The Chinese University of Hong Kong

Electronic Engineering

# Biomedicine in the Age of AI and Foundation Models

14:00-15:30, Nov. 25, 2025

ERB 706, CUHK

## Prof. Lei Xing

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**Abstract**

AI, driven by deep learning, has garnered significant attention in recent years and is increasingly being adopted for various applications in medical imaging and multi-omics data analysis in biomedicine. The remarkable success of AI and deep learning can be attributed to their unique ability to extract essential features from big data and make accurate inferences.

This talk aims to update the audience on the latest advancements in the field of omics data analysis, including foundation models and large language models. It will also address the pitfalls of current data-driven approaches, summarize recent developments in interpretable AI, and offer perspectives on the applications of AI in multi-omics data analysis and precision oncology.


**Biography**

Prof. Lei Xing is the Jacob Haimson & Sarah S. Donaldson Professor at Stanford University. He also holds affiliate faculty positions in Department of Electrical engineering, Institute for Computational and Mathematical Engineering (ICME), and Molecular Imaging Program at Stanford (MIPS). Dr. Xing obtained his PhD from the Johns Hopkins University in 1992. His research has been focused on AI, biomedical data science, medical imaging and image guided interventions, treatment planning and clinical decision-making. Dr. Xing is an author on more than 500 publications in high impact journals, an inventor on many issued and pending patents, and an investigator on numerous research grants.

He is a fellow of AAPM, ASTRO, and AIMBE. He is the recipient of the 2023 Edith Quimby Lifetime Achievement Award of AAPM, which denotes outstanding scientific achievements in medical physics, influence on the professional development of others, and organizational leadership.

Xing's Homepage

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*For enquiries, please contact Prof. Yixuan YUAN, Department of Electronic Engineering, on 3943-8277.*