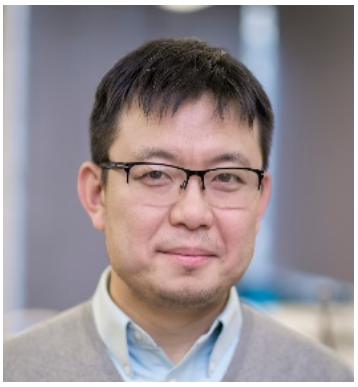
Illinois Eye
ILLINOIS EYE AND EAR INFIRMARY



Dr. Hao F. Zhang
Professor, Biomedical Engineering
Northwestern University

Multiscale optical imaging for ophthalmology, from single molecules to human eyes

Dr. Jhang's research focuses on two optical imaging technologies, optical coherence tomography (OCT) and single-molecule localization microscopy, to fill the gaps in both clinical diagnoses and fundamental biomedical investigations. To enable OCT to extract physiological and pathological information beyond high-quality anatomical imaging, we developed visible-light OCT or vis-OCT. Operating within the visible-light spectral range, vis-OCT has demonstrated great potential in ultra-high resolution imaging, angiogram, oxygen metabolic imaging, and ultrastructural pathological sensing. Using vis-OCT we are studying several blinding diseases (e.g. diabetic retinopathy and glaucoma) and ischemic strokes.

Dr. Hao F. Zhang is a Professor of Biomedical Engineering at Northwestern University. He and colleagues reported the first demonstration of photoacoustic microscopy (Nature Biotechnology 2006, Nature Protocols 2007, PNAS 2010, Nature Communications 2019), the first spectroscopic super-resolution imaging (Nature Communications 2016, Optica 2019), and the first observation of intrinsic stochastic fluorescence emission from DNA (PNAS 2016). He received the NSF CAREER award and NIH Director's Challenge Award in 2010, the NIH IMPACT award in 2015, the SPIE Translational Research Award in 2016, and the US National Academy of Sciences Cozzarelli Prize in 2017. For more information, please visit http://foil.northwestern.edu and www.opticenthealth.com.

Friday, January 17th, 2020
12:30PM
Lions of Illinois Eye Research Institute,
1905 W. Taylor Street, Chicago.

Host: Dr. Ali Djalilian and Dr. Xincheng Yao

Refreshments will be provided

Please contact Dr. Nishit Mukhopadhyay (nishitm@uic.edu)