PROGRESS IN BIOMEDICAL OPTICS AND IMAGING Vol. 23 No. 8

Ophthalmic Technologies XXXII

Daniel X. Hammer Karen M. Joos Daniel V. Palanker Editors

22–23 January 2022 San Francisco, California, United States

20–24 February 2022 ONLINE

Sponsored and Published by SPIE

Volume 11941

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 *Ophthalmic Technologies XXXII*, edited by Daniel X. Hammer, Karen M. Joos, Daniel V. Palanker, Proc. of SPIE 11941, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

ISSN: 1605-7422 ISSN: 2410-9045 (electronic)

ISBN: 9781510647534 ISBN: 9781510647541 (electronic)

Published by **SPIE** P.O. Box 10, Bellingham, Washington 98227-0010 USA Telephone +1 360 676 3290 (Pacific Time) SPIE.org Copyright © 2022 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

FUNCTIONAL IMAGING

11941 04 Intrinsic signal optoretinography of dark adaptation [11941-17]

HIGH-SPEED, FULL-FIELD, AND VOLUMETRIC DEVICES

11941 05 Multifunctional and multimodal Fourier domain mode-locked laser-based adaptive optics system for ultrahigh speed retinal cellular imaging [11941-25]

OCULAR BIOMECHANICAL PROPERTIES: JOINT SESSION WITH CONFERENCES 11941 AND 11962

11941 06 Mapping corneal stiffness with compressional optical coherence elastography [11941-32]

ANTERIOR SEGMENT IMAGING AND THERAPIES

11941 07 Measurements of mechanical steady-state accommodation fluctuations using optical coherence tomography [11941-34]

HANDHELD AND MINIATURE DEVICES

11941 09 Ultra-widefield handheld swept-source OCT for peripheral retinal imaging [11941-41]

POSTER SESSION

- Evaluating the effects of scattering on retinal image quality [11941-60]
- 11941 OC Training of an artificial intelligence algorithm for automatic detection of the Van Herick grade [11941-61]
- 11941 OE An ultra-wide-field fundus camera with color balanced trans-palpebral illumination [11941-63]

11941 OF	Estimation of the cross-sectional surface area of the waist of the nerve fiber layer at the optic
	nerve head [11941-68]

- 11941 OG A simple Maxwellian optical system to investigate the photoreceptors contribution to pupillary light reflex [11941-69]
- 11941 OH Depth-resolved profile features for differentiating arteries and veins in OCT and OCT angiography of the human retina [11941-70]
- 11941 01 Anterior segment optical coherence tomography (AS-OCT) for the visualization and quantification of dose-dependent ocular toxicity [11941-71]
- 11941 0J Comparative feature analysis in OCT and OCT angiography of diabetic retinopathy [11941-78]
- 11941 OK Optimizing the protocol for retinal vascular permeability mapping from fluorescein video angiography data [11941-84]
- 11941 OL What is the role of magnification correction in the measurement of macular microvascular dimensions in emmetropic eyes? [11941-89]
- 11941 OM Is there a relationship between optic disc ovality index and positional changes in myopic eyes? [11941-91]