

Cheng-Chia Lai

chengchialai0719@gmail.com

Education

National Tsing Hua University, Hsinchu, Taiwan

M.S. in Computer Science

Advisor: Prof. Cheng-Hsin Hsu

Sep. 2024 – Jun. 2026

(Expected)

National Tsing Hua University, Hsinchu, Taiwan

B.S. in Computer Science

Sep. 2020 – Jun. 2024

GPA: 4.12/4.30

Research Interests

Digital Twin, Smart City, Internet-of-Things, and Networking

Experience

Ambient Intelligence for Immersive Networked Systems Lab, National Tsing Hua University – Hsinchu, Taiwan

Research Assistant

Advisor: Prof. Cheng-Hsin Hsu

Jan 2022 – Present

Research Description: Network communication protocols, Digital Twin, Smart City

Introduction to Computer Networks Course, National Tsing Hua University – Hsinchu, Taiwan

Teaching Assistant

Fall 2024

- Assisted students in grasping essential course concepts, assignments, and lab activities.
- Offered guidance to students to strengthen their understanding of networking principles and applications.
- Collaborated with course instructors in designing course materials, assignments, exams, and grading.

Publications

- [1] **A Software-Defined Approach to Enabling Network Controllers for Smart Environment Digital Twins**
Chih-Chun Wu, *Cheng-Chia Lai*, Nalini Venkatasubramanian, Cheng-Hsin Hsu
Proc. of IEEE International Conference on Cloud Computing Technology and Science (CloudCom'24)
Abu Dhabi, UAE, December 2024
- [2] **Urban Digital-Twin Planning for Sustainable Smart Cities: System Architecture, Preliminary Experiments, and Open Challenges**
Cheng-Chia Lai, Agnibha Sarkar, Phuong Anh Dinh, Suyash Gaikwad, Cheng-Hsin Hsu
Proc. of ACM International Workshop on Middleware for Digital Twins (Midd4DT'24)
Hong Kong, China, December 2024
- [3] **Evaluating subsurface single-hop WiFi and LoRa networks for internet of underground things**
Chih-Chun Wu, Rummana Rahman, Charlie Hsu, *Cheng-Chia Lai*, Nalini Venkatasubramanian, Cheng-Hsin Hsu
Proc. of IEEE International Workshop on Unconventional IoT Applications (Un-IoT'23)
Kuala Lumpur, Malaysia, December 2023