

SEMINAR ANNOUNCEMENT

**DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
COLLEGE OF DESIGN AND ENGINEERING**

Website: <https://cde.nus.edu.sg/ece>

Area: Microelectronic Technologies & Devices

Host: Associate Professor Aaron Danner

Research seminar

TOPIC	:	Towards a Secure and Interconnected Future with Quantum Internet
SPEAKER	:	Dr Wang Chao Senior Research Fellow Department of Electrical & Computer Engineering, National University of Singapore
DATE	:	Tuesday, 3 October 2023
TIME	:	2.30PM to 3.30PM
VENUE	:	E3-06-01 Block E3, College of Design and Engineering, NUS

ABSTRACT

Quantum Communication promises unconditional security in data communication based on the laws of quantum mechanics, rather than relying on computational complexity assumptions. Consequently, it can withstand threats from the rapid advances in computing hardware and algorithms, including the construction of large-scale quantum computers. This is of paramount importance for applications where data needs to remain secret for decades or even a lifetime, such as protecting companies' trade secrets, governments' confidential documents, and medical records. In this presentation, I will introduce the challenges and opportunities in quantum communication to realise a global Quantum Internet.

BIOGRAPHY

Dr. Wang Chao is currently a Senior Research Fellow in the Department of Electrical and Computer Engineering at the National University of Singapore. He received his PhD degree (CAS Pres. Award) from the University of Science and Technology of China (USTC) in 2018 and his bachelor's degree (Hon.) from Huazhong University of Science and Technology (HUST) in 2013. His research primarily focuses on experimental work in quantum communication, which includes quantum key distribution, quantum random number generation, and quantum networks. His works have been published in prestigious scientific journals like Nature Communications, Physical Review Letters, Light: Science and Applications, Optica, and PRX Quantum. He also contributed as a reviewer for these esteemed journals and served as a program committee member for leading international conferences in the field.

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