



The Chinese University of Hong Kong
Department of Biomedical Engineering



Time: 10:00am, 21 November 2023 (Tuesday)
Venue: Room 704, Mong Man Wai Building

Shortwave Infrared Imaging (SWIR) for new surgical instruments



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Abstract

In the field of biomedical imaging, the integration of optical technologies has significantly enhanced diagnostic and surgical procedures. One of the key advancements discussed in this lecture is utilizing Shortwave Infrared (SWIR) imaging. **Shortwave Infrared Imaging (SWIR)**: SWIR imaging involves capturing and analyzing light in the shortwave infrared spectrum, typically ranging from 1,000 to 2,500 nanometers. We will describe shortwave infrared imaging techniques involving fluorescence and reflection modalities. We will describe new surgical instruments incorporating these technologies.

Biography

Dr. Tulio A Valdez is a surgeon scientist with expertise in Pediatric Otolaryngology. He is a Full Professor of Otolaryngology at Stanford School of Medicine. Clinically, Dr. Valdez focuses on pediatric sleep apnea and sinus disease management in cystic fibrosis. He has co-authored a textbook and various book chapters and scientific papers. His research involves developing imaging methods for diagnosing otitis media and cholesteatoma, common ear conditions that can cause hearing loss. He was associated with the Laser Biomedical Research Center at MIT and works on innovative imaging techniques for diagnosing ear infections and improving intraoperative imaging in pediatric patients to enhance surgical outcomes while minimizing radiation exposure.

***** ALL ARE WELCOME *****

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