

PROGRESS IN BIOMEDICAL OPTICS AND IMAGING

Vol. 20 No. 30

Optical Elastography and Tissue Biomechanics VI

Kirill V. Larin
Giuliano Scarcelli
Editors

2–3 February 2019
San Francisco, California, United States

Sponsored by
SPIE

Cosponsored by
Thorlabs (United States)

Published by
SPIE

Volume 10880

Proceedings of SPIE, 1605-7422, V. 10880

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

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 SPIDigitalLibrary.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 *Optical Elastography and Tissue Biomechanics VI*, edited by Kirill V. Larin, Giuliano Scarcelli, Proceedings of SPIE Vol. 10880 (SPIE, Bellingham, WA, 2019) Seven-digit Article CID Number.

ISSN: 1605-7422

ISSN: 2410-9045 (electronic)

ISBN: 9781510624023

ISBN: 9781510624030 (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

Copyright © 2019, 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 \$18.00 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 1605-7422/19/\$18.00.

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.

SPIE. DIGITAL LIBRARY

SPIDigitalLibrary.org

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	Authors
vii	Conference Committee
xi	Introduction

OPTICAL COHERENCE ELASTOGRAPHY I

10880 03	Assessment of the biomechanical changes in cardiac tissue after myocardial infarction with optical coherence elastography [10880-2]
10880 04	Correlation of optical coherence elastography with clinical evaluation of systemic sclerosis [10880-3]
10880 07	Optimal frequency for vibrational optical coherence elastography (OCE) on tissue mechanical properties characterization [10880-6]

NOVEL METHODS I

10880 0G	Perspectives and advances in optical elastography (Invited Paper) [10880-15]
10880 0H	Real-time and non-invasive quantitative phase imaging of pancreatic ductal adenocarcinoma cell mechanical properties [10880-16]
10880 0K	Phase-sensitive OCT in monitoring of slow-rate strains in laser tissue reshaping [10880-19]

OPTICAL COHERENCE ELASTOGRAPHY II

10880 0P	Differentiation of murine colon pathology by optical and mechanical contrast using optical coherence tomography and elastography [10880-24]
----------	---

BRILLOUIN ELASTOGRAPHY

10880 16	Sequentially-Shifted Excitation (SSE) Brillouin spectroscopy for recovering signal contaminated with strong scattering, absorption or fluorescence [10880-41]
----------	---

POSTER SESSION

- 10880 1D A preliminary study on using reverberant shear wave fields in optical coherence elastography to examine mice brain ex vivo [10880-48]
- 10880 1H Evaluation of human corneal ulcer healing process using optical coherence tomography: an in vitro study [10880-52]
- 10880 1I Adaptive Doppler analysis for robust handheld optical coherence elastography [10880-53]
- 10880 1J OCE quantification of Poisson's ratio through 2D speckle tracking [10880-54]
- 10880 1K Simultaneous reconstruction and displacement estimation for spectral-domain optical coherence elastography [10880-55]
- 10880 1O Assessing the effects of storage medium on the biomechanical properties of porcine lens with optical coherence elastography [10880-59]
- 10880 1P Quantifying lens elastic properties with optical coherence elastography as a function of intraocular pressure [10880-60]