

# Journal of Biomedical Optics

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## Translational Biophotonics

Tomasz Tkaczyk  
Michal Pawlowski  
Mark Pierce

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### Tomasz Tkaczyk

Rice University  
Department of Bioengineering  
Houston, Texas, United States  
E-mail: [tkaczyk@rice.edu](mailto:tkaczyk@rice.edu)

### Michal Pawlowski

Rice University  
Department of Bioengineering  
Houston, Texas, United States  
E-mail: [mep6@rice.edu](mailto:mep6@rice.edu)

### Mark Pierce

Rutgers, The State University of New Jersey  
Department of Biomedical Engineering  
Piscataway, New Jersey, United States  
E-mail: [mark.pierce@rutgers.edu](mailto:mark.pierce@rutgers.edu)

The SPIE Translational Biophotonics conference was launched in 2014 as a biennial event aimed at bringing together researchers from academia, industry, and clinical practice. The meeting was held for a second time in May 2016 at the BioScience Research Collaborative, located at the intersection of Rice University and the Texas Medical Center. The translational theme of this conference was emphasized by the selection of session topics and opportunities for networking between technology developers, clinical end-users, regulatory experts, and commercial entities.

This collection of papers from the 2016 SPIE Translational Biophotonics conference comprises seven original articles, which were published in the *Journal of Biomedical Optics* Vol. 21 Issue 9 through Vol. 22 Issue 3:

S. Abeytunge et al., "Evaluation of breast tissue in an emulated surgical setting with confocal strip mosaicking microscopy," *J. Biomed. Opt.* **22**(3), 034002 (2017).

C. Okoro et al., "Development of a handheld smart dental instrument for root canal imaging," *J. Biomed. Opt.* **21**(11), 114002 (2016).

M. L. Phipps et al., "Super-resolution optical microscopy study of telomere structure," *J. Biomed. Opt.* **21**(9), 094003 (2016).

P. Huang et al., "Quantitative characterization of mechanically indented in vivo human skin in adults and infants using optical coherence tomography," *J. Biomed. Opt.* **22**(3), 034001 (2017).

P. L. Stegehuis et al., "Towards optical guidance during endoscopic ultrasound-guided fine needle aspirations of pancreatic masses using single fiber reflectance spectroscopy: a feasibility study," *J. Biomed. Opt.* **22**(2), 024001 (2017).

M. Jain et al., "Implementation of fluorescence confocal mosaicking microscopy by "early adopter" Mohs surgeons

and dermatologists: recent progress," *J. Biomed. Opt.* **22**(2), 024002 (2017).

F. Teng et al., "Wearable near-infrared optical probe for continuous monitoring during breast cancer neoadjuvant chemotherapy infusions," *J. Biomed. Opt.* **22**(1), 014001 (2017).

These manuscripts span topics ranging from fundamental studies of telomere structure using superresolution microscopy (M. L. Phipps et al.) to an *in vivo* clinical study investigating optical coherence tomography for assessment of the mechanical properties of skin (P. Huang et al.). P. L. Stegehuis et al. also report an *in vivo* study on the use of diffuse reflectance spectroscopy to guide fine needle aspiration of pancreatic tissue. Several papers focus on instruments under development in the laboratory setting targeting future clinical applications. These papers include a hand-held smart instrument for root canal imaging (C. Okoro et al.) and a wearable probe for continuous diffuse optical imaging of breast cancer patients during chemotherapy (Teng et al.). Biomedical optics researchers and clinical users at Memorial Sloan Kettering Cancer Center highlight their close collaboration through *ex vivo* studies on the use of fluorescence confocal microscopy for rapid assessment of tumor margins in skin cancer (M. Jain et al.) and breast surgery (S. Abeytunge et al.).

The guest editors would like to thank the participants at Translational Biophotonics 2016, particularly those who submitted their work to this special series in the *Journal of Biomedical Optics*. We would also like to thank Gwen Weerts, managing editor for SPIE journals, and the JBO staff for their support in bringing this series together. We look forward to welcoming all those involved in moving biophotonic technologies along the pathway from fundamental research to clinical and commercial success to SPIE Translational Biophotonics in 2018.

**Tomasz Tkaczyk**, PhD, is an associate professor in the Departments of Bioengineering and Electrical and Computer Engineering, and is

also a faculty member of the Rice Quantum Institute at Rice University, located in Houston, Texas. His research focuses on development of integrated optical diagnostic systems and snapshot hyperspectral imaging techniques for biomedical and remote sensing applications.

**Michal Pawlowski**, PhD, is a research scientist in the Department of Bioengineering at Rice University located in Houston, Texas. His

research focuses on development of optical technologies for biomedical applications.

**Mark Pierce**, PhD, is an assistant professor in the Department of Biomedical Engineering at Rutgers, The State University of New Jersey. His research interests include development and clinical translation of multiscale, multimodal optical imaging systems and contrast agents.