## Seminar



## Strategic Design of AI Agents: Balancing Framework Selection and Tool Complexity

**Abstract.** As Al agents become more capable and widely adopted, designing the right kind of agent has become a strategic decision – one that directly impacts performance, adaptability, and outcomes. From Chain-of-Thought and ReAct to Plan-and-Execute and ReWOO, each agent strategy comes with its own strengths, assumptions, and trade-offs. In this talk, we'll explore the landscape of Al agent strategies and the decision-making frameworks that guide their selection. Drawing from real-world use cases and experiments, we'll examine how different strategies – along with tool complexity – can both empower and hinder an agent's effectiveness, particularly in reasoning, task selection, and generalization. This session will help researchers and practitioners think critically about how to align agent design with the problem space – balancing capability with simplicity, and dynamicity with control – to build agents that are not just intelligent, but appropriate for the task at hand.

**Biography.** Mr. Allen Chan is an IBM Distinguished Engineer and CTO for Business Automation and lead architect behind IBM Watsonx Orchestrate, recognized for driving innovation at the intersection of AI and enterprise automation. Allen has led the design and evolution of platforms that bring intelligence and adaptability to core business processes. With deep expertise in workflow orchestration, decision automation, and AI Agent technologies, he has consistently transformed emerging technologies into scalable, market-leading products. His work has resulted in 15 patents and a strong body of thought leadership, co-authored two books, multiple articles (<a href="https://medium.com/@achan2013">https://medium.com/@achan2013</a>) and academic publications on automation and applied AI.



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