PROGRESS IN BIOMEDICAL OPTICS AND IMAGING
Vol. 22 No. 15

Ophthalmic Technologies XXXI

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

6–11 March 2021
Online Only, United States

Sponsored and Published by
SPIE

Volume 11623

Proceedings of SPIE, 1605-7422, V. 11623

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 XXXI*, edited by Daniel X. Hammer, Karen M. Joos, Daniel V. Palanker, Proc. of SPIE 11623, Seven-digit Article CID Number (DD/MM/YYYY); (DOI URL).

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

ISBN: 9781510640818
ISBN: 9781510640825 (electronic)

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

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
SPIEDigitalLibrary.org

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

ADAPTIVE OPTICS AND WAVEFRONT SENSING METHODOLOGY

11623 06 **Adaptive glasses wavefront sensorless full-field OCT for high-resolution retinal imaging over a wide field-of-view (Pascal Rol Award)** [11623-1]

11623 08 **Optical incoherence tomography: a method to generate tomographic retinal cross-sections with non-interferometric adaptive optics ophthalmoscopes** [11623-3]

11623 0E **Simultaneous multi-offset imaging of retinal microstructures free of directionality artifacts** [11623-9]

ANGIOGRAPHY AND BLOOD FLOW

11623 0G **Choroidal and retinal hemodynamic imager** [11623-11]

FUNCTIONAL OPHTHALMIC IMAGING

11623 13 **Phase-sensitive measurements of depth dependent signal transduction in the inner plexiform layer** [11623-34]

11623 15 **Intrinsic signal optoretinography of rod photoreceptor dysfunction due to retinal degeneration** [11623-36]

11623 18 **Functional optical coherence tomography for nonmydriatic intrinsic signal optoretinography of human photoreceptors** [11623-39]

MACHINE LEARNING, IMAGE PROCESSING, AND SEGMENTATION ALGORITHMS

11623 1B **Deep learning artery-vein classification in OCT angiography** [11623-42]

11623 1D **Fully automatic estimation of the waist of the nerve fiber layer at the optic nerve head angularly resolved** [11623-44]

NOVEL OPHTHALMIC TECHNOLOGY

11623 1G **Virtually structured detection for super-resolution ophthalmoscopy of human photoreceptors** [11623-47]

POSTER SESSION

11623 1N **Effects of laser pulse duration in two-photon vision threshold measurements** [11623-54]

11623 1S **Assessing cataract formation ex vivo with phase decorrelation OCT** [11623-59]

11623 1U **Single-frame optical coherence tomography angiography for the quantification of corneal neovascularization in a mouse model** [11623-61]

11623 1W **Towards the development of a new model for the oculomotor system** [11623-63]

11623 1X **A new screening system for the estimation of ocular anterior chamber angle width** [11623-64]

11623 1Z **Is there a relationship between retinal blood vessel characteristics and myopia?** [11623-66]

11623 20 **A new method for quantification of retinal blood vessel characteristics** [11623-67]

11623 25 **In-vivo 3D zebrafish imaging for longitudinal observation of the retina regeneration with different light intensity irradiations** [11623-72]

11623 28 **Is the optic disc tilt angle different in myopia?** [11623-75]

11623 2A **2D reverse Shack-Hartmann ocular refraction measurement** [11623-77]