



## Biomedical Imaging and Sensing Conference (BISC 2020)

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This conference will provide an international forum for reporting recent progress in imaging and sensing in biology and medicine, as well as related areas. In biomedical optics and photonics, optical tools are employed for the understanding and treatment of diseases, from the cellular level to macroscopic applications. At the cellular level, highly precise laser applications allow the manipulation, operation or stimulation of cells, even in living organisms or animals. Optical microscopy has been revolutionized by a thorough understanding of the different markers and their switching behavior. Marker-free microscopy technologies, like CARS, SHG or THG-microscopy, Digital Holographic Microscopy, are spreading into multiple biological and clinical imaging applications. OCT is continuously broadening its clinical applicability by becoming even higher resolution, higher speed and more compact. Computational imaging including compressive sensing and deep learning is a rapidly growing field to create powerful applications such as imaging, sensing, and diagnosis. In the broader field of optics and photonics, biomedical imaging and sensing are the most quickly progressing and expanding areas. Techniques developed in these areas could greatly advance physical, engineering and biological knowledge as well as optics and photonics technology.

This conference will include basic research at cellular level through clinical applications of various optical technologies.

Both invited papers and regular contributions will be presented. All abstracts will be reviewed by the program committee for originality and merit. Topics of the conference are listed below, but other topics related to biomedical imaging are also welcome.

### TOPICS:

- medical and biological imaging instrumentation and techniques
- optogenetics
- advanced microscopy
- advanced endoscopy
- super resolution in biomedical imaging and sensing
- computational imaging in biomedical imaging and sensing
- adaptive optics in biomedical imaging and sensing
- structured illumination in biomedical imaging and sensing
- interferometry and holography in biology and medicine
- optical coherence tomography
- diffuse optical tomography
- digital holography
- quantitative phase imaging
- photoacoustic imaging
- multimodal imaging and sensing
- optical biopsy
- spectroscopic imaging and sensing
- multispectral imaging and sensing
- scattering imaging
- fluorescence imaging
- molecular imaging
- terahertz sensing
- optical fibers and sensors for biomedicine
- multimodality optical diagnostic systems.

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**Submission site opens**  
1 October 2019

**Registration opens**  
18 December 2019

**Abstracts due**  
16 January 2020

Submit your abstract today  
<https://opicon.jp/conferences/BISC>