# **Ophthalmic Technologies XXIV**

Fabrice Manns Per G. Söderberg Arthur Ho 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

Proc. of SPIE Vol. 8930 893001-1

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Please use the following format to cite material from this book: 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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# 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



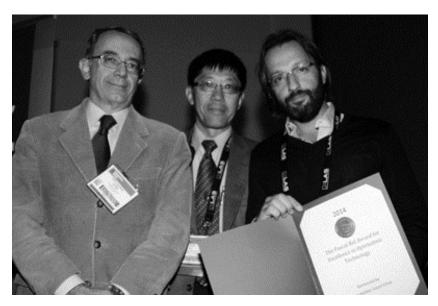
**BrienHolden** Vision Institute

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

# 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 (<u>www.pascalrolfoundation.org</u>)

