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 or functional diseases such as Alzheimer’s, Parkinson’s, and epilepsy.

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.
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)

Important dates

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstracts Submission Deadline</td>
<td>15 July 2020</td>
</tr>
<tr>
<td>Acceptance Notification</td>
<td>21 September 2020</td>
</tr>
<tr>
<td>Manuscripts Due (Conferences OE506, and OE801-OE803 Only)</td>
<td>9 December 2020</td>
</tr>
<tr>
<td>Manuscripts Due (All Conferences EXCEPT OE506, and OE801-OE803)</td>
<td>5 January 2021</td>
</tr>
</tbody>
</table>

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.
• Oral presentations are recorded, and presentation slides are synced with the presenter’s audio. Only those presentations with author permission will be published in the SPIE Digital Library.
• SPIE partners with relevant scientific databases to enable researchers to find the papers in the Proceedings of SPIE easily. The databases that abstract and index these papers include Astrophysical Data System (ADS), EI Compendex, CrossRef, Google Scholar, Inspic, Scopus, and Web of Science Conference Proceedings Citation Index.
• More publication information available on the SPIE Digital Library.

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

Add an application track to help get your presentation noticed
When submitting an abstract, add an application track during the submission process to increase the visibility of your presentation in the program. Application tracks offer a second presentation listing so participants can easily locate presentations in the program on their area of interest.

APPLICATION TRACK Instructions
1. Select a conference online, click “Submit an Abstract,” and follow the instructions.
2. Indicate the appropriate track when prompted during the submission process.

Accepted presentations will be listed in both the conference and application track listing in the program.

SAVE THE DATE
Abstracts Due: 15 July 2020
Author Notification: 21 September 2020
The contact author will be notified of acceptance by email.

SPIE DIGITAL LIBRARY
www.SPIEDigitalLibrary.org
Your work will live far beyond the conference room—all proceedings from this meeting will be published in the SPIE Digital Library. Promote yourself, your ideas, and your organization to millions of key researchers from around the world through this web-based repository of the latest technical information.

www.spie.org/bo200call