## Dynamics and Fluctuations in Biomedical Photonics XVII

Valery V. Tuchin Martin J. Leahy Ruikang K. Wang Editors

1-3 February 2020 San Francisco, California, United States

Sponsored and Published by SPIE

Volume 11239

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.

The papers reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

Please use the following format to cite material from these proceedings:

Author(s), "Title of Paper," in *Dynamics and Fluctuations in Biomedical Photonics XVII*, edited by Valery V. Tuchin, Martin J. Leahy, Ruikang K. Wang, Proceedings of SPIE Vol. 11239 (SPIE, Bellingham, WA, 2020) Seven-digit Article CID Number.

ISSN: 1605-7422

ISSN: 2410-9045 (electronic)

ISBN: 9781510632417

ISBN: 9781510632424 (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.orc

Copyright © 2020, Society of Photo-Optical Instrumentation Engineers.

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of copying fees. The Transactional Reporting Service base fee for this volume is \$21.00 per article (or portion thereof), which should be paid directly to the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. Payment may also be made electronically through CCC Online at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher. The CCC fee code is 1605-7422/20/\$21.00.

Printed in the United States of America by Curran Associates, Inc., under license from SPIE.

Publication of record for individual papers is online in the SPIE Digital Library.



**Paper Numbering:** Proceedings of SPIE follow an e-First publication model. A unique citation identifier (CID) number is assigned to each article at the time of publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online and print versions of the publication. SPIE uses a seven-digit CID article numbering system structured as follows:

- The first five digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc. The CID Number appears on each page of the manuscript.

## Contents

v vii	Authors Conference Committee
	OPTICAL COHERENCE TOMOGRAPHY
11239 0A	Quantitative 4D OCT imaging of tubular mouse embryonic heart reveals its localized pumping mechanism [11239-8]
11239 OB	In vivo nano-scale vibrometry in apical-basal ends of contractile outer hair cells in the mammalian cochlea by supercontinuum source spectral-domain OCT [11239-9]
11239 0C	Visualization of OCT signal pulsatility at variable tissue depth with optical microangiography [11239-10]
11239 0D	Optical coherence angiography reveals changes in murine fetal brain vasculature due to maternal exposure to nicotine [11239-11]
	SPECTROSCOPY AND APPLICATIONS I
11239 OF	Assessing distribution features of fibrous structures using Mueller matrix derived parameters: a quantitative method for breast carcinoma tissues detection and staging (Invited Paper) [11239-13]
	SPECTROSCOPY AND APPLICATIONS II
11239 OH	Diffuse correlation spectroscopy in the Fourier domain with holographic camera-based detection [11239-15]
	FUNCTIONAL IMAGING AND EVALUATIONS
11239 ON	Towards registration of optical and MR signal changes in subcutaneous tumor volume in vivo after optical skin clearing (Invited Paper) [11239-20]
	POSTER SESSION
11239 OW	Confocal Raman microspectroscopy for evaluation of optical clearing efficiency of the skin ex vivo [11239-28]

11239 12 Characterization of nano sensitive sub-micron scale tissue-structural multifractality and its alteration in tumor progress [11239-35]