

## Qi (Rose) Yu

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### CONTACT INFORMATION

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### RESEARCH INTERESTS

Tensor method, scalable algorithms, probabilistic graphical models, with applications to spatio-temporal data analysis. In particular, climate informatics, mobile recommender system and social media anomaly detection.

### EDUCATION

**University of Southern California**, Los Angeles, California, USA  
*Department of Computer Science*  
Ph.D. Candidate, Computer Science, Fall 2012 (4th year completing May 2017)

- Advisors: Yan Liu, Cyrus Shahabi

**Zhejiang University**, Hangzhou, Zhejiang, PRC  
*Chu Kochen Honors College*  
B.S in Computer Science and Technology, June 2008. GPA 3.88/4.0

- Advisor: Zhihua Zhang

**University of California, Davis**, Davis, California, USA  
Cultural Exchange Student, January 2010

### CONFERENCE PUBLICATIONS

**Rose Yu**, Yan Liu. "Learning from Multiway Data: Simple and Efficient Tensor Regression." In *Proceedings of the 33th International Conference on Machine Learning (ICML 2016)* To Appear  
**Oral Presentation**

**Rose Yu**, Andrew Gelfand, Suju Rajan, Cyrus Shahabi, Yan Liu. "Geographic Segmentation via Latent Poisson Factor Model." in *ACM International Conference on Web Search and Data Mining (WSDM 2016)*

**Rose Yu**, Dehua Cheng, Yan Liu. "Accelerated Online Low Rank Tensor Learning for Multivariate Spatiotemporal Streams." In *Proceedings of the 32th International Conference on Machine Learning (ICML 2015)* **Oral Presentation**

**Rose Yu\***, Mohammad Taha Bahadori\*, Yan Liu. "Fast Multivariate Spatio-temporal Analysis via Low Rank Tensor Learning." In *Proceeding of Advances in Neural Information Processing Systems (NIPS 2014)* **Spotlight**

**Rose Yu**, Xinran He, Yan Liu. "GLAD: Group Anomaly Detection in Social Media Analysis." In *Proceeding of ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2014)*

Cuixia Gao, Naiyan Wang, **Qi Yu**, Zhihua Zhang. "A Feasible Nonconvex Relaxation Approach to Feature Selection." In *Proceeding of 24th AAAI conference on Artificial Intelligence (AAAI 2011)*

**Qi Yu**, Zhihao Ding, Rong Rong, Wang Donghui, Zhengyue Zhang. "Dark Pixel Detection: A Novel Single Image Dehaze Approach". In *Proceeding of 27th Image and Vision Computing New Zealand (IVCNZ 2011)*;

JOURNAL PUBLICATIONS	<b>Rose Yu</b> , Yan Liu. "Spatio-Temporal Analysis of Social Media Data" In Encyclopedia of GIS 2016
	<b>Rose Yu</b> , Huida Qiu, Zhen Wen, Ching-Yung Liu, Yan Liu. "A Survey on Social Media Analysis Anomaly Detection" In ACM KDD Exploration 2016
	<b>Rose Yu</b> , Xinran He, Yan Liu. "GLAD: Group Anomaly Detection in Social Media Analysis - Extended Abstract." In ACM Transactions on Knowledge Discovery in Data (TKDD 2015)
WORKSHOPS PUBLICATIONS	<b>Rose Yu</b> , Dehua Cheng, Yan Liu. "Accelerated Online Low-Rank Tensor Learning for Multi-model Ensemble." Poster accepted to International Workshop on Climate Informatics workshop (CI 2015)
	Mohammad Taha Bahadori, <b>Rose Yu</b> , Yan Liu. "Fast Cokriging via Low Rank Tensor Learning." Poster accepted to International Workshop on Climate Informatics workshop (CI 2014)
	<b>Rose Yu</b> , Xinran He, Yan Liu. "Dynamic Social Network Group Anomaly Detection Using Hierarchical Bayesian Model." Poster accepted to Neural Information Processing Systems workshop (NIPS 2013)
SELECTED AWARDS AND HONORS	<b>Selected participant in Rising Stars in EECS: An Academic Career Workshop for Women</b> , MIT, 2015
	<b>Annenberg Graduate Fellowship</b> , Univesity of Southern Califonia, 2012-present
	<b>Selected participant in Heidelberg Laureate Forum</b> - Abel, Fields, Turing laureates meet next generation, University of Heidelberg, 2013
	<b>Microsoft 2011 Young Fellowship</b> , Microsoft Research Asia, 2011
	<b>International Forum (iF) Design Hannover Global Concept Award</b> , iF, 2010
	<b>First prize in Undergraduate Research and Innovation</b> , Zhejiang University, 2010
EMPLOYMENT	<b>Outstanding Undergraduate Award</b> , Zhejiang University, 2009, 2008.
	<b>IBM Thomas J. Watson Research Center</b> , Yorktown Heights, New York, USA
	<i>Research Intern</i> June, 2015 - August, 2015
	Work with Hongfei Li, Anshul Sheopuri in Customer Analytic team on IBM Xtify push intelligence platform. Developed deep learning models for GPS data from Xtify to predict users' click behavior and build customer profiles.
	<b>Yahoo! Labs</b> , Sunnyvale, California, USA
	<i>Research Intern</i> May, 2014 - August, 2014
	Work with Andrew Gelfand, Suju Rajan in Personalization team on Yahoo! Aviate location-aware app recommendation. Developed a hierarchical Bayesian model for geographical segmentation problem in App usage. Continue academic collaboration through November on "Geographic Segmentation via Latent Poisson Factor Model".
	<b>Intel Lab</b> , Santa Clara, California, USA
	<i>Research Intern</i> May, 2013 - August, 2013
	Work with Context-Aware Technology team of Intel Immersive Experience Research (IXR) division. Analyze smart phone usage data and propose a graphical model based algorithm to predict the potential contacts and applications on smart phones. Analyze NBC Universal movie data and fit

regression models to predict future DVD/CD sales.

**Microsoft R&D**, Minghang, Shanghai, USA

*Program Manager Intern*

June, 2011 - June, 2012

Work with Commerce team in Microsofts Server & Tools Business. Build SDK Wiki for Commerce platform partners. Design API prototype for guest purchase without Window Live ID authentication feature. Adapt platform working flow of payment instruments risk check and fraud detection for Microsoft Office 360 and Azure.

TEACHING

**Machine Learning (CSCI 567)**

Spring 2016

Guest lecturer : taught Gaussian mixture models and EM algorithm.

**Advanced Big Data Analytics (CSCI 686)**

Fall 2015

Teaching assistant: Led weekly section; redesigned assignments and mini-project on topic modeling to reflect developments in big data analysis.

INVITED TALK

**Tensor Learning for Large-Scale Spatio-Temporal Analysis**

Computer Science, Stanford University

May 23, 2016

**Tensor Learning for Large-Scale Spatio-Temporal Analysis**

Department of Electrical & Computer Engineering, Northeastern University

Nov 12, 2015

ACADEMIC SERVICE Co-organizer, Woman in Machine Learning Workshop (WiML), 2016

Co-organizer, USC PhD Woman in Computer Science group, Los Angeles, 2013

Student Local Chair, ACM Conference on Computer Supported Cooperative Work (CSCW), Hangzhou, 2011

Organizer, Probabilistic Intelligence Lab Machine Learning Seminar, Hangzhou, 2010

President, Chu KoChen Honors College Excellent Student League, Hangzhou, 2009