

## ***Thursday 1 October, Poster Session:***

- **Non-invasive optical measures of CBV, StO<sub>2</sub>, CBF index, and rCMRO<sub>2</sub> in human premature brains during the first six weeks of life**, N. Roche-Labarbe, Massachusetts General Hospital
- **In vivo multicolor imaging using dehalogenase-based protein-tag (Halo-Tag) system as a reporter**, H. Kobayashi, National Institutes of Health
- **Hyperspectral imaging of human skin for detection of blood oxygen level**, N. Gupta, Army Research Laboratory
- **Handheld confocal reflectance imaging and Raman spectroscopy microscope for in vivo skin cancer diagnosis**, C. L. Arrasmith, Montana State Univ.
- **Multi photon handheld endoscope based on MEMS mirror scanner and a fiber laser system**, G. Liu, Univ. of California, Irvine
- **Experimental and simulated SORS measurements for breast tumor surgical margin analysis**, M. D. Keller, Vanderbilt Univ.
- **Time resolved brain imager: diffuse reflectance and fluorescence measurements**, A. Liebert, Institute of Biocybernetics and Biomedical Engineering
- **Nonlinear interferometric vibrational imaging for high-speed spectral identification of breast cancer**, W. A. Benalcazar, Univ. of Illinois at Urbana-Champaign
- **Transcranial laser therapy for the treatment of Alzheimer's Disease**, M. S. Kindy, Medical Univ. of South Carolina
- **Angle-resolved low coherence interferometry for endoscopic detection of dysplasia in Barrett's esophagus**, Y. Zhu, Duke Univ.
- **Image classification and recognition from sub-cell to tissue scale** Crosta, F. Giovanni, Univ. degli Studi di Milano-Bicocca
- **Dispersive transform imaging spectrometer for high-throughput histopathology screening**, R. Levine, Spectral Sciences, Inc.
- **Dual-modality optical coherence tomography - ultrasound endoscopic probe for intravascular imaging**, J. Yin, Univ. of California, Irvine
- **Novel high frequency surface mounted optical recording system for chronic intracranial optical imaging**, H. Ma, Cornell Univ.

- **Fluorescence lifetime imaging of activatable target specific molecular probes**, R. Alford, National Cancer Institute, NIH
- **A dynamic eye phantom for retinal oximetry measurements**, P. Lemaillet, The Catholic Univ. of America
- **Development of a snapshot spectroscopic multi-aperture retinal imaging camera**, P. Lemaillet, The Catholic Univ. of America
- **Diffuse light quantification of peripheral artery disease (PAD)**, X. Xing, Univ. of Pennsylvania
- **Thermal decomposition of collagen fibers: real-time multiphoton imaging**, P.-J. Su, National Taiwan Univ.
- **Non-invasive treatment of cataract by photolysis**, L. Kessel, Copenhagen Univ. Hospital Glostrup
- **Integrated optical needle (ION) for cellular and molecular imaging of cancer**, M. C. Pierce, Rice Univ.
- **Fluorescent navigation surgery for sentinel lymph node biopsy in breast cancer**, M. Toi, Kyoto University
- **Fluorescence imaging of indocyanine green reveals permeability of tumor microvasculature to detect breast cancer**, R. Macdonald, Physikalisch-Technische Bundesanstalt
- **Optical monitoring of cerebral perfusion at the bedside: instrumentation and methodology used in a clinical study**, O. Steinkellner, Physikalisch-Technische Bundesanstalt
- **Diffuse optical tomography for detection of tumor's oxygenation**, A. G. Orlova, Institute of Applied Physics
- **Fiber-optic based neuro ultramicroscopy**, A. N. Morozov, Institute of Applied Physics RAS
- **Utility of optical spectroscopy for intra-operative guidance during pediatric brain tumor and epilepsy surgery**, W.-C. Lin, Florida International University
- **High spatiotemporal resolution imaging of stimulus-evoked retinal neural activation**, X. Yao, The Univ. of Alabama at Birmingham
- **CW laser STED system for far-field optical microscopy**, C. Kuang, University of South Carolina
- **The use of diffuse optical and diffuse correlation spectroscopies in neonates with congenital heart defects**, E. M. Buckley, Univ. of Pennsylvania
- **Coherence domain molecular imaging: pump-probe OCT and pump-probe OCM**, B. E. Applegate, Texas A&M Univ.

- **Multiphoton imaging using intrinsic tissue signatures in six human organ systems**, S. Mukherjee, Weill Cornell Medical College
- **Piezoelectric MEMS mirrors for forward-looking endoscopic OCT probes**, S. Grego, RTI International
- **Investigation of Autofluorescence Microscopy for In Vivo Imaging of Esophageal Adenocarcinoma**, B. Lin, University of California, Davis
- **Compact scanning systems for multi-photon microscopy**, G. J. Kintz,
- **Effect of anesthesia on neurovascular coupling**, H. Radhakrishnan, Massachusetts General Hospital
- **Design and Evaluation of an Ultra-slim Objective for the in-vivo Diagnosis of Breast Cancer**, S. M. Landau, College of Optical Sciences, The Univ. of Arizona
- **Spatially and chemically resolving melanins in melanomas using nonlinear infrared transient absorption microscopy**, I. Piletic, Duke University
- **Confocal mosaics provide screening of tumor excision margins**, D. S. Gareau, Oregon Health & Science Univ.
- **Multi-wavelength optical tomography using independent component analysis**, M. Alrubaiee, The City College of New York
- **3D breast cancer imaging with diffuse optical tomography**, H. Y. Ban, Univ. of Pennsylvania
- **A Miniaturized Integrated System for Chronic Imaging in Awake, Behaving Rodents**, K. Murari, The Johns Hopkins Univ.
- **Multimodal Optical Imaging and Mouse Ear Model for Angiogenesis**, V. Kalchenko, Weizmann Institute of Science
- **Harnessing the power of light to see and treat breast cancer**, N. Ramanujam, Duke Univ.
- **A method for selective in-vivo imaging of cerebral arteriolar flow using laser speckle contrast**, A. Rege, The Johns Hopkins Univ.
- **Non-invasive assessment of diabetic foot ulcers with diffuse photon density wave methodology: A pilot human study**, E. S. Papazoglou, Drexel University
- **Diffuse optical measurements of cerebral blood flow and oxygenation in patients after traumatic brain injury or subarachnoid hemorrhage**, M. N. Kim, Univ. of Pennsylvania

- **Multimodality optical imaging combining Optical Coherence Tomography (OCT) and Fluorescence Lifetime Imaging (FLIM) for morphological and biochemical tissue characterization**, J. A. Jo, Texas A&M Univ.
- **Line-scanning confocal microscopy for imaging epithelial tissues: potential for translation toward clinical utility**, B. A. Larson, Memorial Sloan Kettering Cancer Center
- **Can infrared imaging predict foot ulcers?**, N. Kaabouch, Univ. of North Dakota
- **H-dimer formation of rhodamines: a design of activatable optical probes for in vivo molecular imaging**, M. Ogawa, National Institutes of Health
- **Raman spectroscopy to improve breast needle biopsy for microcalcifications**, M. Fitzmaurice, Case Western Reserve University
- **Full field OCT in the operating room**, C. Boccara, Ecole Supérieure de Physique et de Chimie Industrielles
- **Photostable Nanophotonic Probes and Biosensors for Molecular Imaging and Diagnosis**, X. Nancy Xu, Old Dominion University

***Friday, 2 October, Poster Session:***

- **A robotic, dual-sensing, functional optical imaging system for breast cancer detection**, R. Al abdi, SUNY Downstate Medical Center
- **An anatomical atlas-based method for efficient generation and registration of 3D DOT image findings**, Y. Xu, SUNY Downstate Medical Center
- **Cerebral monitoring in cardiac surgery with near-infrared spectroscopic (NIRS) diffuse optical tomography (DOT)**, D. C. Lee, SUNY Downstate Medical Center
- **Derivation and validation of metrics for breast cancer screening from diffuse optical tomography imaging data**, R. L. Barbour, SUNY Downstate Medical Center
- **Diagnostic predictors of breast cancer derived from diffuse optical tomography image time series correlate with subject demographic and tumor phenotype data**, H. L. Graber, SUNY Downstate Medical Center
- **A scanning confocal scatter spectroscopy imager for delineation of tumor margins during lumpectomy**, V. Krishnaswamy, Dartmouth College

- **Integration of a multicompartment Windkessel model and Kalman filtering techniques to study the relation between oxygen consumption and arterial dilation during brain activation**, L. Gagnon, MIT
- **Multimodal microscopy for investigation of brain neurovascular coupling**, S. Sakadzic, Massachusetts General Hospital/Harvard Medical School
- **Early-photon fluorescence tomography: spatial resolution improvements and noise stability considerations for small-animal and breast imaging applications**, F. Leblond, Dartmouth College
- **Noninvasive fast optical imaging of brain oscillations: frontal theta activity in a rapid object detection task**, A. V. Medvedev, Georgetown University
- **Tracking response to neoadjuvant chemotherapy with Near-Infrared Spectral Tomography**, S. Jiang, Dartmouth College
- **Wide-field Three-dimensional Imaging in Deep Tissue using Structured Near-Infrared Light**, S. D. Konecky, Univ. of California - Irvine
- **Fluorescence responses to hydrostatic and ultrasonic pressures**, B. Yuan, The Catholic Univ. of America
- **Investigation of DNA hybridization and quantitation by terahertz spectrometry**, A. Rahman, Applied Research & Photonics, Inc.
- **Use of light-based technology in VA's nationwide telemedicine network**, R. E. Dayhoff, U.S. Dept. of Veterans Affairs
- **Multi-modal optical imaging of breast cancer**, Y. Chen, Univ. of Maryland, College Park
- **Numerical and experimental evaluation of an unconstrained approach for UVA-VIS optical property measurement in two-layer mucosal tissue**, Q. Wang, U.S. Food and Drug Administration
- **Low cost densitometry of polyacrlamide electrophoresis gels**, H. Y. Tan, Monash University
- **SERS-active nanopipette for controlled cell navigation and intracellular diagnostics**, E. A. Vitol, Drexel University
- **Dynamic Light Scattering measurement of molecular chaperone alpha crystallin proteins in young lenses: possible roles of oxidative stress and genetic variability in cataract formation**, M. B. Datiles, National Institutes of Health
- **Conjugated quantum dots for in vivo targeting and whole-body imaging of HER2/neu overexpressing tumors**, I. V. Balalaeva, Nizhny Novgorod State Univ.

- **Fiber-optic endomicroscopy for two-photon autofluorescence imaging of biological tissues**, Y. Wu, Johns Hopkins University
- **Development of medical diagnostics by medical multiphoton microscopic endoscopy**, W. W. Webb, Cornell Univ.
- **Quantitative imaging of mitochondrial free zinc in a model of ischemic stroke using an expressible ratiometric fluorescence sensor**, B. J. McCranor, Univ. of Maryland, Baltimore
- **Near-infrared fluorescence imaging of (dys)functional lymphatics in humans**, J. C. Rasmussen, The Univ. of Texas Health Science Ctr. at Houston
- **Spectral imaging of microvessel physiology and function from anastomoses to thromboses**, M. Wankhede, University of Florida
- **Molecular-specific optical imaging and spectroscopy to aid in early detection and margin prediction for oral dysplasia and cancer**, K. J. Rosbach, Rice University
- **Miniaturization of an optoelectronic holographic otoscope for measurement of nanodisplacements in tympanic membranes**, C. Furlong, Worcester Polytechnic Institute
- **In vivo optical characterization of myocardial injury induced by infarction**, P.-C. Chen, Florida International University
- **Multimodal microscopy using ultrashort laser pulses for corneal mechanical depth profiling**, A. T. Yeh, Texas A&M Univ.
- **Naturally integrated photoacoustic microscopy and optical coherence tomography**, H. F. Zhang, Univ. of Wisconsin-Milwaukee
- **Narrow linewidth, short pulse width, low power VCSEL laser source and laser arrays for medical diagnostics**, M. K. Hibbs-Brenner, Vixar
- **Low-cost fluorescence microscopy for near-patient cell imaging**, M. J. Lochhead, Precision Photonics Corp.
- **A pilot study on the safety and efficacy of infrared neural stimulation in humans**, J. M. Cayce, Vanderbilt Univ.
- **Functional ICG-polymeric nanocapsules as fluorescent contrast agents for translational optical molecular imaging**, Y-P. Chen,
- **Snapshot Image Slicing Spectrometer (ISS) for bio-medical applications**, R. T. Kester, Rice University

- **Combined Raman spectroscopy: optical coherence tomography for biochemical and morphological analysis of the skin**, C. A. Patil, Vanderbilt Univ.
- **Studying neurovascular coupling by laser speckle imaging**, N. Li, Johns Hopkins School of Medicine,
- **Identafi(TM)3000: A New Multispectral System for Improved Oral Lesion Evaluation**, A. F. Zuluaga, Remicalm LLC
- **Breast cancer grading knowledge modeling and reasoning for cognitive virtual microscopy**, A. E. Tutac, Politehnica Univ. Timisoara
- **Intraoperative assessment of tumor margins and lymph nodes with optical coherence tomography and interferometric synthetic aperture microscopy**, S. Adie, Univ. of Illinois at Urbana-Champaign
- **Automated algorithm for breast tissue differentiation in optical coherence tomography images and its potential for breast biopsy guidance**, M. Mujat, Physical Sciences Inc.
- **H&Y compliant for PD detection using T1, EPI and FA image analysis**, R. O. Teodorescu, Politehnica Univ. Timisoara
- **Swept-source SOCT system for pancreatic cancer diagnosis and therapy guidance**, N. V. Iftimia, Physical Sciences Inc.
- **Real-time near-infrared spectroscopy imager for brain pathophysiology monitoring**, N. V. Iftimia, Physical Sciences Inc.
- **Hand-held probe based optical imager towards in-vivo imaging of breast tissues**, A. Godavarty, Florida International Univ.
- **Investigation of the neural connectivity during transcranial magnetic stimulation and resting-stage using diffuse optical tomography**, F. Tian, The Univ. of Texas at Arlington
- **Broadband vibrational contrast: CARS imaging for endoscopy**, M. T. Cicerone, National Institute of Standards and Technology
- **Non-invasive angle-resolved optical measurements near the critical angle: Pericritical Reflection Spectroscopy**, R. G. Messerschmidt, Rare Light, Inc.
- **Novel wavelength insensitive Stokes vector polarimeter**, J. C. Ramella-Roman, The Catholic Univ. of America
- **Optical tomographic mapping of the human somatosensory cortex**, J. Mehnert, Charité University Hospital Berlin

- **Simultaneous diffuse optical tomography and EEG in freely moving and anesthetized rats**, M. Farber, SUNY Downstate Medical Center
- **Analysis of temporal co-variations in the hemodynamic response to neuroactivation yields additional functional information**, H. L. Graber, SUNY Downstate Medical Center