

# Curriculum Vitae



**JUN WU**

Professor of System Science, Beijing Normal University

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## CONTACT

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## RESEARCH INTERESTS

Complex Network; Complex System; Voting & Ranking; Game Theory

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## EDUCATION

- **Dec 2007–Dec 2008**  
**Imperial College London**  
Applied Mathematics · Visiting PhD student  
United Kingdom · London
  - **Apr 2007–Jun 2007**  
**Chinese Academy of Sciences**  
Network Engineering · Visiting PhD student  
China · Beijing
  - **Sep 2002–Dec 2008**  
**National University of Defense Technology**  
Management Science · PhD  
China · Changsha
  - **Sep 1998–Jul 2002**  
**Sichuan University**  
Management Science · B. A  
China · Chengdu
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## WORKING EXPERIENCE

- **Jan 2020–**  
**Professor of System Science**  
International Academic Center of Complex Systems  
Beijing Normal University  
China · Zhuhai
- **Dec 2016–Dec 2019**  
**Professor of Management Science**  
College of Information System and Management  
National University of Defense Technology  
China · Changsha
- **Mar 2016–Mar 2017**  
**Visiting Scholar**  
Department of Compute Science  
University of California, Davis  
Davis, USA
- **Dec 2010–Dec 2016**  
**Associate Professor of Management Science**  
College of Information System and Management  
National University of Defense Technology  
China · Changsha
- **Dec 2008–Dec 2010**  
**Lecturer of Management Science**  
College of Information System and Management  
National University of Defense Technology  
China · Changsha

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## TEACHING EXPERIENCE

- **Sep 2010–Dec 2019**  
**Applied Statistics**  
National University of Defense Technology  
Course for undergraduate
  - **Sep 2012–Dec 2019**  
**Modelling and Visualization of Complex Networks**  
National University of Defense Technology  
Course for undergraduate
  - **Feb 2009–Dec 2019**  
**Network Science**  
National University of Defense Technology  
Course for postgraduate
  - **Sep 2012–Dec 2019**  
**Statistics for Management**  
National University of Defense Technology  
Course for MPA
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## GRANTS

- National Science Foundation of China under Grant No. 71871217, “*Study on Disintegration of Complex Networks with Incomplete Information based on Link Prediction*”, 2019-2022, RMB 500,000, PI
- Natural Science Foundation of Hunan Province under Grant No. 2019JJ20019, “*Study on Disintegration of Complex Networks with Incomplete Information*”, 2019-2021, RMB 500,000, PI
- Program for New Century Excellent Talents in University, “*Complex Systems and Complex Networks*”, 2013-2015, RMB 20,0000, PI
- National Science Foundation of China under Grant No. 71371185, “*Enhancement Method for Invulnerability of Complex Networks based on Node Information Camouflage*”, 2014-2017, RMB 580,000, PI
- National Science Foundation of China under Grant No. 60904065, “*Spectral Measure of Structural Robustness in Complex Networks*”, 2009-2012, RMB 180,000, PI

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## AWARDS

- Youth Science and Technology Prize of the Systems Engineering Society of China, 2018
- Nomination Awards of the National Outstanding Doctoral Dissertations, 2011
- CASC Scholarship, National University of Defense Technology, 2007
- Guanghua Scholarship, National University of Defense Technology, 2006
- First Prize Scholarship, Sichuan University, 1999, 2000

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## SCIENTIFIC SOCIETIES

- Council Member of Society of Management Science and Engineering of China
- Council Member of Professional Committee of Complex Systems and Complex Networks
- Chair of the Organization Committee of CCCN'2014
- Chair of the Mini-symposia in ICIAM'2015
- Chair of the session “Network reliability and resilience” in NetSciX'2017
- Chair of the session “Reliability of Complex Networked System” in CSSC'2018
- Member of Technical Program Committee of PESARO, 2012-present
- Member of IEEE, 2012-present
- Member of INCOSE, 2013-present

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## REFEREES

- European Journal of Operational Research
- Computer & Operations Research

- IEEE Transactions on Network Science and Engineering
- Reliability Engineering & System Safety
- Risk Analysis
- Decision Support Systems
- IEEE Transactions on Systems, Man, and Cybernetics A
- International Journal of Systems Science
- Journal of Systems Science and Complexity
- IEEE Communications Letters
- Plos One
- Journal of Physics
- Physics A
- Physics Letters A
- Physics Scripta
- Chinese Journal of Aeronautics
- Chinese Physics Letters
- Chinese Physics

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## PUBLICATIONS

1. Ye Deng, Jun Wu, Yu Xiao, Meng-Xiang Zhang. Optimal Disintegration Strategy With Heterogeneous Costs in Complex Networks [J]. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50(8): 2905-2913 (JCR Q1, IF=5.135)
2. Ya-Peng Li, Ye Deng, Yu Xiao, Jun Wu\*. Attack and Defense Strategies in Complex Networks Based on Game Theory [J]. Journal of Systems Science and Complexity, 2019, 32 (6): 1630-1640 (JCR Q4, IF= 2.243)
3. Ye Deng, Jun Wu\*, Ming-Ze Qi, Yue-Jin Tan. Optimal disintegration strategy in spatial networks with disintegration circle model [J]. Chaos, 2019, 29 (6): 061102 (JCR Q1, IF=2.415)
4. Ming-Ze Qi, Suoyi Tan\*, Hong-Zhong Deng, Jun Wu\*. Evaluating link significance in maintaining network connectivity based on link prediction [J]. Chaos, 2019, 29 (8): 083120 (JCR Q1, IF=2.415)
5. Yu Xiao, Hongzhong Deng, Xin Lu, Jun Wu\*. Optimal ballot-length in approval balloting-based multi-winner elections [J]. Decision Support Systems, 2019, 118 (1): 1-9 (JCR Q1, IF=3.565)

6. Yu Xiao, Hong-Zhong Deng, Xin Lu, Jun Wu\*. Graph-based Rank Aggregation Method for High-dimensional and Partial Rankings [J]. Journal of the Operational Research Society, 2020
7. Ya-Peng Li, Shun Qiao, Ye Deng, Jun Wu\*. Stackelberg game in critical infrastructures from a network science perspective [J]. Physica A, 2019, 521 (5): 705-714 (JCR Q1, IF= 2.243)
8. Mingze Qi, Ye Deng\*, Hongzhong Deng, Jun Wu\*. Optimal disintegration strategy in multiplex networks [J]. Chaos, 2018, 28 (12): 121104 (JCR Q1, IF=2.415)
9. Ya-Peng Li, Suo-Yi Tan, Ye Deng, Jun Wu\*. Attacker-defender game from a network science perspective [J]. Chaos, 2018, 28 (5): 051102 (JCR Q1, IF=2.415)
10. Yang Yu, Ye Deng, Suo-Yi Tan, Jun Wu\*. Efficient disintegration strategy in directed networks based on tabu search [J]. Physica A, 2018, 507 (10): 435-442 (JCR Q1, IF= 2.243)
11. Jun Wu\*, Suo-Yi Tan, Zhong Liu, Yue-Jin Tan. Enhancing structural robustness of scale-free networks by information disturbance. Scientific Reports, 2017, 7: 7559 (JCR Q1, IF=5.228)
12. Yu Xiao, Ye Deng, Jun Wu\*, Hong-Zhong Deng, Xin Lu. Comparison of rank aggregation methods based on inherent ability [J]. Naval Research Logistics, 2017, 64 (6): 556-565 (JCR Q4, IF=0.753)
13. Guan-Sheng Peng, Suo-Yi Tan, Jun Wu\*, Holme P. Trade-offs between robustness and small-world effect in complex networks. Scientific Reports, 2016, 6: 37317 (JCR Q1, IF=5.228)
14. Suo-Yi Tan, Jun Wu\*, Lin-Yuan Lü, Meng-Jun Li. Efficient network disintegration under incomplete information: the comic effect of link prediction [J]. Scientific Reports, 2016, 6: 22916 (JCR Q1, IF=5.228)
15. Suo-Yi Tan Jun Wu\*, Meng-Jun Li, Xin Lu. Approximating natural connectivity of scale-free networks based on largest eigenvalue [J]. Europhysics Letters, 2016, 114 (5): 58002 (JCR Q2, IF=1.957)
16. Guan-Sheng Peng, Jun Wu\*. Optimal Network Topology for Structural Robustness Based on Natural Connectivity. Physica A, 2016, 443: 212-220 (JCR Q1, IF= 2.243)
17. Ye Deng, Jun Wu\*, Yue-Jin Tan. Optimal attack strategy of complex networks based on tabu search [J]. Physica A, 2016, 442: 74-81 (JCR Q1, IF= 2.243)

18. Hong-Zhong Deng, Peter Abell, Ofer Engel, Jun Wu, Yue-Jin Tan. The influence of structural balance and homophily/heterophobia on the adjustment of random complete signed networks [J]. *Social Networks*, 2016, 44 190-201
19. Ye Deng, Jun Wu\*, Yue-Jin Tan. A fast connected component algorithm based on hub contraction, *IEEE SMC'2016* [C]. Budapest, Hungary: IEEE, 2016.
20. Ye Deng, Jun Wu\*. Optimal attack strategy with heterogeneous costs in complex networks, *IEEE SysCon'2016* [C]. Orlando, USA: IEEE, 2016
21. Ye Deng, Jun Wu\*. Optimal Attack Strategy Based on Limited Cost Model on Complex Network, *IEEE SMC'2015* [C]. Hongkong: IEEE, 2015
22. Xiao-Ke Zhang, Jun Wu\*, Cui-Ying Duan, M. T. M. Emmerich. Towards robustness optimization of complex networks based on redundancy backup, *IEEE CEC'2015* [C]. Sendai, Japan: IEEE, 2015
23. Xiao-Ke Zhang, Jun Wu\*, Yong Li, Hong-Zhong Deng, Yue-Jin Tan. Structural Robustness of Weighted Complex Networks Based on Natural Connectivity. *Chinese Physics Letters*, 2013, 30(10): 108901 (JCR Q3, IF= 0.800)
24. Jun Wu\*, Mauricio Barahona, Yue-Jin Tan, Hong-Zhong Deng. Robustness of random graphs based on graph spectra. *Chaos*, 2012, 22(4): 043101 (JCR Q1, IF=2.283)
25. Hong-Zhong Deng, Peter Abell, Ji Li, Jun Wu. A study of sign adjustment in weighted signed networks [J]. *Social Networks*, 2012, 34 (2): 253-263
26. Jun Wu\*, Mauricio Barahona, Yue-Jin Tan, Hong-Zhong Deng. Spectral Measure of Robustness in Complex Networks. *IEEE Transaction on Systems, Man, and Cybernetics A*, 2011, 41(6): 1244-1252 (JCR Q1, IF=2.350)
27. Jun Wu\*, Mauricio Barahona, Yue-Jin Tan, Hong-Zhong Deng. Robustness of regular ring lattices based on natural connectivity. *International Journal of Systems Science*, 2011, 42(7): 1085-1072 (JCR Q2, IF=1.305)
28. Jun Li, Jun Wu\*, Yong Li, Hong-Zhong Deng, Yue-Jin Tan. Optimal Attack Strategy in Random Scale-Free Networks Based on Incomplete Information. *Chinese Physics Letters*, 2011, 28(6): 068902 (JCR Q3, IF= 0.800)
29. Jun Li, Jun Wu\*, Yong Li, Hong-Zhong Deng, Yue-Jin Tan. Attack Robustness of Scale-Free Networks Based on Grey Information. *Chinese Physics Letters*, 2011, 28(5): 058904 (JCR Q3, IF= 0.800)
30. Jun Wu\*, Mauricio Barahona, Yue-Jin Tan, Hong-Zhong Deng. Natural Connectivity of Complex Networks. *Chinese Physics Letters*, 2010, 27(7): 078902 (JCR Q3, IF= 0.800)

31. Yong Li, Jun Wu\*, An-Quan Zou. Effect of Eliminating Edges on Robustness of Scale-Free Networks under Intentional Attack. *Chinese Physics Letters*, 2010, 27(6): 068901 (JCR Q3, IF= 0.800)
32. Jun Wu\*, Yue-Jin Tan, Hong-Zhong Deng, Da-Zhi Zhu. Relationship between degree-rank function and degree distribution of protein-protein interaction networks. *Computational Biology and Chemistry*, 2008, 32(1): 1-4 (JCR Q3, IF=1.331)
33. Jun Wu\*, Hong-Zhong Deng, Yue-Jin Tan, Da-Zhi Zhu. Vulnerability of complex networks under intentional attack with incomplete information. *Journal of Physics A*, 2007, 40(11): 2665-2671 (JCR Q1, IF=1.857)
34. Jun Wu\*, Yue-Jin Tan, Hong-Zhong Deng, Da-Zhi Zhu, CHI Yan. Relationship between degree-rank distributions and degree distributions of complex Networks. *Physica A*, 2007, 383(2): 745-752 (JCR Q1, IF= 2.243)
35. Jun Wu\*, Hong-Zhong Deng, Yue-Jin Tan, Yong Li, Da-Zhi Zhu. Attack vulnerability of complex networks based on local information. *Modern Physics Letters B*, 2007, 21(16): 1007-1014 (JCR Q4, IF= 0.617)
36. Jun Wu\*, Yue-Jin Tan, Hong-Zhong Deng, Da-Zhi Zhu. Normalized entropy of rank distribution: a novel measure of heterogeneity of complex networks. *Chinese Physics*, 2007, 16(6): 1576-1580 (JCR Q2, IF=1.223)
37. Jun Wu\*, Yue-Jin Tan, Hong-Zhong Deng, Da-Zhi Zhu. A robustness model of complex networks with tunable attack information parameter. *Chinese Physics Letters*, 2007, 24(7): 2138-2141 (JCR Q3, IF= 0.800)
38. Jun Wu\*, Yue-Jin Tan, Hong-Zhong Deng, Da-Zhi Zhu. Heterogeneity of Scale-free Networks. *Systems Engineering - Theory & Practice*, 2007, 27(5): 101-105
39. Yue-Jin Tan, Jun Wu\*, Hong-Zhong Deng, Yong Li. Maximum Degree and Average Degree of Scale-free Networks. *Dynamics of Continuous, Discrete and Impulsive Systems B*, 2007, 14(S7): 60-62
40. Jun Wu\*, Yue-Jin Tan. Finding the most vital node by node contraction in communication networks, *International Conference on Communications, Circuits and Systems (ICCCS'2005)* [C]. Hongkong: IEEE, 2005

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