# QIN "CHRISTINE" LV

Professor Tel: +1 (303) 492–8821 Co-Associate Chair for Graduate Education Fax: +1 (303) 492–2844 Department of Computer Science Email: qin.lv@colorado.edu University of Colorado Boulder https://www.cs.colorado.edu/~lv

## RESEARCH OVERVIEW

- Theme of research: Full-stack data analytics integration of systems, algorithms & applications for effective & efficient data analytics in ubiquitous computing & scientific discovery
- Areas of research: Mobile/wearable/IoT sensing, data fusion, spatial-temporal data analysis, anomaly detection, recommendation, behavior analysis, social networks, cybersafety
- **Application domains**: Earth sciences, electrified transportation, renewable and sustainable energy, environmental science, and information needs in people's daily life

## **EDUCATION**

| Ph.D.               | 2006 | Computer Science, Princeton University |
|---------------------|------|--|
|                     |      | Advisor: Kai Li                        |
| M.A.                | 2002 | Computer Science, Princeton University |
| B.E.                | 2000 | Computer Science & Technology          |
| $summa\ cum\ laude$ |      | Tsinghua University                    |

## PROFESSIONAL APPOINTMENTS

| • University of Colorado Boulder, Boulder, CO |                       |
|---|-----------------------|
| Co-Associate Chair for Graduate Education     | Jan. 2018 - present   |
| Co-Graduate Director                          | Jan. 2015 - Dec. 2017 |
| Professor                                     | Aug. 2021 - present   |
| Associate Professor                           | Aug. 2014 - Aug. 2021 |
| Assistant Professor                           | Aug. 2008 - Aug. 2014 |

- NSF ASPIRE Engineering Research Center (ERC)
  Campus Director for University of Colorado Boulder
  Sep. 2020 present
- Renewable and Sustainable Energy Institute (RASEI), Boulder, CO
  Affiliate 2010 present
- Stony Brook University (SUNY), Stony Brook, NY
  Assistant Professor

  Sep. 2007 Aug. 2008
- Princeton University, Princeton, NJ
  Postdoctoral Research Associate
  Oct. 2006 Jul. 2007

## HONORS & AWARDS

- **Distinguished Paper Award**: Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT). Volume 4. 2021.
- Best Paper Award: The 13th IEEE International Conference on Social Computing and Networking (SocialCom 2020)
- National Science Foundation (NSF) Computer Systems Research (CSR) Spotlight Project: OutWithFriendz and GEVR (2019)
- Best Poster Award: The 20th ACM International Workshop on Mobile Computing Systems and Applications (HotMobile 2019)
- Best Paper Runner-up Award: The 16th ACM Conference on Embedded Networked Sensor Systems (SenSys 2018)
- Ten Year Best Paper Award: The 43rd International Conference on Very Large Data Bases (VLDB 2017)
- 2017 Google Faculty Research Award
- Best Student Paper Award: The 29th IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2017)
- Best Paper Award Nomination: The 11th International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (Mobiquitous 2014)
- Computational Sustainability Award: The 10th International Conference on Pervasive Computing (Pervasive 2012)
- Best Paper Award Nomination: The 2010 ACM/IEEE International Symposium on Low Power Electronics and Design (ISLPED 2010)

## **PUBLICATIONS**

Goole Scholar: https://scholar.google.com/citations?hl=en&user=dTkWROMAAAAJ

#### Journal Articles

- 1. Priyam T, Ruan T, Lv Q. Demographic-Based Public Perception Analysis of Electric Vehicles on Online Social Networks. Sustainability. 16 (1) (December 28, 2023): 305-305. (Published online December 28, 2023)
- Ruan T, Lv Q. Public perception of electric vehicles on Reddit and Twitter: A crossplatform analysis. Transportation Research Interdisciplinary Perspectives. 21 (September 2023): 100872.
- 3. Qi X, Lu Q, Pan W, Zhao Y, Zhu R, Dong M, Chang Y, Lv Q, Dick RP, Yang F, et. al. CASES: A Cognition-Aware Smart Eyewear System for Understanding How People Read. Proc. ACM Interact. Mob. Wearable Ubiquitous Technol-IMWUT. 7 (3) (September 2023): ARTN 115.

- 4. Hoelzemann A, Romero JL, Bock M, Van Laerhoven K, Lv Q. 2023. Hang-Time HAR: A Benchmark Dataset for Basketball Activity Recognition Using Wrist-Worn Inertial Sensors. SENSORS. 23 (13) (July 2023): ARTN 5879.
- 5. Yingying Zhao, Ning Li, Wentao Pan, Yujiang Wang, Mingzhi Dong, Xianghua (Sharon) Ding, **Qin Lv**, Robert P. Dick, Dongsheng Li, Fan Yang, Tun Lu, Ning Gu, and Li Shang. 2023. Unveiling Causal Attention in Dogs' Eyes with Smart Eyewear. Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 6, 4, Article 199 (December 2022), 33 pages. https://doi.org/10.1145/3569490
- Tao Ruan and Qin Lv. 2022. Public perception of electric vehicles on reddit over the past decade. Communications in Transportation Research 2, 100070. https://doi.org/10.1016/j.commtr.2022.100070.
- 7. Yichen Wang, Richard Han, Tamara Lehman, **Qin Lv**, Shivakant Mishra. 2022. Do Twitter users change their behavior after exposure to misinformation? An in-depth analysis. Social Network Analysis and Mining 12, 167. https://doi.org/10.1007/s13278-022-00992-8
- 8. Julia Romero and **Qin Lv**. 2022. Global Impact of COVID-19 Pandemic on Physical Activity Habits of Competitive Runners: An Analysis of Wearable Device Data. International Journal of Environmental Research and Public Health 19, no. 19: 12933. https://doi.org/10.3390/ijerph191912933
- 9. Yingying Zhao, Yuhu Chang, Yutian Lu, Yujiang Wang, Mingzhi Dong, **Qin Lv**, Robert P. Dick, Fan Yang, Tun Lu, Ning Gu, and Li Shang. 2022. Do Smart Glasses Dream of Sentimental Visions? Deep Emotionship Analysis for Eyewear Devices. Proc. ACM Interact. Mob. Wearable Ubiquitous Technol. 6, 1, Article 38 (March 2022), 29 pages. https://doi.org/10.1145/3517250
- Yutian Lu, Bo Wang, Yingying Zhao, Xiaochen Yang, Lizhe Li, Mingzhi Dong, Qin Lv, Fujian Zhou, Ning Gu, Li Shang. 2022. Physics-informed surrogate modeling for hydrofracture geometry prediction based on deep learning. Energy 253, 124139. https://doi.org/10.1016/j.energy.2022.124139.
- 11. Tao Ruan, Qingkai Kong, Sara K. McBride, Amatullah Sethjiwala, **Qin Lv.** 2022. Cross-platform analysis of public responses to the 2019 Ridgecrest earthquake sequence on Twitter and Reddit. Scientific Reports 12, 1634. https://doi.org/10.1038/s41598-022-05359-9
- 12. Yuhu Chang, Yingying Zhao, Mingzhi Dong, Yujiang Wang, Yutian Lu, **Qin Lv**, Robert P. Dick, Tun Lu, Ning Gu, and Li Shang. 2021. MemX: An Attention-Aware Smart Eyewear System for Personalized Moment Auto-capture. Proc. ACM Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 5, 2, Article 56 (June 2021), 23 pages. https://doi.org/10.1145/3463509
- 13. Upasana Dutta, Rhett Hanscom, Jason Shuo Zhang, Richard Han, Tamara Lehman, **Qin Lv**, and Shivakant Mishra. 2021. Analyzing Twitter Users' Behavior Before and After Contact by the Russia's Internet Research Agency. Proc. ACM Hum.-Comput. Interact. 5, CSCW1, Article 90 (April 2021), 24 pages. https://doi.org/10.1145/3449164
- 14. Kai Niu, Fusang Zhang, Xuanzhi Wang, **Qin Lv**, Haitong Luo and Daqing Zhang. 2021. Understanding WiFi Signal Frequency Features for Position-Independent Gesture Sensing. IEEE Transactions on Mobile Computing (TMC). https://doi.org/10.1109/TMC.2021.3063135.

- 15. Yingying Zhao, Mingzhi Dong, Yujiang Wang, Da Feng, **Qin Lv**, Robert P. Dick, Dongsheng Li, Tun Lu, Ning Gu, Li Shang. 2021. A Reinforcement-Learning-based Energy-Efficient Framework for Multi-Task Video Analytics Pipeline. IEEE Transactions on Multimedia. https://doi.org/10.1109/TMM.2021.3076612
- 16. Shengjie Li, Zhaopeng Liu, Yue Zhang, Qin Lv, Xiaopeng Niu, Leye Wang, and Daqing Zhang. 2020. WiBorder: Precise Wi-Fi based Boundary Sensing via Through-wall Discrimination. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 4(3), Article 89 (September 2020), 30 pages. https://doi.org/10.1145/3411834
- 17. Fusang Zhang, Zhaoxin Chang, Kai Niu, Jie Xiong, Beihong Jin, **Qin Lv**, and Daqing Zhang. 2020. Exploring LoRa for Long-range Through-wall Sensing. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 4(2), Article 68 (June 2020), 27 pages. https://doi.org/10.1145/3397326
- 18. Jiangtao Wang, Junyi Ma, Yasha Wang, Ning Wang, Leye Wang, Daqing Zhang, Feng Wang, and Qin Lv. 2020. Will Online Digital Footprints Reveal Your Relationship Status? An Empirical Study of Social Applications for Sexual-Minority Men. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), 4(1), Article 29 (March 2020), 23 pages. https://doi.org/10.1145/3380978
- Jiangtao Wang, Feng Wang, Yasha Wang, Leye Wang, Zhaopeng Qiu, Daqing Zhang, Bin Guo, and Qin Lv. 2020. HyTasker: Hybrid Task Allocation in Mobile Crowd Sensing. IEEE Transactions on Mobile Computing (TMC), 19(3):598–611 (March 2020). https://doi.org/10.1109/TMC.2019.2898950
- 20. Yingying Zhao, Dongsheng Li, Tun Lu, **Qin Lv**, Ning Gu, and Li Shang. 2020. Collaborative Fault Detection for Large-scale Photovoltaic Systems. IEEE Transactions on Sustainable Energy (TSE), (Feb 2020), 10 pages. https://doi.org/10.1109/TSTE.2020.2974404
- 21. Jason Shuo Zhang, Chenhao Tan, and **Qin Lv**. 2019. Intergroup Contact in the Wild: Characterizing Language Differences between Intergroup and Single-group Members in NBA-related Discussion Forums. Proceedings of the ACM on Human-Computer Interaction, 3, CSCW, Article 193 (November 2019), 35 pages. https://doi.org/10.1145/3359295
- 22. Kai Niu, Fusang Zhang, Yuhang Jiang, Jie Xiong, **Qin Lv**, Youwei Zeng, and Daqing Zhang. 2019. WiMorse: A Contactless Morse Code Text Input System using Ambient WiFi signals. IEEE Internet of Things Journal (IOTJ), 6(6):9993–10008 (December 2019). https://doi.org/10.1109/JIOT.2019.2934904.
- 23. Jason Shuo Zhang, Mike Gartrell, Richard Han, **Qin Lv**, and Shivakant Mishra. 2019. GEVR: An Event Venue Recommendation System for Groups of Mobile Users. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 3(1), Article 34 (March 2019), 25 pages. https://doi.org/10.1145/3314421
- 24. Jiangtao Wang, Yasha Wang, Daqing Zhang, **Qin Lv**, and Chao Chen. 2019. Crowd-Powered Sensing and Actuation in Smart Cities: Current Issues and Future Directions. IEEE Wireless Communications, 26(2):86–92 (April 2019). https://doi.org/10.1109/MWC.2019.1800030

- 25. Jason Shuo Zhang and **Qin Lv**. 2019. Understanding Event Organization at Scale in Event-Based Social Networks. ACM Transactions on Intelligent Systems and Technologies (TIST), 10(2), Article 16 (February 2019), 23 pages. https://doi.org/10.1145/3243227
- Jiangtao Wang, Yasha Wang, and Qin Lv. 2019. Crowd-Assisted Machine Learning: Current Issues and Future Directions. IEEE Computer, 52(1):46–53 (January 2019). https://doi.org/10.1109/MC.2018.2890174
- 27. Qingkai Kong, Asaf Inbal, Richard M. Allen, **Qin Lv**, and Arno Puder. 2018. Machine Learning Aspects of the MyShake Global Smartphone Seismic Network. Seismological Research Letters (SRL), 90(2A): 546–552 (Dec 2018). https://doi.org/10.1785/0220180309
- 28. Jason Shuo Zhang, Chenhao Tan, and **Qin Lv**. 2018. "This is why we play": Characterizing Online Fan Communities of the NBA Teams. Proceedings of the ACM on Human-Computer Interaction (PACMHCI), 2, CSCW, Article 197 (November 2018), 25 pages. https://doi.org/10.1145/3274466
- 29. Yingying Zhao, Qi Liu, Dongsheng Li, Dahai Kang, **Qin Lv**, and Li Shang. 2019. Hierarchical Anomaly Detection and Multimodal Classification in Large-Scale Photovoltaic Systems. IEEE Transactions on Sustainable Energy (TSE), 10(3):1351–1361 (July 2019). https://doi.org/10.1109/TSTE.2018.2867009
- 30. Jiangtao Wang, Yasha Wang, Daqing Zhang, Feng Wang, Haoyi Xiong, Chao Chen, Qin Lv, and Zhaopeng Qiu. 2018. Multi-Task Allocation in Mobile Crowd Sensing with Individual Task Quality Assurance. IEEE Transactions on Mobile Computing (TMC), 17(9):2101–2113 (September 2018). https://doi.org/10.1109/TMC.2018.2793908
- 31. Zhiwen Yu, Fei Yi, **Qin Lv**, and Bin Guo, 2018. Identifying On-Site Users for Social Events: Mobility, Content, and Social Relationship. IEEE Transactions on Mobile Computing (TMC), 17(9):2055-2068 (September 2018). https://doi.org/10.1109/TMC.2018.2794981
- 32. Kira Sadighi, Evan Coffey, Andrea Polidori, Brandon Feenstra, **Qin Lv**, Daven K. Henze, and Michael Hannigan. 2018. Intra-urban Spatial Variability of Surface Ozone and Carbon Dioxide in Riverside, CA: Viability and Validation of Low-cost Sensors. Atmospheric Measurement Techniques (AMT), 11:1777–1792 (March 2018). https://doi.org/10.5194/amt-11-1777-2018
- 33. Shuo Zhang and **Qin Lv**. 2018. Hybrid EGU-based Group Event Participation Prediction in Event-based Social Networks. Knowledge-Based Systems (KBS), 143:19–29 (March 2018). https://doi.org/10.1016/j.knosys.2017.12.002
- 34. Shuo Zhang, Khaled Alanezi, Mike Gartrell, Richard Han, **Qin Lv**, and Shivakant Mishra. 2017. Understanding Group Event Scheduling via the OutWithFriendz Mobile Application. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 1(4), Article 175 (December 2017), 19 pages. https://doi.org/10.1145/3161200
- 35. Xiang Li, Daqing Zhang, **Qin Lv**, Jie Xiong, Shengjie Li, Yue Zhang, and Hong Mei. 2017. IndoTrack: Device-Free Indoor Human Tracking with Commodity Wi-Fi. Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) 1(3), Article 72 (September 2017), 22 pages. https://doi.org/10.1145/3130940

- 36. Qi Liu, James Williamson, Kun Li, Wyatt Mohrman, **Qin Lv**, Robert P. Dick, and Li Shang. 2017. Gazelle: Energy-Efficient Wearable Analysis for Running. IEEE Transactions on Mobile Computing (TMC), 16(9):2531–2544 (September 2017). https://doi.org/ 10.1109/TMC.2016.2623304
- 37. Yingying Zhao, Dongsheng Li, Ao Dong, Dahai Kang, **Qin Lv**, and Li Shang. 2017. Fault Prediction and Diagnosis of Wind Turbine Generators using SCADA Data. Energies, 10(8):1210, 17 pages. https://doi.org/10.3390/en10081210
- 38. Qi Liu, Rudy Klucik, Chao Chen, Glenn Grant, David Gallaher, **Qin Lv**, and Li Shang. 2017. Unsupervised Detection of Contextual Anomaly in Remotely Sensed Data. Remote Sensing of Environment (RSE), 202:75–87 (December 2017). https://doi.org/10.1016/j.rse.2017.01.034
- 39. Samuel A. Miller, Prashun Gorai, Brenden R. Ortiz, Anuj Goyal, Duanfeng Gao, Scott A. Barnett, Thomas O. Mason, G. Jeffrey Snyder, **Qin Lv**, Vladan Stevanović, and Eric S. Toberer. 2017. Capturing Anharmonicity in a Lattice Thermal Conductivity Model for High-Throughput Predictions. Chemistry of Materials (CM), 29(6):2494–2501. https://doi.org/10.1021/acs.chemmater.6b04179
- 40. Dongsheng Li, **Qin Lv**, Li Shang, and Ning Gu. 2017. Efficient Privacy-Preserving Content Recommendation for Online Social Communities. Neurocomputing 219, C (January 2017), 440–454. https://doi.org/10.1016/j.neucom.2016.09.059
- 41. Dongsheng Li, Yaoping Ruan, **Qin Lv**, and Li Shang. 2016. SalesExplorer: Exploring Sales Opportunities from White-space Customers in the Enterprise Market. Knowledge-Based Systems (KBS), 113:51–60 (December 2016). https://doi.org/10.1016/j.knosys.2016.09.011
- 42. Rahat Ibn Rafiq, Homa Hosseinmardi, Sabrina Arredondo Mattson, Richard Han, **Qin Lv**, and Shivakant Mishra. 2016. Analysis and Detection of Labeled Cyberbullying Instances in Vine, a Video-based Social Network. Social Network Analysis and Mining (SNAM), 6(1), Article 88 (September 2016), 16 pages. https://doi.org/10.1007/s13278-016-0398-x
- 43. Dongsheng Li, Chao Chen, **Qin Lv**, Li Shang, Yingying Zhao, Tun Lu, and Ning Gu. 2016. An Algorithm for Efficient Privacy-preserving Item-based Collaborative Filtering. Future Generation Computer Systems (FGCS), 55:311–320 (February 2016). https://doi.org/10.1016/j.future.2014.11.003
- 44. Prashun Gorai, Duanfeng Gao, Brendon Ortiz, Samuel A. Miller, Scott A. Barnett, Thomas Mason, **Qin Lv**, Vladan Stevanović, and Eric Toberer. 2016. TE Design Lab: A Virtual Laboratory for Thermoelectric Material Design. Computational Materials Science (CMS), 112:368–376 (February 2016). https://doi.org/10.1016/J.COMMATSCI.2015.11.006
- 45. Junho Ahn, James Williamson, Mike Gartrell, Richard Han, **Qin Lv**, and Shivakant Mishra. 2015. Supporting Healthy Grocery Shopping via Mobile Augmented Reality. ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM), 12(1), Article 16 (October 2015), 24 pages. https://doi.org/10.1145/2808207
- 46. Hanqiang Cheng, Xinyu Xing, Xue Liu, and **Qin Lv**. 2015. ISC: An Iterative Social Based Classifier for Adult Account Detection on Twitter. IEEE Transactions on Knowledge and Data Engineering (TKDE), 27(4):1045–1056 (April 2015). https://doi.org/10.1109/ TKDE.2014.2357012

- 47. Ricardo Piedrahita, Yun Xiang, Nicholas Masson, John Ortega, Ashley Collier, Yifei Jiang, Kun Li, Robert Dick, Qin Lv, Michael Hannigan, and Li Shang. 2014. The Next Generation of Low-cost Personal Air Quality Sensors for Quantitative Exposure Monitoring. Atmospheric Measurement Techniques (AMT), 7:3325–3336. https://doi.org/10.5194/amt-7-3325-2014
- 48. Dongsheng Li, **Qin Lv**, Li Shang, and Ning Gu. 2014. Item-based Top-N Recommendation Resilient to Aggregated Information Revelation. Knowledge-Based Systems (KBS), 67 (September, 2014), 290–304. https://doi.org/10.1016/j.knosys.2014.04.038
- 49. Kun Li, Changyun Zhu, **Qin Lv**, Li Shang, and Robert P. Dick. 2013. Personalized Multi-modality Image Management and Search for Mobile Devices. Personal and Ubiquitous Computing (PUC), 17:1817–1834. https://doi.org/10.1007/s00779-013-0660-4
- 50. Yu-Li Liang, Xinyu Xing, Hanqiang Cheng, Jianxun Dang, Sui Huang, Richard Han, Xue Liu, Qin Lv, and Shivakant Mishra. 2013. SafeVchat: A System for Obscene Content Detection in Online Video Chat Services. ACM Transactions on Internet Technology (TOIT), 12(4), Article 13 (July 2013), 26 pages. https://doi.org/10.1145/2499926.2499927
- 51. Yifei Jiang, Du Li, and **Qin Lv**. 2013. Thinking Fast and Slow: An Approach to Energy-Efficient Human Activity Recognition on Mobile Devices. AI Magazine, Association for the Advancement of Artificial Intelligence (AAAI), 34(2), 48–66. https://doi.org/10.1609/aimag.v34i2.2473
- 52. Yifei Jiang, Kun Li, Ricardo Piedrahita, Yun Xiang, Lei Tian, Omkar Mansata, **Qin Lv**, Robert P. Dick, Michael Hannigan, and Li Shang. 2013. User-centric Indoor Air Quality Monitoring on Mobile Devices. AI Magazine, Association for the Advancement of Artificial Intelligence (AAAI), 34(2):11–30. https://doi.org/10.1609/aimag.v34i2.2472
- 53. Jie Wu, Jia Wang, Kun Li, Hai Zhou, **Qin Lv**, Li Shang, and Yihe Sun. 2013. Large-Scale Energy Storage System Design and Optimization for Emerging Electric-Drive Vehicles. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 32(3):325–338 (March 2013). https://doi.org/10.1109/TCAD.2012.2228268
- 54. Yu-Li Liang, William Colgan, **Qin Lv**, Konrad Steffen, Waleed Abdalati, Julienne Stroeve, David Gallaher, and Nicolas Bayou. 2012. A Decadal Investigation of Supraglacial Lakes in West Greenland using a Fully Automatic Detection and Tracking Algorithm. Remote Sensing of Environment (RSE), 123:127–138 (August 2012). https://doi.org/10.1016/j.rse.2012.03.020
- 55. Dongsheng Li, **Qin Lv**, Xing Xie, Li Shang, Huanhuan Xia, Tun Lu, and Ning Gu. 2012. Interest-based Real-time Content Recommendation in Online Social Communities. Knowledge-Based Systems (KBS). 28:1–12 (April 2012). https://doi.org/10.1016/j.knosys.2011.09.019
- 56. Jie Wu, Kun Li, Yifei Jiang, **Qin Lv**, Li Shang, and Yihe Sun. 2011. Large-Scale Battery System Development and User-Specific Driving Behavior Analysis for Emerging Electric-Drive Vehicles. Energies, 4(5):758–779. https://doi.org/10.3390/en4050758
- 57. Zhe Wang, Wei Dong, William Josephson, **Qin Lv**, Moses Charikar, and Kai Li. 2007. Sizing Sketches: A Rank-based Analysis for Similarity Search. SIGMETRICS Performance Evaluation Review, 35(1):157–168 (June 2007). https://doi.org/10.1145/1269899.1254900

58. Qin Lv, William Josephson, Zhe Wang, Moses Charikar, and Kai Li. 2006. Ferret: A Toolkit for Content-based Similarity Search of Feature-rich Data. SIGOPS Operating Systems Review, 40(4):317-330 (October 2006). https://doi.org/10.1145/1218063.1217966

## Refereed Conference and Workshop Papers

- 54. Yixuan Chen, Dongsheng Li, Peng Zhang, Jie Sui, **Qin Lv**, Lu Tun, and Li Shang. 2022. Cross-modal Ambiguity Learning for Multimodal Fake News Detection. In Proceedings of the ACM Web Conference 2022 (WWW '22). 2897–2905. https://doi.org/10.1145/3485447.3511968
- 55. Yichen Wang, Richard Han, Tamara Lehman, **Qin Lv**, and Shivakant Mishra. 2021. Analyzing behavioral changes of Twitter users after exposure to misinformation. In Proceedings of the 2021 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM '21). 591–598. https://doi.org/10.1145/3487351.3492718
- 56. Jason Shuo Zhang, Brian Keegan, **Qin Lv** and Chenhao Tan. 2021. Understanding the Diverging User Trajectories in Highly-related Online Communities during the COVID-19 Pandemic. Proceedings of the International AAAI Conference on Web and Social Media (ICWSM), 15(1), 888-899. https://ojs.aaai.org/index.php/ICWSM/article/view/18112
- 57. Yawen Zhang, Michael Hannigan, and **Qin Lv**. 2021. Air Pollution Hotspot Detection and Source Feature Analysis using Cross-Domain Urban Data. In Proceedings of the 29th International Conference on Advances in Geographic Information Systems (SIGSPATIAL '21). 592–595. https://doi.org/10.1145/3474717.3484263
- 58. Srihaasa Pidikiti, Jason Shuo Zhang, Richard Han, Tamara Lehman, Qin Lv and Shivakant Mishra. 2020. Understanding How Readers Determine the Legitimacy of Online News Articles in the Era of Fake News. 2020 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), pp. 768-775. https://doi.org/10.1109/ASONAM49781.2020.9381451.
- 59. Tao Ruan, Qingkai Kong, Yawen Zhang, Sara K. McBride, and **Qin Lv**. 2020. An Analysis of Twitter Responses to the 2019 Ridgecrest Earthquake Sequence. In Proceedings of the 13th IEEE International Conference on Social Computing and Networking (SocialCom '20). 9 pages.
- 60. Yawen Zhang, Seth Spielman, Qi Liu, Si Shen, Jason Shuo Zhang, and **Qin Lv**. 2020. Exploring the Usage of Online Food Delivery Data for Intra-Urban Job and Housing Mobility Detection and Characterization. In Proceedings of the 13th IEEE International Conference on Social Computing and Networking (SocialCom '20). 8 pages.
- 61. Yichen Wang, Jason Shuo Zhang, Xu Han, and **Qin Lv**. 2020. Jump on the Bandwagon? Characterizing Bandwagon Phenomenon in Online NBA Fan Communities. In Proceedings of the 12th International Conference on Social Informatics (SocInfo '20). 16 pages.
- 62. Rahat Rafiq, Richard Han, **Qin Lv**, and Shivakant Mishra. 2020. BullyAlert A Mobile Application for Adaptive Cyberbullying Detection. In Proceedings of the 11th EAI International Conference on Mobile Computing, Applications and Services (MOBICASE '20). 13 pages.

- 63. Yawen Zhang, **Qin Lv**, Duanfeng Gao, Si Shen, Robert P. Dick, Michael Hannigan, and Qi Liu. 2019. Multi-group Encoder-Decoder Networks to Fuse Heterogeneous Data for Next-day Air Quality Prediction. In Proceedings of the 28th International Joint Conference on Artificial Intelligence (IJCAI '19), pages 4341–4347.
- 64. Qingkai Kong, Qin Lv, and Richard M. Allen. 2019. Earthquake Early Warning and Beyond: Systems Challenges in Smartphone-based Seismic Network. In Proceedings of the 20th International Workshop on Mobile Computing Systems and Applications (HotMobile '19), pages 57–62. https://doi.org/10.1145/3301293.3302377
- 65. Hoang Truong, Shuo Zhang, Ufuk Muncuk, Phuc Nguyen, Nam Bui, Anh Nguyen, **Qin Lv**, Kaushik Chowdhury, Thang Dinh, and Tam Vu. 2018. CapBand: Battery-free Successive Capacitance Sensing Wristband for Hand Gesture Recognition. In Proceedings of the 16th ACM Conference on Embedded Networked Sensor Systems (SenSys '18), pages 54–67. https://doi.org/10.1145/3274783.3274854
- 66. Shengjie Li, Xiang Li, **Qin Lv**, Guiyu Tian, and Daqing Zhang. 2018. WiFit: Ubiquitous Bodyweight Exercise Monitoring with Commodity Wi-Fi Devices. In Proceedings of the 15th IEEE International Conference on Ubiquitous Intelligence Computing (UIC '18), pages 530–537. DOI:http://doi.org/10.1109/SmartWorld.2018.00114
- 67. Yingying Zhao, Dongsheng Li, Qi Liu, Qin Lv, and Li Shang. 2018. Deriving Customer Privacy from Randomly Perturbed Smart Metering Data. In Proceedings of the 2018 IEEE 16th International Conference on Industrial Informatics (INDIN), pages 959–965. https://doi.org/10.1109/INDIN.2018.8471935
- 68. Dongsheng Li, Yingying Zhao, Yawen Zhang, **Qin Lv**, and Li Shang. 2018. An Algorithmic Method for Tampering-Proof and Privacy-Preserving Smart Metering. In Proceedings of the 2018 IEEE 16th International Conference on Industrial Informatics (INDIN), pages 459–465. https://doi.org/10.1109/INDIN.2018.8471959
- 69. Rahat Ibn Rafiq, Homa Hosseinmardi, Richard Han, Qin Lv, and Shivakant Mishra. 2018. Scalable and Timely Detection of Cyberbullying in Online Social Networks. In Proceedings of the 33rd Annual ACM Symposium on Applied Computing (SAC '18), pages 1738–1747. https://doi.org/10.1145/3167132.3167317
- 70. Dongsheng Li, Chao Chen, **Qin Lv**, Hansu Gu, Tun Lu, Li Shang, Ning Gu, and Stephen M. Chu. 2018. AdaError: An Adaptive Learning Rate Method for Matrix Approximation-based Collaborative Filtering. In Proceedings of the 2018 Web Conference (WWW '18), 11 pages. https://doi.org/10.1145/3178876.3186155
- 71. Ludan Tan, Changjian Wang, **Qin Lv**, Yuxing Peng, Minghao Hu, Xiang Zhao, and Zhen Huang. 2017. SDF-NN: A Deep Neural Network with Semantic Dropping and Fusion for Natural Language Inference. In Proceedings of the 2017 IEEE 29th International Conference on Tools with Artificial Intelligence (ICTAI '17), pages 72–79. https://doi.org/10.1109/ICTAI.2017.00023
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## **TEACHING**

## Courses Taught

- CSCI 4502/5502: Data Mining
  - (was CSCI 4830/7000) Spring 2009–2013, Spring 2015–2016, Fall 2017–2022
- CSCI 6502: Big Data Analytics: Systems, Algorithms, and Applications
  - (was CSCI 7000) Fall 2008–2010, Spring 2015–2016, Spring 2018–2023

- CSCI 5000: Introduction to the Computer Science Research-based MS Program
  - Fall 2020, Fall 2021, Fall 2022
- CSCI 6000: Introduction to the Computer Science PhD Program
  - Fall 2018, Fall 2019
- CSCI 3104: Algorithms
  - Fall 2011, Fall 2012, Fall 2014, Fall 2015
- CSE594: Distributed Systems
  - Spring 2008, taught at Stony Brook University
- CSE692: Systems Design for Massive Data
  - Fall 2007, taught at Stony Brook University

## PROFESSIONAL SERVICE

#### **Editorial Board**

- Guest Editor. IEEE PMC (Pervasive and Mobile Computing). 2022.
- Associate Editor. ACM IMWUT (Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies). 2016–2021.

## Technical Program Committee

- MobiSys: ACM International Conference on Mobile Systems, Applications, and Services (2016, 2017, 2019-2024) (External Review Committee: 2015, 2018)
- MobiCom: ACM International Conference On Mobile Computing And Networking (2023, 2024)
- SenSys: ACM Conference on Embedded Networked Sensor Systems (2018, 2020, 2022, 2023). External Technical Program Committee (2019)
- KDD: ACM SIGKDD Conference on Knowledge Discovery and Data Mining (2022)
- SocInfo: International Conference on Social Informatics (2022)
- PerCom: IEEE International Conference on Pervasive Computing and Communication (2013, 2015, 2016, 2017, 2018, 2019, 2020, 2021)
- HotMobile: ACM International Workshop on Mobile Computing Systems and Applications (2015, 2017, 2021)
- IPSN: ACM/IEEE International Conference on Information Processing in Sensor Networks (2021)
- IoTDI: ACM/IEEE Conference on Internet of Things Design and Implementation (2021)

- The Web Conf (formerly WWW): International World Wide Web Conference (2014, 2021)
- WSDM: ACM International Conference on Web Search and Data Mining (2017, 2021)
- SIGIR: Annual ACM SIGIR Conference on Research and Development in Information Retrieval (2018, 2019, 2020)
- SECON: IEEE International Conference on Sensing, Communication, and Networking (2017, 2020)
- ICDCS: IEEE International Conference on Distributed Computing Systems (2019)
- Mobiquitous: EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (2014, 2016, 2017)
- UbiComp: ACM International Joint Conference on Pervasive and Ubiquitous Computing (2012, 2013, 2014, 2016)
- WI: IEEE/WIC/ACM International Conference on Web Intelligence (2012, 2015)
- MobiCASE: EAI International Conference on Mobile Computing, Applications and Services (2014)
- SIGMETRICS: ACM SIGMETRICS International Conference on Measurement and Modeling of Computer Systems (2011, 2012, 2013)
- PhoneCom: IEEE ICDCS International Workshop on Sensing, Networking, and Computing with Smartphones (2012)
- IWQoS: IEEE/ACM International Workshop on Quality of Service (2011)
- WOCC–Multimedia Symposium: IEEE Annual Wireless and Optical Communications Conference (2011)
- MCS: International Workshop on Mobile Cloud Computing & Services: Social Networks and Beyond (2010)

## Organizing Committee

- IMWUT Distinguished Paper Awards Committee (2021, 2022, 2023)
- PerCom 2024: Demo Co-Chair
- PerCom 2022: Technical Program Committee Vice Chair
- HotMobile Steering Committee (2020 2022)
- UbiComp 2021: General Co-Chair
- MobiSys 2021: Virtual Arrangements Co-Chair
- PerCom 2021: PhD Forum Co-Chair
- UbiComp 2020: Workshop Co-Chair

- MobiSys 2020: Best Paper Selection Committee Co-Chair, Workshop Chair
- CONVERGE COVID-19 Working Groups for Public Health and Social Sciences Research
  - Working Group: Extreme Weather Events and Geohazards in a Time of COVID-19
  - Steering Committee (2020)
- CyberSafety: International Workshop on Computational Methods for CyberSafety
  - Workshop Co-Chair (2016, 2019), TPC Co-Chair (2017)
  - Steering Committee (2018, 2020)
- HotMobile 2020: Program Chair
- UbiComp 2019: Doctoral Symposium Co-Chiar
- RMCWiC (Rocky Mountain Celebration of Women in Computing)
  - Registration Chair (2012, 2014, 2016, 2018)
- MobiCom 2016 (The 20th ACM International Conference on Mobile Computing and Networking): Publication Chair
- SenSys 2015: Publication Chair
- WIC 2012 (IEEE/WIC/ACM World Intelligence Congress): Publicity Co-Chair
- CCWIC 2010 (Colorado Celebration of Women in Computing): Registration Chair
- ISCA 2008 (The 35th IEEE International Symposium on Computer Architecture): Publicity Chair
- ANCS 2005 (ACM/IEEE Symposium on Architectures for Networking and Communications Systems): Registration Chair