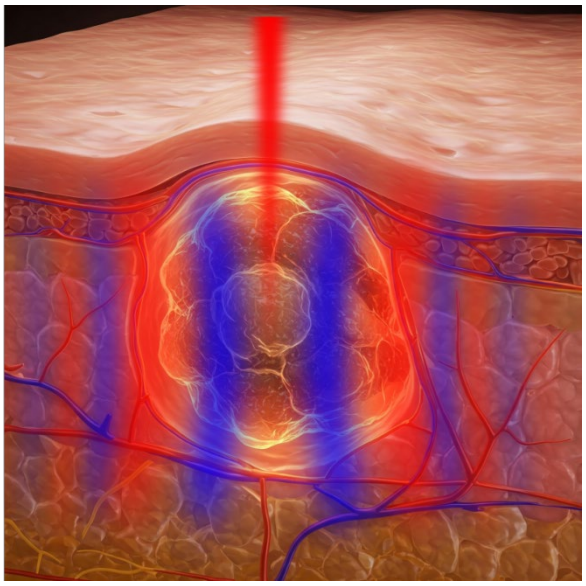
JBO Journal of Biomedical Optics
Published by SPIE

Call for papers

Advances in Optical Elastography



Editors:

Stefan Catheline, PhD
University of Lyon, INSERM
Irina Kabakova, PhD
University of Technology Sydney
Kirill V. Larin, PhD
University of Houston

Optical elastography is a rapidly evolving field that bridges optics, biomechanics, and medical imaging to provide non-invasive, high-resolution measurements of tissue mechanical properties. This JBO special section invites original research articles, reviews, and perspectives that highlight recent advancements, challenges, and future directions in optical elastography and its applications in biomedical research and clinical practice. Topics of interest:

- Novel optical elastography techniques (e.g., OCE, Brillouin microscopy, laser speckle imaging)
- Multimodal imaging approaches combining optical elastography with other modalities
- Advances in tissue biomechanics modeling and characterization
- Development of new phantoms and calibration standards for optical elastography
- Applications in ocular imaging, cancer detection, fibrosis assessment, and cardiovascular diseases
- *In vivo* and *ex vivo* studies of tissue mechanical properties
- Machine learning and AI-driven analysis for optical elastography data
- Miniaturized and portable optical elastography systems for point-of-care applications
- Challenges in translating optical elastography to clinical practice
- Emerging applications in regenerative medicine, ophthalmology, and dermatology

For the full list of suggested topics, see the call for papers at spie.org/JBOcalls.

Submissions accepted through 31 July 2025

SPIE.

For information on how to prepare a manuscript for JBO, please visit our website **spie.org/jboauthorinfo**