Dynamics and Fluctuations in Biomedical Photonics XXI

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

28–29 January 2024 San Francisco, California, United States

Sponsored and Published by SPIE

Volume 12841

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 XXI*, edited by Valery V. Tuchin, Martin J. Leahy, Ruikang K. Wang, Proc. of SPIE 12841, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

ISSN: 1605-7422

ISSN: 2410-9045 (electronic)

ISBN: 9781510669413

ISBN: 9781510669420 (electronic)

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA Telephone +1 360 676 3290 (Pacific Time)

SPIE.org

Copyright © 2024 Society of Photo-Optical Instrumentation Engineers (SPIE).

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 fees. To obtain permission to use and share articles in this volume, visit Copyright Clearance Center 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.

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: A unique citation identifier (CID) number is assigned to each article in the Proceedings of SPIE 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 Conference Committee

	DYNAMIC AND ANGIOGRAPHIC OCT OF REPRODUCTIVE AND EMBRYONIC DEVELOPMENT
12841 02	Utilizing optical coherence angiography to assess the acute and multiple dose effects of prenatal alcohol exposure on fetal brain vasculature [12841-2]
12841 03	Quantitative OCT angiography for dynamic volumetric analysis in embryonic cardiovascular system [12841-3]
	DCS WITH LASER SPECKLE
12841 04	Investigating cerebral dynamics during cardiac arrest using an optical technique and a hemodynamic model [12841-19]
	LASER SPECKLE TECHNIQUES
12841 05	Camera selection for speckle contrast optical spectroscopy and validation against diffuse correlation spectroscopy [12841-21]
	NIRS AND DIFFUSE METHODS
12841 06	Validation of Monro-Kellie doctrine during blood pressure lowering in mice using fNIRS [12841-25]
12841 07	Spectral entropy of cerebral fluids during human sleep measured by wearable fNIRS device (Invited Paper) [12841-26]
12841 08	Implementation of a real-time fNIRS signal quality assessment [12841-27]
12841 09	An open source energy efficient hybrid Monte Carlo and machine learning algorithm for assessing light transport in turbid scattering media (Invited Paper) [12841-29]