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SEMINAR 2026 SERIES

FROM RANKING TO REASONING: TOWARDS AGENTIC RECOMMENDER SYSTEMS IN THE ERA OF MULTIMODAL LLMS

PROF. LINA YAO
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School of Computer Science and Engineering
University of New South Wales

DATE & TIME

6 AUG 2026 (THU)
2:30 PM - 3:30 PM

VENUE

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

ABSTRACT

Recommender systems have long operated as reactive rankers, solving a single-step decision problem over a closed catalogue. Multimodal large language models now enable a fundamentally different design: recommenders as autonomous agents in a temporally extended, partially observable decision process—perceiving context, planning, acting, remembering, and improving through interaction. In this talk, I will introduce our recent work on agentic recommender systems, organized around the key components of this pipeline. Rather than building an end-to-end system, our studies examine each component individually and validate its feasibility: hybrid textual–behavioral memory for long-term personalization, factorized latent reasoning and dynamic in-context adaptation for scalable deliberation, and diffusion-based preference optimization with advantage-conditioned policies for adaptive learning. Autonomy also introduces new vulnerabilities: we demonstrate memory-corruption and indirect prompt injection attacks against recommender agents. I will conclude with open challenges and future directions for this emerging paradigm.

SPEAKER'S BIOGRAPHY

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