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Optical Coherence Tomography and Coherence Techniques VI

Brett E. Bouma
Rainer A. Leitgeb
Editors

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Introduction

This volume is a collection of papers presented at the Optical Coherence Tomography and Coherence Techniques VI conference held May 13–15, 2013 at the European Conference on Biomedical Optics in Munich, Germany.

The present proceedings provide an excellent overview about current state-of-the-art OCT technology as well as advance in holography and Laser Speckle Imaging and gives new perspectives for applications in medicine, biology, and material sciences.

The conference was organized into the following 9 sessions: Advancements in Technology and Applications, Optical Coherence Microscopy and Digital Holography, Adaptive Optics and Resolution Enhancement, Endoscopic and Intravascular OCT, Ophthalmic OCT I&II, Blood Flow Imaging and Speckle, Spectroscopic OCT and Contrasting Techniques. Moreover, this year, a full session was dedicated to an emerging field in OCT, Elastography. As usual, OCT focused papers were predominant throughout the sessions. However, we were happy to see interesting contributions of the field of holography and from Laser Speckle Imaging.

All submissions were peer-reviewed and scored by the conference committee members, who were instrumental for keeping the high quality of presented papers. Authors were requested to submit a 3-page summary. The conference included six excellent invited presentations that were selected as the top six scored submissions:

Branislav Grajciar, Quantitative phase contrast optical coherence microscopy for imaging live cell dynamics, Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria

Danuta M. Bukowska, Angio-OCT as a noninvasive tool for three-dimensional vascular network visualization in retinal diseases, Nicolaus Copernicus University, Torun, Poland.

David G. Blauvelt, Three-dimensional in vivo blood flow mapping in tumors using optical frequency domain imaging, Wellman Center for Photomedicine, Massachusetts General Hospital, Boston, MA, USA,

Martin Villiger, Characterization of coronary plaques with polarization sensitive optical frequency domain imaging, Wellman Center for Photomedicine, Harvard Medical School and Massachusetts General Hospital, Boston, MA, USA,

Amir Nahas, 3D static elastography and shear wave imaging using Full Field OCT, Langevin Institute, Paris, France,

Bernhard Baumann, Polarization sensitive optical coherence tomography for quantitative assessment of tissue properties in the rat eye in vivo, Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, Vienna, Austria;

The conference chairs would like to thank the members of the Technical Program Committee for their considerable effort in reviewing and scoring all submissions and for their help in organizing the conference. We appreciate the support from OSA, SPIE, and the conference staff. Finally we would like to thank all the conference attendees and manuscript authors for their contributions and participation that helped to make this conference a success.

Brett E. Bouma
Rainer A. Leitgeb