

# LIN CHEN

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Department of Computer Science and Engineering  
The Hong Kong University of Science and Technology

## RESEARCH INTERESTS

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Urban Mobility, Urban Science, Computational Social Science, Graph Neural Networks.

## EDUCATION

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**The Hong Kong University of Science and Technology, Hong Kong** *Sept. 2020 - Present*  
Ph.D. Candidate in Department of Computer Science and Engineering  
Advisor: Prof. Pan Hui

**Tongji University, Shanghai** *Sept. 2016 - Jul. 2020*  
B.S. in Department of Electronics and Information Engineering  
*Summa cum laude* (GPA: 4.86/5)

## RESEARCH EXPERIENCE

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**The Hong Kong University of Science and Technology, Hong Kong** *Sept. 2020 - Present*  
Research Assistant @ SyMLab  
Advisor: Prof. Pan Hui (Director of SyMLab)

**Tsinghua University, Beijing** *Apr. 2023 - Dec. 2023*  
Visiting Researcher @ Future Intelligence Lab (FIB)  
Advisor: Prof. Yong Li (Director of FIB)

**University of Chicago, Chicago** *Dec. 2022 - Apr. 2023*  
Visiting Researcher @ Knowledge Lab  
Advisor: Prof. James Evans (Director of Knowledge Lab)

**Feng Chia University, Taichung** *Jul. 2017*  
Summer School, Innovation for Aging in Place

## SELECTED AWARDS

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**Rising Stars Women in Engineering Workshop, Asian Deans' Forum** *2023*

**ICWSM Student Travel Grant** *2023*

**HKUST Overseas Research Award** *2022*

**Hong Kong PhD Fellowship (HKPFS)** *2020-2024*

**Shanghai Outstanding Bachelor Graduate** *2020*

**Outstanding Student of Tongji University** *2019*

**China National Scholarship** *2019*

**China National Scholarship** *2018*

**China National Scholarship** *2017*

## PUBLICATIONS

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- [7] Yunke Zhang, Fengli Xu, **Lin Chen**, Yuan Yuan, James Evans, Luis Bettencourt, and Yong Li. Counterfactual Mobility Network Embedding Reveals Prevalent Accessibility Gaps in U.S. Cities. *Humanities and Social Sciences Communications*, 11, 87. (2024).
- [6] Zhenyu Han, **Lin Chen**, Qian Yue Hao, Qiwei He, Katherine Budeski, Depeng Jin, Fengli Xu, Kun Tang, and Yong Li. How enlightened self-interest guided global vaccine sharing benefits all: a modeling study. *Journal of Global Health*, 13. (2023)
- [5] **Lin Chen**, Qian Yue Hao, Fengli Xu, Yong Li, and Pan Hui. Getting Back on Track: Understanding COVID-19 Impact on Urban Mobility and Segregation with Location Service Data. *Proceedings of the International AAAI Conference on Web and Social Media (ICWSM)*, 17(1), 126-136. (2023)
- [4] Qian Yue Hao, Fengli Xu, **Lin Chen**, Pan Hui, and Yong Li. Hierarchical Multi-agent Model for Reinforced Medical Resource Allocation with Imperfect Information. *ACM Transactions on Intelligent Systems and Technology (TIST)*, Volume 14, Issue 1, pp 1–27. (2022)
- [3] **Lin Chen\***, Fengli Xu\*, Zhenyu Han, Kun Tang, Pan Hui, James Evans, and Yong Li. Strategic COVID-19 vaccine distribution can simultaneously elevate social utility and equity. *Nature Human Behaviour* (**IF=24.252**), Volume 6, Issue 11, pp 1503–1514. (2022)
- [2] Qian Yue Hao, Fengli Xu, **Lin Chen**, Pan Hui, and Yong Li. Hierarchical Reinforcement Learning for Scarce Medical Resource Allocation with Imperfect Information. *Proceedings of the 27th ACM SIGKDD Conference on Knowledge Discovery & Data Mining (SIGKDD)*, pp. 2955-2963. (2021)
- [1] Qian Yue Hao\*, **Lin Chen\***, Fengli Xu, and Yong Li. Understanding the Urban Pandemic Spreading of COVID-19 with Real World Mobility Data. *Proceedings of the 26th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining (SIGKDD)*, pp. 3485-3492. (2020)

\* indicates equal contribution.

## WORKING PAPERS

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- [3] **Lin Chen**, Fengli Xu, Nian Li, Zhenyu Han, Meng Wang, Yong Li, and Pan Hui. Large Language Model-driven Meta-structure Discovery in Heterogeneous Information Network. Under review in *KDD'24*.
- [2] **Lin Chen**, Yong Li, and Pan Hui. VulnerabilityMap: An Open Dataset for Mapping Vulnerability among Urban Disadvantaged Populations in the United States. Under review in *TheWebConf Web4Good Special Track*.
- [1] **Lin Chen**, Fengli Xu, James Evans, Yong Li, and Pan Hui. Heterogeneous Mobility Response in Complex Urban Networks. Ongoing work.

## TEACHING EXPERIENCE

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**COMP 4641: Social Information Network Analysis and Engineering @HKUST** *Spring 2021*  
Teaching Assistant; Instructor: Prof. Pan Hui

**COMP 4021: Internet Computing @HKUST** *Fall 2021*  
Teaching Assistant; Instructor: Prof. Dik-Lun Lee

## ACADEMIC SERVICE

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**Conference Reviewer:** TNSE'20, TheWebConf'22, IC2S2'22, IMWUT'22, WSDM'23  
**Journal Reviewer:** Journal of Social Computing (JSC)

## LANGUAGE

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**Chinese** (native, both Putonghua and Teochew), **English** (proficient), **Korean** (beginner)

## TALKS AND POSTERS

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[Nov 2023, Tokyo] “UrbanLens: Computational Understanding of Urban Lifestyles”, Poster & Pitch @ Rising Stars Women in Engineering Workshop, Asian Deans’ Forum (ADF-RSE’23).

[Sept 2023, Beijing] “Strategic COVID-19 vaccine distribution can simultaneously elevate social utility and equity”, Poster @ the 3rd International Forum on Big Data for Sustainable Development Goals (FBAS’23).

[Aug 2023, Beijing] “Strategic COVID-19 vaccine distribution can simultaneously elevate social utility and equity”, Poster @ the First Research Summit for Urban Science (RSUS’23).

[Jun 2023, Limassol] “Getting Back on Track: Understanding COVID-19 Impact on Urban Mobility and Segregation with Location Service Data”, Oral @ the International AAAI Conference on Web and Social Media (ICWSM’23).