Hongjun Wang

(070) 4375-0683 • hjwang-ai@g.ecc.u-tokyo.ac.jp • Google Scholar • Personal Page

Education

The University of Tokyo, Tokyo, Japan 10/2023 – present
PhD in Information Science and Technology (IST), Supervisor Yinqiang Zheng

Southern University of Science and Technology, Shenzhen, China 09/2020 – 06/2023
Master in Computer Science, Supervisor Xuan Song

Nanjing University of Posts and Telecommunications, Nanjing, China 09/2015 – 07/2019
B.S. in Information and Computing Science, Supervisor Tingting Wu

Experience

Microsoft Research Asia Beijing, China
Research Intern in Data, Knowledge, and Intelligence, Supervisor Lun Du 07/2022 – 02/2023

The Chinese University of Hong Kong Hong Kong, China
Research Assistant in Mathematical Artificial Intelligence, Supervisor Tieyong Zeng 06/2023 – 09/2023

Shanghai Artificial Intelligence Laboratory Shanghai, China
Research Intern in AI for Science, Supervisor Su Mao 11/2024 – 07/2025

Research Interests

AI for Environmental Sciences, Computer Vision, Spatiotemporal Modeling, Graph Neural Networks, Deep Learning for Natural Hazards

Honors and Awards

- MEXT Scholarship for PhD Study, University of Tokyo 2023-2026
- Microsoft Research Asia Stars of Tomorrow Award 2023
- Outstanding Graduate Student Award, SUSTech 2023

Publications

Published Papers

- **Hongjun Wang**, Jiyuan Chen, Xuan Song, Yinqiang Zheng, *Not All Degradations Are Equal: A Targeted Feature Denoising Framework for Generalizable Image Super-Resolution*, submitted to **ICCV'2025** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Xuan Song, Yinqiang Zheng, *Accelerating flood warnings by 10 hours: the power of river network topology in AI-enhanced flood forecasting*, in **npj Natural Hazards'2025** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Tong Pan, Zheng Dong, Renhe Jiang, Xuan Song, *Evaluating the generalization ability of spatiotemporal model in urban scenario*, in **IEEE TMC'2025** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Tieyong Zeng, Yinqiang Zheng, *Navigating Beyond Dropout: An Intriguing Solution Towards Generalizable Image Super Resolution*, in **CVPR'2024** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Tong Pan, Zipei Fan, Boyuan Zhang, Renhe Jiang, Lingyu Zhang, Yunhai Wang, Zheng Wang, Xuan Song, *Easy Begun is Half Done: Spatial-Temporal Graph Modeling with ST-Curriculum Dropout*, in **AAAI'2023** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Lun Du, Qiang Fu, Siyu Han, Xuan Song, *Causal-Based Supervision of Attention in Graph Neural Network: A Better and Simpler Choice towards Powerful Attention*, in **IJCAI'2023** [PDF]
- **Hongjun Wang**, Zhiwen Zhang, Zipei Fan, Jiyuan Chen, Lingyu Zhang, Ryosuke Shibasaki, Xuan Song, *Multi-task Weakly Supervised Learning for Origin Destination Travel Time Estimation*, in **IEEE TKDE'2023** [PDF]
- **Hongjun Wang**, Zipei Fan, Jiyuan Chen, Lingyu Zhang, Xuan Song, *Discovering Key Sub-Trajectories to Explain Traffic Prediction*, in **Sensors'2023** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Zipei Fan, Zhiwen Zhang, Zekun Cai, Xuan Song, *St-expertnet: A Deep Expert Framework for Traffic Prediction*, in **IEEE TKDE'2022** [PDF]

- Zhiwen Zhang, **Hongjun Wang**, Zipei Fan, Xuan Song, Ryosuke Shibasaki, *Emergency Management in Japan: Human Decision Making Strategy Analysis During Large Scale Earthquake*, in **Transactions in GIS'2025**
- Zhiwen Zhang, **Hongjun Wang**, Zipei Fan, Xuan Song, *Assessing the Continuous Causal Responses of Typhoon Related Weather on Human Mobility: An Empirical Study in Japan*, in **CIKM '2023** [PDF]
- Zhen Yin, **Hongjun Wang**, Gui-Song Lin, Weijun Ran, Yinqiang Zheng, *Random Is All You Need: Random Noise Injection on Feature Statistics for Generalizable Deep Image Denoising*, in **ICLR'2025**
- X Li, Y Jin, X Jin, Z Wu, B Li, Y Wang, W Yang, Y Li, Z Chen, B Wen, R Tan, **H Wang**, et al., *NTIRE 2025 Challenge on Day and Night Raindrop Removal for Dual-Focused Images: Methods and Results*, in **CVPR Workshops'2025**
- Zezheng Feng, Yifan Jiang, **Hongjun Wang**, Zipei Fan, Yuxin Ma, Shuang-Hua Yang, Huamin Qu, Xuan Song, *TrafPS: A Shapley-based Visual Analytics Approach to Interpret Traffic*, in **Computational Visual Media'2024** [PDF]
- Zezheng Feng, Fangzhou Zhu, **Hongjun Wang**, Jiawei Hao, Shuang-Hua Yang, Wei Zeng, Huamin Qu, *HoLens: A Visual Analytics Design for Higher-Order Movement Modeling and Visualization*, in **Computational Visual Media'2024**
- Zhiwen Zhang, **Hongjun Wang**, Zipei Fan, Xuan Song, Ryosuke Shibasaki, *Missing Road Condition Imputation Using a Multi-view Heterogeneous Graph Network from GPS Trajectory*, in **IEEE TITS'2023** [PDF]
- Zhiwen Zhang, **Hongjun Wang**, Zipei Fan, Jiyuan Chen, Xuan Song, Ryosuke Shibasaki, *GOF-TTE: Generative Online Federated Learning Framework for Travel Time Estimation*, in **IEEE IoT Journal'2022** [PDF]
- Lingyu Zhang, Xu Geng, Zhiwei Qin, **Hongjun Wang**, Xuan Wang, Yunhai Wang, Jie Liang, Guobin Wu, Huaxiu Yao, Yu Zheng, *Multi-modal Graph Interaction for Multi-graph Convolution Network in Urban Spatiotemporal Forecasting*, in **Sustainability'2022** [PDF]
- Zhiwen Zhang, **Hongjun Wang**, Zipei Fan, Jiyuan Chen, Xuan Song, Ryosuke Shibasaki, *Route to Time and Time to Route: Travel Time Estimation from Sparse Trajectories*, in **ECML PKDD'2022** [PDF]
- Zipei Fan, Zhiwen Zhang, **Hongjun Wang**, *Generative Personalized Federated Learning Framework for Travel Time Estimation*, in **ACM SenSys'2022**

Preprints & Under Review

- **Hongjun Wang**, Jiyuan Chen, Tong Pan, Zheng Dong, Lingyu Zhang, Renhe Jiang, Xuan Song, *STGformer: Efficient Spatiotemporal Graph Transformer for Traffic Forecasting*, **arXiv:2410.00385** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Zhen Yin, Xuan Song, Yinqiang Zheng, *Learning to Balance: Diverse Normalization for Cloth-Changing Person Re-Identification*, **arXiv:2410.03977** [PDF]
- **Hongjun Wang**, Jiyuan Chen, Tong Pan, Zheng Dong, Lingyu Zhang, Renhe Jiang, Xuan Song, *Robust Traffic Forecasting against Spatial Shift over Years*, **arXiv:2410.00373** [PDF]
- Moxuan Ma, Qilin Zhu, Yingqi Zhan, Zhen Yin, **Hongjun Wang**, Yinqiang Zheng, *Robustifying Fourier Features Embeddings for Implicit Neural Representations*, **arXiv:2502.05482** [PDF]