香港浸會大學
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DEPARTMENT OF
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# GENERATIVE DIFFUSION MODELS: EFFICIENT SYNTHESIS AND APPLICATIONS

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**DATE & TIME**

29 JUN 2026 (MON)
10:30 - 11:30 AM

**VENUE**

DLB637, 6/F, DAVID C. LAM BUILDING, SHAW CAMPUS

**ABSTRACT**


Generative diffusion models have achieved remarkable success in high-quality image and video synthesis, demonstrating strong generative capabilities across a wide range of applications. Nevertheless, the iterative denoising process suffers from the problem of inefficient synthesis. In this talk, I will first introduce Adversarial Distribution Matching (ADM), a novel score distillation framework that effectively transfer knowledge from pretrained diffusion models to one-step or few-step generators in a score adversarial manner for efficient generation. The second part of the talk focuses on applications of generative diffusion models. In general, diffusion-based applications can be categorized into two paradigms: (1) generating task-relevant data to enhance the performance of downstream models, and (2) directly producing outputs required by downstream tasks. Following this perspective, I will present three representative applications of diffusion models including data supplementation for object detection, pose-guided human image synthesis, and medical image segmentation.


SPEAKER'S BIOGRAPHY

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