

Employment

- 2020-present Assistant Professor in the Department of Information, Risk and Operations Management at the McCombs School of Business at The University of Texas at Austin
- Core member in the Machine Learning Laboratory at The University of Texas at Austin
 - Research affiliate at the Misinformation & AI at The University of Texas at Austin
 - Research affiliate at the MIT Media Lab

Education

Ph.D. Massachusetts Institute of Technology (MIT), Cambridge, MA, USA
2017-2020 MIT Media Lab, Human Dynamics Group

Master of Science Massachusetts Institute of Technology (MIT), Cambridge, MA, USA
2013-2016 **Computer Science** at Electrical Engineering and Computer Science Department

Master of Science Massachusetts Institute of Technology (MIT), Cambridge, MA, USA
2013-2016 **Transportation Engineering** at Civil and Environmental Engineering Department

Journals

- [1] **Yan Leng**, Xiaowen Dong, Esteban Moro, and Alex Pentland. Long Range Social Influence in Phone Communication Network. *Information Systems Research* (2023).
- [2] **Yan Leng**, Tara Sowriraja, Yujia Zhai, and Alex Pentland. Measuring Social Influence Within and Across Multi-dimensional Homophilous Communities. *IEEE Transactions on Knowledge and Data Engineering* (2023).
- [3] Jahani*, E., Gallagher*, N., Merhout*, F., Cavalli*, N., Guilbeault*, D., **Leng*, Y.**, & Bail*, C. A. An Online Experiment During the 2020 US-Iran Crisis Shows that Exposure to Common Enemies Can Increase Political Polarization. *Scientific Reports* (2022). *All authors contribute equally. Random authorship order.
- [4] **Yan Leng***, Dominiquo Santistevan*, and Alex Pentland. Understanding Collective Regularity in Human Mobility as a Familiar Stranger Phenomenon. *Scientific Reports* (2021). *Equal contribution.
- [5] **Yan Leng**, Yujia Zhai, Shaojing Sun, Yifei Wu, Jordan Selzer, Sharon Strover, Anfan Chen, Hezhao Zhang, and Ying Ding Analysis of Misinformation During the COVID-19 Outbreak in China: Cultural, Social and Political Entanglements. *IEEE Transactions on Big Data* (2021).
- [6] **Yan Leng**, Haris Koutsopolous, and Jinhua Zhao. Leveraging Individual and Collective Regularity to Profile and Segment User Locations from Mobile Phone Data. *ACM Transactions on Management Information Systems (TMIS)* (2021).
- [7] Dhaval Adjodah, **Yan Leng**, Shi Kai Chong, P. M. Krafft, Esteban Moro, and Alex Pentland. Accuracy-Risk Trade-Off Due to Social Learning in Crowd-Sourced Financial Predictions. *Entropy* (2021).
- [8] **Yan Leng**, Yehonatan Yella, Rodrigo Ruiz, and Alex Pentland. Contextual Centrality: Going Beyond Network Structure. *Scientific Reports* (2020).
- [9] Xiaobing Liu, Xuedong Yan, Feng Liu, Rui Wang, and **Yan Leng**. A Trip-specific Model for Fuel Saving Estimation and Subsidy Policy Making of Carpooling Based on Empirical Data. *Applied Energy* (2019).
- [10] Shaokuan Chen, **Yan Leng**, Baohua Mao, and Shuang Liu. Integrated Weight-based Multi-criteria Evaluation on Transfer in Large Transport Terminals: A Case Study of the Beijing South Railway Station. *Transportation Research Part A: Policy and Practice* (2014).

Refereed conference proceedings

- [1] Emanuele Rossi, Federico Monti, **Yan Leng**, Michael Bronstein and Xiaowen Dong. Learning to Infer Structures of Network Games. *International Conference on Machine Learning (ICML)*, 2022.
- [2] **Yan Leng**, Xiaowen Dong, and Alex Pentland. Learning Quadratic Games on Networks. *International Conference on Machine Learning (ICML)*, 2020.

Revisions

- [1] **Yan Leng** and Drew Dimmery. Calibration of Heterogeneous Treatment Effects in Random Experiments. Conditional accept at *Information Systems Research*.
- [2] Junyu Cao* and **Yan Leng***. Adaptive Acquisition Tree for Recommendations with Optimality Guarantees on Short-form Video Platforms. Minor revision at *Management Science*.
- [3] **Yan Leng**, Yijun Chen, Xiaowen Dong, Junfeng Wu, and Guodong Shi. Can Platforms Protect Customers' Social Interaction Structure When Behavioral Data is Public? First-round major revision at *MIS Quarterly*.
- [4] Junyu Cao* and **Yan Leng***. Network-enabled Sequential Data Acquisition for High-dimensional Recommender Systems. First-round reject & resubmit at *Management Science*.

* Equal contribution.

Working papers

- [1] **Yan Leng***, Xiao Liu, and Rodrigo Ruiz. Interpretable Recommender System and Decision Support Using Geometric Deep Learning. Under review in ISR. * Lead author.
- [2] **Yan Leng** and Ashish Agarwal. Are Spatial Neighbors Complements or Substitutes? Discovering a Visits-based Local Market Structure.
- [3] **Yan Leng**. Bayesian learning and information aggregation in phone communication networks.
- [4] Junyu Cao* and **Yan Leng***. Learning to Optimize Data Quality for Crowdsourcing Labor Markets: A Human-Algorithm-Collaborative Framework. Won INFORMS ISS Cluster Best Paper Award.

*Equal contribution.

Awards and honors

- Oct 2023 National Institutes of Health (NIH)'s AIM-AHEAD Consortium Development Program, 2023 - 2024.
- May 2023 Texas Global Faculty Research Seed Grants.
- March 2023 McCombs Research Excellence Grant.
- Feb 2022 National Science Foundation (NSF) CRII Award, 2022 - 2024.
- Nov 2022 Finalist for Meta People's Expectations & Experiences with Digital Privacy Request for Proposals.
- Oct 2022 2022 INFORMS ISS Cluster Best Paper Award.
- April 2022 UT Good Systems Faculty Fellowships.
- Dec 2021 Marketing Science Institute Grant Award.
- June 2021 Second prize in INFORMS Revenue Management and Pricing Data-driven Challenge (2021).
- May 2021 McCombs BBA Faculty Honor Roll (Teaching Award).
- March 2021 UT-Austin McCombs Research Excellence Grant.
- Sep 2018 Russel Sage Foundation Grant Award.

Nov 2016 MIT IDEAS Global Challenge Grant.
Nov 2016 MIT Sandbox Innovation Fund.
Aug 2016 Harvard Sustainability Grant.

Teaching

[MIS304] Introduction to problem solving and programming.
• McCombs faculty teaching award.

Invited talks

- 2022 **Learning network structures from behavioral data** at *Stanford Digital Economy Lab*.
- 2022 **Learning to infer structures of network games** at *Deep Exploration of non-Euclidean Data with Geometric and Topological Representation Learning* by Banff International Research Station.
- 2021 **Interpretable recommender system with heterogeneous information: a geometric deep learning perspective** at *ICLR Geometrical and Topological Representation Learning workshop, University of Pittsburgh*.
- 2019, 2020, 2021 **Learning strategic interaction from individual actions: A game-theoretic approach** at the *Northwestern Institute on Complex Systems at Northwestern University, Machine Learning in Finance Workshop by Columbia University, Alan Turing Institute, University of Washington Data Science Seminar, Carnegie Mellon University*.
- 2020 **Analysis of misinformation during the COVID-19 outbreak in China: cultural, social and political entanglements** at the *IDeas Center at Carnegie Mellon University, UT Austin Disinformation Group at the Good Systems*.
- 2019, 2020 **Collective behaviors on networks** at *C2Smart Center at New York University, and Summer Institute in Computational Social Science at Oxford*.
- 2019 **Observational causal inference with network information** at *Graph Exploitation Symposium by MIT Lincoln Lab*.
- 2018 **Social Bayesian decision-making** on the *52nd Conference on Information Sciences and Systems, 2018*.

Services

- Organized IS events Short talk session Chairs for WITS (2022), local chair for WITS (2021).
- Organized CSS events Summer Institute of Computational Social Science (Beijing, 2021), Computational Social Science for Impact (CSS4Impact) (2020), Summer Institute of Computational Social Science (Boston, 2019).
- Referee for management venues Management Science, Information Systems Research, MIS Quarterly, ACM Transactions on Management Information Systems, ICIS, CIST, HICSS, WITS, Informs Workshop on Data Science.
- Referee for CS venues NeurIPS, ICML, ICLR, AAAI.
- Interdisciplinary venues Plos One, PNAS, Scientific Reports.