

Liyue Fan

TITLE	Assistant Professor in Information Security and Digital Forensics	
CONTACT INFORMATION	1400 Washington Ave, Massry Center for Business, BB 346 Albany, NY 12222	lfan4@albany.edu
RESEARCH INTERESTS	Time Series Analytics, Data Privacy, Database Systems and Applications	
EDUCATION	Emory University , Atlanta, GA	
	Ph.D., Computer Science and Informatics	December 2014
	• Advisor: Li Xiong, Ph.D	
	Zhejiang University , Hangzhou, China	
	B.S., Mathematics and Applied Mathematics	June 2008
	• Chu Kochen Honors College	
RESEARCH EXPERIENCE	Postdoctoral Research Associate October 2014 - August 2016 Theme: Big Data Platforms for Transportation, Health, and Social Media Integrated Media Systems Center, University of Southern California Supervisor: Cyrus Shahabi, Ph.D	
	Graduate Research Assistant June 2012 - July 2014 Theme: Preserving Individual Privacy in Spatio-Temporal Data Analytics Department of Mathematics and Computer Science, Emory University Supervisors: Li Xiong, Ph.D and Vaidy Sunderam, Ph.D	
	Privacy Research Intern June - December 2013 Theme: Privacy-Preserving Data Analytics in Location-Based Services Samsung Research America Supervisor: Hongxia Jin, Ph.D	
	Information Security Intern June - August 2011 Theme: Machine Learning Approaches to Fraud Detection Global Information Security, eBay Inc. Supervisor: David Piggot	
TEACHING EXPERIENCE	Instructor , University at Albany Fall 2016 BFOR 300 - Database Systems School of Business	
	Instructor , University of Southern California Fall 2015 INF 552 - Machine Learning for Data Informatics Viterbi School of Engineering	
	Guest Lecturer , University of Southern California January 2015 EE 579 - Wireless and Mobile Networks Design Talk Title: Introduction to Data Privacy and Location Privacy Host: Murali Annaram, Ph.D Department of Electrical Engineering	
	Instructor , Emory University Spring 2012 CS 130R - Programming in Python Department of Mathematics and Computer Science	
	Teaching Assistant , Emory University Spring 2011	

CS 570 - Data Mining
 Instructor: Li Xiong, Ph.D
 Department of Mathematics and Computer Science
Co-Instructor, Emory University Fall 2010
 CS 377 - Database Systems
 with James J. Lu, Ph.D
 Department of Mathematics and Computer Science
Teaching Assistant, Emory University Fall 2009 - Spring 2010
 CS 170 - Introduction to Computer Science
 Instructors: Eugene Agichtein, Ph.D and Sarah Knepper, Ph.D
 Department of Mathematics and Computer Science

PEER-REVIEWED
 CONFERENCE AND
 JOURNAL
 PUBLICATIONS

1. Mingxuan Yue, **Liyue Fan**, Cyrus Shahabi. "Inferring Traffic Incident Start Time with Loop Sensor Data." *In CIKM*, 2016 (to appear)
2. Luan Tran, **Liyue Fan**, Cyrus Shahabi. "Distance-based Outlier Detection for Data Streams." *In Proceedings of the 42nd International Conference on Very Large Data Bases(VLDB)*, 2016
3. Hien To, Gabriel Ghinita, **Liyue Fan**, Cyrus Shahabi. "Differentially Private Location Protection for Worker Datasets in Spatial Crowdsourcing." *In IEEE Transactions on Mobile Computing (TMC)*, 2016
4. Hien To, **Liyue Fan**, Luan Tran, Cyrus Shahabi. "Real-Time Task Assignment in Hyper-Local Spatial Crowdsourcing under Budget Constraints." *In Proceedings of the IEEE International Conference on Pervasive Computing and Communications (PerCom)*, 2016
5. Luca Bonomi, **Liyue Fan**, Hongxia Jin. "An Information Theoretic Approach to Individual Sequential Data Sanitization." *In Proceedings of the Ninth ACM International Conference on Web Search and Data Mining (WSDM)*, 2016
6. Cyrus Shahabi, **Liyue Fan**, Luciano Nocera, Li Xiong, Ming Li. "Privacy-Preserving Inference of Social Relationships from Location Data: A Vision Paper." *In Proceedings of the 23rd SIGSPATIAL International Conference on Advances in Geographic Information Systems (GIS)*, 2015 **Presenter/Third Prize Winner**
7. Hien To, **Liyue Fan**, Cyrus Shahabi. "Differentially Private H-Tree." In GeoPrivacy workshop at ACM SIGSPATIAL, 2015
8. Minh Nguyen, **Liyue Fan**, Cyrus Shahabi. "Activity Recognition Using Wrist-Worn Sensors for Human Performance Evaluation." *In Proceedings of the IEEE International Conference on Data Mining Workshop (ICDMW)*, 2015
9. **Liyue Fan**, Hongxia Jin. "A Practical Framework for Privacy-Preserving Data Analytics." *In Proceedings of the 24th International World Wide Web Conference (WWW)*, 2015
10. Yonghui Xiao, Li Xiong, **Liyue Fan**, and Slawomir Goryczka. "DPCube: Differentially Private Histogram Release through Multidimensional Partitioning." *In Transactions on Data Privacy (TDP)*, Vol. 7, Iss. 3, 2014
11. **Liyue Fan**, Luca Bonomi, Li Xiong, and Vaidy Sunderam. "Monitoring Web Browsing Behavior with Differential Privacy." *In Proceedings of the 23rd International World Wide Web Conference (WWW)*, 2014

12. **Liyue Fan**, Li Xiong. “An Adaptive Approach to Real-Time Aggregate Monitoring with Differential Privacy. ” *In IEEE Transactions on Knowledge and Data Engineering (TKDE)*, Vol. 26, No. 9, September 2014
13. **Liyue Fan**, Li Xiong. “Differentially Private Anomaly Detection with a Case Study on Epidemic Outbreak Detection.” *In Proceedings of IEEE 13th International Conference on Data Mining Workshops (ICDMW)*, 2013
14. **Liyue Fan**, Li Xiong, and Vaidy Sunderam. “Differentially Private Multi-Dimensional Time Series Release for Traffic Monitoring. ” *In Proceedings of the 27th Annual IFIP WG 11.3 Conference (DBSec)*, pages 33-48, 2013 **Best Student Paper**
15. **Liyue Fan**, Li Xiong, and Vaidy Sunderam. “FAST: Differentially Private Real-Time Aggregate Monitor with Filtering and Adaptive Sampling. ” *In Proceedings of the 2013 ACM SIGMOD International Conference on Management of Data (SIGMOD)*, 2013
16. Li Xiong, Vaidy Sunderam, **Liyue Fan**, Slawomir Goryczka, and Layla Pournajaf. “PREDICT: Privacy and Security Enhancing Dynamic Information Collection and Monitoring. ” *In Procedia Computer Science*, Volume 18, Pages 1979-1988, 2013
17. **Liyue Fan**, Li Xiong. “Real-Time Aggregate Monitoring with Differential Privacy.” *In Proceedings of the 21st ACM international conference on Information and knowledge management (CIKM)*, 2012

BOOK CHAPTERS

1. Luca Bonomi, **Liyue Fan**, Li Xiong. “A Review of Privacy Preserving Mechanisms for Record Linkage.” *In Springer Medical Data Privacy Handbook*, 2015

WORKING PAPERS

1. Luan Tran, **Liyue Fan**, Cyrus Shahabi. “Distributed Outlier Detection for Data Streams”, 2016
2. Li Xiong, Vaidy Sunderam, **Liyue Fan**, Slawomir Goryczka, Layla Pournajaf. “Privacy and Security Issues in DDDAS Systems”, a book chapter in Data Driven Dynamic Application Systems, 2014

TUTORIALS AND POSTERS

1. **Liyue Fan**, Ugur Demiryurek, Cyrus Shahab. “Boosting the Causality Discovery for Traffic Accidents Impact Prediction.” Poster presented at the 56th Annual Transportation Research Forum, 2015
2. **Liyue Fan**. “Privacy-Preserving Record Linkage”. Poster presented at the 2011 CRA-W Graduate Cohort Workshop, 2011
3. **Liyue Fan**. “Record Linkage and FRIL Tutorial.” Tutorial presented at the International Public Health Learning Collaborative on Hemoglobinopathies, 2010

AWARDS

- EECS Rising Star Academic Workshop Invitee 2015
- The EECS Rising Star workshop brings together top graduate and postdoc women in EECS who are interested in careers in academia for scientific interactions and career-oriented discussions. The 2015 workshop was held at MIT.
- ACM Student Research Competition Scholarship at GHC 2012,2013
- The ACM Student Research Competition scholarship is awarded to selected undergraduate and graduate students to present their original research at well-known ACM sponsored and co-sponsored conferences before a panel of judges and attendees.

MODAP-MOVE Summer School Scholarship, Switzerland Jul 2012
• The scholarship is awarded to selected PhD students for participation to the 2nd MODAP-MOVE Summer School on Privacy-Aware Social Mining.

Teaching Award — Piedmont TATTO Fellowship at Emory University 2011,2012
• The Piedmont TATTO Fellowship at Emory University is awarded to selected graduate students to develop new courses that address issues of sustainability, environmental awareness, and urgent societal challenge.

Travel Awards
• ICDM 2013, GHC 2013, SIGMOD 2013, GREPSEC 2013, CIKM 2012, GHC 2012, SIGMOD 2012, CRA-W Grad Cohort 2011

SERVICES

Conferences and Journals:
• PC Chair: HealthGIS workshop
• PC Member: SSTD Demo
• Reviewer: SIGMOD, VLDB, ICDE, CIKM, SSTD, AMIA, ISI, TKDE, Information Fusion, TISSEC

Mentor of female undergraduate students in Computer Science
• Lily Zaghari (*Undergrad*, UC San Diego, Summer 2015), Hitaxi Kalaria (*Undergrad*, Rutgers, Summer 2010)

Founding Member of Emory University ACM-W Student Chapter 2014