JIAN GAO

Gender: Male   **Birth:** May 28, 1989   **Nationality:** P.R. China

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CONTACT INFORMATION

Room B1-202, Main Building
CompleX Lab, Web Sciences Center
Univ. of Elec. Sci. & Tech. of China
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RESEARCH INTERESTS

Network Science: Network Models, Percolation, Networked Spreading Processes
Recommender Systems: Recommendation Algorithms, Online Ranking Methods
Data Analysis: Social media, Co-authorship, Economy and Industry data analysis

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EDUCATION

Univ. of Elec. Sci. & Tech. of China (UESTC)   Chengdu, China
Ph.D. Student in Computer Science   Sep. 2014 - Now
Web Sciences Center, School of Computer Science & Engineering
Adviser: Prof. Tao Zhou

Univ. of Elec. Sci. & Tech. of China (UESTC)   Chengdu, China
Master Student in Computer Science   Sep. 2012 - Jul. 2014
Web Sciences Center, School of Computer Science & Engineering
Adviser: Prof. Tao Zhou

Univ. of Elec. Sci. & Tech. of China (UESTC)   Chengdu, China
Bachelor of Science in Mathematics, Highest honors   Sep. 2008 - Jul. 2012
School of Mathematical Sciences

RESEARCH EXPERIENCE

Research Assistant   Sep. 2013 - Sep. 2015
CompleX Lab, Web Sciences Center, UESTC
Advised by Prof. Tao Zhou and Dr. Yanqing Hu
Did research on online social networks, percolation on spatial networks, and company data analysis, accomplished three journal papers, will write two more journal paper.

Research Assistant   Nov. 2011 - Aug. 2013
Web Sciences Center, UESTC
Advised by Prof. Tao Zhou
Worked with Prof. Mingsheng Shang and Dr. Shimin Cai on missing value imputation and ranking problem in recommender systems, published two papers.

Research Assistant   Sep. 2010 - Oct. 2011
School of Mathematical Sciences, UESTC
Advised by Assoc. Prof. Mingqi Li
Did research on modeling the evolution of microbial population in a wine cellar and evaluating scholarship in universities, published two journal papers in Chinese.

BOOK CHAPTERS

[1] **Jian Gao**, Linyan Zhang, Qian-Ming Zhang and Tao Zhou. *Big Data Human Resources: Performance Analysis and Promotion/Resignation in Employee Networks* in *Social Physics: Social Governance*. Beijing: Science Press, 2014. (In Chinese)

REFEREED PUBLICATIONS

In Progress

[1] **Jian Gao**, Tao Zhou, *et al. Symbiosis and monopoly of the local industry structure in China.* October, 2015. (Prepared for *Science Advances*)

[2] **Jian Gao**, Tao Zhou, Yiding Liu, Haixing Dai and Dan Yang. *Modeling local economy complexity via company data analysis.* October, 2015. (Prepared for *Nature Scientific Reports*)

Pre-print

[1] Ling-Jiao Chen, Zi-Ke Zhang, Jin-Hu Liu, **Jian Gao** (corresponding author), and Tao Zhou. *A novel similarity index for better personalized recommendation.* arXiv:1510.02348, 2015. (Submitted to *Europhysics Letters*)

[2] **Jian Gao** (corresponding author) and Tao Zhou. *Evaluating user reputation in online rating systems via an iterative group-based ranking method.* arXiv:1509.00594, 2015. (First round review under *Knowledge-Based Systems*)

[3] Jian Yuan, Qian-Ming Zhang, **Jian Gao**, Linyan Zhang, Xue-Song Wan, Xiao-Jun Yu, and Tao Zhou. *Promotion and resignation in employee networks.* arXiv:1502.04184, 2015. (Third round review under *Physica A*)

Journal Papers

[1] **Jian Gao**, Tao Zhou, and Yanqing Hu. Bootstrap percolation on spatial networks. Nature Scientific Reports, 2015, 5:14662.

[2] **Jian Gao**, Yu-Wei Dong, Ming-Shing Shang, Shi-Min Cai, and Tao Zhou. *Group-based ranking method for online rating systems with spamming attacks.* EPL, 2015, 110: 28003.

[3] Linyan Zhang, **Jian Gao**, Xiang Hong, and Tao Zhou. *Human Resource Management Based on Big Data.* Big Data Research, 2015, 1: 2015012. (In Chinese)

[4] Dan-Dan Zhao, An Zeng, Ming-Sheng Shang, and **Jian Gao**. *Long-term effects of recommendation on the evolution of online systems.* Chinese Physics Letters, 2013, 30(11): 8901.

[5] Fang-Jian Guo, Jiang Su, and **Jian Gao**. *Finding conspirators in the network via machine learning.* The UMAP Journal, 33(3), 2012. (Outstanding Winner Award paper for MCM/ICM 2012)

[6] **Jian Gao**, and Xi-Nan Zhang. *Comprehensive scholarship evaluation model in colleges and universities.* Journal of Chongqing Technology and Business University (Nat Sci Ed). 2012, 29(1): 36-41. (In Chinese)

FUNDING

[1] Principal Investigator. Performance and behavior trend predication of employees in the context of big data. National Social Science Foundation of China (Grand No. 15CGL029). Co-PI with Dr. Jia Yuan (Chengdu Institute of Public Administration), RMB 200,000, May 2015-Present.

[2] Investigator. Interdisciplinary research of statistical physics and information science. National Natural Science Foundation of China (Grand No. 11222543), directed by Prof. Tao Zhou, RMB 1,000,000, June 2014-Present.

[3] Investigator. Study of information recommendation in dynamic evolution online system. National Natural Science Foundation of China (Grand No. 61370150), directed by Prof. Mingsheng Shang. RMB 750,000, January 2014-December 2014.

[4] Investigator, Percolation theory and cascading failure behavior on coupled com-

plex networks based on actual structure. National Natural Science Foundation of China (Grand No. 61203156), directed by Dr. Yanqing Hu (Southwest Jiaotong University), RMB 250,000, September 2013-September 2014.

[5] Investigator. Integration study of social network and spreading dynamics. National Natural Science Foundation of China (Grand No. 91324002), directed by Prof. Mingsheng Shang, RMB 150,000, October 2013-April 2014.

[6] Principal Investigator. Modeling of population structure of microbes in cellar. Science and Technology Innovation Fund Project of UESTC. RMB 3,000, January 2011-December 2011.

TEACHING EXPERIENCE	**Teaching Assistant**	Sep. 2013 - Jan. 2014
	School of Mathematical Sciences, UESTC	
	Course: Calculus	Instructor: Assoc. Prof. Yong Zhang
	Teaching Assistant	Sep. 2012 - Jan. 2013
	School of Mathematical Sciences, UESTC	
	Course: Mathematical Modeling	Instructor: Lecturer Hongfei Du

WORKING EXPERIENCE	**Research Intern**	Jun. 2015 - Aug. 2015
	Business Big Data LTD., Chengdu, China	
	Position: Data Analyst	
	Research Intern	Jan. 2014 - Jan. 2015
	Hire Big Data LTD., Chengdu, China	
	Position: Senior Algorithms Engineer	
	Management Intern	Sep. 2010 - Jun. 2012
	Department of Student Affair, School of Mathematical Sciences, UESTC	
	Position: Assistant Counselor	

SCHOLARSHIP	Tang Lixin Scholarship (0.2%), UESTC	2013-2015
	Entrance Scholarship (twice) (10%), UESTC	2012&2014
	Second-class Graduate Scholarship (15%), UESTC	2013-2014
	National Inspiration Scholarship (5%), Ministry of Education of China	2011-2012
	Single Award of People's Scholarship (twice) (5%), UESTC	2009-2011
	First-class People's Scholarship (10%), UESTC	2010-2011
	National Inspiration Scholarship (5%), Ministry of Education of China	2009-2010

AWARDS	Best Poster Award in the 2nd Conference on Complexity Science (5%)	2014
	Chinese Complexity Science Research Council	
	Outstanding Winner in 2012 Interdisciplinary Contest in Modeling (0.3%)	2012
	COMAP, sponsored by SIAM, MAA, NSA and INFORMS	
	Second-class Award in Asia-Pacific Mathematical Contest in Modeling (4.5%)	2011
	MATHOR Network, sponsored by APMMW	
	National Second-class Award in Contemporary Undergraduate MCM (5%)	2010
	CSIAM, sponsored by COMAP, MathWorks Inc and IBM Inc	
	First-class Award in Mathematical Contest in Modeling (1.8%)	2010
	UESTC, sponsored by School of Continuing Education	

HONOURS	Outstanding Staff Award of the year, Hire Big Data, LTD	2015
	Deserving Candidate and Outstanding Team of CAS Summer School on Systems Science, China Academic of Science (CAS)	2013
	Outstanding Student of the University (0.2%, highest honor), UESTC	2012
	Outstanding Graduates Awards of the University (5%), UESTC	2012
	Outstanding Individual on Work-study, the only in our school (1%), UESTC	2011
	Excellent Individual in Social Practice of the University (5%), UESTC	2011

CONTRIBUTED TALKS	Linking Companies and Economic Complexity.	Jun. 2015
	China Inter-discipline Association for Complex Economy (CIACE), Yantai, China	
	Group-based ranking method for online rating systems.	Mar. 2015
	Seminar of CompleX Lab, Web Sciences Center, UESTC, Chengdu, China	
	Bootstrap percolation on spatial networks.	Oct. 2014
	The 10th Chinese Conference on Complex Networks, National University of Defense Technology, Changsha, China	
	Bootstrap percolation on Kleinberg's network.	Jul. 2014
	The 2nd Conference on Complexity Science (Academic Conference), Wenzhou University, Wenzhou, China	
	Collective behavior and intervention of crowd.	Oct. 2013
	The CAS Summer School- School of Systems Science. CAS, Beijing, China	
	A two-stage-ranking algorithm based on interval clustering.	Jan. 2013
	Winter School on Networks and Complexity, UESTC, Chengdu, China	

ACADEMIC ACTIVITIES	The Statistical Physics and Complex Systems Conference, Lanzhou, China	Jul. 2015
	The Inter-discipline Association for Complex Economy, Yantai, China	Jun. 2015
	The Seminar on Frontier Issues of Complex Networks, Shenzhen, China	Jan. 2015
	The 10th Chinese Conference on Complex Networks, Changsha, China	Oct. 2014
	The 2nd Academic Conference on Complexity Science, Wenzhou, China	Jul. 2014
	The 9th Chinese Conference on Complex Networks, Hangzhou, China	Oct. 2013

EXTRA ACADEMIC ACTIVITIES	Member of Innovation Study and Share (ISS) Club	Nov. 2013 - Now
	The club is under Tang Lixin Education Development Foundation in UESTC.	
	Instructor of Association Mathematical Modeling (AMM)	Oct. 2011 - Jun. 2014
	The AMM is a student association in UESTC.	
	Leader of Work-Study Team in the School	Sep. 2010 - Jun. 2012
	The program is built by Student Financial Aid Center in UESTC.	
	Vice Minister and Journalist of Propaganda Department	Sep. 2008 - Jun. 2009
	Student Union, School of Mathematical Sciences, UESTC.	

SKILLS	Programming: MATLAB (practical experiences), Python
	Visualization: OriginLab, Gephi, D3.js, Adobe Illustrator

Last updated: October 10, 2015

Typesetting: LaTeX, MS Office
Language: Chinese (native), English (fluent)

HOBBY   Soccer, Badminton, Skiing, Skating

REFERENCE   **Dr. Tao Zhou**

Professor

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University of Electronic Science and Technology of China

Director, Big Data Research Center
University of Electronic Science and Technology of China

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