

Elastographic Imaging: from Early Detection of Cardiovascular Disease to Monitoring Targeted Therapy for Pancreatic Cancer



Marvin Doyley, Ph.D.

Associate Professor in the
Department of Electrical and
Computer Engineering at
University of Rochester

Lecture: Friday, March 23rd, 2018

9:00AM-10:00AM

Room EC 1107

10555 West Flagler Street

Miami, FL 33174

Abstract

Elastography is emerging as an imaging technique for visualizing the mechanical properties within biological tissues. During the last five years, my group has been actively developing novel elastographic imaging techniques to visualize the structural properties of life-threatening atherosclerotic plaques. Recently we have been using these strategies to understanding how tumor microenvironment impacts the stiffness of the extracellular matrix. In this talk, I will discuss progress we have made in vascular elastography and pancreatic cancer imaging.

Biography Marvin M. Doyley received his Ph.D. degree in biophysics from the Institute of Cancer Research (Sutton), University of London in 2000. In 2008, he joined the faculty of the Department of Electrical and Computer Engineering at the University of Rochester, in Rochester New York, where he is currently an Associate Professor in the Department of Electrical and Computer Engineering. His Parametric Imaging Research Laboratory at the University of Rochester concentrates their efforts in the areas of non-invasive vascular imaging, model-based intravascular ultrasound elastography, high frequency nonlinear ultrasound imaging, and molecular imaging for pancreatic cancer. He currently serves as Associate Editor for IEEE Transaction of Ultrasonic and Ferroelectrics and Frequency control, SPIE Journal of Medical Imaging, and Nature Scientific Reports.