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Front Matter: Volume 9718

, "Front Matter: Volume 9718," Proc. SPIE 9718, Quantitative Phase Imaging II, 971801 (28 June 2016); doi: 10.1117/12.2239767

SPIE.

Event: SPIE BiOS, 2016, San Francisco, California, United States

PROGRESS IN BIOMEDICAL OPTICS AND IMAGING

Vol. 17 No. 30

Quantitative Phase Imaging II

Gabriel Popescu

YongKeun Park

Editors

14–17 February 2016

San Francisco, California, United States

Sponsored and Published by

SPIE

Volume 9718

Proceedings of SPIE, 1605-7422, V. 9718

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

Quantitative Phase Imaging II, edited by Gabriel Popescu, YongKeun Park, Proc. of SPIE Vol. 9718, 971801
© 2016 SPIE · CCC code: 1605-7422/16/\$18 · doi: 10.1117/12.2239767

Proc. of SPIE Vol. 9718 971801-1

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Author(s), "Title of Paper," in *Quantitative Phase Imaging II*, edited by Gabriel Popescu, YongKeun Park, Proceedings of SPIE Vol. 9718 (SPIE, Bellingham, WA, 2016) Six-digit Article CID Number.

ISSN: 1605-7422

ISSN: 2410-9045 (electronic)

ISBN: 9781628419528

Published by

SPIE

P.O. Box 10, Bellingham, Washington 98227-0010 USA

Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445

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Introduction

After the launch of the first conference in 2015, the second conference on Quantitative Phase Imaging (QPI II) at Photonics West BIOS has continued its success. For four full days, 14–17 February, the QPI conference hosted a dense program of oral presentations, covering both novel methodologies and applications in diverse fields. The conference was kicked-off with the keynote presentation by James C. Wyant from University of Arizona (United States), highlighting the evolution of interferometry from metrology to biomedical applications and commenting on the exciting future of QPI. Each presentation throughout the conference was followed by insightful comments and questions, truly engaging discussions about the state of the art and future directions of the field. This year QPI II received 107 abstract submissions, making it one of the largest conferences at Photonics West. Recognizing the importance of transferring the QPI technology to the hands of the biomedical users, this year we inaugurated a special session on entrepreneurship, "From lab to market," inviting start-up companies operating in the QPI market to tell their stories. The keynote of this special session was given by Jim Sharp, President of Carl Zeiss Microscopy, LLC (United States) and President and CEO of Carl Zeiss, Inc. (Germany).

Together, this growing event gives a strong message that the QPI field has become one of the most active fields in biophotonics.

Figure 1. A morning session during the QPI Conference at Photonics West, BIOS (San Francisco, 7-10 Feb. 2015)

The papers published in this issue, proceedings volume on Quantitative Phase Imaging II, cover the latest developments and applications. The objective of this volume is to highlight recent progress and trends in novel optical technology developments as well as their biological, clinical, and industrial applications. The papers published here can be categorized into the following major topics:

1. QPI Methodologies
2. QPI Algorithms and Image Processing
3. QPI of Cells and Tissues
4. QPI Clinical Applications
5. QPI Material Applications

These topics are discussed in the contributed papers, covering original results and recent developments. Many of the papers published in this special issue represent an in-depth elaboration of topics presented at the Quantitative Phase Imaging II, Photonics West, BiOS, 2016. As chairs of the QPI II Conference, we are grateful to the contributors to this Volume and all the conference participants who have helped shape this exciting field of quantitative phase imaging.

Gabriel Popescu
YongKeun Park