

# ITPR Distinguished Seminar – Systems Biology and Omics-driven Approaches for Target Identification and Drug Discovery: from the Perspective of Cell-cell Communication

## Abstract

This talk will present an overview of a multicellular systems biology strategy to understand the underlying cell-cell communication within tumor microenvironment using cell-specific, single cell, and spatial transcriptomics, multiplex imaging, and multi-cellular crosstalk modeling in a comprehensive, unbiased manner. We will provide examples of applications targeting tumor microenvironment of different organs, such as the bones, brain, lungs, and ovaries to illustrate the power of systems biology modeling for hypotheses generation, tumor heterogeneity delineation, and target and drug discovery, as well as ongoing extensions to other diseases such as Alzheimer's and Idiopathic pulmonary fibrosis.



**Speaker**

**Stephen T. Wong, PhD, PE.**

Houston Methodist Hospital and  
 Weill Cornell Medicine

**Date: 5 DEC 2022**

**Time: 10:00am – 12:00nn**

**Venue: WLB103**

**Registration:**




Staff / Others



Student

**Enquiry**

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## Biography

Stephen T.C. Wong, B.E.E.E. (hons), Ph.D. (Computer Science), P.E. (Electrical Engineering), FIEEE, FAIMBE, FAMIA, FAAIA, is John S. Dunn Sr. Presidential Distinguished Chair, founding Chair of Systems Medicine and Bioengineering Department, Director of the T.T. & W.F. Chao Center for BRAIN and Translational Biophotonics Laboratory, Chief of Medical Physics, and Associate Director of Neal Cancer Center, Houston Methodist Hospital. He is a Professor of Radiology, Neurosciences, Pathology and Laboratory Medicine of Cornell University. He was a Professor at UCSF and Harvard University, handling major medical information and imaging system initiatives, design and implementation at UCSF, Harvard Medical School and Brigham and Women's Hospital. Stephen has served in leadership roles in major technology-driven companies including HP, Bell Labs, Philips Healthcare, and Charles Schwab. His laboratory investigates molecular mechanisms of cancer and neurodegeneration for translation to diagnostics and therapeutics.