Xinlei Chen

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RESEARCH INTERESTS

Cyber Physical System, Artificial Internet of Things, Multi-agent System, Ubiquitous Computing, Mobile Computing, Smart Sensing, Wireless Communication and Network

EDUCATION

Carnegie Mellon University, USA

Doctor of Philosophy in Electrical and Computer Engineering — May 2018

- Advisor: Professor Pei Zhang
- Thesis Title: *Spatiotemporal Relationship Aided Field Estimation & Route Planning for Large Scale Mobile Cyber Physical Systems*

Tsinghua University, China

Master of Science in Electronic Engineering — Jun 2012

- Advisor: Professor Depeng Jin
- Excellent Master Thesis Award

Tsinghua University, China

Bachelor of Engineering in Electronic Engineering — Jun 2009

MAJOR EXPERIENCE

Associate Professor — Jul 2024 – present
Institute of Data and Information
Shenzhen International Graduate School
Tsinghua University, China

Assistant Professor — Feb 2023 – Jun 2024
Institute of Data and Information
Shenzhen International Graduate School
Tsinghua University, China

Assitant Professor — Jun 2021 – Feb 2023
Tsinghua-Berkeley Shenzhen Institute
Shenzhen International Graduate School
Tsinghua University, China

Visiting Scholar — Apr 2021 – May 2021
Data Science and Information Technology Research Center
Tsinghua-Berkeley Shenzhen Institute
Tsinghua University, China

Visiting Scholar — Sep 2020 – Apr 2021
Global Innovation Exchange Institute
Tsinghua University, China

Postdoctoral Research Associate — Jun 2018 – May 2020
Department of Electrical and Computer Engineering
Carnegie Mellon University, USA
Primary supervisor: Professor Pei Zhang

Visiting Scholar — May 2019 – Jul 2019
Data Science and Information Technology Research Center
Tsinghua-Berkeley Shenzhen Institute
Tsinghua University, China

ACADEMIC HONORS & AWARDS

Best Paper Award — 2023
ACM UbiComp CPD Workshop

Best Presentation Award 2023
ACM UbiComp CPD Workshop

National Overseas Early Career Award 2022
National Science Foundation of China

Best Paper Award 2022
ACM UbiComp CPD Workshop

Best Poster Award 2017
ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN)

Best Demo Award 2016
ACM Conference on Embedded Networked Sensor Systems (SenSys)

Best Poster Runner Up Award 2016
ACM Conference on Embedded Networked Sensor Systems (SenSys)

Dean Fellowship 2013
Carnegie Mellon University

Excellent Master Thesis Award 2012
Tsinghua University

TEACHING EXPERIENCES

Tsinghua University, China

Instructor Fall 2023
- Course Topic: Introduction to Artificial Intelligence of Things (AIoT)
- Give lectures to student, design course project, homework and exams.

Instructor Spring 2022, 2023, 2024
- Course Topic: Data Visualization
- Give lectures to student, design course project, homework and exams.

Instructor Fall 2022
- Course Topic: Data Mining: Theory & Algorithms
- Give lectures to student, design course project, homework and exams.

Carnegie Mellon University, USA

Course Design Summer 2020
- Course Topic: Data Analytics for Physical Systems
- Collaborate with Prof. Hae Young Noh from Stanford University, Prof. Susu Xu from Stony Brook University
- Propose lecture topics, collect and prepare sensing data for course projects

Teaching Assistant Spring 2019, 2018, 2017
- Course Topic: Mobile and Pervasive Computing
- Give lectures to student, propose course project ideas, lead project design for 6 teams, grade presentations, organize weekly discussions

Teaching Assistant Spring 2016, 2015
- Course Topic: Mobile and Pervasive Computing
- Propose course project requirements, recruit students for 4 course projects, grade presentations, organize weekly discussions

Teaching Assistant Fall 2014
- Course Topic: Mobile Hardware for Software Engineers
- Organize weekly discussions, grade presentations, prepare hardware for course projects
- Help patent application for one course project

PROFESSIONAL ACTIVITIES

The 11th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation
Technical Program Committee Member 2024

The 25th International Workshop on Mobile Computing Systems and Applications
Technical Program Committee Member 2024

The 19th International Conference on Mobility, Sensing and Networking
Technical Program Committee Member 2023

Sensors (Special Issue: New Trends in Artificial Intelligence of Things)
Leading Guest Editor 2023

Applied Sciences (Special Issue: Information Fusion and Its Applications for Smart Sensing)
Leading Guest Editor 2023

The 4th TBSI Workshop on Learning Theory
General Chair 2022

The 27th IEEE International Conference on Parallel and Distributed Systems
Technical Program Committee Member 2021

The 23th ACM International Joint Conference on Pervasive and Ubiquitous Computing
TPC Co-chair of CPD Workshop 2021

Cyber-Physical Systems and Internet-of-Things Week
Competition Co-chair 2020

The 22nd ACM International Joint Conference on Pervasive and Ubiquitous Computing
General Co-chair of CPD Workshop 2020

The 29th International Joint Conference on Artificial Intelligence
Technical Program Committee Member 2020

The 21st ACM International Joint Conference on Pervasive and Ubiquitous Computing
General Co-chair of CPD Workshop 2019

The 28th International Joint Conference on Artificial Intelligence
Technical Program Committee Member 2019

The 33rd AAAI Conference on Artificial Intelligence
Technical Program Committee Member 2019

The 20th ACM International Joint Conference on Pervasive and Ubiquitous Computing
General Co-chair of CPD Workshop 2018

The 16th ACM Conference on Embedded Networked Sensor Systems
Web Chair 2018

The 5th ACM International Conference on Systems for Energy-Efficient Built Environments
Web Chair 2018

PUBLICATION LIST

JOURNAL (#EQUAL CONTRIBUTION, *CORRESPONDING AUTHOR)

Zhao, AP., Li, S., Gu, C., Yan, X., Hu JH., Wang, Z., Xie, D., Cao, Z., Chen, X., Wu, C., Luo, T., Wang, Z., Hernando-Gil. Cyber Vulnerabilities of Energy Systems[J]. IEEE Journal of Emerging and Selected Topics in Industrial Electronics.

Chen, X., Wang, H., Cheng, Y., Fu, H., Liu, Y., Dang, F., Chen, X.*, 2024. DDL: Empowering Delivery Drones with Large-scale Urban Sensing Capability. IEEE Journal of Selected Topics in Signal Processing.

Chen, X., Xiao, Z., Cheng, Y., Hsia, C., Wang, H., Xu, J., Chen, X.*, 2024. SOScheduler: Toward Proactive and Adaptive Wildfire Suppression via Multi-UAV Collaborative Scheduling. IEEE Internet of Things Journal.

Zhao, B., Wang, X., Zhang, T., Shi, R., Xu, F., Man, F., Chen, X.*, 2024. Estimating and modeling spontaneous mobility changes during the COVID-19 pandemic without stay-at-home orders. Humanities and Social Sciences Communications, 11(1), pp. 1-15.

Xu, Y., Dang, F., Liu, K., Zhu, Z., Chen, X., Wang, X., Zhao, H., 2024. BEANet: An Energy-efficient BLE Solution for High-capacity Equipment Area Network. ACM Transactions on Sensor Networks, 20(3), pp. 1-23.

Zhang, X., Zhang, H., Tang, H., Liang, L., Cheng, L., Chen, X., Zhang, X. P., 2024. A Scalable Mean-Field MARL Framework for Multi-Objective V2X Resource Allocation. IEEE Transactions on Intelligent Vehicles.

Dang, F., Xu, Y., Xu, R., Chen, X., Liu, Y. ,2024. : A Universal Timeline-Synchronizing Solution for Live Streaming. IEEE/ACM Transactions on Networking.

Jian, Z., Liu, Z., Shao, H., Wang, X.*, Chen, X.* and Liang, B., 2023. Path Generation for Wheeled Robots Autonomous Navigation on Vegetated Terrain. IEEE Robotics and Automation Letters. (Accept)

Zhao, Z., Mao, Y., Liu, Y., Song, L., Ouyang, Y., Chen, X. and Ding, W., 2023. Towards efficient communications in federated learning: A contemporary survey. Journal of the Franklin Institute.

Lin, X., Wang, S., Deng, J., Fu, Y., Bai, X., Chen, X., Qu, X. and Tang, W., 2023. Image manipulation detection by multiple tampering traces and edge artifact enhancement. Pattern Recognition, 133, p.109026.

Zhang, S., Ang, K.K., Zheng, D., Hui, Q., Chen, X., Li, Y., Tang, N., Chew, E., Lim, R.Y. and Guan, C., 2022. Learning EEG representations with weighted convolutional siamese network: A large multi-session post-stroke rehabilitation study. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 30, pp.2824-2833.

Liu, X., Shi, R., Hui, Q., Xu, S., Wang, S., Na, R., Sun, Y., Ding, W., Zheng, D.* and Chen, X.*, 2022. TCACNet: Temporal and channel attention convolutional network for motor imagery classification of EEG-based BCI. Information Processing & Management, 59(5), p.103001.

Sun, Y., Ding, W., Liu, X., Zheng, D., Chen, X., Hui, Q., Na, R., Wang, S. and Fan, S., 2022. Cross-subject fusion based on time-weighting canonical correlation analysis in SSVEP-BCIs. Measurement, 199, p.111524.

Jin, X., Li, L., Dang, F., Chen, X. and Liu, Y., 2022. A survey on edge computing for wearable technology. Digital Signal Processing, 125, p.103146.

Song, Z., Yin, J., Wang, Z., Lu, C., Yang, Z., Zhao, Z., Lin, Z., Wang, J., Wu, C., Cheng, J. and Dai, Y., Zi, Y., Huang, S., Chen, X., Song, J., Li, G., Ding, W., 2022. A flexible triboelectric tactile sensor for simultaneous material and texture recognition. Nano Energy, 93, p.106798.

Na, R., Zheng, D., Sun, Y., Han, M., Wang, S., Zhang, S., Hui, Q., Chen, X.*, Zhang, J. and Hu, C.*, 2021. A wearable low-power collaborative sensing system for high-quality SSVEP-BCI signal acquisition. IEEE Internet of Things Journal, 9(10), pp.7273-7285.

Wang, Z., Hu, C., Zheng, D.* and Chen, X.*, 2021. Ultralow-power sensing framework for internet of things: A smart gas meter as a case. IEEE Internet of Things Journal, 9(10), pp.7533-7544.

Na, R., Hu, C., Sun, Y., Wang, S., Zhang, S., Han, M., Yin, W., Zhang, J., Chen, X. and Zheng, D., 2021. An embedded lightweight SSVEP-BCI electric wheelchair with hybrid stimulator. Digital Signal Processing, 116, p.103101.

Zhao, P., Cao, Z., Zeng, D.D., Gu, C., Wang, Z., Xiang, Y., Qadrdan, M., Chen, X., Yan, X. and Li, S., 2021. Cyber-resilient multi-energy management for complex systems. IEEE Transactions on Industrial Informatics, 18(3), pp.2144-2159.

Zhao, P., Gu, C., Cao, Z., Xie, D., Teng, F., Li, J., Chen, X., Wu, C., Yu, D., Xu, X. and Li, S., 2020. A cyber-secured operation for water-energy nexus. IEEE Transactions on Power Systems, 36(4), pp.3105-3117.

Zhao, P., Gu, C., Cao, Z., Shen, Y., Teng, F., Chen, X., Wu, C., Huo, D., Xu, X. and Li, S., 2020. Data-driven multi-energy investment and management under earthquakes. IEEE Transactions on Industrial Informatics, 17(10), pp.6939-6950.

Zhao, P., Gu, C., Cao, Z., Ai, Q., Xiang, Y., Ding, T., Lu, X., Chen, X. and Li, S., 2020. Water-energy nexus management for power systems. IEEE Transactions on Power Systems, 36(3), pp.2542-2554.

Chen, X.#, Xu, S.#, Liu, X., Xu, X., Noh, H.Y., Zhang, L. and Zhang, P., 2020. Adaptive Hybrid Model-enabled Sensing System (HMSS) for Mobile Fine-Grained Air Pollution Estimation. IEEE Transactions on Mobile Computing, 21(6), pp.1927-1944.

Chen, X.#, Xu, S.#, Han, J., Fu, H., Pi, X., Joe-Wong, C., Li, Y., Zhang, L., Noh, H.Y. and Zhang, P., 2020. PAS: Prediction-Based Actuation System for City-Scale Ridesharing Vehicular Mobile Crowdsensing. *IEEE Internet of Things Journal*, 7(5), pp.3719-3734.

Chen, X., Ruiz, C., Zeng, S., Gao, L., Purohit, A., Carpin, S. and Zhang, P., 2020. H-DrunkWalk: Collaborative and Adaptive Navigation for Heterogeneous MAV Swarm. *ACM Transactions on Sensor Networks (TOSN)*, 16(2), pp.1-27.

Zhao, P., Gu, C., Cao, Z., Hu, Z., Zhang, X., Chen, X., Hernando-Gil, I. and Ding, Y., 2020. Economic-effective multi-energy management considering voltage regulation networked with energy hubs. IEEE Transactions on Power Systems, 36(3), pp.2503-2515.

Xu, S.#, Chen, X.#, Pi, X., Joe-Wong, C., Zhang, P. and Noh, H.Y., 2019. iLOCuS: Incentivizing vehicle mobility to optimize sensing distribution in crowd sensing. *IEEE Transactions on Mobile Computing*, 19(8), pp. 1831-1847.

Chen, X., Zhao, Y. and Li, Y., 2019. Qoe-aware wireless video communications for emotion-aware intelligent systems: A multi-layered collaboration approach. *Information Fusion*, 47, pp.1-9.

Niu, Y., Ding, W., Wu, H., Li, Y., Chen, X., Ai, B. and Zhong, Z., 2019. Relay-assisted and QoS aware scheduling to overcome blockage in mmWave backhaul networks. *IEEE Transactions on Vehicular Technology*, 68(2), pp.1733-1744.

Xu, S., Chen, X., Pi, X., Joe-Wong, C., Zhang, P. and Noh, H.Y., 2019, March. Incentivizing vehicular crowdsensing system for large scale smart city applications. In *Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2019* (Vol. 10970, p. 109701C). International Society for Optics and Photonics.

Xiao, X., Hou, X., Chen, X.,, Liu, C. and Li, Y., 2019. Quantitative analysis for capabilities of vehicular fog computing. Information Sciences, 501, pp.742-760.

Chen, X., Zhao, Y., Li, Y., Chen, X., Ge, N. and Chen, S., 2018. Social trust aided D2D communications: Performance bound and implementation mechanism. *IEEE Journal on Selected Areas in Communications*, 36(7), pp.1593-1608.

Liu, Y.#, Chen, X.#, Niu, Y., Ai, B., Li, Y. and Jin, D., 2018. Mobility-aware transmission scheduling scheme for millimeter-wave cells. *IEEE Transactions on Wireless Communications*, 17(9), pp.5991-6004.

Chen, X., Zhu, Z., Chen, M. and Li, Y., 2018. Large-scale mobile fitness app usage analysis for smart health. *IEEE Communications Magazine*, 56(4), pp.46-52.

Feng, J., Chen, X., Gao, R., Zeng, M. and Li, Y., 2018. Deeptp: An end-to-end neural network for mobile cellular traffic prediction. *IEEE Network*, 32(6), pp.108-115.

Ahmed, M., Shi, H., Chen, X., Li, Y., Waqas, M. and Jin, D., 2018. Socially aware secrecy-ensured resource allocation in D2D underlay communication: An overlapping coalitional game scheme. *IEEE Transactions on Wireless Communications*, 17(6), pp.4118-4133.

Xu, D., Li, Y., Chen, X., Li, J., Hui, P., Chen, S. and Crowcroft, J., 2018. A survey of opportunistic offloading. *IEEE Communications Surveys & Tutorials*, 20(3), pp.2198-2236.

Chen, X., Purohit, A., Pan, S., Ruiz, C., Han, J., Sun, Z., Mokaya, F., Tague, P. and Zhang, P., 2017. Design experiences in minimalistic flying sensor node platform through sensorfly. *ACM Transactions on Sensor Networks (TOSN)*, 13(4), pp.1-37.

Niu, Y., Liu, Y., Li, Y., Chen, X., Zhong, Z. and Han, Z., 2017. Device-to-device communications enabled energy efficient multicast scheduling in mmWave small cells. *IEEE Transactions on Communications*, 66(3), pp.1093-1109.

Gao, C., Zhang, H., Chen, X., Li, Y., Jin, D. and Chen, S., 2017. Impact of selfishness in device-to-device communication underlying cellular networks. *IEEE Transactions on Vehicular Technology*, 66(10), pp.9338-9349.

Lu, X., Chen, X., Li, Y., Jin, D., Zeng, L. and Rashvand, H.F., 2013. ZebraBAN: A heterogeneous high-performance energy efficient wireless body sensor network. *IET Wireless Sensor Systems*, 3(4), pp.247-254.

Lu, X., Chen, X., Sun, G., Jin, D., Su, L. and Zeng, L., 2011. Ultra-wide band wireless body area network channel measurements and modeling. *Journal of Tsinghua University Science and Technology*, 51(11), pp.1621-1626.

CONFERENCE (#EQUAL CONTRIBUTION, *CORRESPONDING AUTHOR)

Zhao, C., Ruan, C., Xu, J., Wang, H., Wang, S., Li, J., Zha, J., Yang, Z., Liu, Y., Zhang, XP., Chen, X.*. Foes or Friends: Embracing Ground Effect for Edge Detection on Lightweight Drones. In International Conference On Mobile Computing And Networking (ACM MobiCom '24).

Li, J., Wang, H., Chen, X.*. Physics-informed Neural ODE for Post-disaster Mobility Recovery[C]//Proceedings of the 30th ACM SIGKDD Conference on Knowledge Discovery and Data Mining.

Li, Z., Man, F., Chen, X., Xu, S., Dang, F., Zhang, X. P., Chen, X.* ,2024, May. QUEST: Quality-informed Multi-agent Dispatching System for Optimal Mobile Crowdsensing. In IEEE INFOCOM 2024-IEEE Conference on Computer Communications (pp. 1811-1820).

Wang, H., Xu, J., Zhao, C., Lu, Z., Cheng, Y., Chen, X., Zhang, X., Liu, Y., and Chen, X.*, 2024, May. TransformLoc: Transforming MAVs into Mobile Localization Infrastructures in Heterogeneous Swarms. In IEEE INFOCOM 2024-IEEE Conference on Computer Communications. IEEE. (pp. 1101-1110).

Zheng, Y., Dang, F., Yang, Z., Jiang, J., Wang, X., Wang, L., Chen, X., Liu, Y. ,2024, May. BlueKey: Exploiting Bluetooth Low Energy for Enhanced Physical-Layer Key Generation. In IEEE INFOCOM 2024-IEEE Conference on Computer Communications (pp. 711-720).

Liu, Y., Wang, H., Man, F., Xu, J., Dang, F., Liu, Y., Chen, X.* , 2024, June. MobiAir: Unleashing Sensor Mobility for City-scale and Fine-grained Air-Quality Monitoring with AirBERT. In Proceedings of the 22nd Annual International Conference on Mobile Systems, Applications and Services (pp. 223-236).

Wang, H., Liu, Y., Zhao, C., He, J., Ding, W. and Chen, X.*, 2023, October. CaliFormer: Leveraging Unlabeled Measurements to Calibrate Sensors with Self-supervised Learning. In Adjunct Proceedings of the 2023 ACM International Joint Conference on Pervasive and Ubiquitous Computing & the 2023 ACM International Symposium on Wearable Computing (pp. 743-748).

Luo, J., Hu, Y., Yu, C., Hong, C., Zhang, X.P. and Chen, X.*, 2023, October. Field Reconstruction-Based Non-Rendezvous Calibration for Low Cost Mobile Sensors. In Adjunct Proceedings of the 2023 ACM International Joint Conference on Pervasive and Ubiquitous Computing & the 2023 ACM International Symposium on Wearable Computing (pp. 688-693).

Zhao, C., Wang, H., Li, J., Man, F., Mu, S., Ding, W., Zhang, X.P. and Chen, X.*, 2023, October. SmoothLander: A Quadrotor Landing Control System with Smooth Trajectory Guarantee Based on Reinforcement Learning. In Adjunct Proceedings of the 2023 ACM International Joint Conference on Pervasive and Ubiquitous Computing & the 2023 ACM International Symposium on Wearable Computing (pp. 682-687).

Ren, J., Xu, Y., Li, Z., Hong, C., Zhang, X.P. and Chen, X.*, 2023, October. Scheduling UAV Swarm with Attention-based Graph Reinforcement Learning for Ground-to-air Heterogeneous Data Communication. In Adjunct Proceedings of the 2023 ACM International Joint Conference on Pervasive and Ubiquitous Computing & the 2023 ACM International Symposium on Wearable Computing (pp. 670-675).

Tang, H., Zhang, H., Shi, Z., Chen, X., Ding, W. and Zhang, X.P., 2023, October. Autonomous Swarm Robot Coordination via Mean-Field Control Embedding Multi-Agent Reinforcement Learning. In 2023 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) (pp. 8820-8826). IEEE.

Li, J., Ge, C., Tao, J., Wang, J., Xu, X., Chen, X., Gui, W., Liang, X. and Ding, W., 2023, October. SolareSkin: Self-powered Visible Light Sensing Through a Solar Cell E-Skin. In Adjunct Proceedings of the 2023 ACM International Joint Conference on Pervasive and Ubiquitous Computing & the 2023 ACM International Symposium on Wearable Computing (pp. 664-669).

Sun, Y., Liu, Y., Wang, Z., Qu, X., Zheng, D.* and Chen, X.*, 2022, November. C-RIDGE: Indoor CO2 Data Collection System for Large Venues Based on prior Knowledge. In Proceedings of the 20th ACM Conference on Embedded Networked Sensor Systems (pp. 1077-1082).

Wang, H., Chen, X., Cheng, Y., Wu, C., Dang, F. and Chen, X.*, 2022, November. H-SwarmLoc: Efficient Scheduling for Localization of Heterogeneous MAV Swarm with Deep Reinforcement Learning. In Proceedings of the 20th ACM Conference on Embedded Networked Sensor Systems (pp. 1148-1154).

Yuan, S., Sun, Y., Wang, S., Chen, X., Ding, Y., Zheng, D. and Fan, S., 2022, November. Non-Acoustic Speech Sensing System Based on Flexible Piezoelectric. In Proceedings of the 20th ACM Conference on Embedded Networked Sensor Systems (pp. 1055-1060).

Hui, Q., Liu, X., Li, Y., Xu, S., Zhang, S., Sun, Y., Wang, S., Chen, X. and Zheng, D., 2022, November. Riemannian Geometric Instance Filtering for Transfer Learning in Brain-Computer Interfaces. In Proceedings of the 20th ACM Conference on Embedded Networked Sensor Systems (pp. 1162-1167).

Jin, X., Dang, F., Fu, Q.A., Li, L., Peng, G., Chen, X., Liu, K. and Liu, Y., 2022, October. StreamingTag: a scalable piracy tracking solution for mobile streaming services. In Proceedings of the 28th Annual International Conference on Mobile Computing And Networking (pp. 596-608).

Azam, M., Chen, X. and Xu, S., 2022, September. Incentivizing Mobility of Multi-agent Vehicle Swarms with Deep Reinforcement Learning for Sensing Coverage Optimization. In Adjunct Proceedings of the 2022 ACM International Joint Conference on Pervasive and Ubiquitous Computing and the 2022 ACM International Symposium on Wearable Computers (pp. 397-402).

Li, Z., Man, F., Chen, X., Zhao, B., Wu, C. and Chen, X.*, 2022, September. TRACT: Towards Large-Scale Crowdsensing With High-Efficiency Swarm Path Planning. In Adjunct Proceedings of the 2022 ACM International Joint Conference on Pervasive and Ubiquitous Computing and the 2022 ACM International Symposium on Wearable Computers (pp. 409-414).

Chen, X., Wang, H., Li, Z., Ding, W., Dang, F., Wu, C. and Chen, X.*, 2022, September. DeliverSense: Efficient delivery drone scheduling for crowdsensing with deep reinforcement learning. In Adjunct Proceedings of the 2022 ACM International Joint Conference on Pervasive and Ubiquitous Computing and the 2022 ACM International Symposium on Wearable Computers (pp. 403-408).

Xu, Y., Dang, F., Xu, R., Chen, X. and Liu, Y., 2022, May. LSync: A Universal Event-synchronizing Solution for Live Streaming. In IEEE INFOCOM 2022-IEEE Conference on Computer Communications (pp. 2188-2197). IEEE.

Liu, X., Hui, Q., Xu, S., Wang, S., Na, R., Sun, Y., Chen, X. and Zheng, D., 2021, September. Tacnet: task-aware electroencephalogram classification for brain-computer interface through a novel temporal attention convolutional network. In Adjunct Proceedings of the 2021 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2021 ACM International Symposium on Wearable Computers (pp. 660-665).

Wu, Z.#, Zhang, X.#, Xu, S.#, Chen, X.*, Zhang, P., Noh, H.Y. and Joe-Wong, C., 2020, September. A generative simulation platform for multi-agent systems with incentives. In *Adjunct Proceedings of the 2020 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2020 ACM International Symposium on Wearable Computers* (pp. 580-587).

Zhou, T., Zhang, Y., Chen, X., Mosalam, K.M., Noh, H.Y., Zhang, P. and Zhang, L., 2019, September. P-Loc: a device-free indoor localization system utilizing building power-line network. In *Adjunct Proceedings of the 2019 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2019 ACM International Symposium on Wearable Computers* (pp. 611-615).

Lu, Y., Chen, X., Wang, B.J., Wang, T.Y., Zhang, P. and Li, Y., 2019, September. Recycling price prediction of renewable resources. In *Adjunct Proceedings of the 2019 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2019 ACM International Symposium on Wearable Computers* (pp. 571-576).

Chen, X., Wang, Y., He, J., Pan, S., Li, Y. and Zhang, P., 2019. Cap: Context-aware app usage prediction with heterogeneous graph embedding. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 3(1), pp.1-25.

Chen, X., Xu, S., Fu, H., Joe-Wong, C., Zhang, L., Noh, H.Y. and Zhang, P., 2019, April. ASC: Actuation system for city-wide crowdsensing with ride-sharing vehicular platform. In *Proceedings of the Fourth Workshop on International Science of Smart City Operations and Platforms Engineering* (pp. 19-24).

Chen, X., Xu, X., Liu, X., Pan, S., He, J., Noh, H.Y., Zhang, L. and Zhang, P., 2018, October. Pga: Physics guided and adaptive approach for mobile fine-grained air pollution estimation. In *Proceedings of the 2018 ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers* (pp. 1321-1330).

Wu, J., Zeng, M., Chen, X., Li, Y. and Jin, D., 2018, October. Characterizing and predicting individual traffic usage of mobile application in cellular network. In *Proceedings of the 2018 ACM International Joint Conference and 2018 International Symposium on Pervasive and Ubiquitous Computing and Wearable Computers* (pp. 852-861).

Ruiz, C., Pan, S., Bannis, A., Chen, X., Joe-Wong, C., Noh, H.Y. and Zhang, P., 2018. IDrone: Robust drone identification through motion actuation feedback. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 2(2), pp.1-22.

Huang, X., Li, Y., Wang, Y., Chen, X., Xiao, Y. and Zhang, L., 2018. CTS: A cellular-based trajectory tracking system with GPS-level accuracy. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 1(4), pp.1-29.

Yu, T.#, Pan, S.#, Xu, S., Chen, X., Mirshekari, M., Fagert, J., Noh, H.Y., Zhang, P. and Mengshoel, O.J., 2018, January. ILPC: Iterative Learning Using Physical Constraints in Real-World Sensing Data. In *AAAI Workshops* (pp. 202-208).

Chen, X., Purohit, A., Dominguez, C.R., Carpin, S. and Zhang, P., 2015, November. Drunkwalk: Collaborative and adaptive planning for navigation of micro-aerial sensor swarms. In *Proceedings of the 13th ACM Conference on Embedded Networked Sensor Systems (pp. 295-308)*.

Chen, X., Lu, X., Liu, Z., Fang, S., Jin, D. and Zeng, L., 2011, December. A heterogeneous high speed wireless body sensor network based on sc-uwb and zigbee. In *2011 IEEE Global Telecommunications Conference-GLOBECOM 2011* (pp. 1-5).

Chen, X., Lu, X., Jin, D., Su, L. and Zeng, L., 2011, June. Channel modeling of UWB-based wireless body area networks. In *2011 IEEE international conference on communications (ICC)* (pp. 1-5).

Lu, X., Chen, X., Sun, G., Jin, D., Ge, N. and Zeng, L., 2011, July. UWB-based Wireless Body Area Networks channel modeling and performance evaluation. In *2011 7th International Wireless Communications and Mobile Computing Conference* (pp. 1929-1934).

POSTER AND DEMO (#EQUAL CONTRIBUTION, CORRESPONDING AUTHOR)

Li, H., Zhuo, Y., Wang, C., Wang, H., Chen, X.* ,2024, May. Generative Modeling of Post-Disaster POI Visits Recovery. In 2024 23rd ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN) (pp. 299-300).

Zhuo, Y., Li, H., Wang, C., Chen, X.*, 2024, May. Adaptive Chirps Domain Window Order of MM-Wave Radar for UAV Motion Capture. In 2024 23rd ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN) (pp. 291-292).

Xu, Y., Jian, Z., Zha, J., Chen, X.,2024, May. Emergency Networking Using UAVs: A Reinforcement Learning Approach with Large Language Model. In 2024 23rd ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN) (pp. 281-282).

Xiao, Z., Luo, J., Chen, X., Cheng, Y., Wang, H., Chen, X.,2024, May. Sprinkler-UAV Cooperative Active Scheduling System. In 2024 23rd ACM/IEEE International Conference on Information Processing in Sensor Networks (IPSN) (pp. 279-280).

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