

# Xovee Xu

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School of Computer Science and Engineering  
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## Education

**University of Electronic Science and Technology of China (UESTC)**

Ph.D., Computer Science, 2021 to 2025 (expc.)

M.S., Software Engineering, 2021

B.S., Software Engineering, 2018

## Academic Employment

Research Assistant, University of Electronic Science and Technology of China, 2018 -

## Distinction

### Student Award & Scholarship

Excellent Master Thesis, 105/4929; and PhD Entrance Scholarship, UESTC, 2021

Outstanding Graduate Student; and First Prize Scholarship, 20%, UESTC, 2020

### Paper Award

INFOCOM 2020 Student Conference Award, IEEE ComSoc, 2020

## Area of Interest

Social network analysis

Spatial-temporal data mining

Science of science

## Academic Service

### Reviewing (selected, ordered by count and alphabetically)

IEEE Internet of Things Journal,  $\times 3$   
 International Journal of Intelligent Systems (IJIS),  $\times 2$   
 AAAI Conference on Artificial Intelligence (AAAI),  $\times 1$   
 ACM SIGKDD Conference on Knowledge Discovery and Data Mining (SIGKDD),  $\times 1$   
 ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems,  $\times 1$   
 IEEE International Conference on Big Data,  $\times 1$   
 IEEE International Conference on Data Engineering (ICDE),  $\times 1$   
 IEEE Transactions on Big Data,  $\times 1$   
 IEEE Transactions on Knowledge and Data Engineering (TKDE),  $\times 1$   
 IEEE Transactions on Neural Networks and Learning Systems (TNNLS),  $\times 1$   
 IEEE/ACM Transactions on Networking (TON),  $\times 1$

### Volunteering

Student Volunteer, ACM Multimedia 2021, Chengdu, China, Oct 20-24, 2021  
 Student Volunteer, SIGIR 2021, Online Conference, Jul 11-15, 2021  
 Student Volunteer, ICTIR 2021, Online Conference, Jul 11, 2021

### Professional Membership

ACM: Association for Computing Machinery  
 Member (2020)  
 CCF: China Computer Federation  
 Student Member (2021)  
 IEEE: Institute of Electrical and Electronics Engineers  
 Graduate Student Member (2020)

## Publication

\* Corresponding , † Equal Contribution

### Refereed Conference Articles

1. Fan Zhou, Ce Li, **Xovee Xu**, Leyuan Liu, and Goce Trajcevski. 2021. HGENA: A hyperbolic graph embedding approach for social network alignment. IEEE Global Communications Conference (GLOBECOM), Hybrid Conference (In-person/Virtual), Madrid, Spain, Dec 7-11, 2021, 6 pages, Accepted.
2. Guanyu Wang, Ting Zhong, **Xovee Xu**, Kunpeng Zhang, Fan Zhou\*, and Yong Wang. 2021. Vector-quantized

- autoencoder with copula for collaborative filtering. ACM International Conference on Information and Knowledge Management (CIKM), Virtual Event, Nov 1-5, 2021, pp. 3458-3462, doi:10.1145/3459637.3482216
3. Fan Zhou, Liu Yu, **Xovee Xu\***, and Goce Trajcevski. 2021. Decoupling representation and regressor for long-tailed information cascade prediction. International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), Virtual Event, Jul 11-15, 2021, pp. 1875-1879, doi:10.1145/3404835.3463104
  4. Fan Zhou, Xiuxiu Qi, **Xovee Xu**, Jiahao Wang\*, Ting Zhong, and Goce Trajcevski. 2020. Meta-learned user preference for topic participation prediction. IEEE Global Communications Conference (GLOBECOM), Virtual Conference, Dec 7-11, 2020, 6 pages, doi:10.1109/GLOBECOM42002.2020.9322197
  5. Fan Zhou, Zijiang Wen, Ting Zhong\*, Goce Trajcevski, **Xovee Xu**, and Leyuan Liu. 2020. Unsupervised user identity linkage via graph neural networks. IEEE Global Communications Conference (GLOBECOM), Virtual Conference, Dec 7-11, 2020, 6 pages, doi:10.1109/GLOBECOM42002.2020.9322311
  6. Fan Zhou, Xin Jing, **Xovee Xu**, Ting Zhong, Goce Trajcevski, and Jin Wu\*. 2020. Continual information cascade learning. IEEE Global Communications Conference (GLOBECOM), Virtual Conference, Dec 7-11, 2020, 6 pages, doi:10.1109/GLOBECOM42002.2020.9322124
  7. Fan Zhou, **Xovee Xu**, Kunpeng Zhang, Goce Trajcevski, and Ting Zhong\*. 2020. Variational information diffusion for probabilistic cascade prediction. IEEE International Conference on Computer Communications (INFOCOM), Virtual Conference, Jul 6-9, 2020, pp. 1618-1627, doi:10.1109/INFOCOM41043.2020.9155349  
**INFOCOM 2020 Student Conference Award**

## Refereed Journal Articles

8. **Xovee Xu**, Ting Zhong, Ce Li, Goce Trajcevski, and Fan Zhou\*. 2021. Heterogeneous dynamical academic network for learning scientific impact propagation. *Knowledge-Based Systems*, 20 pages, Nov 2021, Accepted  
Code: <https://github.com/ceLi52/si-hdgnn>
9. **Xovee Xu**, Fan Zhou\*, Kunpeng Zhang, Siyuan Liu, and Goce Trajcevski. 2021. CasFlow: Exploring hierarchical structures and propagation uncertainty for cascade prediction. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 14 pages, Nov 2021, doi:10.1109/TKDE.2021.3126475  
Code: <https://github.com/Xovee/casflow>
10. Fan Zhou, Pengyu Wang, **Xovee Xu\***, Wenxin Tai, and Goce Trajcevski. 2021. Contrastive trajectory learning for tour recommendation. *ACM Transactions on Intelligent Systems and Technology (TIST)*, 2021, Accepted  
Special Issue on Intelligent Trajectory Data Analytics
11. Fan Zhou, **Xovee Xu\***, Goce Trajcevski, Kunpeng Zhang. 2021. A survey of information cascade analysis: Models, predictions, and recent advances. *ACM Computing Surveys (CSUR)*, vol. 54, no. 2, article 27, 36 pages, Mar 2021, doi:10.1145/3433000, arXiv:2005.11041

## Posters & Abstracts

12. Liu Yu, **Xovee Xu**, Ting Zhong, Goce Trajcevski, and Fan Zhou. 2021. Linking Transformer to Hawkes process for information cascade prediction (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, Feb 22 - Mar 1, 2021, 2 pages, Accepted
13. Guanyu Wang, **Xovee Xu**, Ting Zhong, and Fan Zhou. 2021. Conditional collaborative filtering process for top-k recommender system (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, Feb 22 - Mar 1, 2021, 2 pages, Accepted

14. Haoyang Yu, **Xovee Xu**, Ting Zhong, and Fan Zhou. 2021. Fine-grained urban flow inference via normalizing flows (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, Feb 22 - Mar 1, 2021, 2 pages, Accepted

### Pre-prints

15. **Xovee Xu**, Fan Zhou\*, Kunpeng Zhang, and Siyuan Liu. 2021. CCGL: Contrastive Cascade Graph Learning. arXiv:2107.12576, Jul 2021, 14 pages.  
Code: <https://github.com/Xovee/ccgl>
16. Fan Zhou, **Xovee Xu**, Ce Li, Goce Trajcevski, Ting Zhong, and Kunpeng Zhang. 2020. A heterogeneous dynamical graph neural networks approach to quantify scientific impact. arXiv:2003.12042, Mar 2020, 8 pages.  
Code: <https://github.com/ce152/si-hdgnn>

### Work in Progress

17. Fan Zhou, Zhangtao Cheng, **Xovee Xu**, Ting Zhong, and Goce Trajcevski. 2021. Probabilistic modelling of irregularly sampled information cascade with evolution uncertainty. Under review, 2021
18. Ting Zhong, Haoyang Yu, Rongfan Li, **Xovee Xu**, Xucheng Luo, and Fan Zhou. 2021. Probabilistic fine-grained urban flow inference with normalizing flows. Under review, 2021
19. Liu Yu<sup>†</sup>, **Xovee Xu**<sup>†</sup>, Ting Zhong, Goce Trajcevski, and Fan Zhou\*. 2021. Transformer-enhanced Hawkes process for information cascade prediction. Under review, 2021
20. Zhiyuan Wang<sup>†</sup>, **Xovee Xu**<sup>†</sup>, Goce Trajcevski, Kunpeng Zhang, Ting Zhong, and Fan Zhou\*. 2021. PrEF: Probabilistic electricity forecasting via copula-augmented state space model. Under review, 2021
21. **Xovee Xu**, Ting Zhong, Fan Zhou\*, and Goce Trajcevski. 2021. Spatial-temporal contrasting for fine-grained urban flow super-resolution. Under review, 2021  
Code: <https://github.com/Xovee/stcf>

### Thesis

1. Xovee Xu. 2021. A research of information diffusion models and popularity prediction using graph neural networks (in Chinese). Master's Thesis. School of Information and Software Engineering, University of Electronic Science and Technology of China (UESTC), Chengdu, Sichuan, China, Jun 2021, 93 pages. Supervisors: Ting Zhong. Committee chair: Jingye Cai. doi:10.27005/d.cnki.gdzku.2021.001672  
**Excellent Master Thesis of UESTC (105/4929)**

### Patent

1. Fan Zhou, Chengtai Cao, Ting Zhong, and **Xovee Xu**. 2021. Training data generation method based on meta-learner and causal effect heterogeneous reaction difference estimation method (in Chinese). China Invention Patent Application, No. CN113095440A, Filed Apr 30, 2021, Published Jul 9, 2021.

### Conference Presentation

2020 39<sup>th</sup> IEEE International Conference on Computer Communications (INFOCOM), Virtual Conference

## Demos & Resources

CANV: Co-Authorship Network Visualization, <a href="https://github.com/Xovee/canv">https://github.com/Xovee/canv</a>	Jul 2021
LaTeX Template of Curriculum Vitae, <a href="https://github.com/Xovee/latex-cv">https://github.com/Xovee/latex-cv</a>	Jul 2021
UESTC Course Materials, <a href="https://github.com/Xovee/uestc-course">https://github.com/Xovee/uestc-course</a>	May 2019

## Teaching Experience

<b>C Programming Language</b>	Spring 2020
Teaching Assistant, with Prof. Ting Zhong, at UESTC	
<b>Software Project Management</b>	Summer 2019
Teaching Assistant, with Prof. Gianmario Motta (University of Pavia), at UESTC	

## Language

Native Chinese (Mandarin & Northern Shaanxi Dialect)  
Fluent English

November 27, 2021