

Thursday, October 18 | 8:00 am-9:30 am | Platform Session 1

9:00 am-9:15 am

Time-Varying Stiffness and Mass Measurement of Adherent Colon Cancer Cells Around Mitosis

Olaoluwa Adeniba¹ and Rashid Bashir²

¹University of Illinois, Urbana Champaign, Urbana, IL,

²University of Illinois, Urbana Champaign, Urbana, IL

9:15 am-9:30 am

Compressive Solid Stress Influences Cell Morphology and Migration in Glioblastoma Cells

Yixiao Cui¹, Mark Calhoun¹, Eileen Elliott¹, and Jessica Winter¹

¹The Ohio State University, Columbus, OH

OP-Thurs-1-6

Room A315

Tracks: Biomedical Imaging and Instrumentation

Ultrasound Imaging

Chairs: Ken Hoyt, Craig Goergen

8:00 am-8:15 am

Focused Ultrasound-induced Mild Hyperthermia Improves Immune Cell Infiltration in a Mouse GL261 Intracranial Glioma Model

Anastasia Velalopoulou¹, Yutong Guo¹, Arpit Patel¹, Johannes Leisen¹, and Costas Arvanitis¹

¹Georgia Institute of Technology, Atlanta, GA, ²Georgia Institute of Technology and Emory University, Atlanta, GA

INVITED

8:15 am-8:30 am

Developing an Ultrasound/Photoacoustic Platform for Image-Guided Stem Cell Therapy in Ophthalmology

Kelsey Kubelick¹, Eric Snider¹, C. Ross Ethier¹, and Stanislav Emelianov^{1,2}

¹Georgia Institute of Technology & Emory University, Atlanta, GA,

²Georgia Institute of Technology, Atlanta, GA

8:30 am-8:45 am

Adapting Superharmonic Contrast-Enhanced Ultrasound Imaging for Clinical Applications

Thomas Kierski¹ and Paul Dayton¹

¹UNC/NCSU Joint Dept. of Biomedical Engineering, Chapel Hill, NC

8:45 am-9:00 am

Extravasation of Multifunctional Perfluorocarbon Nanodroplets In Vivo

Steven K. Yarmoska¹, Heechul Yoon², Vadakkancheri S. Ilisha²,

Yiyiing I. Zhu², Eleanor M. Donnelly², and Stanislav Y. Emelianov^{1,2}

¹Georgia Institute of Technology and Emory University, Atlanta, GA,

²Georgia Institute of Technology, Atlanta, GA

9:00 am-9:15 am

CDDO-Me + HIFU as a Potent Strategy to Prevent Progression to Lethal Prostate Cancer

Charles Kelly¹, Hakim Murad¹, Shirley Hong¹, Partha Chandra¹,

Namrata Khurana¹, Debasis Mondal¹, and Damir Khismatullin¹

¹Tulane University, New Orleans, LA

9:15 am-9:30 am

Simulation of Transcranial Ultrasound Pressure Field in Non-Human Primates Based on Segmented MRI

Yixuan Huang¹, Marshal Phipps¹, Wolf Zinke¹, Charles Caskey², and Sumeeth Jonathan¹

¹Vanderbilt University, Nashville, TN, ²Vanderbilt University Medical Center, Nashville, TN

OP-Thurs-1-7

Room A316

Tracks: Biomedical Imaging and Instrumentation

Novel Optical Techniques and Devices

Chairs: Giuliano Scarcelli, Quincy Brown

8:00 am-8:15 am

Label-free Molecular Imaging with Deep Ultraviolet Hyperspectral Interferometric Microscopy

Francisco Robles¹

¹Georgia Tech and Emory University, Atlanta, GA

INVITED

8:15 am-8:30 am

Monitoring the Degradation of Drug Loaded Nanoparticles Using Wide-Field Holographic Imaging

Aniruddha Ray¹, Shuoran Li¹, Tatiana Segura¹, and Aydogan Ozcan¹

¹University of California, Los Angeles, Los Angeles, CA

8:30 am-8:45 am

Development of Mobile Phone Based Transcutaneous Billirubinometer

Brandon Harrison¹, Alexander Dumont¹, Jerry So¹,

Shreyas Chandragiri¹, Zack McCormick², Amy Nwaba¹,

Hendrik Weitkamp¹, and Chetan Patil¹

¹Temple University, Philadelphia, PA, ²TrailBlazing Technologies Inc.,

New York, NY, ³Vanderbilt University Medical Center, Nashville, TN

8:45 am-9:00 am

The Scattering Coefficient Map Reveals Subsurface Colorectal Cancer

Yifeng Zeng¹, Rao Bin¹, William Chapman², Sreyankar Nandy¹, Rehan Rais², Ivan Gonzalez², Deyali Chatterjee², Matthew Mutch², and Qing Zhu¹

¹Washington University in St. Louis, St. Louis, MO,

²Washington University School of Medicine, St. Louis, MO

9:00 am-9:15 am

Optical Coherence Elastography for Analysis of Articular Cartilage Deformation Under Biaxial Loads

Brecken Blackburn¹, Mostafa Motavalli¹, Andrew Rollins¹, Jean Welter¹, and Joseph Mansour¹

¹Case Western Reserve University, Cleveland, OH

9:15 am-9:30 am

Multiscale Quantification of Microstructural Changes in Dermal Collagen in Young and Aged Mice

Alan Woessner¹, Jake Jones¹, Edward Sander², and Kyle Quinn¹

¹University of Arkansas, Fayetteville, AR, ²University of Iowa Iowa City, IA