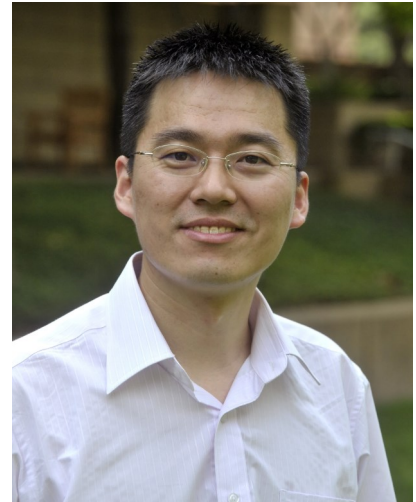


**Ultrasound-switchable fluorescence for deep-tissue high-resolution imaging**

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**LECTURE: 9:00 AM - 10:00 AM**

**ENGINEERING CENTER**  
**ROOM EC 1112**  
**10555 WEST FLAGLER STREET**  
**MIAMI, FL 33174**



**Abstract:** Fluorescence imaging in deep tissue with high spatial resolution is highly desirable because it can provide details about tissue's structural, functional, and molecular information. Unfortunately, current fluorescence imaging techniques are limited either in penetration depth (microscopy) or spatial resolution (diffuse light based imaging) as a result of strong light scattering in deep tissue. To overcome this limitation, we developed an ultrasound-switchable fluorescence (USF) imaging technique whereby ultrasound was used to switch on/off the emission of fluorophores. We synthesized and characterized unique USF contrast agents. The excellent switching properties of these agents, combined with the sensitive USF imaging system developed in this study, enabled us to image fluorescent targets in deep tissue with spatial resolution beyond the acoustic diffraction limit.

**Biography:** Dr. Baohong Yuan received his PhD degree in Biomedical Engineering from University of Connecticut in 2006, and completed his post-doctoral training in Columbia University in 2007. As an assistant professor, he worked in Catholic University of America (CUA) from 2007 to 2010. Since 2010, he joined the bioengineering department at University of Texas at Arlington (UTA). His main research interest is to develop ultrasound-mediated fluorescence technology for cancer imaging. As a PI, he has been awarded ~2 million dollars from Federal and State funding agencies, including NSF, NIH, DOD and CPRIT. He has published 46 peer-reviewed journal papers, numerous conference papers/presentations, and several U.S. patents. He has served as an editor or editorial board member for Journal of Biomedical Optics, International Journal of Optics, Technology in Cancer Research and Treatment, and Austin Journal of Biomedical Engineering. His major awards include NSF CAREER award, Outstanding Early Career Award (UTA), Kaman Award for Excellence in Research (CUA), and Burns Faculty Fellow (CUA).

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**Map:** <http://campusmaps.fiu.edu/Engineering Center>