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Introduction

This volume is a collection of papers presented at the Optical Coherence Tomography and Coherence Techniques V conference held May 22–26, 2011 at the European Conference of Biomedical Optics in Munich, Germany.

These proceedings provide an excellent overview of current state-of-the art OCT technology and also gives new perspectives for applications in medicine, biology, and material sciences.

This year is a particularly interesting one for optical coherence tomography (OCT) since it marks 20 years since the first notion of OCT. This was paid tribute by one plenary talk and one tutorial. Wolfgang Drexler presented an exhaustive overview over two decades of development, application and commercialization, mentioning the self accelerating circle that drives the fast success of this technology. James Fujimoto gave a detailed and instructive tutorial on OCT during a joint session with the CLEO/Europe EQEC with the aim to create a bridge between biomedical technologies.

The conference was organized into the following 11 sessions: Advanced Coherent Sensing and Imaging Concepts I & II, Optical Coherence Microscopy, Polarization-Sensitive OCT, Microcirculation Imaging, Advanced Data Processing and Signal Enhancement, Technological Advances, Intravascular and Endoscopic OCT, Biomedical Applications of OCT, Ophthalmic OCT Techniques, and a poster preview session. As usual, OCT focused papers were predominant throughout the sessions.

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

Stefan Zotter, Double-beam Doppler optical coherence tomography for visualizing the microvasculature within the human retina, Medizinische Universtät Wien (presentation only); Thomas Klein, Megahertz retinal OCT: advanced data processing protocols enabled by densely sampled ultrawide-field data, Ludwig-Maximilians-Universtät Muenchen (presentation only); Cedric Blatter, High-speed functional OCT with self-reconstructive Bessel illumination at 1300nm, Medizinische

Universtät Wien; Young-Joo Hong, High speed and high penetration Doppler optical coherence tomography, University of Tsukuba (presentation only); Boris Povazay, Simultaneous, tracked multi-wavelength optical coherence tomography for clinical applications, Medizinische Universtät Wien (presentation only); Christophe Pache, Combination of dark-field optical coherence microscopy with epi-fluorescence microscopy for functional cell imaging, Ecole Polytechnique Federale de Lausanne (presentation only)

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 the 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.

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