

- 1) Reconstruction of Tissue Dynamics in the Compressed Breast Using Multiplexed Measurements and Temporal Basis Functions**  
Gregory Boverman, Qianqian Fang, Stefan Carp, Juliette Selb, Eric L. Miller, and David A. Boas
- 2) Review of the clinical study at MGH: 20+ cases of co-registered X-ray Tomosynthesis and Tomographic Optical Breast Imaging (TOBI) on healthy breasts and breasts presenting lesions.**  
Juliette Selb, Qianqian Fang, Gregory Boverman, Stefan Carp, Richard Moore, Dianne Georgian-Smith, Daniel B. Kopans, and David A. Boas.
- 3) Effects of radiotherapy on rat breast tumor hemodynamics monitored by near infrared spectroscopy**  
Jae G. Kim<sup>1,4</sup>, Vincent Bourke<sup>2</sup>, Cheng-Hui Chang<sup>3</sup>, Dawen Zhao<sup>2</sup>, Ralph P. Mason<sup>2</sup>, Hanli Liu<sup>4</sup>  
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- 4) A Comparison of Optical Reconstruction Methods Incorporating Spectral and MR- Derived Spatial Information**  
Colin Carpenter, Subhadra Srinivasan, [Brian Pogue](#), Hamid Dehghani and Keith D. Paulsen  
Thayer School of Engineering, Dartmouth College, Hanover NH 03755
- 5) An Analysis of Patient Perspectives and Experience Using the Laser Breast Scanner**  
Debbi Gordon<sup>1</sup>, Natasha Shah<sup>1</sup>, Lari Wenzel<sup>2</sup>, Brian Hill<sup>1</sup>, Montana Compton<sup>1</sup>, Amanda Durkin<sup>1</sup>, Tran Du<sup>1</sup>, Sara Siavoshi<sup>1</sup>, Albert Cerussi<sup>1</sup>, David Hsiang<sup>3</sup>, and Bruce Tromberg<sup>1</sup>  
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- 6) Remission-mode Diffuse Tomography can Localize Absorber and Fluorescent Objects but Image Sensitivity is Non-linear with Depth**  
Dax Kephshire  
Dartmouth College
- 7) Spectral Evidence for the optical detection of the fast neuronal signal as seen as a change due to scattering in the mammalian brain**  
Kandice Tanner<sup>1</sup>, Rui Ma<sup>2</sup>, Joseph Malpeli<sup>2</sup>, William W. Mantulin<sup>1,3</sup> and Enrico Gratton<sup>1,3</sup>  
1 Department of Physics, University of Illinois- Urbana- Champaign, 2 Neuroscience program and Department of Psychology, University of Illinois- Urbana- Champaign, 3 Department of Biomedical Engineering, University of California, Irvine
- 8) MRI-Localized Region Spectroscopy with Near-Infrared Tomography: Analysis of wavelengths, spatial prior false positives and experimental feasibility**  
Jia Wang<sup>1</sup>, Scott Davis<sup>2</sup>, Subhadra Srinivasan<sup>2</sup>, Shudong Jiang<sup>2</sup>, Brian W. Pogue<sup>2</sup>, Keith D. Paulsen<sup>2</sup>  
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**9) Breast Tissue Microscopic Fluctuations in Refractive Index Studied through Phase Contrast Measurements**

Xin Wang  
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**10) Weighted Least-Squares for Diffuse Optical Tomography**

Phaneendra Yalavarthy, Brian Pogue, Hamid Dehghani, Shudong Jiang, and Keith Paulsen  
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**11) Tissue Bound Water Studies on Breast Tumor using Diffuse Optical Spectroscopy**

Sophie (So Hyun) Chung<sup>1</sup>, Albert Cerussi<sup>1</sup>, Sean Merritt, Natasha Shah<sup>1</sup>, David Hsiang<sup>2</sup>, Rita Mehta<sup>2</sup> and Bruce Tromberg<sup>1</sup>

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**12) A Novel Integrated Photonic System for DOT/MR Imaging**

Vishal Saxena (1), Ignacio Gonzalez-Gomez (3), Gevorg Karapetyan (1), Vazgen Khankaldyyan (2), and Walter E. Laug (2) Departments of Radiology (1), Pediatrics (2) and Pathology (3)

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Industrial Collaborator: N-Wave CT, Hartford, Connecticut

**13) Mini-FDPM with Full Heterodyne: Improved Sensitivity and Fast, Non-Invasive Detection of Breast Cancer Detector Based on Frequency Domain Photon Migration**

Keun-Sik No, Qiang Xie, Richard Kwong, Amanda Durkin, Albert Cerussi, Bruce Tromberg, Pai Chou

**14) Progress on Inhalational Differential Contrast for In Vivo Optical Imaging**

Sanhita Dixit, Ken Kotz, Ashley Gibbs, Theresamai Le, Khalid Amin and Gregory Faris SRI International

**15) Co-registration of Dynamic Contrast Enhanced MRI and Broadband Diffuse Optical Spectroscopy for Characterizing Breast Cancer**

Min-Ying Su, HJ Yu, N Shah, D. JB Hsiang, RS Mehta, A Cerussi, B Tromberg, and O. Nalcioglu

**16) Method for Recovering Quantitative Broadband Diffuse Optical Spectra from Layered Media**

Ang Li, Richard Kwong, Albert Cerussi, Sean Merritt, Carole Hayakawa and Bruce Tromberg

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**17) Multi-Wafer Laser Diode for use in Diffuse Optical Spectroscopy**

Vijay Jayaraman<sup>1</sup>, Devin Leonard<sup>1</sup>, Richard Kwong<sup>2</sup>, Amanda F. Durkin<sup>2</sup>, Albert E. Cerussi<sup>2</sup>, and Bruce Tromberg<sup>2</sup> <sup>1</sup>Praevium Research, Santa Barbara, CA <sup>2</sup>Beckman Laser Institute, Laser Medical and Microbeam Program, University of California, Irvine

**18) Qualitative Depth Sectioned Imaging with Diffuse Optical Spectroscopy in Breast Phantoms**

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