THE HONG KONG POLYTECHNIC UNIVERSITY
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Department of Computing
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Agentic Economics:
Identity and Trading Behaviour of AI Agents on Blockchains

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Date ***: 3 Nov 2026 (Tue)***
Time ***: 3:00 pm - 4:00 pm***
Venue ***: CD301***

Abstract

AI agents powered by large language models are beginning to act as autonomous participants in the economy. This talk presents two complementary pieces of evidence from public blockchain data. First, it introduces a dataset of the first 10,000 AI agents registered on Ethereum under the ERC-8004 identity standard. Second, using fully transparent on-chain data from a decentralised perpetual futures exchange, it identifies and tracks autonomously trading AI agents and asks whether they behave like disciplined algorithms or like retail investors. Their behaviour is characterised along several dimensions, including trading activity, asset selection, long–short bias, win rates, profit-and-loss structure and fee burden, and benchmarked against typical patterns of human traders.

About the Speaker

Dr Yulin Liu is Director of the Swiss Quantum Economics AI Lab in Zurich. He holds a PhD in Economics and an MSc in Quantum Computation and Physics from ETH Zurich. He serves as an Editor of Ledger, Topic Editor on AI agents for Frontiers in Blockchain, a PhD mentor at the Technical University of Munich, and a board member of the Decentralized Entities Foundation in Geneva. His research spans agentic economics, blockchain economics, and mechanism design. He previously led economics research at the DFINITY Foundation; served as Chief Economist at Liquity and the Origyn Foundations in Switzerland and as Senior Economic Advisor at Chainlink; and was a visiting economist at the Bank of Finland.