Quantum Frontiers: From Fundamental Theory to Real-World Impact

Dr. Min-Hsiu Hsieh
Hon Hai Research Institute

Friday, October 17, 2025 10:00am
Auditorium106 at IIS new Building

Abstract

In this talk, I will present the latest research priorities in the global quantum community as well as at the Hon Hai Research Institute. The discussion will be organized into three categories: hardware-enabling technologies, quantum software with demonstrated advantages, and emerging real-world applications.

Biography

I have been the director of the Hon Hai Quantum Computing Research Center in Taiwan since January 2021. Prior to this role, I was an Associate Professor at the University of Technology Sydney in Australia and a member of the UTS Centre for Quantum Software and Information from 2014 to 2020. From 2010 to 2012, I was a postdoctoral research fellow at the University of Cambridge in the UK, where I was affiliated with the Centre for Quantum Information and Foundations. Before that, I worked as a research scientist with the ERATO-SORST Quantum Computation and Information Project in Japan, which was funded by the Japan Science and Technology Agency. During this time, I was also affiliated with the Department of Computer Science at the University of Tokyo. From 2014 to 2018, I held an Australian Research Council Future Fellowship.

I serve on the steering committee of

- Asian Quantum Information Science Conference (AQIS), 2024 - .
- Conference on the Theory of Quantum Computation, Communication and Cryptography (TQC), 2021-2025;
- Conference series on Quantum Information Processing 【QIP】, 2021-2025;
- Beyond IID in Information Theory (BIID), 2020 - 2022.

I was the program chair of the TQC 2021 and BIID 2021.

My research interests include general topics in quantum information and computation.

中央研究院 資訊科學研究所
Institute of Information Science, Academia Sinica

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http://www.iis.sinica.edu.tw/