**Home**

**Contact Information**

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Assistant Professor

Department of Computer Science and Information Engineering

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**Education**

1. Ph.D., Department of Computer Science and Information Engineering, National Taiwan University, Taiwan
   * Thesis: Mobile Small Cell Deployment in Wireless Communication Systems
   * Supervisor: Prof. Ai-Chun Pang
2. M.S., Institute of Network Engineering, National Chiao Tung University, Taiwan
   * Thesis: A Measurement Report Mechanism with Dynamic Timer Setting for LTE Networks
   * Supervisor: Prof. Hsi-Lu Chao
3. B.S., Dual Degree in computer science and management science
   * B.S., Department of Computer Science, National Chiao Tung University, Taiwan
   * B.S., Department of Management Science, National Chiao Tung University, Taiwan

**Honors & Awards**

* The Exploration Research Award of Pan Wen Yuan Foundation (潘文淵考察研究獎), Taiwan (2022)
* Young Scholars Research Award, National Taiwan University of Science and Technology, Taiwan (2021)
* Ph.D. Dissertation Award, Institute of Information & Computing Machinery (IICM), Taiwan (2018)
* Ph.D. Dissertation Award, Taiwan Association for Web Intelligence Consortium (WIC), Taiwan (2018)
* Honorary Member of the Phi Tau Phi Scholastic Honor Society (斐陶斐榮譽學會會員), National Taiwan University, Taiwan (2017)
* Google Taiwan Anita Borg Scholarship (2013)
* Honorary Member of the Phi Tau Phi Scholastic Honor Society (斐陶斐榮譽學會會員), National Chiao Tung University, Taiwan (2011)

**Work Experience**

* Visiting Scholar, Electrical and Computer Engineering College of Engineering, Northeastern University, USA, June 2022 - August 2022.
* Assistant Professor, Department of Computer Science and Information Engineering, National Taiwan University of Science and Technology, Taiwan, August 2021 – now.
* Assistant Professor, Department of Transportation and Communication Management Science & Institute of Telecommunications Management, National Cheng Kung University, Taiwan, August 2020 – July 2021.
* Postdoctoral Visiting Scholar, Communication Networks Institute, TU Dortmund University, Germany, October 2019 – November 2019.

**Teaching**

* Seminar(2), Spring 2023
* Introduction to Blockchain and Its Applications, Spring 2023
* Linear Algebra, Spring 2023
* Introduction to Blockchain and Its Applications, Fall 2022
* Artificial Intelligence of Things, Fall 2022
* Introduction to Next-Generation Wireless Networks, Fall 2022
* Introduction to Blockchain and Its Applications, Spring 2022
* Linear Algebra, Spring 2022
* Introduction to Next-Generation Wireless Networks, Fall 2021
* Mathematical Programming, Spring 2021
* Principle of Telecommunication Technology, Fall 2020
* Managerial Mathematics, Fall 2020

**Research Interests**

* Blockchain Networks
* 5G/6G Wireless and Mobile Networks
* Broadband Cellular Networks
* Performance Modeling and Analysis

**Publications**

**External Profiles**

* [Google Scholar](https://scholar.google.com/citations?hl=zh-TW&user=uhPY2YcAAAAJ)
* [DBLP](https://dblp.org/pid/45/8862.html)

**Journal Papers**

1. Shih-Fan Chou, Ai-Chun Pang and Ya-Ju Yu, “**Energy-Aware 3D Unmanned Aerial Vehicle Deployment for Network Throughput Optimization**,” *IEEE Transactions on Wireless Communications,* vol. 19, no. 1, pp. 563-578, Jan. 2020*.*
2. Shih-Fan Chou, Hsiu-Wen Yen and Ai-Chun Pang, “**A REM-enabled Diagnostic Framework in Cellular-based IoT Networks**,” *IEEE Internet of Things Journal*, vol. 6, no. 3, pp. 5273-5284, June 2019.
3. Meng-Hsun Tsai, Ching-Chih Chuang, Shih-Fan Chou, Ai-Chun Pang and Guan-Yu Chen, “**Enabling Efficient and Consistent Network Update in Wireless Data Centers**,” *IEEE Transactions on Network and Service Managemen*t, vol. 16, no. 2, pp. 505-520, June 2019.
4. Shih-Fan Chou, Ya-Ju Yu and Ai-Chun Pang, “**Mobile Small Cell Deployment for Service Time Maximization over Next Generation Cellular Networks**,” *IEEE Transactions on Vehicular Technology,* vol. 66, no. 6, pp. 5398-5408, June 2017.

**Conference Papers**

1. Shih-Fan Chou, Chen-Yu Yu, and Sok-Ian Sou, **“Efficient Multi-UAV-Aided Communication Service Deployment in Disaster-Resilient Wireless Networks”**, *accepted and to appear in IEEE Vehicular Networking Conference (VNC)*, 2023.
2. Shih-Fan Chou, Yi-Lin Kuo, and Yuan-Yao Shih, **“A Privacy Preserving Blockchain Based Framework for AIoT Data Exchange”**, *IEEE Wireless Communications and Networking Conference (WCNC)*, pp. 1170-1175, Apr. 2022.
3. Tien-Jan Hsieh, Ching-Chih Chuang, Shih-Fan Chou, and Ai-Chun Pang, “**Traffic-Aware Network Update in Software-Defined NFV Networks**,” *IEEE International Symposium on Wireless Personal Multimedia Communications (WPMC)*, pp. 1-6, Oct. 2020.
4. Shih-Fan Chou, Ya-Ju Yu, Ai-Chun Pang, and Tzu-An Lin, “**Energy-Aware 3D Aerial Small-Cell Deployment over Next Generation Cellular Networks**,” *IEEE Vehicular Technology Conference (VTC-Spring)*, pp. 1-5, June 2018*.*
5. Shih-Fan Chou, Hsiu-Wen Yen, Yen-Ju Chen, Ai-Chun Pang, and Ting-Wu Ho, “**Coverage Maximization with Switched Multi-Element Antennas in Next Generation Cellular Networks**,” *IEEE Vehicular Technology Conference (VTC-Fall)*, pp. 1-5, September 2017.
6. Te-Chuan Chiu, Ya-Ju Yu, Shih-Fan Chou, Yu-Ting Tsai, and Ai-Chun Pang, “**Efficient Multi-radio Selections for Device-to-Device in Wireless Cellular Networks**,” *International Computer Symposium (ICS)*, pp. 142-147, December 2016.
7. Shih-Fan Chou, Yu-Chia Hsu, and Ai-Chun Pang, “**Utility-Based Scheduling for In-Taxi Video Advertising Systems**,” *IEEE Eighth International Conference on Ubiquitous and Future Networks (ICUFN)*, pp. 617-622, July 2016.
8. Shih-Fan Chou, Te-Chuan Chiu, Ya-Ju Yu, and Ai-Chun Pang, “**Mobile Small Cell Deployment for Next Generation Cellular Networks**,” *IEEE Global Communications Conference Exhibition & Industry Forum (GLOBECOM)*, pp. 4852-4857, December 2014.
9. Yu-Chia Hsu, Chih-Sheng Wang, Shih-Fan Chou, Ai-Chun Pang, Pi-Chen Chiu, and Shu-Jye Chang, “**Design and Implementation of Taxi Advertisement System**,” *IEEE International Conference on Electrical Engineering and Computer Science (ICEECS)*, pp.1-6, November 2014.
10. Shih-Fan Chou, Hsi-Lu Chao, and Chia-Lung Liu, “**An Efficient Measurement Report Mechanism for Long Term Evolution Networks**,” *IEEE* *Personal Indoor and Mobile Radio Communications (PIMRC)*, pp. 197-201, September 2011.
11. Shih-Fan Chou, Jen-Hsi Liu, Hsi-Lu Chao, Tzu-Chi Guo, Chia-Lung Liu, and Feng-Jie Tsai, “**Performance Enhancement of Contention-Based Bandwidth Request Mechanism in IEEE 802.16 WiMAX Networks**,” *IEEE* *Personal Indoor and Mobile Radio Communications (PIMRC)*,pp. 1287-1292, September 2010.

**Patent**

1. Chia-Lung Liu, Pi-Chen Chiu, Hsi-Lu Chao and **Shih-Fan Chou**, System and Method for Measuring and Adjusting an LTE Network (with ICL/ITRI), ROC Patent No. 465130, 2014-2030.

**Professional Activities**

**Technical Program Committee**

1. IEEE Global Communications Conference (Globecom), 2020, 2021, 2022.
2. IEEE Wireless Communications & Networking Conference (WCNC), 2021, 2022.
3. EAI International Conference on Security and Privacy in Cyber-Physical Systems and Smart Vehicles (SmartSP), 2023.
4. International Conference on Advanced Computing, Systems and Applications (InCASA), 2023.

**Referee for Journals**

1. Reviewer, IEEE Internet of Things Journal (IoT)
2. Reviewer, IEEE Transactions on Vehicular Technology (TVT)
3. Reviewer, IEEE Transactions on Mobile Computing (TMC)
4. Reviewer, IEEE Transactions on Wireless Communications (TWC)
5. Reviewer, IEEE/ACM Transactions on Networking (ToN)