

BIOMEDICAL SCIENCES SEMINAR

13 DECEMBER (WED) / 2:30PM-5:00PM

CONNIE FAN MULTI-MEDIA CONFERENCE ROOM,
4/F, CHENG YICK-CHI BUILDING
CITY UNIVERSITY OF HONG KONG

Keynote Speaker:

Prof. Matthew O'Donnell
University of Washington



Speakers:

Dr. Gigi Lo
Department of Biomedical Sciences
City University of Hong Kong

Dr. Kiwon Ban
Department of Biomedical Sciences
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Online Registration



Enquiries

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INTEGRATING PHOTONICS WITH ULTRASONICS FOR BIOMEDICAL APPLICATIONS: A TRANSLATIONAL JOURNEY



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Abstract

For over two decades we have explored technologies combining modern integrated optics with real-time ultrasonics for biomedical applications ranging from molecular imaging to non-destructive testing and laboratory medicine. In this talk I will highlight some of the instrumentation we have developed and targeted nano-agents we have synthesized to address specific biomedical questions using integrated photonics/ultrasonics systems. Particular emphasis will be placed on discussing the translational pathway from bench to bedside for many of these technologies. As expected, translational success is only possible with a highly interdisciplinary team including physical scientists, engineers, life scientists, and clinicians.

Biography

Following undergraduate, graduate, and post-doctoral training at Notre Dame and Washington University in St. Louis, Dr. O'Donnell joined General Electric Corporate Research and Development Center in Schenectady, NY in 1980, where he worked on medical electronics, including MRI and ultrasound imaging systems. In 1990, he moved to University of Michigan in Ann Arbor, MI where he held appointments in Electrical Engineering & Computer Science and in Biomedical Engineering. In 1998, he was named the Jerry W. and Carol L. Levin Professor of Engineering. From 1999-2006 he also served as Chair of the Biomedical Engineering Department. In 2006 he moved to the University of Washington in Seattle, WA where he was the Frank and Julie Jungers Dean of Engineering from 2006-2012. He is now Frank and Julie Jungers Dean Emeritus and a Professor of Bioengineering at the University of Washington. His most recent research has explored new imaging modalities, including elasticity imaging, *in vivo* microscopy, optoacoustic devices, photoacoustic contrast agents for molecular imaging and therapy, laser ultrasound systems, and catheter-based devices. He has won numerous awards, including the Distinguished Alumni Award from the University of Notre Dame, the Achievement and Rayleigh Awards from the IEEE-UFFC Society and the William J. Morlock Award for Excellence in Biomedical Technology from the IEEE-EMBS Society. He is a fellow of the IEEE and AIMBE and is a member of the Washington State Academy of Sciences and the National Academy of Engineering.