

Poster Session B

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| Amaury Badon | Boston University | <i>Volumetric imaging with multi-Z confocal microscopy</i> |
| Boy Braaf | Wellman Center, MGH and HMS | <i>Retinal blood flow quantification from optical coherence tomography speckle intensity fluctuations using neural networks</i> |
| Haimi Tang | Worcester Polytechnic Institute | <i>Preliminary Investigations of Rupture of Human Tympanic Membrane subjected to High Pressure Loads</i> |
| Jean-Marc Tsang | Boston University | <i>Pseudo-volumetric fluorescence endomicroscopy with a fiber bundle</i> |
| Kenichiro Otsuka | Wellman Center, MGH and HMS | <i>Characterizing Coronary Plaque Composition and Stability in Patients with Intravascular Polarimetry</i> |
| Konrad Wojciech Walek | Brown University | <i>Longitudinal OCT Cortex Imaging for Detection of Early Vascular Changes in Alzheimer's Disease</i> |
| Hasan Yilmaz | Yale | <i>Customizing speckle patterns</i> |
| Patrick Breeding | University of Maine | <i>Optical Metabolic Investigation of Lobster Hemocyanin Anti-Cancer Effects Using a Home-Built Two-Photon System</i> |
| Payam Razavi | Worcester Polytechnic Institute | <i>High-speed shape and transient response measurements of tympanic membrane</i> |
| Sheldon J.J. Kwok | Harvard Medical School and MIT | <i>Wavelength-encoded microlasers for massively-multiplexed cell tagging</i> |
| Sinyoung Jeong | Wellman Center, MGH and HMS | <i>Visualization of drug distribution of a topical minocycline gel in human facial skin</i> |
| Szu-Yu Lee | Wellman Center, MGH and HMS | <i>Toward flexible MMF endoscopy with a proximal calibration method</i> |
| Timothy Weber | Boston University | <i>Ocular fundus imaging with transmitted light</i> |
| Soroush Shabahang | Wellman Center, MGH and HMS | <i>Nonlinear passive earplugs for preventing blast injury of the ear</i> |

2018 Program Committee:

Amira Eltony
Mohsen Erfanzadeh
Jian Ren



NORTHEAST SYMPOSIUM ON BIOMEDICAL OPTICS

Schedule:

- 8:30 Breakfast**
- 9:00 Director's Introduction – Brett Bouma (MGH-Wellman)
- 9:15 Session 1 – *Miniaturized optical probes*
- 10:30 Break / Discussion**
- 10:45 Session 2 – *Emerging techniques in optical imaging*
- 11:35 Panel on Career-Advancement Awards
- 12:45 Lunch / Discussion**
- 13:15 Session 3 – *Neuro-imaging and optical modulation of brain*
- 14:55 Break / Discussion and poster set-up**
- 15:15 Poster Session A and Reception
- 16:05 Switch-over posters**
- 16:10 Poster Session B and Reception
- 17:00 Concluding Remarks and Awards

October 24th, 2018
Cambridge, MA, USA

Session 1 – Miniaturized optical probes

Chair: David Adams (MGH)

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| Hamid Pahlevaninezhad | Harvard, MGH | <i>Nano-optic endoscope for high-resolution optical coherence tomography</i> |
| Raphaël Maltais-Tariant | Polytechnique Montréal | <i>Toward co-localized OCT surveillance of laser therapy using real-time speckle decorrelation</i> |
| Jie Hui | Boston University | <i>Intravascular Photoacoustic Imaging of Lipid-laden Plaque: Technical Development towards Clinical Translation</i> |

Session 2 – Emerging techniques in optical imaging

Chair: Allison Marn (Boston University)

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| Hasan Yilmaz | Yale | <i>Coherent control of light transmission through turbid media</i> |
| Vijay Raj Singh | MIT | <i>Studying nucleic and plasma membrane mechanics of eukaryotic cells using confocal reflectance interferometric microscopy</i> |

Panel on Career-Advancement Awards

Jonghwan Lee (Brown)

Girgis Obaid (Wellman Center, MGH and HMS)

Néstor Uribe-Patarroyo (Wellman Center, MGH and HMS)

Pelham Keahey (Wellman Center, MGH and HMS)

Session 3 – Neuro-imaging and optical modulation of brain

Chair: Chiara Maffei (Martinos Center, MGH and HMS)

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| Jonghwan Lee | Brown | <i>Label-Free Imaging and Genetics-Free Modulation of Brain</i> |
| Morris Vanegas | Northeastern University | <i>Towards an optical brain functional imaging platform for monitoring stroke recovery</i> |
| Murat Yildirim | MIT | <i>Imaging neuronal responses through all cortical layers and subplate of visual cortex in awake mice with optimized three-photon microscopy</i> |
| Xinge Li | Boston University | <i>The role of Mirror Neuron System in encoding motor complexity</i> |

Poster Session A

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| Baoqiang Li | Martinos Center, MGH and HMS | <i>Two-photon imaging of capillary flow in mouse brain reveals vulnerability of cerebral white-matter to hypoperfusion</i> |
| Bin Deng | Martinos Center, MGH and HMS | <i>Elucidating breast cancer pathophysiology using integrated dynamic DOT and digital breast tomosynthesis</i> |
| Jong Park | MIT | <i>Wide-Field Two-Photon Microscopy with Enhanced Axial Resolution and Imaging Depth</i> |
| Kyungsik Eom | Brown University | <i>Plasmonic gold nanorods assisted near-infrared neural stimulation of retinal ganglion cell for retinal prosthetics</i> |
| Maha Yaqoob | MIT | <i>Investigating cellular uptake dynamics of single-walled carbon nanotubes by high-speed confocal Raman microscopy</i> |
| Morris Vanegas | Northeastern University | <i>Towards a fiberless, modular, and wearable fNIRS system with built-in 3D self-calibrating orientation sensor network</i> |
| Negin Zaraee | Boston University | <i>Single particle Interferometric Imaging sensor for sensitive and rapid label-free bacteria detection</i> |
| Pallavi Doradla | Wellman Center, MGH and HMS | <i>Multifactorial Stress Equation: Prediction of Coronary Plaque Rupture</i> |
| Parisa Farzam | Martinos Center, MGH and HMS | <i>Diffuse Correlation Spectroscopy for Cerebral Hemodynamics Monitoring During Mechanical Thrombectomy in Acute Stroke Patients</i> |
| Sabina Stefan | Brown University | <i>Determination of confocal profile and curved focal plane for OCT mapping of the attenuation coefficient</i> |
| Syeda Tabassum | Boston University | <i>Investigate optical and molecular biomarkers of cancer treatment response using Spatial Frequency Domain Imaging pre-clinically</i> |
| Yi Xue | MIT | <i>Scanless volumetric imaging by selective access multi-foci multiphoton microscopy</i> |
| Yingchun Cao | Boston University | <i>Depth-resolved mapping of lipids in arterial wall in vivo by intravascular photoacoustic tomography</i> |
| Zeinab Hajjarian | Wellman Center, MGH and HMS | <i>Laser Speckle Micro-rheology for studying the biomechanics of invasion in Breast Carcinoma</i> |