

# Yuying Zhao

Website: <https://yuyingzhao.github.io>  
Email: [yuying.zhao@vanderbilt.edu](mailto:yuying.zhao@vanderbilt.edu)  
LinkedIn: <https://www.linkedin.com/in/yy-zhao/>  
GitHub: <https://github.com/YuyingZhao>  
Google Scholar: [xyTYIX0AAAAJ](https://scholar.google.com/citations?user=xyTYIX0AAAAJ)



## EDUCATION

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<b>Vanderbilt University</b> Ph.D. in Computer Science, GPA: 3.88/4.00 Relevant coursework: Geometric Deep Learning, Machine Learning, Reinforcement Learning	Nashville, United States 2021–2026(expected)
<b>Huazhong University of Science and Technology (HUST)</b> M.S. in Computer Science, GPA: 3.94/4.00 (Outstanding Graduate Award)	Wuhan, China 2018–2021
<b>Huazhong University of Science and Technology (HUST)</b> B.S. in Computer Science, GPA: 3.98/4.00 (Outstanding Graduate Award)	Wuhan, China 2014–2018

## EXPERIENCE

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<b>Network and Data Science Lab (NDS)/Vanderbilt University</b> Advisor: Dr. Tyler Derr Research topics: Fairness, Explainability, Graph Neural Networks	Nashville, United States Fall 2021–Present
<b>Cluster and Grid Computing Lab/HUST</b> Advisor: Dr. Hai Jin, Dr. Pingpeng Yuan Research topics: Graph Mining, Graph Database	Wuhan, China Fall 2018–2021

## PUBLICATIONS

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1. Catherine Yang, **Yuying Zhao**, and Tyler Derr. “The Friendship Paradox: An Analysis on Signed Social Networks with Positive and Negative Links” KDD Undergraduate Consortium, 2023.
2. Yu Wang, **Yuying Zhao**, Yi Zhang, Tyler Derr. “Collaboration-Aware Graph Convolutional Networks for Recommendation Systems” In Proceedings of the ACM Web Conference (TheWebConf), Austin, TX, USA, April 30 - May 4, 2023.
3. Yunfei Hu\*, **Yuying Zhao**\* (co-first author), Curtis T. Schunk, Yingxiang Ma, Tyler Derr, Xin Maizie Zhou. “ADEPT: Autoencoder with Differentially Expressed Genes and Imputation for a Robust Spatial Transcriptomics Clustering” iScience (also accepted and presented at RECOMB-Seq), 2023.
4. **Yuying Zhao**, Yu Wang, Tyler Derr. “Fairness and Explainability: Bridging the Gap” In Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI), Washington, DC, USA, February 7-14, 2023.
5. Xinmeng Zhang\*, **Yuying Zhao**\* (co-first author), Chao Yan, Tyler Derr, and You Chen. “Inferring EHR Utilization Workflows through Audit Logs” AMIA Annual Symposium Proceedings. Vol. 2022. American Medical Informatics Association, Washington D.C., USA, November 5-9, 2022.
6. Yu Wang, **Yuying Zhao**, Yushun Dong, Huiyuan Chen, Jundong Li, and Tyler Derr. “Improving Fairness in Graph Neural Networks via Mitigating Sensitive Attribute Leakage.” In Proceedings of the 28th ACM SIGKDD

International Conference on Knowledge Discovery and Data Mining (KDD), Washington D.C., USA, August 14-18, 2022.

7. Yu Wang, **Yuying Zhao**, Neil Shah, and Tyler Derr. “Imbalanced graph classification via graph-of-graph neural networks.” In Proceedings of the 31th ACM International Conference on Information and Knowledge Management (CIKM), Atlanta, GA, USA, October 17-21, 2022.
8. **Yuying Zhao**, Yunfei Hu, Pingpeng Yuan, and Hai Jin. “Maximizing Influence Over Streaming Graphs with Query Sequence.” Data Science and Engineering 6, no. 3 (2021): 339-357.
9. Xiang Kang, **Yuying Zhao**, Pingpeng Yuan, and Hai Jin. “Grace: An Efficient Parallel SPARQL Query System over Large-Scale RDF Data.” In 2021 IEEE 24th International Conference on Computer Supported Cooperative Work in Design (CSCWD), pp. 769-774. IEEE, 2021.

## PREPRINTS AND SUBMISSIONS

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1. **Yuying Zhao**, Yu Wang, Yunchao Liu, Xueqi Cheng, Charu Aggarwal, Tyler Derr. “Fairness and Diversity in Recommender Systems: A Survey” 2023 (under review).
2. Yi Zhang, **Yuying Zhao**, Zhaoqing Li, Xueqi Cheng, Yu Wang, Olivera Kotevska, Philip Yu, Tyler Derr. “A Survey on Privacy in Graph Neural Networks: Attacks, Preservation, and Applications” 2023 (under review).
3. **Yuying Zhao**, Yu Wang, Yi Zhang, Pamela Wisniewski, Charu Aggarwal, Tyler Derr. “Leveraging Opposite Gender Interaction Ratio as a Path Towards Fairness in Online Dating Recommendations for Sexually Fluid Users” 2023 (under review).

## SYMPOSIUMS AND WORKSHOPS

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1. **Yuying Zhao**. Learning Beyond Utility: Fairness, Explainability, Diversity. International Conference on Data Mining (SDM) Doctoral Forum, SIAM, Poster, 2023.
2. **Yuying Zhao**. Improving Fairness via Fair Explanation. International Conference on Data Mining (SDM) Doctoral Forum, SIAM, Poster, 2022.

## SCHOLARSHIPS AND AWARDS

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- KDD Student Travel Award 2023
- C.F. Chen **Best Paper Runner-Up Award** in Computer Science from Vanderbilt University 2023
- SDM Student Travel Award 2023
- AAAI Student Scholarship 2022
- KDD Student Travel Award 2022
- SDM Student Travel Award 2022
- ICML Free Conference Registration Awardee 2021
- ICWSM-21 Student Scholarship 2021
- “**Outstanding Graduate**” Award for MS from HUST 2021
- IBM Fellowship from Vanderbilt University 2021
- The First Prize Scholarship from HUST 2018–2019
- “**Outstanding Graduate**” Award for BS from HUST 2018

## GUEST LECTURES

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- **Fairness in Recommendation** Oct 2022  
*CS 4352: Social Network Analysis, Computer Science Department, Vanderbilt University.*
- **Information Diffusion and Influence Maximization** Feb 2022  
*DS 5720: Social Network Analysis, Data Science Institute, Vanderbilt University.*

## SERVICES

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- **Conference Reviewer/Sub Reviewer:** WWW'22, WSDM'21, CIKM'21
- **Program Committee Member:** AAAI-ICWSM'23, IEEE workshop BigData CTA3'22, ICDM workshop MLoG'22, WSDM workshop MLoG'22
- **Other:** Session chair and student volunteer at AAAI'23, Student director for machine learning seminar, Web chair for ICDM workshop MLoG'23, Web chair for WSDM workshop MLoG'23, Web chair for CIKM workshop PAS'22, Student volunteer at KDD'22

## TEACHING

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- **Teaching Assistant** at Vanderbilt University Spring 2023  
*Artificial Intelligence (CS 4260)*
- **Teaching Assistant** at Vanderbilt University Fall 2022  
*Social Network Analysis (CS 4352)*
- **Teaching Assistant** at Vanderbilt University Spring 2022  
*Social Network Analysis (DS 5720)*
- **Teaching Assistant** at Vanderbilt University Fall 2021  
*Database Management Systems (CS 3265/5265)*