



## Department of Applied Mathematics Seminar

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## **Topic**

Statistics-powered AI

## **Date | Time**

17 November 2025 (Monday) | 14:00 – 15:00 (HK Time)

#### Venue

PQ303

#### **Abstract:**

We have definitely entered an era of generative artificial intelligence (AI), where large language models (LLMs) are increasingly reshaping our daily lives. Their impact is everywhere - from education and academia to professional work and everyday life. In this talk, I will present two recent NeurIPS papers on statistics-powered AI, focusing on how statistical methodologies can enhance AI's performance in (1) aligning LLM's model outputs with human feedback, and (2) detecting LLM-generated content with rigorous guarantees. Open-source Python implementations are available at <a href="https://github.com/Mamba413/AdaDetectGPT">https://github.com/Mamba413/AdaDetectGPT</a> and <a href="https://github.com/DRPO4LLM/DRPO4LLM">https://github.com/DRPO4LLM/DRPO4LLM</a>.