HAIBING LU

Associate Professor, Department of Information Systems and Analytics

Santa Clara University

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EDUCATION

Rutgers University *2006 - 2011*
Ph.D. in Management (Information Technology)

Xi'an Jiaotong Unviersity, China *1998 - 2002, 2002 - 2005*
B.S., M.S. in Mathematics

WORK EXPERIENCE

Santa Clara University 2017 - Present
Department Chair/Co-Chair of Information Systems and Analytics (ISA)

Santa Clara University 2017 - Present
Associate Professor

Santa Clara University 2011 - 2017
Assistant Professor

Singapore Management University 2005 - 2006
Research Fellow

JOURNAL PUBLICATIONS

Samorani, M., S. Harris, L.G. Blount, H. Lu, M.A. Santoro. 2020. Overbooked and Overlooked: Machine Learning and Racial Bias in Medical Appointment Scheduling. Manufacturing Service Operations Management. Accepted. (Reported by Forbes, WIRED, and United Nations)

Guojie Song, Yizhou Zhang, Lingjun Xu, Haibing Lu, 2020. Domain Adaptive Network Embedding, *IEEE Transactions on Big Data.* Accepted.

Haibing Lu, Xi Chen, Qi Liu, Michele Samorani, Guojie Song, Yanjiang Yang, 2020. Stochastic Workflow Authorizations with Queueing Constraints, *IEEE Transactions on Dependable and Secure Computing.* Accepted.

Haibing Lu, Xi Chen, Junmin Shi, Jaideep Vaidya, Vijay Atluri, Yuan Hong, Wei Huang, 2020. Algorithms and Applications to Weighted Rank-One Binary Matrix Factorization, *ACM Transactions on Management Information Systems*, 11, no. 2 (2020): 1-33.

Xi Zhang, Haibing Lu, Zhili Zhou, Shen Yang, Shengjun Xu, 2020. Analysis and optimization of perishable inventory with stocks-sensitive stochastic demand and two-stage pricing: A discrete event simulation study, *Journal of Simulation*, pp.1-12.

Cheng Fang, Haibing Lu, Yuan Hong, Shan Liu, Aichi Chang, 2020. Dynamic Pricing for Electric Vehicle Extreme Fast Charging, *IEEE Transactions on Intelligent Transportation Systems.*

Xi Chen, Cheng Fang, Jasmin Chang, Yanjiang Yang, Yuan Hong, Haibing Lu, 2019. Chinese address standardisation via hybrid approach combining statistical and rule-based methods, *International*

Journal of Internet and Enterprise Management, 9(2), pp.179-193.

Shengyu Xie, Han Wang, Shengbin Wang, Haibing Lu, Yuan Hong, Dong Jin, and Qi Liu, 2019. Discovering Communities for Microgrids with Spatial-Temporal Net Energy, *Journal of Modern Power Systems and Clean Energy*, 2019 Nov 1;7(6):1536-46.

Ai-Chih Chang, Haibing Lu, Junmin Shi, 2019. Stockout Risk of Production-Inventory Systems with Compound Poisson Demands, *Omega*, Volume 83, March 2019, Pages 181-198

Haibing Lu, Wendong Zhu, Joseph Phan, M. Ghiassi, Yi Fang, Yuan Hong and Xiaoyun He, 2018. Fault-Tolerant Tile Mining, *Expert Systems with Applications*, Volume 101, Pages 25-42.

Yanjiang Yang, Zhuo Wei, Youcheng Zhang, Haibing Lu, Kim-Kwang Raymond Choo, and Haibin Cai, 2017. V2X security: A case study of anonymous authentication. *Pervasive and Mobile Computing* 41: 259-269, 2017.

Xiaoyu He and Haibing Lu, 2017. Detecting and preventing inference attacks in online social networks: A data-driven and holistic framework. *Journal of Information Privacy and Security*, 13 (3): 104-119, 2017.

Lian Duan, Yanchi Liu, W. Nick Street, and Haibing Lu. Utilizing Advances in Correlation Analysis for Community Structure Detection. *Expert Systems with Applications*, 84 (30) 74-91, 2017

Tingting Liu, Wendong Zhu, Haibing Lu, Ting Zhao, He Liu, Guangyi Liu, Wenjuan Zhu, 2017. Chinese Address Standardization in Electric Power Industry, *Electric Power Information and Communication Technology*, 15 (5).

Yuan Hong, Jaideep Vaidya, Haibing Lu and Wen Ming Liu, 2016. Accurate and Efficient Query Clustering via Top Ranked Search Results. *Web Intelligence* 14(2): 119-138 (2016).

Xiaoyun He and Haibing Lu, 2016. Catch a Fad or Capture a Value? Social Media Leverage in SMEs. *Journal of Organizational and End User Computing*, 28, 3 (July 2016), 67-81.

Heechang Shin and Haibing Lu, 2016. Towards Trajectory Anonymization Using Multi-dimensional Index Structures. *International Journal of Business Continuity and Risk Management*, 6 (4), 2016.

Mrinalini Shekhawat, Shilpa Deshmukh, Gabriel Monroy, Anupriya Tiwari, Xiaoyun He , Heechang Shin, Yuan Hong, and Haibing Lu, 2016. Usability Test of Personality Type within a Roommate Matching Website: A Case Study, *Journal of International Technology and Information Management*, 25 (1), 5.

Yanjiang Yang, Haiyan Zhu, Haibing Lu, Jian Wen, Youcheng Zhang, and Kim-Kwang Raymond Choo, 2015. Cloud Based Data Sharing with Fine-grained Proxy Re-encryption. *Pervasive and Mobile Computing*, 28, 122-134.

Yuan Hong, Jaideep Vaidya, Haibing Lu, Panagiotis Karras and Sanjay Goel, 2015. Collaborative Search Log Sanitization: Toward Differential Privacy and Boosted Utility. *IEEE Transactions on Dependable and Secure Computing*, 5 (12), 504-518.

Haibing Lu, Yuan Hong, Yanjiang Yang, Lian Duan and Nazia Badar, 2015. Towards User-Oriented RBAC Mode. *Journal of Computer Security*, 23 (1), 127 – 129.

Haibing Lu, Jaideep Vaidya, Vijay Alturi and Yingjiu Li, 2015. Statistical Database Auditing without Query Denial Threat, *INFORMS Journal on Computing*, 27(1), 20 – 34.

Haibing Lu, Jaideep Vaidya, Vijay Atluri, 2014. An Optimization Framework for the Boolean Matrix Decomposition Problem. *Journal of Computer Security*, 22(1), 1-31.

Yuan Hong, Jaideep Vaidya, Haibing Lu, 2012. Secure and Efficient Distributed Linear Programming. *Journal of Computer Security*, 20 (5) 583–634.

Haibing Lu, Jaideep Vaidya, Vijay Atluri, Yuan Hong, 2012. Constraint-Aware Role Mining Via Extended Boolean Matrix Decomposition. *IEEE Transaction on Dependable and Secure Computing*, 9(5), 655-669.

Yingjiu Li and Haibing Lu, 2011. Privacy Risk Assessment with Bounds Deduced from Bounds. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, 19 (4), 685-715.

Xiaoyun He, Haibing Lu, JaideepVaidya and VijayAtluri, 2011. Secure Construction and Publication of Contingency Tables from Distributed Data. *Journal of Computer Security*, 19(3), 453-484.

Jaideep Vaidya, VijayAtluri, QiGuo, and Haibing Lu, 2009. Role Engineering for Minimizing Administrative Assignment. *Journal of Computer Security*, 17 (2), 211-235.

Haibing Lu and Yingjiu Li, 2008. Practical Inference Control for Data Cubes. *IEEE Transaction on Dependable and Secure Computing*, 5(2): 87-98.

REFEREED CONFERENCE PROCEEDINGS

Michele Samorani, Shannon Harris, Linda Goler Blount, Haibing Lu, and Michael A. Santoro. Overbooked and Overlooked: Machine Learning and Racial Bias in Medical Appointment Scheduling, *INFORMS Data Mining Workshop*, 2019.

Yuan Hong, Sanjay Goel, Haibing Lu and Shengbin Wang, 2017. Discovering Energy Communities for Microgrids on the Power Grid, in *Proceedings of the IEEE International Conference on Smart Grid Communications (SmartGridComm '17)*, Dresden, Germany, Oct 23-26, 2017

Yanjiang Yang, Haibin Cai , Zhuo Wei, Haibing Lu, and Kim-Kwang Raymond Choo, 2016. Towards Lightweight Anonymous Entity Authentication for IoT Applications. *The Proceeding of the 21st Australasian Conference on Information Security and Privacy.*

Yanjiang Yang, Haibing Lu, Joseph Liu, Jian Weng, Youcheng Zhang and Jianying Zhou, 2016. Credential Wrapping: From Anonymous Password Authentication to Anonymous Biometric Authentication. *The Proceeding of the 11th ACM Asia Conference on Computer and Communications Security.*

Yanjiang Yang, Haibing Lu, Jian Weng, Youcheng Zhou, 2014. Fine-grained Conditional Proxy Reencryption and Application. *The Proceeding of the Eighth International Conference on Provable Security*, 2014. (Best Student Paper Award)

Lian Duan, W. Nick Street, and Haibing Lu, 2014. Community Detection through Correlation. *The Proceeding of the 20th ACM SIGKDD Conference on Knowledge Discovery and Data Mining.*

Haibing Lu, Yuan Hong, Yanjiang Yang, Yi Fang, and Lian Duan, 2014. Dynamic Workflow Adjustment with Security Constraints. *The Proceeding of the 28th Annual IFIP WG 11.3 Working Conference on Data and Application Security.*

Yuan Hong, Jaideep Vaidya, Haibing Lu, and Lingyu Wang, 2014. Collaboratively Solving the Traveling Salesman Problem with Limited Disclosure. *The Proceeding of the 28th Annual IFIP WG 11.3 Working Conference on Data and Application Security.*

Yanjiang Yang, Xuhua Ding, Haibing Lu, Zhiguo Wan and Jianying Zhou, 2013. Achieving Revocable Fine-Grained Cryptographic Access Control over Cloud Data. *The Proceeding of the 16th Information Security Conference.*

Yanjiang Yang, Xuhua Ding, Haibing Lu, Jian Weng and Jianying Zhou, 2013. Self-blindable Credential: Towards Anonymous Entity Authentication Upon Resource-constrained Devices. *The Proceeding of the 16th Information Security Conference.*

Haibing Lu, Yuan Hong, Yanjiang Yang, Lian Duan, and Nazia Badar, 2013. Towards User-Oriented Role Mining. *The Proceeding of the 27th Annual WG 11.3 Conference on Data Applications Security and Privacy.*

Haibing Lu, Yuan Hong, Nick Street, Fei Wang, and Hanghang Tong, 2012. Overlapping Clustering with Sparseness Constraints. *The Proceeding of the 12th International Conference on Data Ming.*

Yanjiang Yang, Haibing Lu, Jian Weng, Xuhua Ding, and Jianying Zhou, 2012. A Generic Approach for Providing Revocation Support in Secret Handshake. *The Proceeding of the 14th International Conference on Information and Communication Security.*

Yuan Hong, Jaideep Vaidya and Haibing Lu, 2012. Differentially Private Search Log Sanitization with Optimal Output Utility. *The Proceeding of the 15th Internal Conference on Extending Database Technology.*

Yanjiang Yang, Haibing Lu and Jian Weng, 2011. Multi-User Private Keyword Search for Cloud Computing. *The Proceeding of the 3rd IEEE International Conference on Cloud Computing Technology and Science.*

Yuan Hong, Jaideep Vaidya, Haibing Lu and Basit Shafiq, 2011. Privacy-preserving Tabu Search for Distributed Graph Coloring. *The Proceeding of the 3rd IEEE International Conference on Privacy, Security, Risk and Trust.*

Yuan Hong, Jaideep Vaidya and Haibing Lu, 2011. Search Engine Query Clustering using Top-k Search Results. *The Proceedings of the 10th IEEE/WIC/ACM International Conference on Web Intelligence.*

Emre Uzun, Vijayalakshmi Atluri, Haibing Lu and Jaideep Vaidya, 2011. An Optimization Model for the Extended Role Mining Problem. *The Proceeding of the 25th Annual WG 11.3 Conference on Data Applications Security and Privacy.*

Yuan Hong, Jaideep Vaidya and Haibing Lu, 2011. Efficient Distributed Linear Programming with Limited Disclosure. *The Proceeding of the 25th Annual WG 11.3 Conference on Data Applications Security and Privacy.*

Haibing Lu, Jaideep Vaidya, Vijay Atluri, Heechang Shin, and Lili Jiang, 2011. Weighted Rank-One Binary Matrix Factorization. *The Proceeding of the 2011 SIAM International Conference on Data Mining.*

Haibing Lu, Shengsheng Huang, 2011. Clustering Panel Data. *The Proceeding of the 2011 SIAM International Workshop on Data Mining for Marketing.*

Jaideep Vaidya, Vijay Atluri, Qi Guo, and Haibing Lu, 2010. Role Mining in the Presence of Noise. *The Proceeding of the 24nd Annual IFIPWG 11.3 Working Conference on Data and Application Security.*

Haibing Lu, JaideepVaidya, VijayAtluri, and Yuan Hong, 2009. Extended Boolean Matrix Decomposition The Proceeding of the 9th IEEE Internal Conference on Data Mining.

Haibing Lu, YingjiuLi, Vijay Atluri, and Jaideep Vaidya, 2009. An Efficient Online Auditing Approach to Limit Private Data Disclosure. *The Proceeding of the 12th Internal Conference on Extending Database Technology.*

Yingjiu Li and Haibing Lu, 2008. Disclosure Analysis and Control in Statistical Databases. *The Proceeding of the 13th European Symposium on Research in Computer Security.*

Haibing Lu, Xiaoyun He, Jaideep Vaidya, and Nabil Adam, 2008. Secure Construction of Contingency Tables from Distributed Data. *The Proceeding of the 22nd Annual IFIPWG 11.3 Working Conference on Data and Application Security.*

Haibing Lu, Jaideep Vaidya, and Vijay Atluri, 2008. Optimal Boolean Matrix Decomposition: Application to Role Engineering. *The Proceeding of the 24th International Conference on Data Engineering.*

Haibing Lu, Yingjiu Li, and Xintao Wu, 2006. Disclosure Risk in Dynamic Two-Dimensional Contingency Tables. *The Proceeding of the 2nd International Conference on Information System Security.*

Haibing Lu, Yingjiu Li, and Xintao Wu, 2006. Disclosure Analysis for Two-Way Contingency Tables. *The Proceeding of the 2006 Privacy in Statistical Databases.*

Yingjiu Li, Haibing Lu, and Robert Deng, 2006. Practical Inference Control for Data Cubes. *The Proceeding of the 2006 IEEE Symposium on Security and Privacy.*

BOOK CHAPTERS

Nabil Adam, Haibing Lu, Jaideep Vaidya, and Basit Shafiq, 2011. Statistical Databases. *Encyclopedia of Cryptography and Security.*

Haibing Lu, Shengsheng Huang, Yingjiu Li and Yanjiang Yang, 2014. Panel Data Analysis via Clustering and Variable Selection. *Data Mining for Services.*

WORKING PAPERS

Michele Samorani, Nan Liu, Shannon Harris, Haibing Lu. Machine Learning and Racial Disparity in Access to Health Care.

Xi Chen, Jiangpeng Dai, Xiaokun Zheng, Haibing Lu, Yi Fang, Yuan Wang, Xin Tang. Optimization Models for Extreme Fast Charging.

Fengmin Xu, Jieao Ma, Haibing Lu. Regime-based Group Sparse Enhanced Indexation Model with Data-driven

Guojie Song, Yizhou Zhang, Lingjun Xu, Haibing Lu. Domain Adaptive Network Embedding.

AWARDED GRANTS AND PROJECTS

GEIRI North America, Intelligent EV Fast Charging Station Siting and Sizing, Principle Investigator, 2020

AKTANA, Medical Sales Representative Engagement with Reinforcement Learning Phase II, Principle Investigator, 2019

Ultimate Software, Privacy-Preserving for Human Resources Intelligence, Principle Investigator, 2019

AKTANA, Medical Sales Representative Engagement with Reinforcement Learning Phase I, Principle Investigator, 2018

GEIRI North America, Chinese Address Standardization via Hybrid Approach Combining Machine Learning and Rule-Based Algorithms, Principle Investigator, 2017

Markkular Center, Fake News Detection on Social Media, 2015

OMIS (ISA) Department Grant, 2014-2019

SCU Course Release Research Grant, 2019

Leavey Business School Extraordinary Teaching Award, 2014, ...

Leavey Business School Extraordinary Service Award, 2014, ...

Leavey Business School Extraordinary Research Award, 2013, ...

SCU Faculty Summer Scholarship Stipend, 2015

Santa Clara University Research Grant, 2012, ...

IBM Faculty Research Grant, 2012

SIAM Travel Award, 2011

IEEE ICDM Travel Award (supported by NSF), 2009

Summer Research Award, Rutgers Business School, 2007 -2009

CIMIC Research Award, Rutgers Business School (one per school), 2008

EXTERNAL SERVICES

Leadership

President, AIS Special Interest Group in IS/IT Issues in Asia Pacific, 2017 - present

Guest editor, Special Issue on PACIS 2019, *Information & Management*

Guest editor, Special Issue on Big Data Analytics and Business Innovation, *International Journal of Technology, Policy and Management*

Co-Chair, Woman in Data Science - Santa Clara, 2020

Co-Chair, Workshop on Information Systems in Asia Pacific, 2018-present

Publicity chair, International Symposium on Security and Privacy in Social Networks and Big Data, 2018

Local chair, Workshop on Information Technology and Systems, 2018

Journal Referee

Information Systems Frontier

IEEE Transaction on Signal Processing

Knowledge and Information Systems

Production and Operations Management, IEEE Internet of Things Journal

IEEE Transaction on Service Computing

IEEE Systems Journal

Security and Communication Networks

IEEE Transactions on Information Forensics & Security

IEEE Transactions on Knowledge and Data Engineering

IEEE Transactions on Dependable and Secure Computing

IEEE Transactions on Information Forensics and Security

IEEE Transactions on Parallel and Distributed Systems

IEEE Transactions on Big Data

IEEE Transactions on Signal Processing

IEEE Transactions on Services Computing

INFORMS Information Systems Research
MIS Quarterly
Production and Operations Management
Computers & Security
International Journal of Information Security
Information Retrieval
Data Mining and Knowledge Discovery
Journal of Computer Security
Journal of Computer and System Sciences
Future Generation Computer Systems
Knowledge and Information Systems

Program Committee and Panelist
NSF Panelist
INFORMS Workshop on Data Science
ACM SIGKDD Conference on Knowledge Discovery and Data Mining
International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage
International Workshop on Trust, Security and Privacy for Big Data
International Conference on Data Science and Advanced Analytics
IEEE International Conference on Data Mining
International Conference on Security and Cryptography
IEEE International Conference on Cloud Computing Technology and Science
European Symposium on Research in Computer Security
ACM Symposium on Access Control Models and Technologies
Annual IFIP WG 11.3 Working Conference on Data and Application Security
International Conference on Future Internet of Things and Cloud
International Conference on Computer Science and Its Applications
ICDM Workshop on Data Mining Technologies for Computational Collective Intelligence
Session Chair at INFORMS Annual Meeting
Workshop on Information Technology and Systems
International Conference on Information Systems Security
International Conference on Algorithms and Architectures for Parallel Processing
Australasian Conference on Information Security and Privacy