

Xovee Xu

PhD Student in Computer Science
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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

AAAI-22 Scholarship, AAAI, 2022

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

Human-centered data mining

Science of science

Academic Service

Reviewing (include sub- & external-reviews)

IEEE Internet of Things Journal, $\times 3$
 IEEE International Conference on Data Engineering (ICDE), $\times 3$
 IEEE Transactions on Big Data, $\times 2$
 IEEE Transactions on Neural Networks and Learning Systems (TNNLS), $\times 2$
 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, $\times 1$
 Expert Systems With Applications (ESWA), $\times 1$
 IEEE Conference on Computer Vision and Pattern Recognition (CVPR), $\times 1$
 IEEE International Conference on Big Data, $\times 1$
 IEEE Transactions on Knowledge and Data Engineering (TKDE), $\times 1$
 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

Refereed Journal Articles

1. **Xovee Xu**, Fan Zhou*, Kunpeng Zhang, and Siyuan Liu. 2022. CCGL: Contrastive Cascade Graph Learning. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 15 pages, 2022, Accepted.
2. **Xovee Xu**, Ting Zhong, Ce Li, Goce Trajcevski, and Fan Zhou*. 2021. Heterogeneous dynamical academic network for learning scientific impact propagation. *Knowledge-Based Systems*, vol. 238, pp. 107839, Feb 2022.

3. Fan Zhou, Pengyu Wang, **Xovee Xu***, Wenxin Tai, and Goce Trajcevski. 2022. Contrastive trajectory learning for tour recommendation. *ACM Transactions on Intelligent Systems and Technology (TIST)*, vol. 13, no. 1, article 4, 25 pages, Feb 2022. Special Issue on Intelligent Trajectory Data Analytics.
4. **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, Early-Access.
5. 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.

Refereed Conference Articles

6. Ting Zhong, Haoyang Yu, Rongfan Li, **Xovee Xu***, Xucheng Luo, and Fan Zhou. 2022. Probabilistic Fine-Grained Urban Flow Inference With Normalizing Flows. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Singapore/Shenzhen, May 22-27, 2022, 5 pages, Accepted.
7. Zhiyuan Wang[†], **Xovee Xu[†]**, Goce Trajcevski, Kunpeng Zhang, Ting Zhong, and Fan Zhou*. 2022. PrEF: Probabilistic electricity forecasting via copula-augmented state space model. AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, Feb 22 - Mar 1, 2022, 9 pages, Accepted.
8. 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.
9. 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.
10. 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.
11. 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.
12. Fan Zhou, Zijing 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.
13. 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.
14. 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.

INFOCOM 2020 Student Conference Award

Posters & Abstracts

15. Liu Yu, **Xovee Xu**, Ting Zhong, Goce Trajcevski, and Fan Zhou. 2022. Linking Transformer to Hawkes process for information cascade prediction (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, Feb 22 - Mar 1, 2022, 2 pages, Accepted
16. Guanyu Wang, **Xovee Xu**, Ting Zhong, and Fan Zhou. 2022. Conditional collaborative filtering process for top-k recommender system (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, Feb 22 - Mar 1, 2022, 2 pages, Accepted
17. Haoyang Yu, **Xovee Xu**, Ting Zhong, and Fan Zhou. 2022. Fine-grained urban flow inference via normalizing flows (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Vancouver, Canada, Feb 22 - Mar 1, 2022, 2 pages, Accepted
Selected (20/111) for Three-Minute Presentation Contest

Pre-print

18. 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.

Work in Progress

19. 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.
20. Liu Yu[†], **Xovee Xu**[†], Ting Zhong, Goce Trajcevski, and Fan Zhou*. 2021. Transformer-enhanced Hawkes process for information cascade prediction. 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.

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.
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 39th IEEE International Conference on Computer Communications (INFOCOM), Virtual Conference

Competition

Weibo Diffusion Popularity Prediction Track, AI Algorithm Competition Dec 2021
Winning Prize, group member: Xovee Xu, Ce Li, and Zhiyuan Wang
Organizer: People's Daily Online, State Key Laboratory of Communication Content Cognition

Demos & Resources

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

Teaching Experience

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

Language

Native Chinese (Mandarin & Northern Shaanxi Dialect)
Fluent English