

Fengli Xu

The University of Chicago
The Department of Sociology
Chicago, Illinois, U.S. 60615.

Phone: (+86) 18515396742
Email: fenglixu2020@hotmail.com
Homepage: <http://www.fenglixu.com>

Research Interests

Computational Social Science, Data Science, Urban Science.

Education

Tsinghua University, Beijing, China (Sep. 2015 – Jan. 2020).

Ph.D. in Department of Electronic Engineering

Advisor: Prof. Yong Li

Graduate with Distinction

Huazhong University of Science and Technology, Wuhan, China (Sep. 2011 – Jul. 2015).

B.S. in Department of Electronic Engineering

Graduate with Distinction

Selected Research Experience

The University of Chicago, U.S.

Mansueto Fellow & Postdoctoral Scholar, with **Prof. James Evans** in *Knowledge Lab* (Aug. 2020 – Present).

Microsoft Research Asia, China

Research Intern, with **Prof. Xing Xie** in *Social Computing Group* (Oct. 2018 – Jan. 2019).

Tencent Inc., Beijing, China

Research Scientist Intern, Mobile Data Mining Team (Dec. 2016 – May 2017).

Georg-August-University of Goettingen, Germany

Visiting Researcher, with **Prof. Xiaoming Fu** in *Computer Networks Research Group* (Jun. 2016 – Sep. 2016).

Tsinghua University, Beijing, China

Research Assistant, with **Prof. Yong Li** in *FIB Lab* (Sep. 2015 – Jan. 2020).

Honors and Awards

CCF PhD Doctoral Dissertation Award Nominee 2020

Excellent Doctoral Dissertation of Tsinghua University 2020

Outstanding PhD Graduate of Tsinghua University 2020

MSRA Fellowship 2018

Outstanding Oral Presentation Award in Tsinghua PhD Forum	2017
ACM UBICOMP Honorable Mention Award	2016
National Graduate Student Scholarship of China	2016
Outstanding Graduate of Huazhong University of Science and Technology	2015
National Undergraduate Student Scholarship of China	2014

Publications

Working papers:

- Zhenyu Han, **Fengli Xu**, Yong Li, Tao Jiang, Depeng Jin, Jianhua Lu, James A. Evans. Policy-Aware Mobility Model Explains the Growth of COVID-19 in Cities. In Submission to *Science Advances*.
- Fengli Xu**, Yong Li, Chaoming Song. The Emergence of Urban Growth Patterns Driven by Human Mobility Behavior. Under Revision in *Nature Communications*.

Conferences:

- Fengli Xu**, Guozhen Zhang, Yuan Yuan, Hongjia Huang, Diyi Yang, Depeng Jin, Yong Li. Would You Like to Join Us: Understanding the Invitation Acceptance in Agent-initiated Social E-commerce. Accepted by *International AAAI Conference on Web and Social Media (ICWSM)*, 2021.
- Fengli Xu**, Yong Li, Shusheng Xu. Attentional Multi-graph Convolutional Network for Regional Economy Prediction with Open Migration Data. In *ACM Conference on Knowledge Discovery and Data Mining (KDD)*, 2020.
- Fengli Xu**, Zongyu Lin, Tong Xia, Diansheng Guo, Yong Li. SUME: Semantic-enhanced Urban Mobility Network Embedding for User Demographic Inference. In *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UBICOMP)*, 2020.
- Zhilong Chen, Hancheng Cao, Huangdong Wang, **Fengli Xu**, Vassilis Kostakos, Yong Li. Will You Come Back/Check-in Again? Understanding Characteristics Leading to Urban Revisitation and Re-check-in. In *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UBICOMP)*, 2020.
- Qianyue Hao, Lin Chen, **Fengli Xu**, Yong Li. Understanding the Urban Pandemic Spreading of COVID-19 with Real World Mobility Data. In *ACM SIGKDD (AI for COVID)*, 2020.
- Jie Feng, Zeyu Yang, **Fengli Xu**, Haisu Yu, Mudan Wang, Yong Li. Learning to Simulate Human Mobility. In *ACM SIGKDD (AI for COVID)*, 2020.
- Hancheng Cao, Zhilong Chen, **Fengli Xu**, Yong Li, Tao Wang. When Your Friends Become Sellers: An Empirical Study of Social Commerce Site Beidian. In *International AAAI Conference on Web and Social Media (ICWSM)*, 2020.
- Fengli Xu**, Jianxun Lian, Zhenyu Han, Yong Li, Yujian Xu, Xing Xie. Relation-Aware Graph Convolutional Networks for Agent-Initiated Social E-Commerce Recommendation. In *Conference on Information and Knowledge Management (CIKM)*, 2019.
- Fengli Xu**, Zhenyu Han, Jinhua Piao, Yong Li. "I Think You'll Like It": Modelling the Online Purchase Behavior in Social E-commerce. In *ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, 2019.

12. Hancheng Cao, Zhilong Chen, **Fengli Xu**, Yong Li, Vassilis Kostakos. Revisitation in Urban Space vs. Online: A Comparison across POIs, Websites, and Smartphone Apps. In *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UBICOMP)*, 2019.
11. **Fengli Xu**, Zhen Tu, Hongjia Huang, Shuhao Chang, Funing Sun, Diansheng Guo, Yong Li. No More than What I Post: Preventing Linkage Attacks on Check-in Services. In *The Web Conference (WWW)*, 2019.
10. Tong Xia, Yue Yu, **Fengli Xu**, Funing Sun, Diansheng Guo, Depeng Jin, Yong Li. Understanding Urban Dynamics via State-sharing Hidden Markov Model. In *The Web Conference (WWW)*, 2019.
9. **Fengli Xu**, Tong Xia, Hancheng Cao, Yong Li, Funing Sun, Fanchao Meng. Detecting Popular Temporal Modes in Population-scale Unlabelled Trajectory Data. In *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UBICOMP)*, 2018.
8. **Fengli Xu**, Guozhen Zhang, Jiaxin Huang, Yong Li, Diyi Yang, Ben Y. Zhao, Fanchao Meng. Understanding Motivations behind Inaccurate Check-ins. In *ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)*, 2018.
7. Donghan Yu, Yong Li, **Fengli Xu**, Pengyu Zhang, Vassilis Kostakos. Smartphone App Usage Prediction Using Points of Interest. In *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UBICOMP)*, 2018.
6. **Fengli Xu**, Zhen Tu, Yong Li, Pengyu Zhang, Xiaoming Fu, Depeng Jin. Trajectory Recovery From Ash: User Privacy Is NOT Preserved in Aggregated Mobility Data. In *International Conference on World Wide Web (WWW)*, 2017.
5. Zhen Tu, Kai Zhao, **Fengli Xu**, Yong Li, Li Su, Depeng Jin. Beyond k-anonymity: protect your trajectory from semantic attack. In *IEEE International Conference on Sensing, Communication, and Networking (SECON)*, 2017.
4. Jiaxin Huang, **Fengli Xu**, Yujun Lin, Yong Li. On the Understanding of Interdependency of Mobile App Usage. In *IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS)*, 2017.
3. **Fengli Xu**, Jie Feng, Pengyu Zhang, Yong Li. Context-aware Real-time Population Estimation for Metropolis. In *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UBICOMP)*, 2016. (**Honorable Mention Award**)
2. Mingyang Zhang, **Fengli Xu**, Yong Li. Mobile Traffic Data Decomposition for Understanding Human Urban Activities. In *IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS)*, 2016.
1. Huandong Wang, **Fengli Xu**, Yong Li, Pengyu Zhang, Depeng Jin. Understanding mobile traffic patterns of large scale cellular towers in urban environment. In *ACM Internet Measurement Conference (IMC)*, 2015.

Journals:

13. **Fengli Xu**, Yong Li. Survey on user mobility behavior modelling in urban environment. *Journal on Communications* (in Chinese), 2020, 41(7): 18-28.
12. Tong Xia, Yong Li, Yue Yu, **Fengli Xu**, Qingmin Liao, Depeng Jin. Understanding urban dynamics via state-sharing hidden markov model. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 2020.
11. **Fengli Xu**, Yong Li, Zhen Tu, Shuhao Chang, Hongjia Huang. No More than What I Post: Preventing Linkage Attacks on Check-in Services. *IEEE Transactions on Mobile Computing (TMC)*, 2019.
10. **Fengli Xu**, Zhen Tu, Yong Li. Connecting the Dots: User Privacy Is NOT Preserved in ID-removed Cellular Data. *IEEE Transactions on Network and Service Management (TNSM)*, 2019, 17(1): 147-159.
9. Hancheng Cao, **Fengli Xu**, Jane Sankaranarayanan, Yong Li, Hamen Samet. Habit2vec: Trajectory Semantic Embedding for Living Pattern Recognition in Population. *IEEE Transactions on Mobile Computing (TMC)*, 2019, 19(5): 1096-1108.

8. Kai Zhao, Zhen Tu, **Fengli Xu**, Yong Li, Pengyu Zhang, Dan Pei, Li Su, Depeng Jin. Walking without friends: Publishing anonymized trajectory dataset without leaking social relationships. *IEEE Transactions on Network and Service Management (TNSM)*, 2019, 16(3): 1212-1225.
7. Zhen Tu, **Fengli Xu**, Yong Li, Pengyu Zhang, Depeng Jin. A New Privacy Breach: User Trajectory Recovery From Aggregated Mobility Data. *IEEE/ACM Transactions on Networking (TON)*, 2018, 26(3):1446-1459.
6. Jie Feng, Yong Li, **Fengli Xu**, Depeng Jin. A Bimodal Model to Estimate Dynamic Metropolitan Population by Mobile Phone Data. *Sensors*, 2018, 18(10), 3431.
5. Zhen Tu, Kai Zhao, **Fengli Xu**, Yong Li, Li Su, Depeng Jin. Protecting Trajectory From Semantic Attack Considering k -Anonymity, l -Diversity, and t -Closeness. *IEEE Transactions on Network and Service Management (TNSM)*, 2018, 16(1): 264-278.
4. **Fengli Xu**, Yong Li, Huandong Wang, Pengyu Zhang, Depeng Jin. Understanding Mobile Traffic Patterns of Large Scale Cellular Towers in Urban Environment. *IEEE/ACM Transactions on Networking (TON)*, 2017, 25 (2), 1147-1161.
3. **Fengli Xu**, Yong Li, Min Chen, Shen Chen. Mobile Cellular Big Data: Link Cyberspace and Physical World with Social Ecology. *IEEE Network*, 2016,30(3):6-12.
2. **Fengli Xu**, Yujun Lin, Jiabin Huang, Di Wu, Hongzhi Shi, Jeungeun Song, Yong Li. Big Data Driven Mobile Traffic Understanding and Forecasting: A Time Series Approach. *IEEE Transaction on Service Computing (TSC)*, 2016, 9(5):796-805.
1. Yong Li, **Fengli Xu**. Trace-driven analysis for location-dependent pricing in mobile cellular networks. *IEEE Network*, 2016, 30(2):40-45.

Professional Activity

Senior PC Member:

International Joint Conference on Artificial Intelligence(IJCAI), 2021.

PC Member:

The Web Conference(WWW), 2021.

AAAI Conference on Artificial Intelligence(AAAI), 2021.

International Joint Conference on Artificial Intelligence(IJCAI), 2020.

CPD Workshop (UBICOMP), 2019, 2020.

AppLens Workshop (UBICOMP), 2019.

Conference External Reviewing:

International Joint Conference on Pervasive and Ubiquitous Computing(UBICOMP), 2017, 2018, 2019, 2020.

ACM SIGKDD Conference on Knowledge Discovery and Data Mining(SIGKDD), 2019.

International World Wide Web Conference(WWW), 2017, 2018, 2019.

International AAAI Conference on Web and Social Media(ICWSM), 2017.

IEEE International Conference on Computer Communications(INFOCOM), 2017.

ACM Internet Measurement Conference(IMC), 2016, 2017, 2018.

Journal Reviewing:

IEEE Transactions on Network and Service Management, 2018, 2019, 2020.

IEEE Transactions on Mobile Computing, 2017, 2019.

IEEE Communications Magazine, 2017.

IEEE Transactions on Services Computing, 2017.