



Clinical and Translational Neurophotonics (BO200)

Conference Chairs: **Steen J. Madsen**, Univ. of Nevada, Las Vegas (USA); **Victor X. D. Yang**, Ryerson Univ. (Canada)

Program Committee: **David Abookasis**, Ariel Univ. of Samaria (Israel); **Frederic Leblond**, Ecole Polytechnique de Montréal (Canada); **Herbert Stepp**, Ludwig-Maximilians-Univ. München (Germany)

Recent technological advances have opened exciting opportunities for lasers and optical techniques in neurosurgery and brain imaging. Therapeutic applications include: tumor debulking/removal via thermal or photochemical interactions, and spinal decompression and discectomy. Optical techniques have also shown promise in a number of diagnostic applications, including fluorescence-guided tumor resection, imaging of cortical function and intra-vascular examinations. Of special interest is the use of optical or other imaging modalities in the detection and therapy of neuro-degenerative diseases such as Alzheimer's or Parkinson's.

The purpose of this conference is to provide a forum for clinicians, scientists, engineers and manufacturers to report on current developments and to discuss future opportunities for optical techniques in neurosurgery and brain imaging.

Contributed papers are solicited concerning, but not limited to, the following areas:

- laser surgery in the brain and spine
- fluorescence-guided resection
- optical spectroscopy of normal brain and neoplastic tissue
- functional imaging of the brain using optical techniques
- photodynamic therapy in neurosurgery
- optical instrumentation and devices, including microscopes and endoscopes
- optical localization and registration techniques for neuronavigation
- fMRI/PET
- techniques for in vivo microscopy
- microscopic imaging and advanced microscopic techniques
- virtual reality and augmented reality visualization in the OR
- real-time functional imaging in the OR
- co-registration (optical and other imaging modalities)
- translational research.

ABSTRACT SUBMISSION

By submitting an abstract, I agree to the following conditions:

AN AUTHOR OR COAUTHOR (INCLUDING KEYNOTE, INVITED, ORAL, AND POSTER PRESENTERS) WILL:

- Register at the reduced author registration rate (current SPIE Members receive an additional discount on the registration fee).
- Attend the meeting.
- Make the presentation as scheduled in the program.
- Submit a manuscript (6 pages minimum for LASE & OPTO; 4 pages minimum for BiOS; 20 pages maximum) for publication in the Proceedings of SPIE in the SPIE Digital Library.
- 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.

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- Please submit a **250-word text abstract** for technical review purposes that is suitable for publication. SPIE is authorized to circulate your abstract to conference committee members for review and selection purposes.
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- Only original material should be submitted.
- Abstracts should contain enough detail to clearly convey the approach and the results of the research.
- Commercial papers, papers with no new research/development content, and papers where supporting data or a technical description cannot be given for proprietary reasons will not be accepted for presentation in this conference.
- Please do not submit the same, or similar, abstracts to multiple conferences.

SPECIAL TOPICS HIGHLIGHTED IN PROGRAM

- If your submission is related to Translational Research, Brain, or 3D Printing, please indicate this when prompted during the abstract submission. If your paper is accepted, and you have indicated interest in Translational Research, Brain, or 3D Printing, the contact author will be emailed after we publish the program, and invited to submit a 1-2 page summary explaining how their research is related to that special topic.
- **TRANSLATIONAL RESEARCH:** If your paper is chosen by the selection committee, your presentation will be cross-listed in the SPIE Translational Research Virtual Program, and you will be eligible to win an SPIE Translational Research Best Paper Award.
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- **3D PRINTING:** If your paper is selected by the 3D Printing committee, your presentation will be cross-listed in the SPIE Applications of 3D Printing Virtual Program and you will be eligible to win an SPIE Applications of 3D Printing Award.

REVIEW, NOTIFICATION, AND PROGRAM PLACEMENT INFORMATION

- To ensure a high-quality conference, all submissions will be assessed by the Conference Chair/Editor for technical merit and suitability of content.
- Conference Chair/Editors reserve the right to reject for presentation any paper that does not meet content or presentation expectations.
- The contact author will receive notification of acceptance and presentation details by e-mail the week of **25 September 2017**.
- Final placement in an oral or poster session is subject to the Chairs' discretion.

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- Conference Chair/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.
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Abstracts Due: **17 JULY 2017**

Manuscript Due Date: **5 JANUARY 2018**