

DEPARTMENT OF COMPUTER SCIENCE

SEMINAR

2025 SERIES

# Foundation Models in Healthcare: Advances, Pitfalls, and Path Forward

## DATE & TIME

7 JUL 2025 (MON) 10:00 - 11:00 AM

## VENUE

DLB111, 1/F, DAVID C. LAM BUILDING, SHAW CAMPUS



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### ABSTRACT

Foundation models (FMs) have emerged as transformative tools in AI-driven healthcare, promising unprecedented capabilities for biomedical data analysis. In this talk, I will first provide an overview of our recent advances in incorporating transformer-based FMs into medical image analysis. Despite their successes, medical FMs face critical challenges, including biases, limited interpretability, insufficient adaptability to clinical contexts, etc. As the focus of this talk, I will share our exploration of these challenges, emphasizing strategies that significantly enhance fairness, robustness, and clinical utility. Additionally, I will share our in-depth analysis on critically examining the ongoing debate over whether general-purpose foundation models are justified, considering their substantial cost, or if specialized medical foundation models alone suffice. Lastly, I will outline our strategies to unlock the full potential of trustworthy and impactful AI in healthcare.



SPEAKER'S  
BIOGRAPHY



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