

NUS COMPUTING

AI-X: INDUSTRY DAY

in partnership with IMDA's Technical Sharing Session

Speaker Line-up & Abstracts

1	Xu Xinxing  Principal Research Manager, Microsoft Research Asia	Title: Building Industry Intelligence with Generative AI
2	Victor Liang  Head of Data Science, Geo Services, Grab	Abstract: In this talk, <i>Mr Victor Liang will share how Grab has been leveraging the latest advancements in AI to enhance our super-app experience — not only for their consumers but also for their driver-partners. Additionally, how AI has transformed the way they build and innovate — enabling their teams to boost productivity, accelerate product development, and conduct experiments at scale with greater speed and precision.</i>
3	Yang Jun Tao  Solutions Architect, Nvidia	Title: Accelerating science with AI
6	Dimitri Bintein  Technology Director, AI CoE NCS	

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4	Suranga Nanayakkara  Associate Professor, School of Computing and Takahiro Masuda  Researcher, Asahi Quality & Innovations	Title: EmoDrink: Enhancing Human Well-being through Beverages and Technology Abstract: <i>In this talk, we will first share the Augmented Human Lab's vision of designing novel human-computer interfaces—where technology is not treated as a separate tool, but as a seamless extension of the human body, mind, and identity. We will then highlight EmoDrink, a collaborative project developed with Asahi Quality & Innovations, Ltd. EmoDrink is a smart system that helps people maintain a positive emotional state through beverages. We will present some early-stage results and outline directions for future work.</i>
5	Thia Kai Xin  Vice President, Head of AI and Analytics, ST Engineering	STE's Physical AI Research Translation

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4	<u>Chang Yi-Jun</u>  NUS Presidential Young Professor, School of Computing	Title: Distributed Shortest Path Computation in Large-Scale Networks Abstract: <i>Shortest path computation is a cornerstone of computer science. Classical algorithms such as those of Dijkstra and Bellman–Ford, developed in the 1950s, have long been standard material in computer science curricula and remain essential in practice, from Internet routing protocols to real-time navigation services like Google Maps.</i> <i>Despite its long history, the problem remains vibrant. Modern applications demand efficient shortest path computation on massive graphs under stringent time and resource constraints. Emerging computational models, including parallel, distributed, and streaming settings, introduce new challenges that classical algorithms cannot address.</i> <i>In this talk, I will discuss recent advances in designing algorithms suited to these modern settings, including our recent work “Improved All-Pairs Approximate Shortest Paths in the Congested Clique” (with Hong Duc Bui, Shashwat Chandra, Michal Dory, and Dean Leitersdorf), presented at PODC 2024.</i>
5	<u>Lin Shao</u>  Assistant Professor, School of Computing	Title: Unified Representation of Robot and Object Interaction for Cross-Embodiment Dexterous Grasping

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6	<u>Freddy Lim</u>  Assistant Professor, School of Computing	Title: Consumer analytics in loyalty programs Abstract: <i>Loyalty programs have become powerful tools for firms to strengthen customer relationships and drive revenue growth. In this short talk, I will share several collaborative projects with industry partners that examine how consumers engage with loyalty programs. These studies reveal interesting behavioral patterns and generate actionable insights for program design and pricing strategies.</i>
7	<u>Tan Zhi Xuan</u>  NUS Presidential Young Professor, School of Computing	Topic: Scaling Cooperative Intelligence via Rational AI Engineering Abstract: <i>How can we build cooperative machines that model and understand human minds — machines that assist us with our goals, coordinate on shared plans, infer the intentions behind our words, and even learn our norms and values? This talk introduces an approach to building trustworthy AI assistants and cooperators called rational AI engineering. By designing AI agents with explicit probabilistic models of their social world, then using probabilistic programming and model-based planning to automate rational Bayesian inference and assistive decision-making, we can achieve real-time goal recognition, grounded understanding of ambiguous language, and uncertainty-aware assistance, while attaining higher reliability and lower cost than purely LLM-based solutions. I will present the key technical innovations that enable this approach to scale, alongside ongoing research on applications such as browser agents and smart co-players in video games.</i>

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8	<u>Jane E</u>  Assistant Professor, School of Computing	Title: Interactive Computational Guidance for Developing Expertise Abstract: <i>Computer scientists have long pursued the vision of human–AI collaboration that augments human capabilities and intellect. Prof E Jane Little’s work contributes to this vision by asking: How can computational tools not only help users complete tasks, but also support the development of domain expertise in the process?</i> <i>She will explore these questions through some of my past work that investigates this question in domains of artistic creativity. This work is inspired by the fact that expert artists have trained their eyes to “see” in ways that embed their expert domain knowledge—in this case, core artistic concepts. Her work designs creativity tools that leverage these expert structures to help novices develop this expert-like “artistic vision”—specifically through providing guidance to scaffold their design processes. She discuss how this approach begins to address a broader question: How can systems scaffold, rather than substitute, the development of expertise?</i>
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