

Xovee Xu

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Education

Ph.D.	Computer Science	University of Electronic Science and Technology of China	2025
		Advisors: Fan Zhou & Jingkuan Song	(exp.)
M.S.	Software Engineering	University of Electronic Science and Technology of China	2021
B.S.	Software Engineering	University of Electronic Science and Technology of China	2018

Academic Employment

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

Academic Newcomer Award of UESTC	2022
Excellent Master Thesis of UESTC	2021

Area of Interest

Social network analysis & web mining
Multimodal & spatial-temporal data learning
Human-centered data mining & human-computer interaction

Academic Service

Program Committee Member/Reviewer

ACM SIGKDD, Research Track, 2023

Reviewing (include sub- & external-reviews)

ACM SIGKDD Conference on Knowledge Discovery and Data Mining	×5
Expert Systems With Applications	×5
IEEE Internet of Things Journal	×3
IEEE Transactions on Big Data	×3

AAAI Conference on Artificial Intelligence	×2
IEEE International Conference on Data Engineering (ICDE)	×2
IEEE Transactions on Knowledge and Data Engineering (TKDE)	×2
IEEE Transactions on Neural Networks and Learning Systems (TNNLS)	×2
International Journal of Intelligent Systems	×2
The Web Conference	×2
ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (GIS)	×1
IEEE Conference on Computer Vision and Pattern Recognition (CVPR)	×1
IEEE International Conference on Big Data	×1
IEEE/ACM Transactions on Networking	×1
INFORMS Journal on Computing	×1
Knowledge-Based Systems	×1
Knowledge and Information Systems	×1
Neurocomputing	×1

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

<https://www.xoveexu.com/pub>

* Corresponding Author , † Equal Contribution

Refereed Journal Articles

1. Chunjing Xiao[†], Xovee Xu[†], Yue Lei, Kunpeng Zhang, Siyuan Liu, and Fan Zhou*. 2023. Counterfactual graph learning for anomaly detection on attributed networks. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, 14 pages, Mar 2023, Early-Access.
2. Liu Yu[†], Xovee Xu[†], Goce Trajcevski, and Fan Zhou*. 2022. Transformer-enhanced Hawkes process with decoupling training for information cascade prediction. *Knowledge-Based Systems*, vol. 255, pp. 109740, Nov 2022.
3. Xovee Xu, Fan Zhou*, Kunpeng Zhang, and Siyuan Liu. 2022. CCGL: Contrastive cascade graph learning. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, vol. 35, no. 5, pp. 4539–4554, May 2023.
4. Xovee Xu, Ting Zhong, Ce Li, Goce Trajcevski, and Fan Zhou*. 2022. Heterogeneous dynamical academic network for learning scientific impact propagation. *Knowledge-Based Systems*, vol. 238, pp. 107839, Feb 2022.
5. 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)*, vol. 13, no. 1, article 4, 25 pages, Nov 2021. Special Issue on Intelligent Trajectory Data Analytics.

6. 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)*, vol. 35, no. 4, pp. 3484–3499, Apr 2023.
7. Fan Zhou, Xovee Xu*, Goce Trajcevski, Kunpeng Zhang. 2021. A survey of information cascade analysis: Models, predictions, and recent advances. *ACM Computing Surveys*, vol. 54, no. 2, article 27, 36 pages, Mar 2021.

Refereed Conference Articles

8. Xovee Xu, Yutao Wei, Pengyu Wang, Xucheng Luo*, Fan Zhou, and Goce Trajcevski. 2023. Diffusion probabilistic modeling for fine-grained traffic flow inference with relaxed structural constraint. IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Rhodes Island, Greece, Jun 4–10, 2023. **Oral Presentation.**
9. Haoyang Yu[†], Xovee Xu[†], Ting Zhong*, and Fan Zhou*. 2023. Overcoming forgetting in fine-grained urban flow inference via adaptive knowledge replay. AAAI Conference on Artificial Intelligence (AAAI), Washington DC, USA, Feb 7–14, 2023. **Oral Presentation.**
10. Zhiyuan Wang, Xovee Xu, Goce Trajcevski, Weifeng Zhang, Ting Zhong, and Fan Zhou. 2022. Learning latent seasonal-trend representations for time series forecasting. Annual Conference on Neural Information Processing Systems (NeurIPS), New Orleans, USA, Nov 28 – Dec 9, 2022, pp. 38775–38787. **Oral Presentation.**
11. Yang Cao, Zhenzhen Dang, Feng Wu, Xovee Xu*, and Fan Zhou. 2022. Probabilistic electricity demand forecasting with Transformer-guided state space model. IEEE International Conference on Automation, Electronics and Electrical Engineering (AUTEEE), Shenyang, China, Nov 18–20, 2022, pp. 964–969.
12. 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 & Online, May 23–27, 2022, pp. 3663–3667.
13. 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, pp. 12200–12207.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.

20. 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

21. Zhangtao Cheng, Xovee Xu, Ting Zhong, Fan Zhou, and Goce Trajcevski. 2023. CasODE: Modeling irregular information cascade via neural ordinary differential equations (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Washington DC, USA, Feb 7–14, 2023.
22. Tangjiang Qian, Xovee Xu, Zhe Xiao, Ting Zhong, and Fan Zhou. 2023. A probabilistic graph diffusion model for source localization (Student abstract). AAAI Conference on Artificial Intelligence (AAAI), Washington DC, USA, Feb 7–14, 2023.
23. 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, pp. 13103–13104.
24. 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, pp. 13101–13102.
25. 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, pp. 13073–13074.

Pre-print

26. Qiang Gao, Jinyu Hong, Xovee Xu, Ping Kuang, Fan Zhou*, and Goce Trajcevski. 2022. Predicting human mobility via self-supervised disentanglement learning. arXiv:2211.09625, Nov 2022, 15 pages.
27. 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.

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. Advisor: Ting Zhong. Committee chair: Jingye Cai.
Excellent Master Thesis of UESTC (105/4929)

Patent

1. Fan Zhou, Zhangtao Cheng, Zhe Xiao, Xovee Xu, and Ting Zhong. 2022. Information diffusion prediction system and method based on meta-knowledge learning. China Invention Patent, No. CN115936120A, Filed Dec 8, 2022.
2. Fan Zhou, Liu Yu, Ting Zhong, Xovee Xu, and Ping Kuang. 2022. Information cascade prediction system and method based on Transformer-enhanced Hawkes process. China Invention Patent, No. CN115409155A, Filed Aug 17, 2022.

3. Fan Zhou, Chengtai Cao, Ting Zhong, and Xovee Xu. 2021. Meta-learner based training data generation method and causal effect heterogeneous reaction difference estimation method.
China Invention Patent, No. CN113095440A, Filed Apr 30, 2021, Issued May 17, 2022.

Conference Presentation

- 48th IEEE International Conference on Acoustics, Speech, and Signal Processing, Rhodes Island, Greece 2023
39th IEEE International Conference on Computer Communications (INFOCOM), Virtual Conference 2020

Competition

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

Demo & Resource

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

Distinction (Longer List)

Student Award & Scholarship

Name	Criterion	Issuer	Year
Wuliangye Innovation Scholarship	-	Wuliangye Co.,Ltd.	2022
First Prize Scholarship for PhD Students	10%	UESTC	2022
Academic Newcomer Award	5%	UESTC	2022
Excellent Graduate Student (PhD Program)	-	UESTC	2022
AAAI-22 Scholarship	-	AAAI	2022
PhD Entrance Scholarship	-	UESTC	2021
Excellent Master Thesis	105 of 4929	UESTC	2021
Excellent Graduate Student (Master Program)	-	UESTC	2020
First Prize Scholarship for Master Students	20%	UESTC	2020
INFOCOM 2020 Student Conference Award	-	IEEE ComSoc	2020

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

Industrial Experience**Ant Group**, Hangzhou, Zhejiang, China

Dec 2022 - Jan 2023

Algorithm Engineer Intern, on building large-scale service-content knowledge graph

PICC Property & Casualty Co. Ltd., Chengdu, Sichuan, China

Feb - May, 2018

Software Test Engineer Intern, on large-scale insurance systems

Chengdu Gluxen Tech. Co. Ltd., Chengdu, Sichuan, China

Feb - Jul, 2017

Web Developer Intern, on designing webpages

Student**Co-Mentored Student**

Followings are students that I co-mentored with Prof. Fan Zhou

Jiayang Li, MS, 2022 - 2025

Haoyang Yu, MS, 2021 - 2024

Zhangtao Cheng, MS, 2020 - 2023

Erdős Number for FunPaul Erdős $\xrightarrow{1}$ János Pach $\xrightarrow{2}$ Hervé Brönnimann $\xrightarrow{3}$ Goce Trajcevski $\xrightarrow{4}$ Xovee Xu**Language**

Native Chinese (Mandarin & Northern Shaanxi Dialect)

Fluent English