- polarization-based mobile imaging and/or detection methods.
**Present your research at SPIE Photonics West**

Follow these instructions to develop a successful abstract and accompanying manuscript for the conference and for publication in the Proceedings of SPIE in the SPIE Digital Library.

**How to submit an abstract**

1. Browse the conference program and select the conference(s) that most closely matches the topics of the research you wish to present. *Important: each abstract may be submitted to one conference only.*
2. Click “Submit an Abstract” from within the conference you’ve chosen, and you’ll be prompted to sign in to your spie.org account to complete the submission wizard.
3. If your submission is related to an application track, indicate the appropriate track when prompted during the submission process.

**What you will need to submit**

A completed electronic submission should include the following:

- Title
- Author(s) information
- 250-word abstract for technical review
- 100-word summary for the program
- Keywords used in search for your paper (optional)
- Your decision on publishing your presentation recording to the SPIE Digital Library (slide capture and audio)
- Check the individual conference Call for Papers for additional requirements (for example, some conferences require 2- to 3-page extended summary for technical review, or have instructions for competing for awards)

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.

**Important dates**

| Abstracts Submission Deadline | 26 August 2020 |
| Acceptance Notification Sent to Contact Author | 2 November 2020 |
| Manuscripts Due (Conferences OE506, and OE801-OE803 Only) | 20 January 2021 |
| Manuscripts Due (All Conferences EXCEPT OE506, and OE801-OE803) | 16 February 2021 |

**Submission agreement**

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
- Attend the meeting
- Present at the scheduled time
- Publish their manuscript in the SPIE Digital Library
- 6-page manuscript minimum for LASE and OPTO; 4-page minimum for BIOS; 20-page maximum
- Obtain funding for registration fees, travel, and accommodations, independent of SPIE, through their sponsoring organizations
- Ensure that all clearances, including government and company clearance, have been obtained to present and publish. If you are a DoD contractor in the USA, allow at least 60 days for clearance.

**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 Chairs’ discretion.

**Publication of Proceedings in the SPIE Digital Library**

- Conference Chairs/Editors may require manuscript revision before approving publication and reserve the right to reject for publication any paper that does not meet acceptable standards for a scientific publication.
- Conference Chair/Editor decisions on whether to allow publication of a manuscript are final.
- Authors must be authorized to transfer copyright of the manuscript to SPIE, or provide a suitable publication license.
- Only papers presented at the conference and received according to publication guidelines and timelines will be published in the conference Proceedings of SPIE in the SPIE Digital Library.
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**Contact information**

For questions about submitting an abstract, or the meeting, contact the Conference Program Coordinator.

www.spie.org/bo302call