

# Jian Gao

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🌐 Homepage: <http://www.gaocn.net>

## Personal Information

Birth DATE: May 28, 1989      ♀ GENDER: Male      ♀ NATIONALITY: P.R. China  
Affiliation Complx Lab, University of Electronic Science and Technology of China (UESTC)

## Research Interests

Summary I'm working in the emerging field named **Computational Socioeconomics**, focusing on understanding socio-economic phenomena using the data-driven approach. As the first/corresponding author, I have published **20+ research papers** in leading journals including **Physics Reports (IF: 20.1, invited paper and submitted)**, **Scientific Reports (IF: 5.6)**, **Journal of the Royal Society Interface (IF: 3.4)**, **Physica A (IF: 2.1)**, **EPL (IF: 2.0)**, etc. My papers have been cited by **200+ times (H-index: 10)**.

Keywords Computational Socioeconomics, Data Analysis, Network Science, Economic Complexity, Information Retrieval, Computational Social Science

## Edu. & Res. Background

2014–2019	<b>University of Electronic Science and Technology of China</b>	Chengdu, China
	PhD Student in <i>Computer Science</i> . School of Computer Science and Engineering	
	advisor: Prof. Tao Zhou	
2016–2017	<b>Massachusetts Institute of Technology</b>	Cambridge, USA
	Visiting Student in <i>Media Arts and Sciences</i> . The MIT Media Lab	
	advisor: Prof. César A. Hidalgo	
2016–2016	<b>Boston University</b>	Boston, USA
	Visiting Scholar in <i>Complex Systems</i> . Department of Physics	
	advisor: Prof. H. Eugene Stanley	
2012–2014	<b>University of Electronic Science and Technology of China</b>	Chengdu, China
	Master Student in <i>Computer Science</i> . School of Computer Science and Engineering	
	advisor: Prof. Tao Zhou	
2008–2012	<b>University of Electronic Science and Technology of China</b>	Chengdu, China
	B.Sc in <i>Information and Computing Science</i> . School of Mathematical Sciences	
	GPA: 88.6/100 (3.88/4)	

## Selected Publications

‡: equal contribution      †: corresponding author

- [1] **Jian Gao**, Yi-Cheng Zhang & Tao Zhou. Computational socioeconomics. Invited by *Physics Reports* (invited paper and submitted), 2019.
- [2] **Jian Gao**<sup>†</sup> & Tao Zhou. Quantifying China's regional economic complexity. *Physica A*, 492: 1591–1603, 2018.
- [3] **Jian Gao**<sup>†</sup> & Tao Zhou. Evaluating user reputation in online rating systems via an iterative group-based ranking method. *Physica A*, 473: 546–560, 2017.
- [4] **Jian Gao**, Bogang Jun, Alex "Sandy" Pentland, Tao Zhou & César A. Hidalgo. Collective learning in China's regional economic development. arXiv:1703.01369, 2017.
- [5] **Jian Gao**<sup>†</sup>. Maximizing the collective learning effects in regional economic development. In: *International Computer Conference on Wavelet Active Media Technology and Information Processing*, IEEE Press, 2017, pp. 337–341.

- [6] **Jian Gao**<sup>†</sup> & Tao Zhou. Stamp out fake peer review. *Nature*, 546(7656): 33–33, 2017. Correspondence letter.
- [7] **Jian Gao**<sup>†</sup> & Tao Zhou. Big data reveal the status of economic development. *Journal of University of Electronic Science and Technology of China*, 45(4): 625–633, 2016. In Chinese.
- [8] **Jian Gao**, Tao Zhou & Yanqing Hu. Bootstrap percolation on spatial networks. *Scientific Reports*, 5: 14662, 2015.
- [9] **Jian Gao**, Yu-Wei Dong, Ming-Sheng Shang, Shi-Min Cai & Tao Zhou. Group-based ranking method for online rating systems with spamming attacks. *EPL (Europhysics Letters)*, 110(2): 28003, 2015.
- [10] Yi Cao<sup>‡</sup>, **Jian Gao**<sup>‡</sup>, De-Fu Lian, Zhi-Hai Rong, Jia-Tu Shi, Qing Wang, Yi-Fan Wu<sup>‡</sup>, Hua-Xiu Yao<sup>‡</sup> & Tao Zhou<sup>‡</sup>. Orderness predicts academic performance: Behavioral analysis on campus lifestyle. *Journal of the Royal Society Interface*, 15: 20180210, 2018.
- [11] Jun Wang, **Jian Gao**<sup>†</sup>, Jin-Hu Liu, Dan Yang & Tao Zhou. Regional economic status inference from online information flow and offline talent mobility. *EPL (Europhysics Letters)*, 125(6): 68002, 2019.
- [12] Ling-Jiao Chen & **Jian Gao**<sup>†</sup>. A trust-based recommendation method using network diffusion processes. *Physica A* 506: 679–691, 2018.
- [13] Xiao Yang, **Jian Gao**<sup>†</sup>, Jin-Hu Liu & Tao Zhou. Height conditions salary expectations: Evidence from large-scale data in China. *Physica A*, 501: 86–97, 2018.
- [14] Ling-Jiao Chen, Zi-Ke Zhang, Jin-Hu Liu, **Jian Gao**<sup>†</sup> & Tao Zhou. A vertex similarity index for better personalized recommendation. *Physica A*, 466: 607–615, 2017.

Full List <http://www.gaocn.net/index.html#Pub>

## Selected Honors & Awards

2019	Excellent Graduate Student Graduated, <i>Education Department in Sichuan</i>	(1%)
2018	Best Poster Award in the 2018 NetSciX Conference on Network Science	(Top 6)
2016	National Scholarship for Graduate Student, <i>Ministry of Education</i>	(5%)
2014	Best Poster Award in the 2nd Conference on Complexity Science	(Top 3)
2012	<b>Outstanding Winner</b> in 2012 Interdisciplinary Contest in Modeling	(0.3%)
2011	<b>Outstanding Student</b> of the University, <i>UESTC</i>	(0.2%)

## Selected Review Services

Reviewer	Journal of the Royal Society Interface	2018
	Knowledge-Based Systems	2017-2019
	Physica A	2016-2018
	IEEE Transactions on Knowledge and Data Engineering	2016

## Skills

Computing	MATLAB (practical), Python (basic)	◊ Visualization: OriginLab, Gephi, D3, AI
Language	English (fluent), Chinese (native)	◊ Typesetting: L <sup>A</sup> T <sub>E</sub> X, MS Office

## References

- Prof. Tao Zhou**, zhutou@ustc.edu Chengdu, China  
Big Data Research Center, University of Electronic Science and Technology of China
- Prof. César A. Hidalgo**, hidalgo@mit.edu Cambridge, USA  
Collective Learning Group, MIT Media Lab, Massachusetts Institute of Technology