

# WANYUE XU

## CONTACT INFORMATION

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## EDUCATION EXPERIENCE

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**Fudan University(FDU)**, Shanghai, China

09/2019 – Present

The successive postgraduate and doctoral programs of study

Ph.D candidate in school of computer science · GPA 3.64/4.00

Advisor: Prof. Zhongzhi Zhang · Anticipated Date of Graduation: 06/2024

Research Interests: Network Science/Complex Networks/ Graph Algorithms/Computational Social Science

**Shandong University(SDU)**, Shandong, China

09/2015 – 06/2019

B.Eng in Computer Science and Technology · GPA 3.77/4.00 · TOP 10%

## PUBLICATIONS

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1. **Wanyue Xu**, Bin Wu, Zuobai Zhang, Zhongzhi Zhang, Haibin Kan, and Guanrong Chen. Coherence scaling of noisy second-order scale-free consensus networks. *IEEE Transactions on Cybernetics*, 2021. (TCYB, IF:11.079)
2. **Wanyue Xu**, Qi Bao, and Zhongzhi Zhang. Fast evaluation for relevant quantities of opinion dynamics. In: *Proceedings of the Web Conference*, 2021. (WWW'21, CCF A)
3. **Wanyue Xu**, Yibin Sheng, Zuobai Zhang, Haibin Kan, and Zhongzhi Zhang. Power-law graphs with minimal scaling of Kemeny constant for random walks. In: *Proceedings of the Web Conference*, 2020. (WWW'20, CCF A)
4. **Wanyue Xu**, Liwang Zhu, Jiale Guan, Zuobai Zhang, and Zhongzhi Zhang. Effects of Stubbornness on Opinion Dynamics. In: *Proceedings of the 31st ACM International Conference on Information and Knowledge Management*, 2022. (CIKM'22, CCF B)
5. Zuobai Zhang, **Wanyue Xu**, Yuhao Yi, and Zhongzhi Zhang. Fast approximation of coherence for second-order noisy consensus networks. *IEEE Transactions on Cybernetics*, 2020.
6. Zuobai Zhang, **Wanyue Xu**, and Zhongzhi Zhang. Nearly linear time algorithm for mean hitting times of random walks on a graph. In: *Proceedings of ACM International Conference on Web Search and Data Mining*, 2020.(WSDM'20,CCF B)
7. Zuobai Zhang, **Wanyue Xu**, and Zhongzhi Zhang, and Guanrong Chen. Opinion dynamics incorporating high-order interactions.In *Proceedings of the 20th IEEE International Conference on Data Mining*.(ICDM'20,CCF B)
8. Che Jiang, **Wanyue Xu**, Xiaotian Zhou, Zhongzhi Zhang, and Haibin Kan. Some combinatorial problems in power-law graphs. *The Computer Journal*, 2021. (CCF B, IF: 0.98)
9. Yi Qi, **Wanyue Xu**, Liwang Zhu, and Zhongzhi Zhang. Real-world networks are not always fast mixing. *The Computer Journal*, 2021.
10. Yucheng Wang, Yuhao Yi, **Wanyue Xu**, and Zhongzhi Zhang. Modeling higher-order interactions in complex networks by edge product of graphs. *The Computer Journal*, 2021.
11. Qi Bao, **Wanyue Xu**, and Zhongzhi Zhang. Benchmark for discriminating power of edge centrality metrics. *The Computer Journal*, 2021.
12. Mingzhe Zhu, **Wanyue Xu**, Zhongzhi Zhang, Haibin Kan, and Guanrong Chen. Resistance Distances In Simplicial Networks. *The Computer Journal*, 2022.

## PROJECTS

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**Important Influence Factors and Fast Algorithms for Opinion Dynamics in Social Networks**

01/2021–Present

- Study the influence factors in opinion dynamics, not only include the individual stubbornness, higher-order interactions, scale-free small-world topology, and opinion leaders. Reveal how they affect the opinion revolution,

mainly manifest in overall opinion and coverage speed for opinions.

- Measure, calculate and optimize some related social phenomena on opinion dynamics, such as conflict, disagreement, and polarization.
- Establish fast and effective algorithms to solve the above problems. Perform experiments on large-scale real networks with millions of nodes to verify the theoretical results.
- Publish papers in WWW'21, ICDM'20.

## Detection and Recognition of Fake Media Content in Online Social Networks

01/2021–Present

Project supported by the Joint Funds of the National Natural Science Foundation of China

- Construct a transmission model of FMC in online social networks based on the higher-order temporal network.
- Develop a method of FMC transmission blocking, through evaluating the importance of the broadcasting nodes/edges and finding solutions for the blocking optimization problem.
- Publish paper in CIKM'22.

## Random/Biased Walk on Complex Networks and Their Applications 03/2019–12/2020

Project supported by National Natural Science Foundation of China

- Uncover the effects of network construction on the primary quantities of random and biased walk, including stationary distribution, hitting time, mixing time, cover time and Kemeny constant.
- Apply random and biased walk to the field of graph data mining. Such as link prediction, node group centrality, and network robustness.
- Publish papers in WWW'20, WSDM'20, and TCYB.

## OTHER EXPERIENCE

<b>Research Intern</b> , MSRA	08/2022 – Present
<b>Class President</b> , Fudan University	09/2021 – Present
<b>IEEE Student Member</b>	12/2019 – Present
<b>Conference Reviewer</b> , The Web Conference 2022	10/2021 – 12/2021
<b>Teaching Assistant</b> , Fudan University	
<ul style="list-style-type: none"> <li>• Graph Theory and its Application in 2022 Fall</li> <li>• Complex Network Modeling and Algorithms in 2022 Spring</li> <li>• Set and Graph Theory in 2021 Fall</li> <li>• Linear Algebra in 2019 Fall &amp; 2020 Fall (Outstanding Teaching Assistant)</li> </ul>	
<b>Vice Minister of Organization Department</b> , Shandong University	09/2016 – 06/2017
<b>Class President</b> , Shandong University	09/2015 – 06/2019
<ul style="list-style-type: none"> <li>• Excellent Student Cadre</li> </ul>	

## HONORS & AWARDS

<b>12th Fudan Academic Star (Top 10 postgraduate students in FDU)</b>	2021
<b>National Scholarship</b>	2020, 2021
<b>JR Talent Ltd. Scholarship</b>	2022
<b>Wilked Shortlisted Award</b>	2021
<b>Outstanding Teaching Assistant</b>	2020,2021
<b>Merit Student in FDU</b>	2020,2021
<b>Merit Student in SDU</b>	2016,2017,2018
<b>Outstanding Graduate of Shandong Province</b>	2019
<b>Outstanding Graduate of Shandong University</b>	2019
<b>First class Academic Scholarship</b>	2017,2018
<b>Silver award in China College Students' Entrepreneurship Competition</b>	2018
<b>Honorable prize in MCM/ICM</b>	2018
<b>First prize in CUMCM in Shandong Province</b>	2017
<b>Excellent Student Cadre in SDU</b>	2016,2017,2018