



Biomedical Imaging and Sensing Conference (BISC 2021)

Program Committee: **Wonshik Choi**, Korea Univ. (Korea, Republic of); **Shi-Wei Chu**, National Taiwan Univ. (Taiwan); **Katsumasa Fujita**, Osaka Univ. (Japan); **Yoshio Hayasaki**, Utsunomiya Univ. Ctr. for Optical Research & Education (Japan); **Masaki Hisaka**, Osaka Electro-Communication Univ. (Japan); **Wataru Inami**, Shizuoka Univ. (Japan); **Ichiro Ishimaru**, Kagawa Univ. (Japan); **Toshiaki Iwai**, Tokyo Univ. of Agriculture and Technology (Japan); **Hsiang-Chieh Lee**, National Taiwan Univ. (Taiwan); **Dong Li**, CAS (China); **Xingde Li**, Johns Hopkins Univ. (United States); **Takashi Kakue**, Chiba Univ. (Japan); **Myung K. Kim**, Univ. of South Florida (United States); **Robert Magnusson**, The Univ. of Texas at Arlington (United States); **Yuji Matsuura**, Tohoku Univ. (Japan); **Izumi Nishidate**, Tokyo Univ. of Agriculture and Technology (Japan); **Goro Nishimura**, Hokkaido Univ. (Japan); **Yusuke Ogura**, Osaka Univ. (Japan); **Eiji Okada**, Keio Univ. (Japan); **Yukitoshi Otani**, Utsunomiya Univ. (Japan); **Yong-Keun Park**, KAIST (Korea, Republic of); **Xiangyu Quan**, Kobe Univ. (Japan); **Manabu Sato**, Yamagata Univ. (Japan); **Shunichi Sato**, National Defense Medical College (Japan); **Tatsuki Tahara**, NICT (Japan); **Enrique Tajahuerce**, Univ. Jaume I (Spain); **Yosuke Tamada**, Utsunomiya Univ. (Japan); **Eriko Watanabe**, The Univ. of Electro-Communications (Japan); **Peng Xia**, AIST (Japan); **Yasui Takeshi**, The Univ. of Tokushima (Japan)

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.

Submit your abstract today

<https://opicon.jp/conferences/BISC>

CONFERENCE CHAIR



Toyohiko Yatagai
Utsunomiya Univ. (Japan)

CONFERENCE CO-CHAIRS

Yoshihisa Aizu
Muroran Institute of
Technology (Japan)

Osamu Matoba
Kobe Univ. (Japan)

Yasuhiro Awatsuji
Kyoto Institute of
Technology (Japan)

Yuan Luo
National Taiwan Univ.
(Taiwan)

**SPIE. STRUCTURED
LIGHT**

Submission site opens
14 October 2020

Registration opens
18 December 2020

Abstracts due
14 January 2021