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FRIDAY, SEPTEMBER 17 / 9:00 AM
Room EC 2300

HIGH RESOLUTION MULTIMODAL BIOMEDICAL OPTICAL IMAGING

ABSTRACT: Vision is the most fundamental of our senses and losing vision is perhaps the greatest tragedy for a person. Unfortunately, with aging of the population vision loss is becoming a major public health problem worldwide. The diagnosis and treatment monitoring for eye diseases highly rely on imaging technologies, especially in vivo imaging technologies. The eye is an optical device in nature, which makes it the most suitable for imaging with light. Many technologies have been developed to image ocular tissues, especially the retina. These technologies have greatly assisted ophthalmologists in the diagnosis and treatment of ocular diseases. My research is mainly focused on the development of novel technologies for anatomic and functional imaging the retina, using

light as the probe, to explore different physical processes of the light tissue interactions, including scattering, absorption, polarization modification, and Doppler effects, as contrast mechanisms for imaging. In this presentation I will give a brief review of the technologies that have been developed in my lab for imaging the retina in vivo, including Optical Coherence Tomography (OCT), Photoacoustic Microscopy (PAM), Quantitative Fluorescence Microscopy, and multimodal imaging. These technologies have been used for imaging either animal models of retinal diseases or human subjects for the investigation of major blinding diseases such as age-related macular degeneration, glaucoma, and diabetic retinopathy.



Through the generous support of the Wallace H. Coulter Foundation, the Department of Biomedical Engineering facilitates weekly lectures each year during academic terms. Experts in all areas of Biomedical Engineering are invited to provide a research seminar and to meet with faculty and students to discuss the latest developments and research in Biomedical Engineering.

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9:00AM-10:00AM | <https://bme.fiu.edu/seminars>