香港浸會大學 HONG KONG BAPTIST UNIVERSITY

香港浸會大學理學院 HKBU Faculty of Science

DEPARTMENT OF MATHEMATICS 數學系

Department of Mathematics Colloquium

Facial Knowledge Transfer for Deep Learning Based Video Deception Detection

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Abstract

Deception detection has garnered significant attention over the past few decades due to its critical applications in law enforcement, national security, interviewing, and related domains. Researchers have long been devoted to developing effective automatic detection methods. Traditional approaches primarily focused on handcrafting low-level feature sets that exhibit significant differences between truthful and deceptive behaviors. However, their performance has been limited by the insufficient semantic representation capacity of such features. In recent years, deep learning methods have been increasingly explored for their superior ability to capture high-level representations. Nevertheless, the effectiveness of these models is often constrained by the lack of large-scale, high-quality labeled datasets. To address this issue, our research incorporates external facial knowledge—motivated by psychological theories and prior studies—to enhance the performance of deep models. The proposed approach is evaluated across multiple datasets, demonstrating not only improved detection performance but also interpretability consistent with established psychological findings and previous research.

Date	Time	Venue
13 August 2025, Wednesday	10:30-11:30	FSC1217 Fong Shu Chuen Library Ho Sin Hang Campus