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Rinat O. Esenaliev, The University of Texas Medical Branch (United States)

Martin Frenz, Universität Bern (Switzerland)

Miya Ishihara, National Defense Medical College (Japan)

Chulhong Kim, Pohang University of Science and Technology (Korea, Republic of)

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Vasilis Ntziachristos, Helmholtz Zentrum München GmbH (Germany)
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Günther Paltauf, Karl-Franzens-Universität Graz (Austria)
Wiendelt Steenbergen, Universiteit Twente (Netherlands)
Roger J. Zemp, University of Alberta (Canada)
Vladimir P. Zharov, University of Arkansas for Medical Sciences
(United States)

Qifa Zhou, The University of Southern California (United States) **Quing Zhu**, Washington University in St. Louis (United States)

Session Chairs

- Clinical Imaging: In Vivo, Ex Vivo, and Towards I
 Alexander A. Oraevsky, TomoWave Laboratories, Inc. (United States)

 Rinat O. Esenaliev, The University of Texas Medical Branch
 (United States)
- Clinical Imaging: In Vivo, Ex Vivo, and Towards II
 Srirang Manohar, Universiteit Twente (Netherlands)
 Quing Zhu, Washington University in St. Louis (United States)
- Optical Sensing and Generation of Ultrasound I Paul C. Beard, University College London (United Kingdom) Günther Paltauf, Karl-Franzens-Universität Graz (Austria)
- 4 Optical Sensing and Generation of Ultrasound II **Günther Paltauf**, Karl-Franzens-Universität Graz (Austria) **Martin Frenz**, Universität Bern (Switzerland)
- 6 Inside the Body: Endoscopy and Intervention **Qifa Zhou**, The University of Southern California (United States) **Xueding Wang**, University of Michigan (United States)
- 7 Special Session: Best Paper Award Competition I Vasilis Ntziachristos, Helmholtz Zentrum München GmbH (Germany) Chulhong Kim, Pohang University of Science and Technology (Korea, Republic of)
- 8 Special Session: Best Paper Award Competition II Vasilis Ntziachristos, Helmholtz Zentrum München GmbH (Germany) Matthew O'Donnell, University of Washington (United States)
- 9 Image Enhancement: Algorithm, Processing, Modeling, and Machine Learning

Mark A. Anastasio, Washington University in St. Louis (United States) Martin Frenz, Universität Bern (Switzerland)

- Microscopy and Multimodal Imaging: System and Application I Lihong V. Wang, California Institute of Technology (United States) Chulhong Kim, Pohang University of Science and Technology (Korea, Republic of)
- Microscopy and Multimodal Imaging: System and Application II Paul C. Beard, University College London (United Kingdom) Roger J. Zemp, University of Alberta (Canada)
- 13 Contrast Agents and Molecular Imaging Matthew O'Donnell, University of Washington (United States) Roger J. Zemp, University of Alberta (Canada)
- Quantitative Analysis and Imaging
 Miya Ishihara, National Defense Medical College (Japan)
 Ben T. Cox, University College London (United Kingdom)
- Monitoring of Therapy
 Srirang Manohar, Universiteit Twente (Netherlands)
 Chulhong Kim, Pohang University of Science and Technology (Korea, Republic of)
- Novel Technologies: Acousto-optics, Ultrasound Encoding of Light, Laser Sources
 Günther Paltauf, Karl-Franzens-Universität Graz (Austria)
 Miya Ishihara, National Defense Medical College (Japan)

Introduction

This volume of SPIE Proceedings summarizes research and development conducted by our community in the year that marks 25th anniversary of the first pioneering works in the field of depth-resolved biomedical optoacoustic (photoacoustic) imaging presented at Photonics West. The field of biomedical optoacoustic imaging continues to experience rapid growth, especially noticeable in the area of clinical applications. Our conference remains the largest at Photonics West. The quality of most presentations is high.

This year, two awards for the best paper of the conference were presented at the closing ceremony sponsored by Seno Medical Instruments. The best paper of 2018 was selected through a two-tiered process: (1) selection of finalists by the organizing committee and (2) final selection by a special committee of experts, which took time. The winner of the Best Paper Award 2018 announced at the closing of our conference this year is:

Paper 10494-93 entitled, "Whole-organ atlas imaged by label-free high-resolution photoacoustic microscopy assisted by a microtome," by Terence T. W. Wong, Washington Univ. in St. Louis (United States), California Institute of Technology (United States); Ruiying Zhang, Washington Univ. in St. Louis (United States); Hsun-Chia Hsu, Washington Univ. in St Louis (United States), California Institute of Technology (United States); Konstantin I. Maslov, Junhui Shi, California Institute of Technology (United States); Ruimin Chen, Kirk Shung, Qifa Zhou, The Univ. of Southern California (United States); Lihong V. Wang, California Institute of Technology (United States).

For the Best Paper Award 2019, the organizing committee selected a paper presented during a special award competition session. The winner is:

Paper 10878-46 entitled, "Multifocal photoacoustic microscopy through an ergodic relay," by Yang Li, Terence T. W. Wong, Junhui Shi, Hsun-Chia Hsu, Lihong V. Wang, California Institute of Technology (United States).

We would like to congratulate the Best Paper Award winners of 2018 and 2019 and thank all the contributors of this conference and the Organizing Committee for their dedicated work.

As guest editors of the upcoming Special Section in the SPIE Journal of Biomedical Optics dedicated to the steady exponential growth of the optoacoustic / photoacoustic imaging technology, we would like to invite all attendees of this year's conference to submit their work by the deadline of 1 July 1 2019.

Alexander A. Oraevsky Lihong V. Wang