

Photonics Forum

anuary 31, 2018
11:45 a.m 1:15 p.m.
9th Floor
Room 901

Photonics Center

8 Saint Mary's Street

Lunch will be served!



Professor Ji Yi, Boston University

"Big Data" in Human Neuroretinal Imaging and its Applications

The retina is a part of the brain that creates vision, and is also one of the few internal organs that can be directly accessed by light. Modern ophthalmic imaging provides a toolbox for us to study the structures and functions of the retina, and also generates abundant data for us to understand and interpret. In this talk, Professor Yi will introduce multi-dimensional data extracted from volumetric neuroretinal imaging in vivo in human. He hopes to present a case where physiology, biophysics, optical engineering, data science and medicine can crosscut and translate to clinical applications, such as blindness and Alzheimer's diseases.

Dr. Ji Yi obtained his bachelor's degree in Biomedical Engineering from Tsinghua University, and subsequently completed his Ph.D. and postdoctoral training at Northwestern University. He started his independent research at the Boston University School of Medicine in 2015 as an Assistant Professor. His research focuses on developing novel optical imaging techniques and methods for early detection of cancers and retina-related blinding diseases. Among other inventions, he developed various imaging methods that enable non-invasive detection of nanoscale structural alterations in tissue and the local tissue metabolism. He is also the first scientist advancing visible light optical coherence tomography into in vivo human retinal imaging. His goal is to translate the new technology and impact healthcare for the general public. Dr. Yi has published more than 46 peer-reviewed journal articles, and is co-inventor of five patents. He has received numerous awards including the Baxter young investigator award, the JDRF postdoctoral fellowship, and the Bright Focus foundation award.

