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Pascal Rol Award
Arthur Ho, Brien Holden Vision Institute (Australia)
Karen M. Joos M.D., Vanderbilt University (United States)
Daniel V. Palanker, Stanford University (United States)

Introduction

The papers contained in this volume were presented at the twenty-seventh conference on Ophthalmic Technologies, held from January 28 to 29, 2017, at the Moscone Center in San Francisco, California as a part of the SPIE Photonics West BiOS Meeting.

A total of 56 papers and 16 posters were presented by scientists, clinicians, and engineers from academia and industry representing 20 countries spanning 4 continents. Topics included new approaches using vortex beams for laser corneal surgery, characterization of corneal and lens biomechanics using optical coherence elastography, high resolution cellular-level imaging of the cornea and retina using optical coherence tomography and adaptive optics, and retinal and choroidal vasculature imaging.

The conference hosted its eleventh presentation on the topic of the unmet needs and impact of technology in a clinical area. Prof. William Culbertson, from Bascom Palmer Eye Institute at the University of Miami, gave a captivating lecture describing the development and future needs of femtosecond laser cataract surgery.

The seventeenth Pascal Rol Award was presented to Dr. Furu Zhang and his colleagues from Indiana University for their outstanding paper on "*Tracking dynamics of photoreceptor disc shedding with adaptive optics-optical coherence tomography*" (10045-40). 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 2017 finalists of the award, selected by the entire program committee among the 74 abstract submissions, included Iwona M. Gorczynska (10045-33), Francesco LaRocca (10045-45), and Zhuolin Liu (10045-38).

We are very grateful to the Brien Holden Vision Institute in Sydney, Australia, for sponsoring the 2017 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 XXVIII conference, which is scheduled for Saturday January 27 and Sunday January 28, 2018 in San Francisco, CA.

Fabrice Manns
Per G. Söderberg
Arthur Ho

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

Brien Holden Vision Institute

Presented on Sunday January 29, 2017 to

Dr. Furu Zhang

for his excellent paper on

" Tracking dynamics of photoreceptor disc shedding with adaptive optics-optical coherence tomography"

Arthur Ho (left) and Karen Joos (right) present the 2017 Pascal Rol Award to Furu Zhang (center).

Past awardees

2016	**Zhuolin Liu**	*Imaging human retinal pigment epithelium cells using adaptive optics optical coherence tomography*
2015	**Francesco de la Rocca**	*Ultra-compact switchable SLO/OCT handheld probe design*
2014	**Marco Ruggeri**	*Biometry of the ciliary muscle during dynamic accommodation assessed with OCT*
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**	*1μm 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 2017 Pascal Rol Lecture on Ophthalmic Technologies
Saturday January 28, 2017

Professor William Culbertson
Bascom Palmer Eye Institute
University of Miami, Miami, FL

Clinical implementation of fs cataract surgery, needs for further 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 2017 lecture was supported by the Brien Holden Vision Institute through the Pascal Rol Foundation (www.pascalrolfoundation.org)

Brien Holden Vision Institute