Openings

Engineering Systems and Design Pillar

Singapore University of Technology and Design

About the Openings: There are openings for Ph.D. candidates, Postdoctoral researchers, research assistants, and visiting scholars/students in the Engineering Systems and Design Pillar at Singapore University of Technology and Design (SUTD).

Our research focuses on learning, information processing and transfer, and security in decentralized networked systems, particularly in: (i) decentralized learning and large language models; (ii) security, privacy, and robustness; (iii) networking and multi-agent systems.

Methodologically, our work integrates modern learning approaches such as foundation models and alignment, decentralized optimization, and reinforcement learning with theoretical tools from information theory, stochastic processes, and graph theory.

We seek to understand theoretical foundations of networked intelligent systems and to develop resilient, secure, freshness-aware, and scalable strategies for real-world applications, bridging rigorous theory with practical challenges. We are also interested in translating theoretical insights into system design and implementation.

We look for candidates interested in theoretical research who have exceptional mathematical ability (beyond mere knowledge). For candidates interested in system/experimental research, strong programming skills and hands-on experience are highly valued.

If interested, please send your CV, transcripts, one representative publication when available (**please choose this paper carefully, as I will use it to access your research taste, originality of ideas, and theoretical foundation**) to Prof. Xingran Chen (xingranc@ieee.org). Due to the volume of inquiries, I may not be able to respond to every email.

Ph.D. candidate positions will start no earlier than Fall 2027. Postdoctoral researcher positions will start no earlier than early 2027.

We value bold, unconventional, and ambitious ideas. Our goal is not to produce incremental work, but to pursue research that is original, deep, and impactful. We foster a lab culture in which members are genuinely passionate about research, willing to think deeply about important problems, and driven by strong self-motivation and intellectual curiosity.

About SUTD: SUTD is the 4th public autonomous university in Singapore, established in 2009 in collaboration with MIT. SUTD positions itself as the world's first *Design* $\times$ *AI* university, integrating design, artificial intelligence, and technology in research and education. This interdisciplinary environment supports work that connects fundamental ideas with practical challenges.

About Prof. Xingran Chen: Xingran Chen is an Assistant Professor (as of Jul. 2026) in the Engineering Systems and Design Pillar at SUTD. Prior to joining SUTD, he was a postdoc at Rutgers University (Jan. 2025–Apr. 2026), and an Assistant Professor at the University of Electronic Science and Technology of China (Sep. 2023–May 2026). He earned his Ph.D. in Electrical and Systems Engineering (May 2023) from the University of Pennsylvania. Dr. Chen's research focuses on learning, information processing and transfer, and security in decentralized networked systems. He received the IEEE Communications Society & Information Theory Society Joint Paper Award in 2023. Dr. Chen is a member of IEEE. He has served the research community through editorial and conference service, including a Guest Editor for China Communications in 2024 and Entropy in 2025, and as a Technical Program Committee Member for WiOpt 2026, IEEE ICC 2024, and IEEE GLOBECOM 2020 Workshop 7. His research is supported by NSF of China and Ministry of Education of China.

Finally, for our prospective lab members, just for fun, we invite you to take a look at the academic heritage behind our lab below. It is a fun way to trace some of the intellectual roots of our work and to see how generations of scholars and ideas are connected across time.