PROCEEDINGS OF SPIE

Biomedical Imaging and Sensing Conference 2020

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Yokohama, Japan
20–24 April 2020

Sponsored and Published by
SPIE

Volume 11521

Proceedings of SPIE 0277-786X, V. 11521

Biomedical Imaging and Sensing Conference 2020, edited by T. Yatagai, Y. Aizu, O. Matoba, Y. Awatsuji, Y. Luo,
Proc. of SPIE Vol. 11521, 1152101 · © 2020 SPIE · CCC code: 0277-786X/20/$21 · doi: 10.1117/12.2574221

The papers in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. Additional papers and presentation recordings may be available online in the SPIE Digital Library at SPIEDigitalLibrary.org.

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Please use the following format to cite material from these proceedings:
Author(s), "Title of Paper," in *Biomedical Imaging and Sensing Conference 2020*, edited by T. Yatagai, Y. Aizu, O. Matoba, Y. Awatsuji, Yuan Luo, Proceedings of SPIE Vol. 11521 (SPIE, Bellingham, WA, 2020) Seven-digit Article CID Number.

ISSN: 0277-786X
ISSN: 1996-756X (electronic)

ISBN: 9781510638495
ISBN: 9781510638501 (electronic)

Published by
SPIE
P.O. Box 10, Bellingham, Washington 98227-0010 USA
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445
SPIE.org

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Introduction

On behalf of the organizing committee and program committee, it is our great pleasure that the 6-th Biomedical Imaging and Sensing Conference in Yokohama is going to open, within the framework of the OPTICS & PHOTONICS International Congress (OPIC 2020). Unfortunately, due to the spreading of COVID-19, the conference this year is performed as a digital conference.

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, like SHG or THGmicroscopy, is spreading into multiple biological and clinical imaging applications. OCT is continuously broadening its clinical applicability by even higher resolution, higher speed and more compact and the use of Doppler and polarization sensitivity for functional imaging.

In the field of optics and photonics, biomedical imaging and sensing areas are the most quickly progressing and expanding. Techniques developed in these areas could make great steps forward in the advancement of physical, engineering and biological knowledge as well as optics and photonics technology. This Conference aims at covering several aspects from fundamental studies at the cellular level to clinical applications of various optical technologies.

Finally, we hope the 6-th Biomedical Imaging and Sensing Conference contributes to progress in this field and we hope you enjoy fruitful discussions during the Conference.

Takashige Omatsu
Kishan Dholakia
Hajime Ishihara
Keiji Sasaki