

Yi-Chao Chen

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EDUCATION

The University of Texas at Austin, Texas, USA
Ph.D. in Computer Science

Aug. 2009 ~ Sept. 2015

National Taiwan University, Taipei, Taiwan
M.S. in Computer Science and Information Engineering

Sept. 2004 ~ June 2006

National Taiwan University, Taipei, Taiwan
B.S. in Computer Science and Information Engineering

Sept. 2000 ~ June 2004

EXPERIENCE

Associate Professor, Shanghai Jiao Tong University, China
Research Topic: Mobile Computing, Wireless Networking, Big Data Analytics

Start from Sept. 2018

Chief Scientist, Hauoli LLC, TX, USA
Research Topic: Acoustic-based Motion Tracking

Feb. 2017 ~ Sept. 2018

Researcher, Huawei, HongKong
Research Topic: Software Defined Networks, Internet of Things

Sept. 2015 ~ Feb. 2017

Research Intern, AT&T Research Labs, NJ, USA
Mentor: Dr. Jia Wang, Dr. Nicholas Duffield.
Research Topic: Anomaly Detection, Social Networks

June 2011 ~ Aug. 2011

Research Assistant, Academia Sinica, Taipei, Taiwan
Mentor: Dr. Ling-Jyh Chen.
Research Topic: Delay-Tolerant Networking (DTN)

Jan. 2008 ~ July 2009

SELECTED PUBLICATION

Google Scholar: <https://scholar.google.com/citations?user=LdNIR90AAAAJ>

Conference Papers

- Min-Wei Hung, Chien Wen (Tina) Yuan, Nanyi Bi, Yi-Chao Chen, Wan-Chen Lee, Ming-Chyi Huang, Chuang-Wen You. *To Use or Abuse: Opportunities and Difficulties in the Use of Multi-channel Support to Reduce Technology Abuse by Adolescents*. ACM CSCW 2022.
- Haonan Wu, Yi-Chao Chen, Yuehu Jiang, Guangtao Xue, Ming Wang, Shiyu Qian, Jiadi Yu, Pai-Yen Chen. *OnionCode: Enabling Multi-priority Coding in LED-based Optical Camera Communications*. IEEE Infocom 2022.
- Hao Kong, Li Lu, Jiadi Yu, Yingying Chen, Xiangyu Xu, Feilong Tang, Yi-Chao Chen. *MultiAuth: Enable Multi-User Authentication with Single Commodity WiFi Device*. ACM MobiHoc 2021.
- Hao Pan, Yi-Chao Chen, Qi Ye, Guangtao Xue. *MagicInput: Training-free Multi-lingual Finger Input System using Data Augmentation based on MNISTs*. IPSN 2021.
- Yushi Cheng, Xiaoyu Ji, Lixu Wang, Qi Pang, Yi-Chao Chen, Wenyan Xu. *mID: Tracing Screen Photos via Moiré Patterns*. USENIX Security 2021.
- Yijie Li, Yi-Chao Chen, Xiaoyu Ji, Hao Pan, Lanqing Yang, Guangtao Xue, Jiadi Yu. *ScreenID: Enhancing QRCode Security by Fingerprinting Screens*. IEEE Infocom 2021.

- Lanqing Yang#, Yi-Chao Chen#, Hao Pan, Dian Ding, Guangtao Xue, Linghe Kong, Jiadi Yu, Minglu Li. *MagPrint: Deep Learning Based User Fingerprinting Using Electromagnetic Signals*. IEEE **Infocom** 2020.
- Xiangyu Xu, Jiadi Yu, Yingying Chen, Qin Hua, Yanmin Zhu, Yi-Chao Chen, Minglu Li. *TouchPass: Towards Behavior-irrelevant on-touch User Authentication on Smartphones Leveraging Vibrations*. ACM **MobiCom** 2020.
- Hao Pan, Lanqing Yang, Yi-Chao Chen*, Guangtao Xue, Chuang-Wen You, Xiaoyu Ji. *mQRCode: Secure QR Code Using Nonlinearity of Spatial Frequency in Light*. ACM **MobiCom** 2019.
- Wenguang Mao, Mei Wang, Wei Sun, Lili Qiu, Swadhin Pradhan, Yi-Chao Chen. *RNN-based Room Scale Hand Motion Tracking*. ACM **MobiCom** 2019.
- Yushi Cheng, Xiaoyu Ji, Wenyuan Xu, Yi-Chao Chen. *DeMiCPU: Device Fingerprinting with Magnetic Signals Radiated by CPU*. ACM **CCS** 2019.
- Hao Pan, Yi-Chao Chen*, Guangtao Xue, Xiaoyu Ji. *MagneComm: Magnetometer-based Near-Field Communication*. ACM **MobiCom** 2017.
- Qun Huang, Xin Jin, Patrick P. C. Lee, Runhui Li, Lu Tang, Yi-Chao Chen, Gong Zhang. *SketchVisor: Robust Network Measurement for Software Packet Processing*. ACM **SigComm** 2017.
- Sangki Yun#, Yi-Chao Chen#, Huihuang Zheng, Lili Qiu, and Wenguang Mao. *Strata: Fine-Grained Device-Free Tracking Using Acoustic Signals*. ACM **MobiSys** 2017.
- Apurv Bhartia, Yi-Chao Chen, George P. Nychis, Lili Qiu. *Embracing Distributed MIMO in Wireless Mesh Networks*. IEEE **ICNP** 2015.
- Sangki Yun#, Yi-Chao Chen#, Lili Qiu. *Turning a Mobile Device into a Mouse in the Air*. ACM **MobiSys** 2015.
- Yi-Chao Chen, Lili Qiu, Yin Zhang, Zhenxian Hu, Guangtao Xue. *Robust Network Compressive Sensing*. ACM **MobiCom** 2014.
- Yi-Chao Chen, Yong Liao, Mario Baldi, Sung-Ju Lee, Lili Qiu. *OS Fingerprinting and Tethering Detection in Mobile Networks*. ACM **IMC** 2014.
- Apurv Bhartia#, Yi-Chao Chen#, Swati Rallapalli, and Lili Qiu. *Harnessing Frequency Diversity in Multicarrier Wireless Networks*. ACM **MobiCom** 2011.
- Upendra Shevade, Yi-Chao Chen, Lili Qiu, Yin Zhang, Vinoth Chandar, Mi Kyung Han, Han Hee Song, Yousuk Seung. *Enabling high-bandwidth vehicular content distribution*. ACM **CoNEXT** 2010.
- Swati Rallapalli, Lili Qiu, Yin Zhang, and Yi-Chao Chen. *Exploiting Temporal Stability and Low Rank Structure for Mobile Network Localization*. ACM **MobiCom** 2010.

Journal Articles

- Dian Ding, Lanqing Yang, Yi-Chao Chen, Guangtao Xue. *Handwriting Recognition System Leveraging Vibration Signal on Smartphones*. IEEE **TMC** 2022.
- Dian Ding, Lanqing Yang, Yi-Chao Chen, Guangtao Xue. *Leakage or Identification: Behavior-irrelevant User Identification Leveraging Leakage Current on Laptops*. ACM **IMWUT** 2021.
- Guangtao Xue, Hao Pan*, Yi-Chao Chen*, Xiaoyu Ji, Jiadi Yu. *MagneComm+: Near-Field Electromagnetic Induction Communication with Magnetometer*. IEEE **TMC** 2021.
- Xiaoyu Ji, Yushi Cheng, Wenyuan Xu, Yuehan Chi, Hao Pan, Zhuangdi Zhu, Chuang-Wen You, Yi-Chao Chen, Lili Qiu. *No Seeing is Also Believing: Electromagnetic-emission-based Application Guessing Attacks via Smartphones*. IEEE **TMC** 2021.
- Yongzhao Zhang, Wei-Hsiang Huang, Chih-Yun Yang, Wen-Ping Wang, Yi-Chao Chen*, Chuang-Wen You, Da-Yuan Huang, Guangtao Xue, Jiadi Yu. *Endophasia: Utilizing Acoustic-Based Imaging for Dropping Contact-Free Silent Speech Commands*. ACM **IMWUT** 2020.
- Liang Zhu, Mohamed Farhat, Yi-Chao Chen, Khaled N Salama, Pai-Yen Chen. *A Compact, Passive Frequency-Hopping Harmonic Sensor Based on a Microfluidic Reconfigurable Dual-Band Antenna*. IEEE **Sensors** 2020.

RESEARCH PROJECT

- **NSFC Key Program**, Research on Key Technologies for Optimal Resource Allocation in Edge Intelligence Architecture, 2019-2022. **Co-PI**.
- **NSF**, Champion Air Tracker (CAT), SBIR Phase II: EW 1738525, 2017-2019, **PI**.
- **NSF**, Champion Air Tracker (CAT), SBIR Phase I: EW 1621833, 2016-2017, **PI**.
- **NSF**, Extreme Densification of Wireless Networks, CNS-1343383, 2014-2017.
- **NSF**, Compressive Network Analytics, CCF-1117009, 2011-2014.
- **NSF**, From Sensing To Sharing Across Networks In White Space, CNS-1017549, 2010-2014.
- **NSF**, Multi-Resolution Analysis of Network Matrices, CNS-0916309, 2009-2013.

TEACHING

Mobile Sensing and Computing , <i>Shanghai Jiao Tong University</i>	Fall 2018 ~ Now
Computer Networks , <i>Shanghai Jiao Tong University</i>	Fall 2018 ~ Now
The Technologies and Trend of IoT , <i>Shanghai Jiao Tong University</i>	Spring 2019 ~ Now
CS 429: Computer Organization and Architecture , <i>University of Texas at Austin</i> Teaching Assistant. Lecturer: Dr. Robert F. Dickerson	Spring 2015
CS 329E: Elements of Mobile Computing , <i>University of Texas at Austin</i> Teaching Assistant. Lecturer: Dr. Robert F. Dickerson	Fall 2014
CS 361C: Information Assurance and Security , <i>University of Texas at Austin</i> Teaching Assistant. Lecturer: Dr. Bill Young	Spring 2014
CS 337: Theory in Programming Practice , <i>University of Texas at Austin</i> Teaching Assistant. Lecturer: Dr. Jayadev Misra	Spring 2013
CS 337: Theory in Programming Practice , <i>University of Texas at Austin</i> Teaching Assistant. Lecturer: Dr. Mary Eberlein	Spring 2012
CS 395T: Learning Theory , <i>University of Texas at Austin</i> Teaching Assistant. Lecturer: Dr. Adam Klivans and Dr. Pradeep Ravikumar	Fall 2011
CS 307: Foundations of Computer Science , <i>University of Texas at Austin</i> Teaching Assistant. Lecturer: Dr. Mike Scott	Fall 2010
Database Systems / Practicum in Database Systems , <i>National Taiwan University</i> Teaching Assistant. Lecturer: Dr. Hao-hua Chu	Fall 2005

HONOR AND AWARD

2021	World Artificial Intelligence Conference 2021, Honorary Mention.
2019-2020	Shanghai Jiao Tong University MEM Program, Outstanding Teaching Award.
2020	IEEE ComSoc Student Competition, Honorary Mention.
2019	The 8th "Ecology-Value" Jinbo Award, Start-up Leader Award.
2019	The Fifth Youth Innovation Competition, 2 nd Prize.
2019	SJTU Double-First Class Award.
2018	CMU Summit on US-China Innovation and Entrepreneurship, Finalists.
2017	NSF SBIR Phase II Award
2017	7th Annual North America Chinese Startup Contest (UCAHP) 1st Prize.
2014	ACM Travel Grant for MobiCom 2014, IMC 2014

2011-2014	UT CS travel grant for MobiCom 2011, Infocom 2013, MobiCom 2014, IMC 2014, and etc.
2011	Travel grant for S3 PhD forum organized with ACM MobiCom.
2004	Scholarships of Taichung Special Municipality Congress Union
2000-2003	Scholarships of Tai-Power Union