

## Li Xiong

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### Education

- 1997 B.S., Computer Science, University of Science and Technology of China
- 1999 M.S., Computer Science, Johns Hopkins University
- 2005 Ph.D., Computer Science, Georgia Institute of Technology

### Positions Held

- 2016 - Professor, Mathematics and Computer Science, Biomedical Informatics, Emory University
- 2015 - 2018 Winship Distinguished Research Professor, Emory University
- 2012 - 2016 Associate Professor, Mathematics and Computer Science, Biomedical Informatics, Emory University
- 2005 - 2012 Assistant Professor, Mathematics and Computer Science, Emory University
- 2001 Software Engineer, Internet Security Systems (acquired by IBM)
- 1999 - 2000 Software Engineer, SRA International

### Honors and Awards

- 2017 Faculty appreciation award, Undergraduate Admissions Office, Emory University
- 2016 Best paper award, 17<sup>th</sup> IEEE International Conference on Mobile Data Management (MDM)
- 2016 Google Research Award
- 2015 Computing Community Consortium (CCC) Blue Sky Ideas Best Paper Award, 23rd ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (SIGSPATIAL)
- 2015 Winship Distinguished Research Award, Emory University
- 2013 Best student paper award (advisor and co-author), 27th IFIP WG 11.3 Conference on Database and Applications Security and Privacy (DBSec)
- 2010 IBM Smarter Healthcare Faculty Innovation Award
- 2010 Cisco University Research Award
- 2009 Career Enhancement Fellowship, Woodrow Wilson Foundation (20 awarded nationally across all disciplines)
- 2008 Best paper award, 8<sup>th</sup> International Conference on Computational Science (ICCS)
- 2004 Grace Hopper Celebration of Women in Computing Scholarship, Georgia Institute of Technology

- 1999 Project Excellence Award, SRA International
- 1997 Guo Moruo Prize, University of Science and Technology of China (USTC)

## External Funding

- Georgia Clinical & Translational Science Alliance (Georgia CTSA)  
*National Institutes of Health (NIH) CTSA Award, 2017-2022*  
Role: Emory Co-Investigator (5% effort)
- Decentralized differentially-private methods for dynamic data release and analysis  
*National Institutes of Health (NIH), R01GM118609*  
\$661,798 (Emory portion out of total budget \$2,325,463), 01/01/2017 – 12/30/2020  
Role: Emory PI  
PI/PD: Xiaoqian Jiang (UCSD), Lucila Ohno-Machado (UCSD)  
Co-investigators: Andrew Post (Emory); Robert El-Kareh (UCSD), Shuang Wang (UCSD)
- TWC: Small: Rigorous and Customizable Privacy for Location Based Applications  
*National Science Foundation (NSF) #CNS-1618932*  
\$456,399, 9/1/2016 – 8/31/2019  
Role: PI
- Next Generation Frameworks for Secure DDDAS/Infosymbiotics Systems  
*Air Force Office of Scientific Research (AFOSR) DDDAS Program, FA9550-12-1-0240*  
\$499,783, 9/1/2016 – 8/31/2019  
Role: PI  
Co-PI: Vaidy Sunderam (Emory)
- SHARE: Statistical Health Information Release with Differential Privacy  
*National Institutes of Health (NIH), R01GM114612*  
\$1,022,785, 04/01/2015 – 03/31/2019  
Role: PI/PD  
Co-Investigators: Andrew Post (Emory), Xiaoqian Jiang (UCSD), Lucila Ohno-Machado (UCSD)
- Building Data Registries with Privacy and Confidentiality for PCOR  
*Patient-Centered Outcomes Research Institute (PCORI), ME-1310-07058*  
\$1,101,042, 10/17/2014 - 11/24/2018  
Role: PI/PD  
Co-Investigators: Andrew Post (Emory), Qi Long (Emory), Xiaoqian Jiang (UCSD), Lucila Ohno-Machado (UCSD)
- Extending Differential Privacy for Privacy Preserving Location Sharing  
*Google Research Award*  
\$43,373, 2016 – 2017  
Role: PI

- I-Corps: iCloak: Privacy Preserving Individual Location Sharing  
*National Science Foundation (NSF), #IIP-1619679*  
\$50,000, 1/1/2016 – 3/31/2017  
Role: PI  
Entrepreneurial Lead: Yonghui Xiao (Emory), Business Mentor: Kyutae Lim (Georgia Tech)
- PREDICT: Privacy and Security Enhancing Dynamic Information Monitoring  
*Air Force Office of Scientific Research (AFOSR) DDDAS Program, FA9550-12-1-0240*  
\$498,023, 4/1/2012 – 3/31/2015  
Role: Co-PI  
PI: Vaidy Sunderam (Emory)
- TC: Adaptive Differentially Private Data Release  
*National Science Foundation (NSF), #CNS-1117763*  
\$429,647, 9/1/2011- 8/31/2015  
REU (Research Experiences for Undergraduates) supplement, \$16,000  
Role: PI
- Enabling Privacy for Data Federation Services  
*Cisco University Research Award*  
\$50,063, 2010  
Role: PI
- Hippocratic Database Technology  
*IBM Smarter Healthcare Faculty Innovation Award*  
\$10,000, 2010
- Career Enhancement Fellowship for Junior Faculty  
*Woodrow Wilson Foundation*  
\$30,000, 2009-2010
- Integrated Health Information De-identification  
*International Science Cooperation Fund, China, GJ200807210023A*  
¥300,000, 2009-2011  
Joint PI: Chun Yuan (Tsinghua University, China)

### **Internal Grants**

- Trust-aware Information Fusion for Spatiotemporal dynamic data systems  
*Emory College Program to Enhance Research and Scholarship (PERS), \$6000, 2016*
- SHARE: Statistical Health Information Release with Differential Privacy  
*Emory University Research Committee (URC), \$30,000, 2011-2012*
- Linking Emory Health Research with caBIG Initiative  
*Emory University Information Technology Subcommittee (ITSC) Research Grant, \$95,000, 2007 – 2009 (Co-PI, PI: James Lu)*

- HIDE: Health Information DE-identification  
*Emory University Research Committee (URC)*, \$30,000, 2007 – 2008
- Data Privacy and Security  
*Center for Teaching and Curriculum (CTC) Course Development Fund*, \$3000, 2007
- Data Interface Toolkit  
*Emory College Seed Research Fund*, \$50,000, 2006 – 2007 (Co-PI, PI: James Lu)

## **Publications – Refereed Journal Articles**

(\* *student advisees*)

- J-1. Chencheng Li, Pan Zhou, Li Xiong, Qiang Wang, Ting Wang. Differentially Private Distributed Online Learning. *IEEE Transactions on Data and Knowledge Engineering (TKDE)*, 2018
- J-2. Xiang Cheng, Sen Su, Shengzhi Xu, Li Xiong, Ke Xiao, Mingxing Zhao. A Two-Phase Algorithm for Differentially Private Frequent Subgraph Mining. *IEEE Transactions on Data and Knowledge Engineering (TKDE)*, 2018
- J-3. Meng Wang, Zhanglong Ji, Hyeon-Eui Kim, Shuang Wang, Li Xiong, Xiaoqian Jiang. Selecting Optimal Subset to release under Differentially Private M-estimators from Hybrid Datasets. *IEEE Transactions on Data and Knowledge Engineering (TKDE)*, 2017
- J-4. Boyang Wang, Ming Li, Li Xiong. FastGeo: Efficient Geometric Range Queries on Encrypted Spatial Data. *IEEE Transactions on Dependable and Secure Computing (TDSC)*, 2017
- J-5. Shengzhi Xu\*, Sen Su, Xiang Cheng, Zhengyi Li, Li Xiong. Differentially Private Frequent Sequence Mining. *IEEE Transactions on Data and Knowledge Engineering (TKDE)*, 28(11), 2016
- J-6. Luca Bonomi\*, Li Xiong. On Differentially Private Longest Increasing Subsequence Computation in Data Stream. *Transactions on Data Privacy (TDP)*, 2016
- J-7. Layla Pournajaf\*, Daniel Garcia-Ulloa\*, Li Xiong, Vaidy Sunderam. Participant Privacy in Mobile Crowd Sensing Task Management: A Survey of Methods and Challenges. *SIGMOD Record*, 44(4): 23-34, December 2015
- J-8. Slawomir Goryczka\*, Li Xiong. A Comprehensive Comparison of Multiparty Secure Sum with Differential Privacy. *IEEE Transactions on Dependable and Secure Computing (TDSC)*, 2015
- J-9. Chia-Lun Lu, Shuang Wang, Zhanglong Ji, Yuan Wu, Li Xiong, Xiaoqian Jiang, Lucila Ohno-Machado. WebDISCO: a Web service for DIStributed COx model learning without patient-level data sharing. *Journal of the American Medical Informatics Association (JAMIA)*, 22(6): 1212-1219, 2015
- J-10. Jinfei Liu\*, Li Xiong, Xiaofeng Xu. Faster output-sensitive skyline computation algorithm. *Inf. Process. Lett.* 114(12): 710-713 (2014)
- J-11. Yonghui Xiao\*, Li Xiong, Liyue Fan\*, Slawomir Goryczka\*, Haoran Li\*. DPCube: Differentially Private Histogram Release through Multidimensional Partitioning, *Transactions of Data Privacy (TDP)*, 7(3): 195-222, 2014

- J-12. Liyue Fan\*, Li Xiong. An Adaptive Approach to Real-Time Aggregate Monitoring with Differential Privacy. *IEEE Transactions on Data and Knowledge Engineering (TKDE)*, 26(9): 2094-2106, 2014
- J-13. Slawomir Goryczka\*, L. Xiong, B. C. M. Fung. m-Privacy for Collaborative Data Publishing. *IEEE Transactions on Data and Knowledge Engineering (TKDE)*, 26(10): 2520-2533, 2014
- J-14. Haoran Li\*, Li Xiong, Lucila Ohno-Machado, Xiaoqian Jiang. Privacy Preserving RBF Kernel Support Vector Machine, *BioMed Research International*, Volume 2014, Article 827371, 10 pages, 2014
- J-15. Zhanglong Ji, Xiaoqian Jiang, Shuang Wang, Li Xiong and Lucila Ohno-Machado. Differentially Private Distributed Logistic Regression using Private and Public Data. *BMC Medical Genomics* 2014, 7 (Suppl 1):S14
- J-16. Jinfei Liu\*, Li Xiong, Jun Luo. Semantic Security: Privacy Definitions Revisited. *Transactions on Data Privacy (TDP)*, 6:3 (2013)
- J-17. J. Liu\*, L. Xiong, J. Luo, J. Huang. Privacy Preserving Distributed DBSCAN Clustering. *Transactions on Data Privacy (TDP)*, 6:1 (2013)
- J-18. James Gardner\*, Li Xiong, Yonghui Xiao\*, Jingjing Gao, Andrew Post, Xiaoqian Jiang, Lucila Ohno-Machado. SHARE: System Design and Case Studies for Statistical Health Information Release. *Journal of the American Medical Informatics Association (JAMIA)*, 2013; 20: 109-116, 2013
- J-19. B. Fung, T. Trojer, P. Hung, L. Xiong, K. Al-Hussaeni, R. Dssouli. Service-Oriented Architecture for High-Dimensional Private Data Mashup. *IEEE Transactions on Services Computing (TSC)*, 5(3), 2012
- J-20. S. Kang, S. Elf, K. Lythgoe, T. Hitosugi, J. Taunton, W. Zhou, L. Xiong, D. Wang, S. Muller, S. Fan, S. Sun, A. I. Marcus, T. Gu, R. D. Polakiewicz, Z. Chen, F. R. Khuri, D. M. Shin, and J. Chen. p90 Ribosomal S6 Kinase 2 Promotes Head and Neck Cancer Cell Invasion and Tumor Metastasis, *Journal of Clinical Investigation*, Vol. 120, No. 4, 1165-1177, April 2010
- J-21. J. Gardner\*, L. Xiong. An integrated framework for anonymizing unstructured medical data, *Data and Knowledge Engineering (DKE)*, Elsevier, 68(12), 2009
- J-22. J. Gardner\*, A. Krowne, L. Xiong. NNexus: Automatic Linking for Distributed and Collaborative Corpora. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 21(6), 2009
- J-23. D. Zhong, L. Xiong, T. Liu, X. Liu, X. Liu, J. Chen, S. Sun, F. R. Khuri, Y. Zong, Q. Zhou, and W. Zhou. The Glycolytic Inhibitor 2-Deoxyglucose Activates Multiple Prosurvival Pathways through IGF1R. *The Journal of Biological Chemistry*, 284 (35), pp. 23225–23233, 2009
- J-24. P. Jurczyk\*, J. J. Lu, L. Xiong, J. D. Cragan, A. Correa, Fine-grained record integration and linkage tool, *Birth defects research. Part A, Clinical and molecular teratology*, 82(11): 822-9, 2008
- J-25. L. Xiong, S. Chitti, L. Liu. Preserving Data Privacy in Outsourcing Data Aggregation Services. *ACM Transactions on Internet Technology (TOIT)*, 7(3), 2007

- J-26. D. Zhong, A. Morikawa, L. Guo, C. Colpaert, L. Xiong, A. R. Nassar, C. Chen, J. Dong, W. Zhou. Homozygous Deletion of SMAD4 in Breast Cancer Cell Lines and Invasive Ductal Carcinomas. *Cancer Biology and Therapy*, 5(6), 2006
- J-27. L. Xiong, L. Liu. PeerTrust: Supporting Reputation-Based Trust in Peer-to-Peer Communities. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 16(7), 2004

### **Publications – Refereed Conference Papers**

- C-1. Ardavan Afshar, Joyce Ho, Bistra Dilkina, Ioakeim Perros, Elias Khalil, Li Xiong and Vaidy Sunderam. CP-ORTHO: An Orthogonal Tensor Factorization Framework for Spatio-Temporal Data. *ACM SIGSPATIAL*, 2017
- C-2. Wenhui Yu, Zheng Qin, Jinfei Liu\*, Li Xiong, Xu Chen, Huidi Zhang. Fast Algorithm of Pareto Optimal Group-based Skyline. *International Conference on Information and Knowledge Management (CIKM)*, 2017
- C-3. Daniel Garcia Ulloa\*, Li Xiong, Vaidy Sunderam. Truth Discovery for SpatioTemporal Events from Crowdsourced Data. *Proceedings of the VLDB Endowment (PVLDB)*, Volume 10, 2017
- C-4. Yonghui Xiao\*, Li Xiong, Si Zhang, Yang Cao. LocLok: Location Cloaking with Differential Privacy via Hidden Markov Model. *Proceedings of the VLDB Endowment (PVLDB)*, demo track, Volume 10, 2017
- C-5. Liyue Fan, Luca Bonomi, Cyrus Shahabi, Li Xiong. Multi-user Itinerary Planning for Optimal Group Preference. *International Symposium on Spatial and Temporal Databases (SSTD)*, 2017
- C-6. Michael Solomon\*, Vaidy Sunderam, Li Xiong, Ming Li. Mutually Private Location Proximity Detection with Access Control. *31st Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSec)*, 2017
- C-7. Haoran Li\*, Li Xiong, Xiaoqian Jiang. Partitioning Mechanisms for Personalized Differential Privacy. *The Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2017
- C-8. Yang Cao\*, Masatoshi Yoshikawa, Yonghui Xiao\* and Li Xiong. Quantifying Differential Privacy under Temporal Correlations. *33rd IEEE International Conference on Data Engineering (ICDE)*, 2017
- C-9. Jinfei Liu\*, Juncheng Yang\*, Li Xiong and Jian Pei. Secure Skyline Queries on Cloud Platform. *33rd IEEE International Conference on Data Engineering (ICDE)*, 2017
- C-10. Sicong Zhang, Grace Hui Yang, Lisa Singh, Li Xiong. Safelog: Supporting Web Search and Mining by Differentially-Private Query Logs. *AAAI Fall Symposium on Privacy and Language Technologies (PLT)*, 2016
- C-11. Xiaofeng Xu\*, Li Xiong, Vaidy Sunderam, Yonghui Xiao. A Markov Chain Based Pruning Method for Predictive Range Queries, *ACM SIGSPATIAL*, 2016
- C-12. Michael G. Solomon\*, Vaidy Sunderam, Li Xiong, Ming Li. Enabling Mutually Private Location Proximity Services in Smart Cities: A Comparative Assessment. *IEEE Second International Smart Cities Conference (ISC2)*, 2016

- C-13. Xiaofeng Xu\*, Li Xiong, Vaidy Sunderam. D-Grid: An In-Memory Dual Space Grid Index for Moving Object Databases. In 17th IEEE International Conference on Mobile Data Management (MDM), 2016 (**Best paper award**)
- C-14. Shengzhi Xu\*, Sen Su, Li Xiong, Xiang Cheng, Ke Xiao, Differentially Private Frequent Subgraph Mining. 32nd IEEE International Conference on Data Engineering (ICDE), 2016
- C-15. Yonghui Xiao\*, Li Xiong. Protecting Locations with Differential Privacy under Temporal Correlations. 22nd ACM Conference on Computer and Communications Security (CCS), 2015
- C-16. Jinfei Liu\*, Li Xiong, Jian Pei, Jun Luo, and Haoyu Zhang\*. Finding Pareto Optimal Groups: Group-based Skyline. PVLDB 8(13), 2015
- C-17. Jinfei Liu\*, Haoyu Zhang\*, Li Xiong, Haoran Li\*, and Jun Luo. Finding Probabilistic k-Skyline Sets on Uncertain Data. 24th ACM International Conference on Information and Knowledge Management (CIKM), 2015
- C-18. Haoran Li\*, Li Xiong, Xiaoqian Jiang, and Jinfei Liu\*. Differentially Private Histogram Publication for Dynamic Datasets: An Adaptive Sampling Approach. 24th ACM International Conference on Information and Knowledge Management (CIKM), 2015
- C-19. Xiaofeng Xu\*, Li Xiong, Vaidy Sunderam, Jinfei Liu\* and Jun Luo. VPIndexer: Velocity-based Partitioning for Indexing Moving Objects (demo track), ACM SIGSPATIAL, 2015
- C-20. Layla Pournajaf\*, Li Xiong and Vaidy Sunderam. STAC: Spatial Task Assignment for Crowd Sensing with Cloaked Participant Locations (demo track), ACM SIGSPATIAL, 2015
- C-21. Cyrus Shahabi, Liyue Fan, Luciano Nocera, Li Xiong and Ming Li. Privacy-Preserving Inference of Social Relationships from Location Data: A Vision Paper, ACM SIGSPATIAL, 2015 (**CCC Blue Sky Ideas Best Paper Award**)
- C-22. Jinfei Liu\*, Li Xiong. Secure Similarity Queries: Enabling Precision Medicine with Privacy. In VLDB Workshop on Data Management and Analytics for Medicine and Healthcare, 2015
- C-23. Xiaofeng Xu\*, Li Xiong, Vaidy Sunderam, Jinfei Liu\* and Jun Luo. Speed Partitioning for Indexing Moving Objects. 14th International Symposium on Spatial and Temporal Databases (SSTD), 2015
- C-24. Li Xiong, Vaidy S. Sunderam. Security and Privacy Dimensions in Next Generation DDDAS/Infosymbiotic Systems: A Position Paper. International Conference on Computational Science (ICCS), 2015
- C-25. Shengzhi Xu\*, Sen Su, Xiang Cheng, Zhengyi Li, Li Xiong. Differentially Private Frequent Sequence Mining via Sampling-based Candidate Pruning. 31st IEEE International Conference on Data Engineering (ICDE), 2015
- C-26. Luca Bonomi\* and Li Xiong. Private Computation of the Longest Increasing Subsequence in Data Streams. Workshop on Privacy and Anonymity in Information Society (PAIS), in conjunction with EDBT, 2015

- C-27. Xiaofeng Xu\*, Li Xiong, Jinfei Liu. Database Fragmentation with Confidentiality Constraints: A Graph Search Approach. Fifth ACM Conference on Data and Application Security and Privacy (CODASPY), 2015
- C-28. Raquel Hill, Michael Hansen, Erick Janssen, Stephanie A. Sanders, Julia R. Heiman, Li Xiong. A Quantitative Approach for Evaluating the Utility of a Differentially Private Behavioral Science Dataset. IEEE International Conference on Healthcare Informatics (ICHI), 2014
- C-29. Haoran Li\*, Li Xiong, Lifan Zhang\*, Xiaoqian Jiang. DPSynthesizer: Differentially Private Data Synthesizer for Privacy Preserving Data Sharing (demo track). 40th International Conference on Very Large Data Bases (VLDB), 2014
- C-30. Michael Solomon\*, Vaidy Sunderam and Li Xiong. Towards Secure Cloud Database with Fine-Grained Access Control. 28th IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSec), 2014
- C-31. Layla Pournajaf\*, Li Xiong, Vaidy Sunderam, Slawomir Goryczka. Spatial Task Assignment for Crowd Sensing with Cloaked Locations. In 15th IEEE International Conference on Mobile Data Management (MDM), 2014
- C-32. Layla Pournajaf\*, Li Xiong, Vaidy Sunderam. Dynamic Data Driven Crowd Sensing Task Assignment. In DDDAS Workshop, in conjunction with ICCS 2014
- C-33. Jun Luo, Jinfei Liu, Li Xiong. Privacy Preserving Publication of Locations Based on Delaunay Triangulation. In 18th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), 2014
- C-34. Liyue Fan\*, Luca Bonomi\*, Li Xiong, Vaidy Sunderam. Monitoring Web Browsing Behaviors with Differential Privacy. In WWW 2014
- C-35. Haoran Li\*, Li Xiong, Xiaoqian Jiang. Differentially Private Synthesization of Multi-Dimensional Data using Copula Functions. In EDBT 2014
- C-36. Liyue Fan\*, Li Xiong. Differentially Private Anomaly Detection with a Case Study on Epidemic Outbreak Detection. IEEE Workshop on Privacy Aspects of Data Mining (PADM), in conjunction with International Conference on Data Mining (ICDM), 2013
- C-37. Luca Bonomi\*, Li Xiong. A Two-Phase Algorithm for Mining Sequential Patterns with Differential Privacy. In 22<sup>nd</sup> ACM Intl. Conference on Information and Knowledge Management (CIKM), 2013
- C-38. Liyue Fan\*, Li Xiong, Vaidy Sunderam. Real-Time Monitoring of Multi-Dimensional Time-Series with Differential Privacy. 27th IFIP WG 11.3 Conference on Data and Applications Security and Privacy (DBSEC), 2013 (**Best student paper award**)
- C-39. L. Bonomi\*, L. Xiong, J. Lu. LinkIT: Privacy Preserving Record Linkage and Integration via Transformations (demo track). ACM SIGMOD, 2013
- C-40. L. Fan\*, L. Xiong, V. Sunderam. FAST: Differentially Private Real-Time Aggregate Monitor with Filtering and Adaptive Sampling (demo track). ACM SIGMOD, 2013
- C-41. Li Xiong, Vaidy Sunderam, Liyue Fan\*, Slawomir Goryczka\*, Layla Pournajaf\*. PREDICT: Privacy and Security Enhancing Dynamic Information Collection and Monitoring. In DDDAS Workshop, in conjunction with ICCS, 2013
- C-42. Slawomir Goryczka\*, Li Xiong and Vaidy Sunderam. Secure Multiparty Aggregation with Differential Privacy: A Comparative Study. In 6th International Workshop on



- Privacy and Anonymity in the Information Society (PAIS), in conjunction with the International Conference on Extended Database Technology (EDBT), 2013
- C-43. Jinfei Liu\*, Li Xiong and Jun Luo. A Privacy Framework: Indistinguishable Privacy. In 6th International Workshop on Privacy and Anonymity in the Information Society (PAIS), in conjunction with the International Conference on Extended Database Technology (EDBT), 2013
- C-44. Luca Bonomi\*, Li Xiong, Rui Chen, and Benjamin C. M. Fung. Frequent grams based Embedding for Privacy Preserving Record Linkage. In 21st ACM International Conference on Information and Knowledge Management (CIKM), 2012
- C-45. Liyue Fan\*, Li Xiong. Real-Time Aggregate Monitoring with Differential Privacy. In 21st ACM International Conference on Information and Knowledge Management (CIKM), 2012
- C-46. Syed Raheel Hassan, Julien Bourgeois, Vaidy Sunderam, Li Xiong. Detection of Distributed Attacks in Hybrid & Public Cloud Networks. In 8th International Conference on Semantics, Knowledge and Grids (SKG), 2012
- C-47. Y. Xiao\*, J. Gardner\*, L. Xiong. DPCube: Releasing Differentially Private Data Cubes for Health Information (demo track). In 28th IEEE International Conference on Data Engineering (ICDE), 2012
- C-48. P. Jurczyk\*, L. Xiong, S. Goryczka\*. DObjects+: Enabling Privacy-Preserving Data Federation Services (demo track). In 28th IEEE International Conference on Data Engineering (ICDE), 2012
- C-49. J. Liu\*, J. Luo, J. Huang, L. Xiong. Privacy Preserving Distributed DBSCAN Clustering. In 5th International Workshop on Privacy and Anonymity in the Information Society (PAIS), in conjunction with the International Conference on Extended Database Technology (EDBT), 2012
- C-50. K. Thayer\*, L. Xiong, V. Hertzberg. IFC Soft: Visual Comparison of Flow Cytometry Data Using Self-Organizing Maps (demo track). In 2nd ACM SIGHIT International Health Informatics Symposium (IHI), 2012
- C-51. S. Goryczka\*, L. Xiong, B. C. M. Fung. m-Privacy for Collaborative Data Publishing. 7th International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom), 2011
- C-52. P. Jurczyk\*, L. Xiong. Information Sharing Across Private Databases: Secure Union Revisited. In 3rd IEEE International Conference on Privacy, Security, Risk and Trust (PASSAT), 2011
- C-53. R. Chen, N. Mohammed, B. C. M. Fung, B. C. Desai, L. Xiong. Publishing Set-Valued Data via Differential Privacy. In 37th International Conference on Very Large Data Bases (VLDB), 2011
- C-54. L. Xiong, S. Goryczka\*, V. Sunderam. Adaptive, Secure, and Scalable Distributed Data Outsourcing: A Vision Paper. In Workshop on Dynamic Distributed Data-Intensive Applications, Programming Abstractions, and Systems (3DAPAS), in conjunction with HPDC, 2011
- C-55. J. Gardner\*, L. Xiong, F. Wang, A. Post, J. Saltz, T. Grandison. An evaluation of feature sets and sampling techniques for statistical de-identification of medical records. In 1st ACM International Health Informatics Symposium (IHI), 2010

- C-56. P. Shi\*, L. Xiong, B. C. M. Fung. Anonymizing Data with Quasi-Sensitive Attribute Values (short paper). In 19th ACM International Conference on Information and Knowledge Management (CIKM), 2010
- C-57. Y. Xiao\*, L. Xiong, C. Yuan. Differentially private data release through multidimensional partitioning. In Secure Data Management (SDM), 7th VLDB Workshop, Lecture Notes in Computer Science, 2010
- C-58. Y. Zhu\*, L. Xiong, C. Verdery\*. Anonymizing User Profiles for Personalized Web Search (poster). In International Conference on World Wide Web (WWW), 2010
- C-59. J. Gardner\*, L. Xiong. Automatic Link Detection: A Sequence Labeling Approach (short paper). In International Conference on Information and Knowledge Management (CIKM), 2009
- C-60. P. Jurczyk\*, L. Xiong. Dynamic query processing for distributed data services in the cloud. In 20th International Conference on Database and Expert Systems Applications (DEXA), 2009
- C-61. P. Jurczyk\*, L. Xiong. Distributed Anonymization: Achieving Privacy for Both Data Subjects and Data Providers. In 23rd Annual IFIP WG 11.3 Working Conference on Data and Applications Security (DBSec), 2009
- C-62. J. Gardner\*, L. Xiong. HIDE: Heterogeneous Information DE-identification (demo track). In 12th International Conference on Extending Database Technology (EDBT), 2009
- C-63. J. Gardner\*, A. Krowne, L. Xiong. NNexus: An Automatic Linker for Collaborative Web-Based Corpora (demo track). In 12th International Conference on Extending Database Technology (EDBT), 2009
- C-64. P. Jurczyk\*, L. Xiong. Adapting Distributed Commit Protocol for Large-scale and Dynamic Distributed Applications. In 16th Cooperative Information Systems (CoopIS), 2008
- C-65. L. Liu\*, L. Xiong, J. Lu, K. Gernert, V. Hertzberg. Comparing and Clustering Flow Cytometry Data. In 2nd IEEE Conf. on Bioinformatics and Biomedicine (BIBM), 2008
- C-66. P. Jurczyk\*, L. Xiong. Architecture for Privacy-Preserving Integration and Querying of Distributed and Heterogeneous Data. In PhD workshop (PIKM) at ACM Conference on Information and Knowledge Management (CIKM), 2008
- C-67. P. Jurczyk\*, L. Xiong. Privacy-Preserving Data Publishing for Horizontally Partitioned Databases (poster). In ACM Conference on Information and Knowledge Management (CIKM), 2008
- C-68. P. Jurczyk\*, J. J. Lu, L. Xiong, J. D. Cragan, A. Correa. FRIL: A Tool for Comparative Record Linkage. In AMIA 2008 Annual Symposium, 2008
- C-69. P. Jurczyk\*, L. Xiong. DObjects: Enabling Data Services for Distributed and Heterogeneous Data Sources (demo track). In 34th Conference on Very Large Data Bases (VLDB), 2008
- C-70. P. Jurczyk\*, L. Xiong, V. Sunderam. DObjects: Enabling Distributed Data Services for Metacomputing Frameworks. In International Conference on Computational Science (ICCS), 2008 (**Best Paper Award**)

- C-71. J. Gardner\*, L. Xiong. HIDE: A Health Information DE-identification System. In 21st IEEE International Symposium on Computer-Based Medical Systems (CBMS), 2008
- C-72. L. Xiong, K. Rangachari\*. Towards Application-Oriented Data Anonymization. In SIAM Workshop on Practical Privacy-Preserving Data Mining (P3DM) at SIAM International Conference on Data Mining (SDM), 2008
- C-73. C. LaRosa\*, L. Xiong, K. Mandelberg. Frequent Pattern Mining for Kernel Trace Data. In ACM Symposium on Applied Computing (SAC), Data Mining Track, 2008
- C-74. L. Xiong, L. Liu, M. Ahamad. Countering Feedback Sparsity and Manipulation in Reputation Systems. In 3rd IEEE Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom), 2007
- C-75. L. Xiong, P. Jurczyk\*, L. Liu. Mining Distributed Private Databases using Random Response Protocols. In NSF Symposium on Next Generation of Data Mining and Cyber-Enabled Discovery for Innovation (NGDM), 2007
- C-76. L. Xiong, E. Agichtein. Towards Privacy Preserving Query Log Publishing and Analysis. In Query Log Analysis Workshop at International Conference on World Wide Web (WWW), 2007
- C-77. L. Xiong, S. Chitti, L. Liu. Mining Multiple Private Databases using a Privacy Preserving *kNN* Classifier. In ACM Symposium on Applied Computing (SAC), Data Mining Track, 2007
- C-78. J. Gardner\*, A. Krowne, L. Xiong. NNexus: Towards a Subject-Steered Automatic Linker for a Massively-Distributed Collaborative Corpus. In Workshop on Mobility, Collaborative Working, and Emerging Applications at 2nd IEEE International Conference on Collaborative Computing (CollaborateCom), 2006
- C-79. L. Xiong, S. Chitti, L. Liu. *K* Nearest Neighbor Classification across Multiple Private Databases (poster). In 15th ACM Conference on Information and Knowledge Management (CIKM), 2006
- C-80. L. Xiong, S. Chitti, L. Liu. Top-*k* Queries across Multiple Private Databases. In 25th International Conference on Distributed Computing Systems (ICDCS), 2005
- C-81. M. Srivatsa, L. Xiong, L. Liu. TrustGuard: Countering Vulnerabilities in Reputation Management for Decentralized Overlay Networks. In 14th International World Wide Web Conference (WWW), 2005
- C-82. M. Srivatsa, L. Xiong, L. Liu. ExchangeGuard: A Distributed Protocol for Electronic Fair-Exchange. In 19th IEEE International Parallel & Distributed Processing Symposium (IPDPS), 2005
- C-83. L. Xiong, L. Liu. A Reputation-Based Trust Model for Peer-to-Peer eCommerce Communities. In IEEE Conference on Electronic Commerce (CEC), 2003
- C-84. L. Xiong, L. Liu. A Reputation-Based Trust Model for Peer-to-Peer eCommerce Communities (poster). In 4th ACM Conference on Electronic Commerce (EC), 2003
- C-85. L. Xiong, L. Liu. Building Trust in Decentralized Peer-to-Peer Electronic Communities. In 5th International Conference on Electronic Commerce Research (ICECR), 2002

## **Publications - Refereed Book Chapters, Invited, and Other Articles**

- B-1. Haoran Li\*, Li Xiong, Xiaoqian Jiang. Differentially Private Histogram and Synthetic Data Publication. In Medical Data Privacy Handbook, Gkoulalas-Divanis, Aris, Loukides, Grigorios (Eds.), pp. 35-58, Springer 2015
- B-2. Luca Bonomi\*, Liyue Fan\*, Li Xiong. A Review of Privacy Preserving Mechanisms for Record Linkage. In Medical Data Privacy Handbook, Gkoulalas-Divanis, Aris, Loukides, Grigorios (Eds.), pp. 233-265, Springer 2015
- B-3. J. Gardner\*, L. Xiong, A. Krowne. Invocation Linking for Collaborative Web-Based Corpus. In R. Chbeir, A. Hassanien, A. Abraham, Y. Badr (Ed.), Emergent Web Intelligence, Springer Verlag, 2010
- B-4. J. Gardner\*, L. Xiong, F. Wang, A. Post, J. Saltz. De-Identifying Pathology Reports for Pathology Informatics (extended abstract), Pathology Informatics, 2010
- B-5. L. Xiong, J. Gardner\*, P. Jurczyk\*, James Lu. Privacy Preserving Data Mining on EHRs. In Vagelis Hristidis (Ed.), Information Discovery on EHRs, CRC Press, 2009
- B-6. L. Xiong, T. M. Truta, F. Fotouhi. Report on the International Workshop on Privacy and Anonymity in the Information Society (PAIS 2008). SIGMOD Record 37(4), 2008
- B-7. L. Xiong, Y. Xia. Report on ACM Workshop on Health Information and Knowledge Management (HIKM 2006). SIGMOD Record 36(2): 39-42, 2007
- B-8. L. Xiong, L. Liu. Reputation and Trust in Mobile Commerce. In Hu, W., Lee, C., and Kou, W. (Ed.), Advances in Security and Payment Methods for Mobile Commerce, ISBN 1591403456, IGI Publishing, 2005
- B-9. D. Buttler, M. Coleman, T. Critchlow, R. Fileto, W. Han, L. Liu, C. Pu, D. Rocco, L. Xiong. Querying Multiple Bioinformatics Data Sources: Can Semantic Web Research Help? SIGMOD Record, 31(4), 2002

## **Patents**

- Methods and Systems for Determining Protected Location Information Based on Temporal Correlations, U.S. Patent No. 9,867,041

## **Invited Talks and Panels**

(Contributed talks not listed, included under conference publications)

- “A Geospatial Software to Protect the Privacy of Location Data”, NSF Workshop on Geospatial Software: Connecting Big Data with Geospatial Discovery and Innovation, Los Angeles, January 2018
- “Privacy Preserving Data Sharing and Analytics with Differential Privacy”, Colloquium, Computer Science Department, University of Southern California, November 2017
- “Privacy Preserving Data Sharing and Analytics with Differential Privacy”, Seminar, Johns Hopkins University Information Security Institute, Baltimore, September, 2017
- “Health Data Management and Analytics with Privacy and Confidentiality”, VLDB Workshop on Data Management and Analytics for Healthcare and Medicine (DMAH) (**keynote**), Munich, September, 2017

- “Where Are We Now? Where Should We Go Next?”, Research Panel, 15<sup>th</sup> International Symposium on Spatial & Temporal Databases (SSTD), Arlington, August 2017
- “Skyline for Similarity Search: New Definitions, Data Structures, and Algorithms”, Beijing University of Post and Telecommunications, Beijing, China, May 2017
- “Building Data Registries with Privacy and Confidentiality for PCOR”, Health Innovation Symposium XIX, Atlanta, April 2017
- “The Incredible World of Big Data: A ‘Private’ Tour”, Emory Undergraduate Admissions Open House Faculty Showcase, Atlanta, April 2017
- “Privacy Preserving Data Sharing and Analytics with Differential Privacy”, Computer Science Colloquium, Dartmouth College, Hanover, Jan 2017
- “The Incredible World of Big Data: A ‘Private’ Tour”, Emory Undergraduate Admission Program, Atlanta, November 2016
- “Extending Differential Privacy for Location Based Applications”, Google, Mountain View, 2016
- “Privacy Preserving Data Sharing and Analytics with Differential Privacy”, Facebook, Menlo Park, 2016
- Data Privacy Panel, France/Atlanta Cybersecurity Symposium, October, Atlanta, 2016
- “Can we have secure and practical and usable systems”, Academic panel, NSF Workshop on Data Science for Secure and Privacy-aware Large Data Management and Mining (DSSP), Snowbird, September 2016
- “Privacy-Preserving Data Sharing and Analytics with Differential Privacy”, Department of Computer Science and Computer Engineering, University of Arkansas, Fayetteville, September 2016
- “PREDICT: Enhancing DDDAS Systems with Privacy and Security”, Dynamic Data Driven Adaptive Systems Symposium, Hartford, CT, August 2016
- “Data Sharing and Analytics with Differential Privacy”, School of Computer Science and Engineering, Beihang University, Beijing, China, June 2016
- “Privacy-Preserving Location Sharing: Possibilities and Challenges”, Beijing University of Post and Telecommunications, Beijing, China, June 2016
- “Data Sharing and Analytics with Differential Privacy”, School of Computer Science, Wuhan University, Wuhan, China, June 2016
- “Data Sharing and Analytics with Differential Privacy”, School of Electronic Information and Computer Engineering, Huazhong University of Science and Technology, Wuhan, China, June 2016
- “Data Sharing and Analytics with Differential Privacy”, School of Computer Science and Software Engineering, East China Normal University, Shanghai, China, May 2016
- “Privacy-Preserving Location Sharing: Possibilities and Challenges”, Department of Computer Science & Engineering, Shanghai Jiaotong University, Shanghai, China, May 2016
- “The Incredible World of Big Data: A ‘Private’ Tour”, Emory College 50-year reunion, May 2016
- “Making Private User Data Accessible for Research”, Bloomberg, New York, April 2016

- “Health Information Sharing with Differential Privacy”, Department of Mathematics and Statistics and Florida Cyber Security Center, University of South Florida, April 2016
- “Privacy-Preserving Location Sharing: Possibilities and Challenges”, Department of Computer Science, Simon Fraser University, January 2016
- “Hiding in Plain Sight: Social Networking with Location Privacy”, ACM SIGSPATIAL Location Based Social Networks Workshop (**Keynote**), Seattle, November 2015
- “Privacy-Preserving Location Sharing: Possibilities and Challenges”, Integrated Media Systems Center (IMSC), University of Southern California, Los Angeles, CA, October, 2015
- “Statistical and Synthetic Health Information Sharing with Differential Privacy”, pSCANNER and iDASH Symposium, UCSD, San Diego, CA, October 2015
- “Data Privacy and the World We (Will) Live In”, Emory College Alumni Board Meeting, September 2015
- “Building Data Registries with Privacy and Confidentiality for PCOR”, Patient-Centered Outcomes Research Institute (PCORI) Methods Program webinar, September 2015
- “Making Private User Data Accessible for Information Retrieval Research: Data Sharing with Differential Privacy”, ACM SIGIR Privacy Preserving IR Workshop (**Keynote**), Santiago, Chile, August 2015
- “Health Information Sharing under Differential Privacy”, 2015 USENIX Summit on Information Technologies for Health (Panel), Washington, DC, August 2015
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Department of Computer Science and Engineering, Kyoto University, Kyoto, Japan, July 2015
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Department of Computer Science and Engineering, Jiangnan University, Wuhan, China, July 2015
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Beijing University of Post and Telecommunications, Beijing, China, June 2015
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Chinese Academy of Electronics and Information Technology, Beijing, China, June 2015
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Shenzhen University, Shenzhen, China, June 2015
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Chinese Academy of Science - Shenzhen Institutes of Advanced Technology, Shenzhen, China, June 2015
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Department of Computer Science and Engineering, Hong Kong University of Science and Technology (HKUST), Hong Kong, June 2015
- “SHARE: Statistical and Synthetic Health Information Sharing with Differential Privacy”, TRUST (Team for Research in Ubiquitous Secure Technology) Women’s Institute in Summer Enrichment (WISE), University of California at Berkeley, Berkeley, CA, June 2015

- “Harnessing Personal Data from Internet Of Things: Privacy Enhancing Dynamic Information Monitoring”, 16<sup>th</sup> International Conference on Collaboration Technologies and Systems (CTS 2015), Atlanta, GA, June 2015
- “SHARE: Statistical and Synthetic Health Information Sharing with Differential Privacy”, School of Electrical Engineering and Computer Science, University of Ottawa, Ottawa, Canada, April 2015
- “Privacy Enhancing Dynamic Information Collection and Monitoring”, TRUST (Team for Research in Ubiquitous Secure Technology) Security Seminar, University of California at Berkeley, Berkeley, CA, November 2014
- “Privacy Enhancing Dynamic Information Collection and Monitoring”, School of Computer Science and Technology, University of Science and Technology of China, Hefei, China, September 2014
- “Building Data Registries with Privacy and Confidentiality”, Data Integration, Analysis, And Sharing Symposium, UCSD, San Diego, CA, September 2014
- “Privacy Enhancing Dynamic Information Collection and Monitoring”, Department of Computer Science and Engineering, Shanghai Jiaotong University, Shanghai, China, September 2014
- “Privacy Enhancing Dynamic Information Collection and Monitoring”, School of Computer Science, Fudan University, Shanghai, China, August 2014
- “Privacy Enhancing Dynamic Information Collection and Monitoring”, Information Security Department of School of Information Management, Beijing Information Science & Technology University, Beijing, China, July 2014
- “PREDICT: Privacy Enhancing Dynamic Information Collection and Monitoring”, Department of Computer Science, Texas A&M University, College Station, TX, April 2014
- “Real-Time Aggregate Monitoring with Differential Privacy”, Workshop on Big Data and Differential Privacy, Simons Institute, University of California at Berkeley, Berkeley, CA, December 2013
- “Real-Time Aggregate Monitoring with Differential Privacy”, Cisco Systems Inc., San Francisco, CA, December 2013
- “Adaptive Differentially Private Data Release for Data Sharing and Data Mining”, IEEE International Workshop on Privacy Aspects of Data Mining (**Keynote**), Dallas, TX December 2013 (Unable to deliver due to weather/canceled flight)
- “SHARE: Statistical Health Information Release with Differential Privacy”, Department of Biostatistics, Bioinformatics, and Biomathematics, Georgetown University, Washington, DC, November 2013
- “Real-Time Aggregate Monitoring with Differential Privacy”, Integrated Media Systems Center (IMSC), University of Southern California, Los Angeles, CA, November, 2013
- “Real-Time Aggregate Monitoring with Differential Privacy”, Department of Computer Science, University of California at San Diego, San Diego, CA November, 2013
- “Real-Time Aggregate Monitoring with Differential Privacy”, Department of Computer Science, University of California at Irvine, Irvine, CA, September, 2013

- “SHARE: Statistical Health Information Release with Differential Privacy”, iDASH (NIH National Center for Biomedical Computing) All Hands Meeting, San Diego, CA, September, 2013
- “SHARE: Statistical Health Information Release with Differential Privacy”, IBM Thomas J. Watson Research Center, Yorktown Heights, NY, June, 2013
- “SHARE: Statistical Health Information Release with Differential Privacy”, iDASH (NIH National Center for Biomedical Computing) External Webinar, San Diego, CA, February, 2013
- “Aggregate Monitoring with Differential Privacy”, iDASH Privacy Workshop, University of California at San Diego, San Diego, CA, September, 2012
- “Adaptive Data Release with Differential Privacy”, China Computer Federation (CCF) Young Computer Scientists & Engineers Forum, Shenzhen, China, June, 2011
- “HIDE: Privacy Preserving Data Release for Health Informatics”, Center for Secure Information Systems (CSIS), George Mason University, Fairfax, VA, November, 2010
- “HIDE: Privacy Preserving Data Release for Health Informatics”, Center for Applied Cybersecurity Research (CACR), Indiana University, Bloomington, IN, November, 2010
- “Preserving Privacy and Confidentiality for Collaborative Data Publishing”, Tsinghua University Graduate School at Shenzhen, Shenzhen, China, November, 2009
- “Preserving Privacy and Confidentiality for Collaborative Data Publishing”, Database Seminar, Department of Computer and Information Science, University of Pennsylvania, Philadelphia, PA, October, 2009
- “Towards Privacy-Preserving Database Federations”, Department of Management Science and Information Systems, Rutgers University, Piscataway, NJ, November, 2008
- “Towards Privacy-Preserving Database Federations”, IBM Almaden Research Center, Almaden, CA, October, 2008
- “Protecting Privacy and Confidentiality for Assured Information Sharing”, Information Security Institute Seminar, Johns Hopkins University, Baltimore, MD, October, 2007
- “Sharing Biological and Medical Databases”, Computational Biology Seminar, University of Georgia, Athens, GA, April, 2006
- “Information Sharing across Multiple Private Databases”, Computer Science and Engineering Department Colloquium, Arizona State University, March, 2005
- “Information Sharing across Multiple Private Databases”, NEC Labs, CA, March, 2005
- “Information Sharing across Multiple Private Databases”, Department of Mathematics and Computer Science, Emory University, Atlanta, GA, March, 2005
- “Information Sharing across Multiple Private Databases”, Computer Science Department Colloquium, San Francisco State University, San Francisco, CA, February, 2005
- “Information Sharing across Multiple Private Databases”, Computer Science Department Colloquium, Naval Academy, Monterey, CA, February, 2005



## Student Advising – Doctoral Thesis

(Emory's Ph.D. program in Computer Science and Informatics was established in 2007)

- Qiuchen Zhang, PhD student
- Pengfei Tang, PhD student
- Farnaz Tahmasebian, PhD student
- Daniel Garcia ulloa, PhD, 2017 (co-advise with Vaidy Sunderam)  
Dissertation: Recommender Systems and Information Fusion in Spatial Crowdsourcing  
Recognitions: Emory ORDER scholar 2016-2017
- Jinfei Liu, PhD, 2017  
Dissertation: Fast and Adaptive Algorithms for Skyline Computation  
Recognitions: Emory Math/CS Award for Outstanding Graduate Research 2017
- Yonghui Xiao, PhD, 2017  
Dissertation: Protecting Locations of Individual Movement under Temporal Correlations  
Recognitions: NSF I-Corps project entrepreneurial lead
- Layla Pournajaf, PhD, 2017 (co-advise with Vaidy Sunderam)  
Dissertation: Privacy preserving task management for mobile crowd sensing  
Recognitions: Emory ORDER scholar 2015-2016
- Haoran Li, PhD, 2016  
Dissertation: Privacy preserving data release and analytics  
Recognition: Emory Math/CS Award for Outstanding Graduate Research 2016  
Employment: Samsung Research, eBay
- Michael Solomon, PhD, 2016 (co-advise with Vaidy Sunderam)  
Dissertation: Efficient Search and Computation on Encrypted Data with Access Control  
Employment: Solomon Consulting
- Xiaofeng Xu, PhD, 2016 (co-advise with Vaidy Sunderam)  
Dissertation: Indexing Moving Objects for Spatiotemporal Queries  
Recognitions: Best Paper Award, MDM 2016  
First/current employment: Facebook
- Luca Bonomi, PhD, 2015  
Dissertation: Big Data goes Personal: Privacy and Social Challenges  
Recognitions: Emory Math/CS Award for Outstanding Graduate Research 2015  
Employment: Postdoctoral Fellow at UCSD
- Liyue Fan, PhD, 2014  
Dissertation: Preserving individual privacy for Spatio-Temporal Data Analytics  
Recognitions: Best Student Paper Award DBSec 2013, Emory Math/CS Award for Outstanding Graduate Research 2014  
Employment: Postdoctoral Fellow at USC, Assistant Professor at SUNY Albany
- Slawomir Goryczka, PhD, 2014  
Dissertation: Secure and Privacy-Preserving Distributed Data Release  
Employment: Google Zurich
- James Gardner, PhD, 2012  
Dissertation: Privacy Preserving Medical Data Publishing  
Employment: Digital Reasoning, Apple, Favor, Conde Nast

- Pawel Jurczyk, PhD, 2010  
Dissertation: Towards Scalable and Privacy-Preserving Integration of Distributed Heterogeneous Data  
Recognitions: Best Paper Award ICCS 2008, ORISE (Oak Ridge Institute for Science and Education) fellowship  
Employment: Google

### **Student Advising – Master’s Thesis and Project**

- Kyle Thayer, MS, 2011 (co-advise with Prof. Vicki Hertzberg)  
MS thesis: Self-Organizing Maps and Wind-Rose Charts in the Visualization and Analysis of Flow Cytometry Data  
First employment: National Snow and Ice Data Center
- Pu Shi, MS, 2009  
MS project: Anonymizing Data with Quasi-Sensitive Attributes  
First employment: Google Inc.
- Akanksha Srivastav, MS, 2008 (co-advise with Prof. James Lu)  
MS project: e-attachment  
First employment: Blue Cross Blue Shield Inc.
- Kumudhavalli Rangachari, MS, 2007  
MS project: Towards Application-Oriented Data Anonymization  
First employment: Vitruve Inc
- Lin Liu, MS, 2007 (co-advise with Prof. James Lu)  
MS project: Comparing and Clustering Flow Cytometry Data  
Immediate placement: PhD program at University of Southern California
- Christopher LaRosa, MS, 2006 (co-advise with Prof. Ken Mandelberg)  
MS thesis: Frequent Pattern Mining for Kernel Trace Data  
Immediate placement: MS program (International Relations) at Georgia Institute of Technology

### **Student Advising – Honors Thesis**

- Wenxuan Wang, BS, 2017  
Honors Thesis: Frequent Itemsets Mining with Differential Privacy
- Ilya Shats, BS, 2016  
Honors thesis: Incorporating Social Relationships from Call Detail Records to Disease Spread Simulators (High honors)  
Employment: EPIC
- Andrew McLeod, BS, 2013  
Honors thesis: Automatic Transcription of Polyphonic Music Signals with Linear Matching Pursuit (Highest honors)  
Recognitions: Emory Math/CS Evans Award (2013)  
Immediate placement: PhD program at University of Edinburgh (deferred one year)
- Matthew Hausknect, BS, 2009  
Honors thesis: Heuristic Based Extraction of Causal Relations from Annotated Causal

Cue Phrases (Highest honors)

Co-advisors: Prof. Eugene Agichtein, Prof. Phillip Wolff

Immediate placement: PhD program at University of Texas at Austin

Recognitions: Emory Math/CS Evans Award (2009), NSF Graduate Fellowship (2009)

- Christopher Verdery, BS, 2008  
Honors thesis: Privacy-preserving personalized web search (High honors)  
Immediate placement: PhD program at Texas A&M University

### **Student Advising – PhD Thesis Committees**

- Tomasz Jurczyk, Emory University, 2017  
Thesis: Improving Question Answering by Bridging Linguistic Structures and Statistical Learning
- Sicong Zhang, Georgetown University, 2017 (**external**)  
Thesis: Query Log Anonymization by Differential Privacy
- Hien Ho, University of Southern California, 2017 (**external**)  
Thesis: Privacy-preserving computation of location statistics using differential privacy
- Maryam Fanaeepour, University of Melbourne, 2017 (**external**)  
Thesis: Privately Counting Trajectories, Regions and Tuning Spatial Data Structures
- Denis Savenkov, Emory University, 2017  
Thesis: Question Answering with Structured and Semi-Structured User Generated Content
- Jun Zhang, Nanyang Technological University (NTU), 2016 (**external**)  
Thesis: Algorithms for Private Data Release
- Han Chao, Simon Fraser University, Canada, 2016 (**external**)  
Thesis: Sensitive Disclosures under Differential Privacy Guarantees
- Georgios Kellaris, Hong Kong University of Science and Technology, 2015 (**external**)  
Thesis: Practical Differential Privacy
- Hanna Farah, University of Ottawa, Canada, 2015 (**external**)  
Thesis: Privacy-Preserving Patient Tracking for Phase 1 Clinical Trials
- Thomas Przybylinski, Emory University, 2015  
Thesis: New Insights Into the Similarity and Difference of Propositional Models via Symmetry
- Qiaoling Liu, Emory University, 2014  
Thesis: Improving Usefulness of Community Question Answering Services Towards Better Searcher Satisfaction and Question Recommendation
- Qi Guo, Emory University, 2012  
Thesis: Predicting Search Intent, Performance and Relevance from Interaction Data
- Sebastian Siva, Emory University, 2011  
Thesis: Enabling Relational Databases for Effective CSP Solving
- Junqiang Liu, Simon Fraser University, Canada, 2010 (**external**)  
Thesis: Enhancing Utility in Privacy Preserving Data Publishing

- Dawid Kurzyniec, Emory University, 2007  
Thesis: Towards Lightweight and Reconfigurable Resource Sharing Frameworks
- Seung Jun, Georgia Institute of Technology, 2006 (**external**)  
Thesis: Building Robust Peer-to-Peer Information Dissemination Systems Using Trust and Incentives

### **Student Advising – MS/Honors Thesis Committees**

- Meera Satya Hahn, Emory University, 2016  
Honors Thesis: Dependency Tree Parsing in Natural Language Processing
- Noah Adler, Emory University, 2014  
Honors Thesis: Assessing Motor Function in Parkinson’s Disease using a Web-based, Computerized and User-friendly Tool
- Siyuan Luo, Emory University, 2012  
MS Thesis: Analysis of Detour Gap Numbers
- Kanwei Li, Emory University, 2009  
MS Thesis: Optimization of SPARQL Queries Using the TripleT Index
- Lesi Wang, Emory University, 2008  
MS Thesis: An Investigation into Managing SQL-Cardinality Constraints
- Robin Lohfert, Emory University, 2007  
MS Thesis: A Decomposition Technique for SAT Systems
- Melissa K. Goldstein, Emory University, 2006  
Honors Thesis: Image Registration

### **Other Advising**

- Yang Cao, Postdoctoral Fellow, 2017-2018
- Jinfei Liu, Postdoctoral Fellow, 2017-2018
- Sen Zhao, Postdoctoral Fellow, 2017-2018
- Ari Afshar, Research assistant, 2017
- Yousef Elmehdwi, Postdoctoral Fellow, 2016-2017  
Employment: Computer Science Lecturer, Illinois Institute of Technology
- Si Zhang, visiting scholar, 2016-2017  
Home institution: Jiangnan University
- Jining Zhao, visiting PhD student, 2016-2018  
Home institution: University of Electronic Science and Technology of China
- Yang Cao, visiting PhD student, 2016-2017  
Home institution: Kyoto University, Japan
- Liang Tao, Research Assistant, Emory University, 2014-2016
- Shengzhi Xu, visiting PhD student, 2014-2015  
Home institution: Beijing University of Posts and Telecommunications (BUPT), China
- Lifan Zhang, Research Assistant, Emory University, 2013-2014

- Raheel Syed Hassan, visiting scholar, 2012  
Home institution: University of Franche-Comte, Montbeliard, France
- Hitaxi Kalaria, visiting undergraduate student, 2010  
Program: Distributed Research Experiences for Undergraduates (DREU), CRA-W  
Home institution: Rutgers University
- Courtney Beach, visiting undergraduate student, 2010  
Program: Distributed Research Experiences for Undergraduates (DREU), CRA-W  
Home institution: Albany State University
- Haiyan Kang, visiting scholar, 2009-2010  
Home institution: Beijing Information Science & Technology University
- Yun Zhu, Research Assistant, Emory University, 2009-2010

### **Courses Taught at Emory**

- CS170 Introduction to Computer Science I (undergraduate), Spring 2009, Fall 2007, Spring 2007, Spring 2006, Fall 2005
- CS171 Introduction to Computer Science II (undergraduate), Fall 2014, Spring 2014, Spring 2013, Fall 2012, Spring 2012, Spring 2011
- CS377 Introduction to Database Systems (undergraduate), Fall 2011, Spring 2007
- CS378 Introduction to Data Mining (undergraduate), Spring 2018, Spring 2017, Spring 2016, Spring 2015, Spring 2017
- CS554 Database Systems (graduate), Fall 2006
- CS570 Introduction to Data Mining (graduate), Fall 2017, Fall 2015, Spring 2011, Spring 2008, taught as CS584 in Fall 2005
- CS573 Data Privacy and Security (graduate), Spring 2012, Spring 2009, Fall 2016
- CS584 Topics in Computer Science and Informatics: Big Data Analytics (graduate), Spring 2014, taught as CS730 in Spring 2012
- CS700 Graduate Computer Science and Informatics Seminar (coordinator), Fall 2015, Spring 2012, Fall 2011

### **Professional Service – Conference and Workshop Organization, Editorial Boards**

- Program co-chair, 26th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems, 2018, 2019
- Co-Editor, Spatial Information Systems Series, Morgan & Claypool Publishers, 2017 -
- Associate Editor, IEEE Transactions on Knowledge and Data Engineering (TKDE), 2016 -
- Co-organizer, International Workshop on Privacy-Preserving Information Retrieval (PIR), in conjunction with 39<sup>th</sup> International ACM SIGIR Conference, 2016
- Organizer and program co-chair, International Workshop on Privacy and Anonymity in Information Society (PAIS), in conjunction with International Conference on Extended Database Technology (EDBT), 2008-2016
- Demo chair, 14<sup>th</sup> International Symp. on Spatial and Temporal Databases (SSTD), 2015

- Co-organizer, iDASH Privacy & Security Workshop - Secure Genome Analysis Competition, 2015
- Proceedings co-chair, 40th International Conf. on Very Large Databases (VLDB), 2014
- Special issue co-editor, Journal of Biomedical Informatics (JBI) Special Issue on Informatics Methods in Medical Privacy, 2014
- Registration co-chair, 2nd ACM SIGHIT International Health Informatics Symposium (IHI), 2012
- Associate Editor, ACM SIGHIT (Special Interest Group in Health Informatics) Record, 2011-2012
- Program co-chair, International Workshop on Healthcare Information and Knowledge Management (HIKM) at ACM Conference on Information and Knowledge Management (CIKM), 2006

### **Professional Service – Conference and Workshop Program Committee**

- International Conference on Management of Data (SIGMOD), 2018
- 44th International Conference on Very Large Databases (VLDB), 2018
- 34th IEEE International Conference on Data Engineering (ICDE), 2018
- Senior Program Committee, 26th ACM Conference on Information and Knowledge Management (CIKM), 2017
- 43rd International Conference on Very Large Databases (VLDB), 2017
- 25th ACM Conference on Information and Knowledge Management (CIKM), 2016
- 17th Mobile Data Management Conference (MDM), 2016
- 19th Workshop on the Web and Databases (WebDB) at SIGMOD, 2016
- 32nd IEEE International Conference on Data Engineering (ICDE), 2016
- 24th ACM Conference on Information and Knowledge Management (CIKM), 2015
- First International Workshop on Data Management and Analytics for Medicine and Healthcare (DMAH), in conjunction with VLDB 2015
- 2nd International Workshop on Genome Privacy and Security (GenoPri), in conjunction with IEEE Symposium on Security and Privacy (S&P), 2015
- IEEE International Conference on Big Data, 2014
- 23rd ACM Conference on Information and Knowledge Management (CIKM), 2014
- 1st International Workshop on Privacy and Security of Big Data (PSBD), in conjunction with CIKM, 2014
- 30<sup>th</sup> IEEE International Conference on Data Engineering (ICDE), 2014
- 4<sup>th</sup> ACM Conference on Data and Application Security and Privacy (CODASPY), 2014
- IEEE International Conference on Big Data, 2013
- 22<sup>nd</sup> ACM Conf. of Information and Knowledge Management (CIKM), demo track, 2013
- 39th International Conf. on Very Large Databases (VLDB), demo track, 2013
- IEEE International Conference on Intelligence and Security Informatics (ISI), 2013

- 19th ACM Conference on Computer and Communications Security (CCS), Poster/demo Track, 2012
- 38th International Conference on Very Large Databases (VLDB), research track and PhD program track, 2012
- IEEE International Conference on Intelligence and Security Informatics (ISI), 2012
- 21st International World Wide Web Conference (WWW), poster track, 2012
- 20th ACM Conference on Information and Knowledge Management (CIKM), 2011
- ACM SIGMOD Conference, demo track, 2011
- 20th International World Wide Web Conference (WWW), poster track, 2011
- ACM Conference on Information and Knowledge Management (CIKM), demo track, 2010
- 36th International Conf. on Very Large Data Bases (VLDB), demo track, 2010
- 16th ACM International Conference on Knowledge Discovery and Data Mining (SIGKDD), 2010
- 11th International Conference on Web-Age Information Management (WAIM), 2010
- IEEE International Conference on Intelligence and Security Informatics (ISI), 2010
- International Symposium on Data, Privacy and E-Commerce (ISDPE), 2010
- ACM Conference on Information and Knowledge Management (CIKM), demo track, 2009
- 16th International Conference on Cooperative Information Systems (CoopIS), 2009, 2008
- PhD Workshop on Information and Knowledge Management (PIKM) at ACM Conference on Information and Knowledge Management (CIKM), 2008, 2007
- International Symposium on Parallel Architectures, Algorithms, and Networks (ISPAN), 2007
- International Conference on Computer Communications and Networks (ICCCN), 2006
- International Conference on Distributed Computing Systems (ICDCS), 2006

### **Professional Service - Grant Proposal Reviews**

- National Institutes of Health (NIH), Big Data to Knowledge (BD2K) Enhancing the Efficiency and Effectiveness of Digital Curation for Biomedical Big Data, 2/2017
- National Institutes of Health (NIH), Biodata Management and Analysis (BDMA), 2/2016, 2/2015
- National Science Foundation (NSF), 2018, 2017, 2016, 2015, 2014, 2013, 2012, 2006
- Air Force Scientific Research Office (AFSOR), 2016, 2015, 2014
- Research Grants Council (RGC) of Hong Kong, 2016
- New Researchers Start-up Program of FQRNT, Canada, 2009

### **Professional Service - Journal Refereeing**

- ACM Computing Surveys (CSUR)
- IEEE Transactions on Knowledge and Data Engineering (TKDE)
- IEEE Transactions on Dependable and Secure Computing (TDSC)
- ACM Transactions on Privacy and Security (TOPS)
- ACM Transactions on Database Systems (TODS)
- IEEE Transactions on Knowledge Discovery and Data Mining (TKDD)
- ACM Transactions on Internet Technology (TOIT)

### **Institutional Service**

- Task Force on Research in Basic Sciences at Emory, 2018
- Emory College of Arts and Sciences Dean Search Committee Co-Chair, Emory University, 2016-2017
- Faculty Search Committee, Department of Mathematics and Computer Science, Emory University, 2016-2017, 2014-2015, 2013-2014, 2012-2013, 2005-2006
- Faculty search committee, Department of Biomedical Informatics, Emory University, 2016-2017
- Mentor for Junior Faculty, Department of Mathematics and Computer Science, Emory University, 2015 –
- Faculty advisor, Emory College Honor Council, 2015-2016
- Computer Science and Informatics Interdisciplinary Curriculum Committee, Emory University, 2015-2016
- Faculty advisor, ACM-W Emory Chapter, 2014 -
- Organizing Committee, Emory University Laney Graduate School STEM Research and Career Symposium, 2014, 2015
- Graduate Committee, Department of Mathematics and Computer Science, Emory University, 2014-2017, 2007-2009
- Pre-Major Advising Connections at Emory (PACE), 2014 - 2016, 2011 - 2013
- University Research Committee, Emory University, 2013
- Introductory Computer Science Curriculum Committee, Department of Mathematics and Computer Science, Emory University, 2011 - 2012
- Computer Science Graduate Seminar Coordinator, Department of Mathematics and Computer Science, Emory University, 2011 - 2013
- Undergraduate Committee Member, Department of Mathematics and Computer Science, Emory University, 2008-2009
- Emory Graduate Diversity Fellowship (EGDF) Committee, 2007
- Freshmen Advising and Mentoring Experience (FAME), Emory University, 2006 – 2007