

Cheng-Chia Lai

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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

Experience

Ambient Intelligence for Immersive Networked Systems Lab , National Tsing Hua University – Hsinchu, Taiwan <i>Research Assistant</i> Advisor: Prof. Cheng-Hsin Hsu	Jan 2022 – Present
Introduction to Computer Networks Course , National Tsing Hua University – Hsinchu, Taiwan <i>Teaching Assistant</i>	Fall 2024

Awards

Undergraduate Project Competition – Third Place Internet of Senses Research Center (IoSRC)	2023
Undergraduate Research Fellowship National Science and Technology Council (NSTC)	2023
Academic Excellence Award National Tsing Hua University	2023

Publications

- [1] **CARLA-Twin: A Large-Scale Digital Twin Platform for Advanced Networking Research**
Zifan Zhou, **Cheng-Chia Lai**, Bo Han, Cheng-Hsin Hsu, Songqing Chen, Bin Li
Proc. of IEEE International Conference on Computer Communications for Digital Twins over NextG Wireless Networks (DTWin'25)
London, United Kindom, May 2025
- [2] **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
- [3] **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
- [4] **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

Research Interests

Digital Twin, Large Language Model, and Networking

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