

Jianxi Gao, Ph.D.

Address: 177 Huntington Ave 11th floor, Boston, MA, USA 02115; Phone: +1-617-888-9526;
Email: Jianxi.gao@gmail.com; Homepage: www.jianxigao.com; Employment status: Green Card (EB1A)

RESEARCH INTEREST

- Resilience, Regime Shift, Cascading Failures, & Control
- Network Theory, Control Theory, Statistic Physics, & Operation Research
- Critical Infrastructural, Ecological, Biological, & Social-economical Systems
- Cyber Physical systems, Cyber Security Systems, & Multi Agent Systems
- Data Analysis & Data Visualization
- Evolutionary Dynamics & Game Theory

APPOINTMENTS

Research Assistant Professor, Northeastern University	2016-present
<i>Advisor: Albert-Laszlo Barabasi, Robert Gray Dodge Professor of Network Science</i>	
Postdoctoral Research Associate, Northeastern University	2012-2016
<i>Advisor: Albert-Laszlo Barabasi, Robert Gray Dodge Professor of Network Science</i>	
Research Assistant, Boston University	2009-2012
<i>Advisor: H. Eugene Stanley (NAS), William Fairfield Warren Distinguished Professor</i>	
Research Assistant, Intelligent Information Control Lab at SJTU	2006-2009
<i>Advisor: Xiaoming Xu, Past Vice President of Shanghai Jiao Tong University, Professor of Automation</i>	

EDUCATION

Ph.D. Shanghai Jiao Tong University, Control Theory and Control Engineering	2008-2012
<i>Advisor: Xiaoming Xu, Thesis: Robustness and synchronization of network of networks.</i>	
<i>Co-Advisor: H. Eugene Stanley (NAS) and Shlomo Havlin (Past President of Israel Physical Society).</i>	
M.S. Shanghai Jiao Tong University, Control Theory and Control Engineering	2006-2009
<i>Advisor: Xiaoming Xu; Thesis: Convergence of dynamic networks based on Vicsek model</i>	
B.S. Dalian University of Technology, Chemical and Mechanical Engineering	2002-2006
<i>Advisor: Hongguang Dong; Thesis: Real-time optimization of process system – Data Rectification</i>	

JOURNAL PAPERS [\[Google Scholar\]](#) [\[Researcher ID\]](#)

- [1] *J. Gao*, B. Barzel., and A-L. Barabasi. [Universal Resilience Patterns in Complex Networks](#). *Nature*, 530(7590), 307-312 (2016). (MATLAB software, NuRsE.)
- [2] X. Liu, H. E. Stanley, and *J. Gao*. [Breakdown of Interdependent Directed Networks](#). *Proceedings of the National Academy of Sciences*, 113(5), 1138-1143 (2016).
- [3] J.-H. Cho and *J. Gao*. [Cyber War Game in Temporal Networks](#). *PLOS ONE*, 11(2), e0148674 (2016).
- [4] *J. Gao*, X. Liu, D. Li, and S. havlin. [Recent Progress on the Resilience of Complex Networks](#). *Energies*, 8(10), 12187–12210 (2015).
- [5] H. Peng, D. Zhao, X. Liu, and *J. Gao*. [Collective Motion on A Network of Self-propelled Agent Systems](#). *PLOS ONE*, 10(12): e0144153 (2015).
- [6] X. Liu, H. Peng, and *J. Gao*. [Vulnerability And Controllability of Networks of Networks](#). *Chaos, Solitons & Fractals*, 80, 125-138 (2015).

- [7] [J. Gao, Y.-Y. Liu, R. D'Souza, and A.-L. Barabasi. Target Control of Complex Networks. *Nature communication* 5, 5415 \(2014\).](#)
- [8] [J. Gao, D. Li, and S. Havlin. From Single Network to Network of Networks. *Nati. Sci. Rev.* 1, 346 \(2014\).](#)
- [9] [S. Havlin, H. E. Stanley, A. Bashan, J. Gao, and D. Y. Kenett. Percolation of Interdependent Network of Networks. *Chaos, Solitons & Fractals* 72, 4-19 \(2014\).](#)
- [10] [S. Havlin, D. Y. Kenett, A. Bashan, J. Gao, and H. E. Stanley. Vulnerability of Network of Networks. *Eur. Phys. J. Special Topics* 223, 2087 \(2014\).](#)
- [11] [J. Gao, S. V. Buldyrev, H. E. Stanley, X. Xu, and S. Havlin. Percolation of A General Network of Networks. *Phys. Rev. E*, 107, 195701 \(2013\).](#)
- [12] [D. Zhou, J. Gao, H. E. Stanley, and S. Havlin. Percolation of Partially Interdependent Scale-free Networks. *Phys. Rev. E*, 88, 062816 \(2013\).](#)
- [13] [G. Dong, J. Gao, R. Du, L. Tian, H. E. Stanley, and S. Havlin. Robustness of Network of Networks Under Targeted Attack. *Phys. Rev. E*, 87, 052804 \(2013\).](#)
- [14] [J. Gao, S. V. Buldyrev, S. Havlin, and H. E. Stanley. Networks Formed From Interdependent Networks. *Nature Physics*, 8, 40-48 \(2012\). \(C++ software, NON\)](#)
- [15] [J. Gao, S. V. Buldyrev, S. Havlin, and H. E. Stanley. Robustness of A Network Formed by n Interdependent Networks With A One-to-one Correspondence of Dependent Nodes. *Phys. Rev. E*, 85, 066134 \(2012\).](#)
- [16] [G. Dong, J. Gao, L. Tian, R. Du, Y. He. Percolation of Partially Interdependent Networks Under Targeted Attack. *Phys. Rev. E*, 85, 016112 \(2012\).](#)
- [17] [J. Gao, S. V. Buldyrev, S. Havlin, and H. E. Stanley. Robustness of a Network of Networks. *Phys. Rev. Lett.*, 107, 195701 \(2011\).](#)
- [18] [X. Huang, J. Gao, S. V. Buldyrev, S. Havlin, and H. E. Stanley. Robustness of Interdependent Networks Under Targeted Attack. *Phys. Rev. E*, 83, 065101\(R\) \(2011\).](#)
- [19] [J. Gao, S. Havlin, X. Xu, and H. E. Stanley. Angle Restriction Enhances Synchronization of Self-propelled Objects. *Phys. Rev. E*, 84, 046115 \(2011\).](#)
- [20] [Z. Chen, J. Gao, Y. Cai, and X. Xu. Evolutionary Prisoners Dilemma Game in Flocks. *Physica A*, 390, 50-56 \(2011\).](#)
- [21] [Z. Chen, J. Gao, Y. Cai, and X. Xu. Evolution of Cooperation among Mobile Agents. *Physica A*, 390, 1615-1622 \(2011\).](#)
- [22] [Y. Cai, L. Xu, J. Gao, and X. Xu. Study on Robust \$H_\infty\$ Filtering in Networked Environments. *International Journal of Automation and Computing*, 8, 465-471 \(2011\).](#)
- [23] [J. Gao, Z. Chen, Y. Cai, and X. Xu. Enhancing The Convergence Efficiency of A Self-propelled Agent System Via A Weighted Model. *Phys. Rev. E*, 81, 041918 \(2010\).](#)

Book and Book chapters

- [1] D. Kenett, *J. Gao*, X. Huang, S. Shao, I. Vodenska, S. Buldyrev, G. Paul, H. E. Stanley, S. Havlin. [Network of Interdependent Networks: Overview of Theory and Applications](#). *Networks of Networks: The Last Frontier of Complexity*. Springer, 107, 3–36 (2014).
- [2] *J. Gao*, A. Bashan, S. Havlin. [Introduction to Network of Networks](#). IOP ebooks (2016) In preparation (invited).

Patents

- [1] *J. Gao*, Y. Cai, C. Wen, X. Xu. Optimization method for multi-agent synchronization. *China Patent*, CN102393709A, 2012.

Journal Publication in Chinese (Mainly Undergraduate Work)

- [1] L. Song, Y. Cai, *J. Gao*, X. Xu. Multi-Sensor Data Fusion for Delayed Systems. *Control Engineering*, 2, (2010).
- [2] R. Li, Y. Cai, *J. Gao*, X. Xu. A Multi-Sensor Fusion Estimation Method. *Control Engineering*, 2, (2010).
- [3] *J. Gao*, Z. Chen, Y. Cai, X. Xu. Approach to Enhance Convergence Efficiency of Vicsek Model. *Control and Decision*, 24(8), 1269-1272 (2009).
- [4] *J. Gao*, H. Dong, Y. Liu, S. Cui, X. Qin. Analysis and Simulation of Stock Market Based on Cellular Automata. *Mathematics in Practice and Theory*, 39(4), 6-12 (2009).
- [5] Y. Liu, H. Dong, *J. Gao*, S. Cui, X. Qin. Analysis of Investor's Psychology And Fluctuations of Stock's Price in Stock Market Based on Cellular Automata. *Bulletin of Science and Technology*, 24(3), 427-432 (2008).
- [6] *J. Gao*, H. Dong, J. Huang, Z. Han, X. Xu. Data Rectification Based on Fuzzy Self-Adaptability Genetic Algorithm. *Control and Instruments in Chemical Industry*, 34(4), 9-14 (2007).
- [7] H. Dong, Z. Han, *J. Gao*, Y. Cui, P. Yao, Y. Yuan. Realization of Integral Frame of Separation Sequence Synthesis by Intelligent Search Algorithm. *Applied Science and Technology*, 33(1), 55-58 (2006).
- [8] *J. Gao*, H. Dong, Y. Liu, J. Liu. Algorithm for Portfolio Based on The Strategy of Equal-Risk. *Journal of Xi'an Institute of Technology*, 25(5), 425-428 (2005).

PEER-REVIEWED JOURNAL PAPERS (UNPUBLISHED)

- [1] M. Posfai, *J. Gao*, S. Cornelius, R. D'Souza, and A.-L. Barabasi. Controllability of Multilayer, Multi-Timescale Networks. Second Review, *Phy. Rev. X* (2016).
- [2] X. Liu, Linqiang Pan, H. E. Stanley, and *J. Gao*. Controllability of Network Giant Connected Components. Second Review, *Phy. Rev. E* (2016).
- [3] H. Zhang, M. Fan, Y. Wu, *J. Gao*, H. E. Stanley, Y. Yuan. Achieving synchronization using a cheap distributed controller or individual memory extension Submitted, *Proceedings of the National Academy of Sciences* (2016).

- [4] R. Rajaei, A. Bagheri, S. P. Cornelius, and *J. Gao*. On Synchronization of a General Network of Networks. Submitted, CDC (2016).
- [5] H. Zhang, W. Zhang, *J. Gao*. Synchronization of the Integrated Grids. Submitted, (2016).
- [6] *With* A. Sharma, X. Liu, and A. Halu. Robustness of networks of biological networks. In preparation (2016).
- [7] *With* Haizhong Wang. Resilience of transportation networks to disaster In preparation (2016).
- [8] *With* X. Liu, Linqiang Pan, H. E. Stanley. Robustness of a Network of Interdependent Directed Networks. In preparation (2016).
- [9] *With* N. Panduranga, X. Yuan, H. E. Stanley, and Shlomo Havlin. K-core Percolation In Interdependent Networks. In preparation (2016).

SUMMARY OF JOURNAL PAPERS

Journal	#	IF	Journal	#	IF
Nature	1	41.5	Nature Communications	1	11.5
Nature Physics	1	20.1	Physical Review Letters	1	7.5
PNAS	1	9.7	Physical Review E	8	2.3
PLOS ONE	2	3.2	Chaos, Solitons and Fractals	2	1.4
Energies	1	2.1	Eur. Phys. J. Special Topics	1	1.4
Physica A	2	1.7	Inter. Jour. of Auto. and Com.	1	TBD
Nati. Sci. Rev.	1	TBD	TOTAL	23	123.1

PUBLIC MEDIA & ARTS

- [20] “The Complex Networks of Our Planet”, **Next Nature Net**, April 25, 2016. ([Link](#))
- [19] “Resilience and complex systems (Translated from Italy)”, **Alekoslab**, April 17, 2016. ([Link](#))
- [18] “Prophecy given to scientists: when the extinction of bees? (Translated from Hebrew)”, **YNET**, Mar. 25, 2016. ([Link](#))
- [17] “How resilient is a complex system? Is it near collapse?”, **The Connectivist**, Mar. 17, 2016. ([Link](#))
- [16] “Patterns of Resilience and Collapse”, **Andrew Zolli**, Mar. 13, 2016. ([Link](#))
- [15] “Predicting the resiliency ‘tipping points’ of complex natural and social systems”, **Resilient Investor**, Mar. 9, 2016. ([Link](#))
- [14] “Network Earth”, **Ecology**, Mar. 8, 2016. ([Link](#))
- [13] “A 5-minute video shows why the social network of plants and animals is so fragile (Translated from German)”, **WIRED**, Feb. 26, 2016. ([Link](#))
- [12] “What are the complex networks? (Translated from Italy)”, **WIRED**, Feb. 25, 2016. ([Link](#))
- [11] “We’re Pushing Nature’s Network Architecture To A Catastrophic Crash – Nature can compensate for failure. Until one too many things go wrong.”, **Fast Codesign News**, Feb. 23, 2016. ([Link](#))
- [10] “From Coral Reefs To Power Grids, This Math Tool Can Predict Whether A System Will Collapse”, **Forbes News**, Feb. 22, 2016. ([Link](#))
- [9] “Watch: Can nature handle many more extinctions?”, **Siliconrepublic News**, Feb. 22, 2016. ([Link](#))

- [8] “Social network of Earth’s plants and animals”, **Flowing Data**, Feb. 22, 2016. ([Link](#))
- [7] “Calculating Nature’s Tipping Point ”, **Geo Lounge**, Feb. 21, 2016. ([Link](#))
- [6] “Witness the Stunning Complexity of Network Earth”, **Stash Media**, Feb. 19, 2016. ([Link](#))
- [5] “Researchers find the tipping point between resilience and collapse in complex systems”, **Northeastern News**, Feb.17, 2016. ([Link](#))
- [4] “Network Earth”, Youtube, **Nature Video**, Feb. 17, 2016. ([Link](#))
- [3] “Scientists review worldwide rise of ‘network of networks’ ”, **Phys Org**, Dec. 3, 2014. ([Link](#))
- [2] “When Networks Network”, **Science News**, Sep. 7, 2012. ([The Link](#))
- [1] ”Tom Siegfried, Randomness: Networks of networks are all around you – and you are one”, **Science News**, Feb. 6, 2012. ([Link](#))

RESEARCH EXPERIENCE (SELECTED PROJECTS)

Resilience in Complex Networks.

In this project, I develop a general formalism to analytically derive the resilience function of any complex system with known topology and dynamics. The formalism identifies a natural parameter space, in which the resilience of diverse complex systems follows a universal pattern. In this parameter space most real systems follow highly predictive resilience transitions. I validate the predictions on ecological networks with experimentally mapped mutualistic interactions, on the regulatory networks of *E. coli* and yeast, and on the power grid, in each case demonstrating that the analytically predicted resilience function accurately captures the system’s resilience. The paper was published on *Nature* in Feb. 2016.

Target Control of Complex Networks

In many circumstances it is neither feasible nor necessary to control the entire system. In social networks, gene regulatory networks or Internet, it is virtually impossible to control millions of nodes simultaneously. In this project, I develop a greedy algorithm to approximate the minimum set of driver nodes sufficient to control the target nodes, and explored the fundamental laws governing the target controllability of complex networks. Finally, I validate my algorithm on 4 gene regulatory networks, 2 trust networks, 4 food webs, 1 power grid, 3 metabolic networks, 3 electronic networks and 2 neuronal networks. The paper was published on *Nature Communications* in 2014.

Breakdown of Interdependent Directed Networks

In this project, I developed a novel theoretical framework based on generating functions and percolation theory. By applying the theoretical analysis to real interdependent international trade networks, I find that the robustness of these real-world systems increases with the in-degree and out-degree correlations, confirming the theoretical analysis. The paper was published on *PNAS* in Feb. 2016.

Robustness of a Network of Networks (NONs)

In this project, I have developed a general theoretical framework for analyzing the robustness of and cascading failures in NONs. The results of NONs have been surprisingly rich, and they differ so greatly from those of single networks that they present a new paradigm. While non-interacting networks breakdown continuously due to node failures, a NON can fail abruptly due to cascading failures. The papers were published on *Nature Physics* and *Physical Review Letters* in 2012.

TEACHING EXPERIENCE

Co-Teaching
Boston University

2015 Fall

"Network Science (PY895)" with H. E. Stanley. The students were from Department of Physics, Department of Chemistry, Department of Electrical & Computer Engineering, and Department of Psychology. I taught half of class, including four chapters (Network Robustness, Degree Correlations, Evolving Networks, and Spreading Phenomena), front research in Network Science (Network controllability, Network of networks, and Network resilience), and software for computation and data visualization. I also designed the homework and guided the research project of each group.

Teaching 2007–2008
Continuing Education School, Shanghai Jiao Tong University
"Computer Graph" and "Operating System". The students were from Department of Computer Science.

Training Mar. 2009
Baosteel Company
I trained Matlab to 13 employees of Baosteel Company (8 hours/day × 4 days).

Lab Supervisor 2007-2009
Intelligent Information Control Lab, Shanghai Jiao Tong University
Supervise undergraduate and graduate students on their research with Yunze Cai.

2010-present
Center for Polymer Studies, Boston University
Supervise graduate students on their research with H. Eugene Stanley.

HONORS

Outstanding Thesis

- 2015 Outstanding Doctoral Dissertation, Shanghai.
- 2014 Outstanding Doctoral Dissertation Award by CAA.
- 2012 Shanghai Outstanding Doctoral Graduates.
- 2010 Outstanding Master's Thesis, Shanghai.
- 2006 Outstanding Bachelor's Thesis, Dalian University of Technology.

Outstanding Referees

- 2016 Outstanding Reviewer of Elsevier's journals
- 2015 Distinguished Referees for Europhysics Letters.
- 2014 Distinguished Referees for Europhysics Letters.
- 2013 Distinguished Referees for Europhysics Letters.

Funding Awards

- 2011 Excellent Doctoral Student granted by Ministry of Education. \$5,000/year
- 2010 Outstanding Doctoral Dissertation Engagement Fund. \$ 11,800/year
- 2004 Science and Technology Innovation Fund for Undergraduates. \$ 320/year

Other Awards

- 2010 Guanhua Scholarship for Graduate Students.
- 2005 The Mathematical Contest in Modeling (USA), Second Prize.
- 2004 The Mathematical Contest in Modeling (USA), Second Prize.

GRANT PROPOSAL WRITING EXPERIENCE

[1] Wrote with Albert-Laszlo Barabasi (NEU), Auroop R Ganguly (NEU), Stephen Flynn (NEU), Baruch Barzel (BIU) et al. "Critical Resilient Interdependent Infrastructure Systems and Processes (CRISP, NSF)", 2016, **Status: Under review.**

[2] Wrote with Auroop R Ganguly (NEU), Stephen Flynn (NEU), Pinar Keskinocak (Georgia Tech), Lucio Soibelman (USC), Andrew J Whittle (MIT), Albert-Laszlo Barabasi (NEU), Edmund Yeh (NEU) et al.,

“Engineering Research Center for Climate Adaptation and Resilient Engineering (CARE)” (ERC, NSF), 2015, **Status: Unfunded**.

[3] Wrote with Albert-Laszlo Barabasi (NEU), R. D’Souza (UCDavis), Jin-Hee Cho (ARL) et al. ”Controlability of complex networks”, Army Research Lab (ARL), 2014. **Status: Funded, \$ 225K × 5 years**.

[4] Wrote with Albert-Laszlo Barabasi (NEU), Yang-Yu Liu (Harvard) et al. ”Control strategies for multi-layer/multi-dependent network response to WMD attacks”, Defense Threat Reduction Agency (DTRA), 2013. **Status: Funded, \$ 210K × 5 years**.

[5] Wrote with H. Eugene Stanley (BU), Shlomo Havlin (BIU) et al. “Dynamical processes in interdependent techno-social networks”, NSF, 2011, **Status: Funded, \$ 680K**.

INVITED TALKS

[15] “Resilience of complex networks”, Scalable cooperation group in MIT Media Lab, Boston, June, 2016.

[14] “Network of Networks: from structures to dynamics”, **NetSci Satellite: Netonets2016**, Seoul, South Korea, 2016.

[13] “Network of Networks: from theory to applications”, **NetSci Satellite: Multiscale Characterization of the Human Diseases by Multinetworks**, Seoul, South Korea, 2016.

[12] “Universal resilience patterns in complex networks”, Channing Lab, Harvard Medical School, February 2016.

[11] “The extreme vulnerability of network of networks”, **NetSci Satellite: Physics of multilayered interconnected networks**, Berkeley, California, USA, 2014.

[10] “The Extreme Vulnerability of Network of Networks”, **SIAM on Applications of Dynamic Systems**, Snowbird, USA, 2013, Featured Minisymposium Video ([Link](#)).

[9] “Extremely vulnerability of a network of networks”, **FuturICT Workshop at MIT Media Lab**, Boston, USA, 2013.

[8] “From single network to Network of networks”, **East Lake International Forum**, Wuhan, China, 2013.

[7] “Controlling network of networks”, Automation Department, Shanghai Jiao Tong University, June 2013.

[6] “Target control a complex network”, Automation Department, Huazhong University of Science and Technology, November 2013.

[5] “Robustness of a network of networks”, **Workshop Networks’ Emergence and sustainability**, Venice, Italy, 2012.

[4] “Networks of Networks”, **Workshop Complex networks**, Shanghai, China, 2012.

[3] “Collective Motion”, Department of Mechanical Engineering and Department of Automation, Huazhong University of Science and Technology, June 2012.

[2] “Extremely vulnerability of network of networks”, Physics Department, Bar-Ilan University, Sep. 2012.

[1] “Networks of Networks”, Department of Electronic Engineering, Fu dan University, January 2012.

CONTRIBUTED TALKS AND CONFERENCES

[6] *J. Gao*, B. Barzel, and A.-L. Barabasi. “Universal resilience patterns in complex networks”, Netsci2016, Seoul, South Korea, 2016. (Abstract + Oral)

[5] *J. Gao*, Y.-Y. Liu, R. D’Souza, and A.-L. Barabasi. “Target Control of complex networks”, APS March meeting, Denver, USA, 2014. (Abstract + Oral)

- [4] Di Zhou , Jianxi Gao , Shlomo Havlin , H.Eugene Stanley, “Percolation of Double-Layer Networks with Different Topologies Under Random Attacks”, APS March meeting, Boston, USA, 2012. (Abstract)
- [3] Jianxi Gao , Sergey V. Buldyrev , H. Eugene Stanley , Shlomo Havlin, “Robustness of a Network of Networks”, APS March meeting, Boston, USA, 2012. (Abstract + Oral)
- [2] Xuqing Huang , Jianxi Gao , Sergey Buldyrev , Shlomo Havlin , H. Eugene Stanley, “Robustness of interdependent networks under targeted attack”, APS March meeting, Boston, USA, 2012. (Abstract)
- [1] Jianxi Gao, Zhuo Chen, “An Approach to Enhance Convergence Efficiency of Self-propelled Agent System”, First International Conference, Complex 2009, Shanghai, China, 2009. (Paper+Oral)

PROFESSIONAL ACTIVITIES

Editor Board

- [1] Nature Scientific Reports, from Jan. 2015

Reviewer

- [1] Science.
- [2] Proceedings of the National Academy of Sciences of United States
- [3] Physical Review X.
- [4] Physical Review Letters.
- [5] Physical Review E.
- [6] Nature Scientific Reports.
- [7] Plos One.
- [8] New Journal of Physics.
- [9] Journal of Physics: Condensed Matter.
- [10] Europhysics Letter.
- [11] Nonlinear Dynamics, Psychology, and Life Sciences.
- [12] Journal of Statistical Mechanics: Theory and Experiment.
- [13] IEEE/ACM Transactions on Computational Biology and Bioinformatics.
- [14] IEEE Transactions on Control of Network Systems.
- [15] IEEE Transactions on Network Science and Engineering.
- [16] Journal of Statistical Physics.
- [17] BMC Systems Biology.
- [18] Canadian Journal of Physics.
- [19] Physics Letters A.
- [20] Physica A: Statistical Mechanics and its Applications.
- [21] Journal of Circuits, Systems, and Computers.
- [22] International Journal of Control.

Program Committee

- [1] 7th International Workshop on Complex Networks (CompleNet2016)

Co-organizer

- [1] Satellite “Controlling complex networks” in NetSci 2014, Berkeley, California.

Section Chair

- [1] “Resilience” section in NetSci 2016, Seoul, South Korea.

SELECTED SUPERVISED STUDENTS & VISITING SCHOLARS

Xin Yuan	2015-Present
<i>Graduate Student in BU.</i>	
Nagendra Panduranga	2014-Present
<i>Graduate Student in BU.</i>	
Huixin Zhang	2013-present

Graduate student in SJTU China.

Xueming Liu <i>Visiting student in BU. Now assistant professor in HZUST</i>	2013-present
Di Zhou <i>Graduate Student in BU. Now Financial Software Developer at Bloomberg LP</i>	2011-2013
Rujin Du <i>Visiting student in BU. Now assistant professor in Jiangsu University</i>	2010-2013
Gaogao Dong <i>Visiting student in BU. Now assistant professor in Jiangsu University</i>	2010-2013
Xuqing Huang <i>Graduate Student in BU. Now Software Engineer at Google</i>	2010-2011
Lin Song <i>Graduate student in SJTU China. Now working in Exxon Mobil.</i>	2008-2009

MENTORING UNDERGRADUATE RESEARCH

National Undergraduate Innovative Test Program <i>Research on the emergence of collective behavior of multiple agent systems.</i> Undergraduate students: Lei Ji, Sheng Ding, Cong Gu, Mingming Zhao	9/08–1/10
National Undergraduate Innovative Test Program <i>Research on the complexity of financial markets based on multi-agent models.</i> Undergraduate students: Zhongling Hang, Ziyi Zhou, Xiangyang Liu, Yi Sun	9/08–1/10

REFERENCES

1. Albert-Laszlo Barabasi

Robert Gray Dodge Professor of Network Science; Distinguished University Professor;
Director, Center for Complex Network Research; Northeastern University, Boston, MA 02115 USA;
Email: alb@neu.edu; Phone: +1 (617) 373-2355.

2. H. Eugene Stanley

Member of the US National Academy of Sciences, William Fairfield Warren Distinguished Professor;
Professor of Physics, Chemistry, Biomedical Engineering, Physiology (BU School of Medicine);
Director, Center for Polymer Studies, Boston University, Boston, MA 02215 USA;
Email: hes@buphy.bu.edu; Phone: +1 (857) 891-1941.

3. Shlomo Havlin

Past President, Israel Physical Society; Professor of Physics;
Bar-Ilan University, 52900 Ramat-Gan, Israel;
Email: havlin@ophir.ph.biu.ac.il; Phone: +972-3-5318436