

PROGRESS IN BIOMEDICAL OPTICS AND IMAGING

Vol. 15 No. 5

Ophthalmic Technologies XXIV

Fabrice Manns
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Editors

1–2 February 2014
San Francisco, California, United States

Sponsored and Published by
SPIE

Volume 8930

Proceedings of SPIE, 1605-7422, V. 8930

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

Ophthalmic Technologies XXIV, edited by Fabrice Manns, Per G. Söderberg, Arthur Ho, Proc. of SPIE
Vol. 8930, 893001 · © 2014 SPIE · CCC code: 1605-7422/14/\$18 · doi: 10.1117/12.2053603

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Author(s), "Title of Paper," in *Ophthalmic Technologies XXIV*, edited by Fabrice Manns, Per G. Söderberg, Arthur Ho, Proceedings of SPIE Vol. 8930 (SPIE, Bellingham, WA, 2014) Article CID Number.

ISSN: 1605-7422

ISBN: 9780819498434

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

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Contents

- vii *Conference Committee*
- xi *Introduction*
- xiii *14th Pascal Rol Award for Excellence in Ophthalmic Technologies*

SMALL ANIMAL MODELS

- 8930 04 **Air-puff OCE for assessment of mouse cornea *in vivo*** [8930-3]
J. Li, S. Wang, M. Singh, Univ. of Houston (United States); S. Aglyamov, S. Emelianov, The Univ. of Texas at Austin (United States); M. Twa, Univ. of Houston (United States); K. V. Larin, Univ. of Houston (United States) and Baylor College of Medicine (United States)
- 8930 05 **Evaluation of state-of-the-art imaging systems for *in vivo* monitoring of retinal structure in mice: current capabilities and limitations** [8930-4]
P. Zhang, A. Zam, E. N. Pugh Jr., Univ. of California, Davis (United States); R. J. Zawadzki, Univ. of California, Davis (United States) and UC Davis Eye Ctr. (United States)

OPHTHALMIC IMAGING: POLARIZATION

- 8930 08 **Five-dimensional analysis of multi-contrast Jones matrix tomography of posterior eye** [8930-7]
U. Bhaskar, Univ. of Tsukuba (Japan) and Indian Institute of Technology (India); Y.-J. Hong, Univ. of Tsukuba (Japan); M. Miura, Univ. of Tsukuba (Japan) and Tokyo Medical Univ. Ibaraki Medical Ctr. (Japan); Y. Yasuno, Univ. of Tsukuba (Japan)

PASCAL ROL LECTURE

- 8930 0B **Corneal refractive surgery: Is intracorneal the way to go and what are the needs for technology? (Keynote Paper)** [8930-57]
J. Hjortdal M.D., A. Ivarsen, Aarhus Univ. Hospital (Denmark)

OPHTHALMIC INSTRUMENTS I

- 8930 0C **Eye vision system using programmable micro-optics and micro-electronics** [8930-10]
N. A. Riza, M. J. Amin, Univ. College Cork (Ireland); M. N. Riza, Presentation Brothers College (Ireland)

- 8930 0D **High temporal resolution ocular aberrometry with pupil tracking** [8930-11]
J. Jarosz, ONERA (France) and Quantel Medical (France); S. Meimon, J.-M. Conan, ONERA (France); M. Paques, Clinical Investigation Ctr. 503, INSERM, Hôpital Des Quinze Vingts (France)
- 8930 0E **A simple handheld pupillometer for chromatic flicker studies** [8930-12]
M. Bernabei, Univ. degli Studi di Modena e Reggio Emilia (Italy); R. Tinarelli, L. Peretto, Univ. degli Studi di Bologna (Italy); L. Rovati, Univ. degli Studi di Modena e Reggio Emilia (Italy)
- 8930 0F **High frequency pupillometry** [8930-13]
S. Meimon, ONERA (France); J. Jarosz, ONERA (France) and Quantel Medical (France); G. Chenegros, Clinical Investigation Ctr. 503, INSERM, Hôpital Des Quinze Vingts (France); C. Petit, J.-M. Conan, B. Sorrente, ONERA (France); M. Paques, Clinical Investigation Ctr. 503, INSERM, Hôpital Des Quinze Vingts (France)
- 8930 0G **Novel technique: a pupillometer-based objective chromatic perimetry** [8930-14]
Y. Rotenstreich, A. Skaat, I. Sher, A. Kolker, E. Rosenfeld, S. Melamed, M. Belkin, Sheba Medical Ctr. (Israel)

OPHTHALMIC INSTRUMENTS II

- 8930 0H **The Uppsala Contrast Sensitivity Test (UCST): A fast strategy for clinical assessment of contrast sensitivity** [8930-56]
L. D. Malmqvist, P. G. Söderberg, Uppsala Univ. (Sweden) and Uppsala Univ. Hospital (Sweden)
- 8930 0I **Complete 360° circumferential SS-OCT gonioscopy of the iridocorneal angle** [8930-15]
R. P. McNabb, A. N. Kuo, Duke Univ. Medical Ctr. (United States) and Duke Univ. (United States); J. A. Izatt, Duke Univ. (United States) and Duke Univ. Medical Ctr. (United States)
- 8930 0J **Portable, low-priced retinal imager for eye disease screening** [8930-16]
P. Soliz, S. Nemeth, R. VanNess, E. S. Barriga, G. Zamora, VisionQuest Biomedical LLC (United States)
- 8930 0K **Non-mydratric, wide field, fundus video camera** [8930-17]
B. Hoehner, Univ. of Erlangen-Nuremberg (Germany); P. Voigtmann, Voigtmann GmbH (Germany); G. Michelson, B. Schmauss, Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

OPHTHALMIC IMAGING: IMAGE PROCESSING

- 8930 0P **Segmentation method for in vivo meibomian gland OCT image** [8930-22]
J. G. Shin, B. H. Lee, T. J. Eom, Gwangju Institute of Science and Technology (Korea, Republic of)

OCULAR BIOMETRY AND EYE MODELS

- 8930 OR **Finite element study on the effects of GRIN order on the accommodative response of the human crystalline lens** [8930-24]
H. Mohammad-Pour, Univ. of New South Wales (Australia) and Brien Holden Vision Institute (Australia); S. Kanapathipillai, Univ. of New South Wales (Australia); F. Manns, Bascom Palmer Eye Institute (United States) and Univ. of Miami (United States); A. Ho, Univ. of New South Wales (Australia), Brien Holden Vision Institute (Australia), Bascom Palmer Eye Institute (United States), Vision Cooperative Research Ctr. (Australia)

OPHTHALMIC IMAGING: STRUCTURAL AND FUNCTIONAL

- 8930 OV **Label-free SHG imaging and spectral FLIM of corneas using a sub-15 fs laser microscope** [8930-28]
A. Batista, Univ. de Coimbra (Portugal) and Univ. des Saarlandes (Germany); H. G. Breunig, Univ. des Saarlandes (Germany) and JenLab GmbH (Germany); A. Uchugonova, B. Seitz, Univ. des Saarlandes (Germany); A. M. Morgado, Univ. de Coimbra (Portugal); K. König, Univ. des Saarlandes (Germany) and JenLab GmbH (Germany)
- 8930 OW **Biometry of the ciliary muscle during dynamic accommodation assessed with OCT (Pascal Rol Award)** [8930-29]
M. Ruggeri, Bascom Palmer Eye Institute (United States); V. Hernandez, C. de Freitas, F. Manns, Bascom Palmer Eye Institute (United States) and Univ. of Miami (United States); J. Parel, Bascom Palmer Eye Institute (United States), Univ. of Miami (United States), Vision Cooperative Research Ctr. (Australia)
- 8930 OX **Improved *in vivo* imaging of human blood circulation in the chorioretinal complex using phase variance method with new phase stabilized 1 μ m swept-source optical coherence tomography (pv-SSOCT)** [8930-30]
R. Poddar, UC Davis Medical Ctr. (United States); D. Y. Kim, California Institute of Technology (United States); J. S. Werner, UC Davis Medical Ctr. (United States); R. J. Zawadzki, UC Davis Medical Ctr. (United States) and Univ. of California Davis (United States)

OPHTHALMIC SURGERY: IMAGE-GUIDED AND THERAPY

- 8930 14 **Repetitive magnetic stimulation improves retinal function in a rat model of retinal dystrophy** [8930-37]
Y. Rotenstreich, A. Tzameret, N. Levi, S. Kalish, Sheba Medical Ctr. (Israel) and Tel Aviv Univ. (Israel); I. Sher, Sheba Medical Ctr. (Israel); A. Zangen, Ben Gurion Univ. of the Negev (Israel); M. Belkin, Sheba Medical Ctr. (Israel) and Tel Aviv Univ. (Israel)
- 8930 16 **Non-damaging laser therapy of the macula: Titration algorithm and tissue response (Translational Research Best Poster Award)** [8930-39]
D. Palanker, Stanford Univ. (United States); D. Lavinsky, Stanford Univ. (United States) and Federal Univ. Rio Grande do Sul (Brazil); R. Dalal, P. Huie, Stanford Univ. (United States)

ADAPTIVE OPTICS

- 8930 1B **Compact adaptive optics line scanning retinal imager; closer to the clinic** [8930-44]
M. Mujat, A. Patel, N. Iftimia, R. D. Ferguson, Physical Sciences Inc. (United States)

POSTER SESSION

- 8930 1C **Cost-effective instrumentation for quantitative depth measurement of optic nerve head using stereo fundus image pair and image cross correlation techniques** [8930-45]
L. A. V. de Carvalho, Wavetek Technologies USA (United States), Univ. de São Paulo (Brazil), Univ. Federal de São Paulo (Brazil); V. Carvalho, Wavetek Technologies USA (United States), Univ. de São Paulo (Brazil), Univ. Federal de São Carlos (Brazil)
- 8930 1E **UV protection for sunglasses: revisiting the standards** [8930-47]
M. Masili, H. Schiabel, L. Ventura, Univ. de São Paulo (Brazil)
- 8930 1F **UV transmittance during the crosslinking procedure: tunable treatment** [8930-48]
V. A. C. Lincoln, M. M. Mello, L. Ventura, Univ. de São Paulo (Brazil)
- 8930 1G **Flammability test for sunglasses: developing a system** [8930-49]
R. Magri, L. Ventura, Univ. de São Paulo (Brazil)
- 8930 1J **Femtosecond laser assisted design of sutureless intrastromal graft as an alternative to partial thickness keratoplasty** [8930-52]
F. Rossi, H. Durkee, R. Pini, Istituto di Fisica Applicata Nello Carrara (Italy); A. Canovetti, A. Malandrini, I. Lenzetti, Azienda USL 4 (Italy); P. Rubino, R. Leaci, A. Neri, P. Scaroni, Univ. degli Studi di Parma (Italy); L. Menabuoni, Azienda USL 4 (Italy); C. Macaluso, Univ. degli Studi di Parma (Italy)
- 8930 1K **Utilization of the excimer laser and a moving piezoelectric mirror to accomplish the customized contact lens ablation to correct high-order aberrations** [8930-53]
L. de Matos, Wavetek Technologies Industry Ltd. (Brazil), Univ. de São Paulo (Brazil), Univ. Federal de São Paulo (Brazil); F. M. M. Yasuoka, Wavetek Technologies Industry Ltd. (Brazil) and Univ. de São Paulo (Brazil); P. Schor, E. de Oliveira, Univ. Federal de São Paulo (Brazil); V. S. Bagnato, Univ. de São Paulo (Brazil); L. A. V. Carvalho, Wavetek Technologies Industry Ltd. (Brazil), Univ. de São Paulo (Brazil), Univ. Federal de São Paulo (Brazil)
- 8930 1L **Development of a universal toric intraocular lens calculator** [8930-54]
D. Hjelmstad, The Eye Ctr. (United States) and Arizona State Univ. (United States); S. I. Sayegh, The Eye Ctr. (United States)

Author Index

Conference Committee

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Session Chairs

- 1 Small Animal Models
Daniel X. Hammer, U.S. Food and Drug Administration (United States)
Karen M. Joos M.D., Vanderbilt University (United States)
 - 2 Ophthalmic Imaging: Polarization
Donald T. Miller, Indiana University (United States)
Luigi Rovati, Università degli Studi di Modena e Reggio Emilia (Italy)
 - 3 Ophthalmic Instruments I
Ezra Maguen, American Eye Institute (United States)
Arthur Ho, Brien Holden Vision Institute (Australia)
 - 4 Ophthalmic Instruments II
Ralf Brinkmann, Universität zu Lübeck (Germany)
Georg Schuele, OptiMedica Corporation (United States)
Michael Belkin, Tel Aviv University (Israel)
 - 5 Ophthalmic Imaging: Image Processing
David Borja, Alcon Laboratories, Inc. (United States)
Peter Soliz, VisionQuest Biomedical, LLC (United States)
Kostadinka Bizheva, University of Waterloo (Canada)
 - 6 Ocular Biometry and Eye Models
Arthur Ho, Brien Holden Vision Institute (Australia)
David Borja, Alcon Laboratories, Inc. (United States)
Ezra Maguen, American Eye Institute (United States)
 - 7 Ophthalmic Imaging: Structural and Functional
Wolfgang Drexler, Medizinische Universität Wien (Austria)
Daniel V. Palanker, Stanford University (United States)
Donald T. Miller, Indiana University (United States)
 - 8 Ophthalmic Surgery: Image-Guided and Therapy
Georg Schuele, OptiMedica Corporation (United States)
Roberto Pini, Istituto di Fisica Applicata Nello Carrara (Italy)
 - 9 Adaptive Optics
Daniel X. Hammer, U.S. Food and Drug Administration (United States)
Peter Soliz, VisionQuest Biomedical, LLC (United States)
Per G. Söderberg, Uppsala University (Sweden)
- Pascal Rol Award
Arthur Ho, Brien Holden Vision Institute (Australia)
Fabrice Manns, University of Miami (United States)

Poster Session

Arthur Ho, Brien Holden Vision Institute (Australia)

Fabrice Manns, University of Miami (United States)

Introduction

The papers contained in this volume were presented at the twenty-fourth conference on Ophthalmic Technologies, held from 1–2 February 2014, at the Moscone Center in San Francisco, California as a part of the SPIE Photonics West BiOS Meeting.

A total of 45 papers and 11 posters were presented by scientists, clinicians, and engineers from academia, private clinics, and industry representing many different countries covering 5 different continents. Topics included new devices and approaches for ocular biometry and imaging, low-cost and compact imaging and diagnostic devices, ophthalmic image processing, and advances in adaptive optics.

The fourteenth Pascal Rol Award was presented to Dr. Marco Ruggeri and his colleagues from Bascom Palmer Eye Institute at the University of Miami for their excellent paper on "*Biometry of the ciliary muscle during dynamic accommodation assessed with OCT*" (8930-29). Established in memory of Dr. Pascal O. Rol, former chair and co-founder of the Ophthalmic Technologies conference, the award is in recognition of the best manuscript and presentation. The outstanding finalists, selected by the entire program committee among the 56 abstract submissions, were Drs. McNabb (8930-15) and Palanker (8930-39).

The conference hosted its ninth presentation on the topic of the unmet needs and impact of technology in a clinical area. Prof. Jesper Hjortdal, from Aarhus University, a pioneer in the field of corneal biomechanics and femtosecond laser corneal surgery gave an inspiring lecture on the topic of clinical applications and technological needs for femtosecond laser corneal surgery.

We are very grateful to the Brien Holden Vision Institute in Sydney, Australia, for sponsoring the 2014 Pascal Rol award and keynote lecture through the Pascal Rol Foundation.

We thank the Program Committee members, session chairs, speakers and participants, as well as the SPIE staff for their support and dedication in making this conference a success.

We extend an invitation for the Ophthalmic Technologies XXV conference, which is scheduled for Saturday, 7 February and Sunday, 8 February 2015 in San Francisco, California.

Fabrice Manns
Per G. Söderberg
Arthur Ho

Fourteenth Pascal Rol Award for Excellence in Ophthalmic Technologies
Supported by the Brien Holden Vision Institute
through the Pascal Rol Foundation



Presented on Sunday February 2, 2014 to

Marco Ruggeri

for his excellent paper on

"Biometry of the ciliary muscle during dynamic accommodation assessed with OCT"



Pier Giorgio Gobbi (left) and Arthur Ho (center) present the 2014 Pascal Rol Award to Marco Ruggeri (right).

Past awardees

2013	Yossi Mandel	<i>In-vivo performance of photovoltaic subretinal prosthesis</i>
2012	Clemens Alt	<i>In vivo quantification of microglia dynamics with an SLO in a mouse model of focal laser injury</i>
2011	James Loudin	<i>Photovoltaic Retinal Prosthesis</i>
2010	Daniel Hammer	<i>Multimodal adaptive optics for depth enhanced high-resolution ophthalmic imaging</i>
2009	Kazuhiro Kurokawa	<i>1 μm wavelength adaptive optics scanning laser ophthalmoscope</i>
2008	Boris Povazay	<i>Minimum distance mapping using volumetric OCT: A novel indicator for early glaucoma diagnosis</i>
2007	Yoshiaki Yasuno	<i>Clinical examinations of anterior eye segments by three-dimensional swept-source optical coherence tomography</i>
2006	Enrique Fernandez	<i>Adaptive optics using a liquid crystal spatial light modulator for ultrahigh-resolution optical coherence tomography</i>
2005	Karsten König	<i>Cornea surgery with nanojoule femtosecond laser pulses</i>
2004	Daniel Palanker	<i>Attracting retinal cells to electrodes for high-resolution stimulation</i>
2003	Igor Ermakov	<i>Measurement of macular pigments</i>
2002	Georg Schuele	<i>Non-invasive temperature measurements during laser irradiation of the retina with optoacoustic techniques</i>
2001	Matthew Smith	<i>Minimizing the influence of fundus pigmentation on retinal vessel oximetry measurements</i>

The 2014 Pascal Rol Lecture on Ophthalmic Technologies
Saturday February 1, 2014



Professor Jesper O. Hjortdal
Department of Ophthalmology
Aarhus University Hospital, University of Aarhus, Denmark

Corneal refractive surgery: Is intracorneal the way to go and what are the needs for technology?

The Pascal Rol Lecture on Ophthalmic Technologies" is presented by a leading researcher in ophthalmology with a strong interest and pioneering research contributions to the field of ophthalmic technologies. This invited lecture is intended to trigger further development of ophthalmic technologies by stimulating discussions between basic scientists, engineers, and clinicians.

The 2014 lecture was supported by the Brien Holden Vision Institute through the Pascal Rol Foundation (www.pascalrolfoundation.org)



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