

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research
Department of Mathematics*

Seminar

PKU Quest: AI-Powered Math Education Practice at Peking University

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Abstract

The advent of Generative AI necessitates a paradigm shift in higher education, calling for new, diverse models of interaction between students, teachers, and AI. In response to this challenge, Peking University has developed PKU Quest, an AI-assisted platform designed to explore these new pedagogical frontiers. PKU Quest focuses on optimizing for the unique demands of mathematics education, and has developed the "Math Tutor," a tool specifically designed for math problem-solving support. Instead of providing direct answers, the Math Tutor engages students in a heuristic and exploratory dialogue, guiding them to develop independent thinking and problem-solving skills. This application has now been implemented across all foundational mathematics courses at Peking University. This presentation will share our journey in developing PKU Quest, discussing the motivations, challenges, and practical outcomes of what we consider a first step in exploring the vast potential of AI in education.

Date:	September 10, 2025 (Wednesday)
Time:	4:30 - 5:30pm
Venue:	Room 210, Run Run Shaw Building, HKU

All are welcome