



WINTER 2017

**Venue:**

Engineering Technology Building (ETB) 535

Tuesday, April 18th from 1:30 - 2:20 PM

# ENGINEERING

# PHYSICS

# SEMINAR SERIES

Department of Engineering Physics in  
the Faculty of Engineering at  
McMaster University, Canada.

**Yong Du**

Assistant Professor of Radiology,  
Johns Hopkins University



TUESDAY APRIL 18 2017

## SPECT and Quantitative Imaging Biomarkers:

SPECT (Single Photon Emission Computed Tomography) is a medical imaging modality that is commonly used in routine clinical practices. SPECT detects gamma photons emitted from radiopharmaceuticals administered into a human body and provides 3D information of physiological functions at molecular level. With recent interesting in “precision medicine”, research has been focused on improving quantitative accuracy of SPECT images through advanced iterative reconstruction algorithms and comprehensive compensations for physical image degrading factors. The goal is to develop accurate and precise quantitative SPECT imaging biomarkers to assist diagnosis and treatment planning, and to monitor patient’s response to therapy.

**Biography:** Yong Du, Ph.D. is an assistant professor at Johns Hopkins University in the Department of Radiology. Dr. Du is a certified Nuclear Medicine Physicist by the American Board of Radiology. He received his B.S and M.S in Biophysics from Nankai University, his second M.S. in Applied Physics from the East Carolina University, and his Ph.D. in Biomedical Engineering from The University of North Carolina at Chapel Hill. He then received postdoc training and subsequently faculty appointment at the Department of Radiology, Johns Hopkins University. Dr. Du is experienced in medical imaging physics, image reconstruction algorithms, and quantitative image analysis. He is also involved in design and optimization of imaging protocols for animal studies and various clinical trials.