

# James Jianqiao Yu 余剑峭

Lecturer (Assistant Professor) | Department of Computer Science | University of York  
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## SHORT BIOGRAPHY

James Jianqiao Yu received the B.Eng. and Ph.D. degree in Electrical and Electronic Engineering from the University of Hong Kong, Pokfulam, Hong Kong, in 2011 and 2015, respectively. He was a post-doctoral fellow at the University of Hong Kong from 2015 to 2018, and was an assistant professor at the Department of Computer Science and Engineering, Southern University of Science and Technology, Shenzhen, China from 2018 to 2023. He is currently a Lecturer at the Department of Computer Science, the University of York, United Kingdom. His general research interests are in intelligent transportation systems, privacy computing, deep learning, and smart cities. His work is now mainly on spatial-temporal data mining, forecasting and logistics of future transportation systems, and artificial intelligence techniques for industrial applications. He has published over 100 academic papers in top international journals and conferences, and representative papers have been selected as ESI highly cited papers. He was the World's Top 2% Scientists from 2020 to 2023 and of career by Stanford University. He is an Editor of the IET Smart Cities journal and a Senior Member of IEEE.

余剑峭，本科、博士毕业于香港大学，主要研究方向和研究兴趣包括时空数据挖掘、智能交通系统、深度学习、智慧城市等。主持和参与多项国家重点研发计划、国家和广东省自然科学基金等科研项目，在国际顶级期刊和会议中发表XXX余篇学术论文，包括40余篇第一/通信作者中科院一二区和计算机协会推荐A类期刊会议论文，代表性论文发表在IEEE T-ITS, IEEE TKDE, IEEE IoTJ, IEEE TII等期刊并入选ESI高被引论文列表，申请发明专利20余项，谷歌学术XXXX余次引用，并于2020至2023年连续入选全球前2%顶尖科学家榜单年度科学影响力以及终身科学影响力排行榜（人工智能领域前0.38%，交通领域前0.24%）。现任中国自动化学会综合智能交通专业委员会委员、IET Smart Cities期刊编辑和特刊主编等学术职务，于国际顶级智能交通系统和人工智能学术会议（AAAI、IJCAI、ITSC等）担任委员会委员，并任三十余种国际顶尖杂志审稿人。

## EDUCATION

- Doctor of Philosophy** 2015.09  
Department of Electrical and Electronic Engineering, The University of Hong Kong  
• Thesis: A Social Spider Inspired Metaheuristic for Global Numerical Optimization and its Applications  
• Advisor: Prof. Victor O.K. Li
- Bachelor of Engineering (Hons.)** 2011.06  
Department of Electrical and Electronic Engineering, The University of Hong Kong

## PROFESSIONAL EXPERIENCE

- Lecturer** 2023.09 – Present  
Department of Computer Science, University of York
- Assistant Professor** 2018.12 – 2023.08  
Department of Computer Science and Engineering, Southern University of Science and Technology
- Post-doctoral Researcher** 2015.09 – 2018.12  
Department of Electrical and Electronic Engineering, The University of Hong Kong  
• Advisor: Prof. David John Hill

## REPRESENTATIVE HONORS

- World's Top 2% Scientists of Career 2023  
全球前 2% 顶尖科学家终身科学影响力榜单
- World's Top 2% Scientists of Single Year 2020, 2021, 2022, 2023  
全球前 2% 顶尖科学家年度科学影响力榜单
- Overseas High-Caliber Personnel Level-C, Shenzhen 2019  
深圳市海外高层次人才计划 C 类

## RESEARCH GRANTS

- General Program of Shenzhen Natural Science Fund** 2021.01 – 2022.12  
深圳市科创委高等院校稳定支持计划（面上项目）  
Research on key methods for data prediction in intelligent transportation systems of large-scale smart cities  
面向大规模智慧城市的智能交通系统数据预测关键方法研究  
• Principal Investigator 主持, RMB 500,000, No. 20200925155105002
- General Program of Guangdong Basic and Applied Basic Research Foundation** 2019.10 – 2022.09  
广东省基金委自然科学基金面上项目（基础与应用基础研究基金）  
Research on traffic speed estimation and prediction in city-wide transportation networks driven by graph deep learning  
图网络深度学习驱动的城市交通网车速监测及预测算法研究  
• Principal Investigator 主持, RMB 100,000, No. 2019A1515011032

- Key Laboratory Construction Program of Shenzhen, China** 2022.04 – 2024.05  
 深圳市重点实验室建设  
 Shenzhen Key Laboratory of Safety and Security for Next Generation of Industrial Internet  
 深圳市未来工业互联网安全保障重点实验室  
 • Co-Investigator 参与, RMB 5M, No. ZDSYS20210623092007023
- Construction Program of Nobel Prize Scientist Research Institute** 2020.07 – 2025.07  
 深圳市科创委诺贝尔奖科学家实验室建设  
 Research Institute of Trustworthy Autonomous Systems  
 斯发基斯可信自主系统研究院  
 • Co-Investigator 参与, RMB 100M, No. 0102004-2019-ZXZJ-0079-79-0017
- Key Laboratory Construction Program of Guangdong Province, China** 2020.01 – 2022.12  
 广东省重点实验室建设  
 Guangdong Provincial Key Laboratory of Brain-inspired Intelligent Computation  
 广东省类脑智能计算重点实验室  
 • Co-Investigator 参与, RMB 3M + 7M supplement, No. 2020B121201001
- National Key Research and Development Program of China** 2017.07 – 2020.12  
 科技部国家重点研发计划  
 Research on key technology, core equipment and engineering demonstration of distributed renewable AC and DC energy generation  
 交直流混合的分布式可再生能源关键技术、核心装备和工程示范研究  
 • Co-Investigator 参与, RMB 62.56M, No. 2017YFB0903200
- National Natural Science Foundation of China (Young Scientists)** 2018.01 – 2020.12  
 国家自然科学基金青年基金  
 Fundamental Research on Construction and Operation Strategies of Converged Network for Smart Grids and Electric Vehicles  
 智能电网与电动车融合网络构建及运营策略的基础性研究  
 • Co-Investigator 参与, RMB 200,000, No. 51707170

## TEACHING EXPERIENCE

- Intelligent Systems: Machine Learning and Optimisation** S'24  
 Department of Computer Science, University of York  
 • Course Instructor, English  
 • Website (S'24): [https://vle.york.ac.uk/ultra/courses/\\_109041\\_1/outline](https://vle.york.ac.uk/ultra/courses/_109041_1/outline)
- Introduction to Computer Programming** S'23, F'21, F'20, F'19  
 Department of Computer Science and Engineering, Southern University of Science and Technology  
 • Course Instructor, Bilingual (English and Chinese)  
 • Website (S'23): <https://jqyu.me/courses/CS109>  
 • Evaluation: 4.64/5 (F'21), 4.63/5 (F'20), 4.52/5 (F'19)
- Digital Logic** F'22, S'21, S'20, S'19  
 Department of Computer Science and Engineering, Southern University of Science and Technology  
 • Course Instructor and Designer, English  
 • Website (F'22): <https://jqyu.me/courses/CS207>  
 • Evaluation: 4.69/5 (F'22), 4.72/5 (S'21), 4.67/5 (S'20), 4.01/5 (S'19)

## Digital Logic (H)

M'22, M'21

Department of Computer Science and Engineering, Southern University of Science and Technology

- Course Instructor and Designer, English
- Website (M'22): <https://jqyu.me/courses/CS211>
- Evaluation: 5.00/5 (M'22), 5.00/5 (M'21)

## Introduction to Computer Programming (H)

F'21, F'20

Department of Computer Science and Engineering, Southern University of Science and Technology

- Course Instructor and Designer, Bilingual (English and Chinese)
- Website (F'21): <https://jqyu.me/courses/CS107>
- Evaluation: 4.89/5 (F'21), 4.59/5 (F'20)

## Embedded System

F'17, F'16

Department of Electrical and Electronic Engineering, The University of Hong Kong

- Guest Lecturer, English

## Engineering Management and Society

F'14

Department of Electrical and Electronic Engineering, The University of Hong Kong

- Guest Lecturer, English

# SELECTED RECENT PUBLICATIONS

(\* Corresponding author, Students / scholars under my supervision, ' Equal contribution)

According to Google Scholar, my publications have 5464 citations. My h-index is 35 and i10-index is 78. Complete list of publications is attached to the end of vitae.

- ☆ ControlTraj: Controllable Trajectory Generation with Topology-Constrained Diffusion Model  
Yuanshao Zhu, **James Jianqiao Yu**<sup>\*</sup>, Xiangyu Zhao<sup>\*</sup>, Qidong Liu, Yongchao Ye, Wei Chen, Zijian Zhang, Xuetao Wei, and Yuxuan Liang<sup>\*</sup>  
*Proc. ACM SIGKDD Conference on Knowledge Discovery and Data Mining*, Barcelona, Spain, August 2024
- ☆ Citywide Estimation of Travel Time Distributions with Bayesian Deep Graph Learning  
**James J.Q. Yu**  
*IEEE Transactions on Knowledge and Data Engineering*, Volume 35, Issue 3, March 2023, Pages 2366–2378, DOI: 10.1109/TKDE.2021.3117986
- ☆ DiffTraj: Generating GPS Trajectory with Diffusion Probabilistic Model  
Yuanshao Zhu, Yongchao Ye, Shiyao Zhang, Xiangyu Zhao<sup>\*</sup>, and **James J.Q. Yu**<sup>\*</sup>  
*Proc. Annual Conference on Neural Information Processing Systems*, New Orleans, LA, US, December 2023
- ☆ Cross-Area Travel Time Uncertainty Estimation from Trajectory Data: A Federated Learning Approach  
Yuanshao Zhu<sup>'</sup>, Yongchao Ye<sup>'</sup>, Yi Liu, and **James J.Q. Yu**<sup>\*</sup>  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 12, December 2022, Pages 24966–24978, DOI: 10.1109/TITS.2022.3203457
- ☆ Graph Construction for Traffic Prediction: A Data-driven Approach  
**James J.Q. Yu**  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 9, September 2022, Pages 15015–15027, DOI: 10.1109/TITS.2021.3136161
- ☆ Sybil Attack Identification for Crowdsourced Navigation: A Self-supervised Deep Learning Approach  
**James J.Q. Yu**  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 22, Issue 7, July 2021, Pages 4622–4634, DOI: 10.1109/TITS.2020.3036085

- ☆ Travel Mode Identification with GPS Trajectories using Wavelet Transform and Deep Learning  
**James J.Q. Yu**  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 22, Issue 2, February 2021, Pages 1093–1103, DOI: 10.1109/TITS.2019.2962741
- ☆ Capturing Uncertainty in Unsupervised GPS Trajectory Segmentation Using Bayesian Deep Learning  
Christos Markos, **James J.Q. Yu\***, and Richard Y.D. Xu  
*Proc. AAAI Conference on Artificial Intelligence*, Vancouver, Canada, February 2021, DOI: 10.1609/aaai.v35i1.16115
- ☆ Privacy-preserving Traffic Flow Prediction: A Federated Learning Approach  
Yi Liu, **James J.Q. Yu\***, Jiawen Kang, Dusit Niyato, and Shuyu Zhang  
*IEEE Internet of Things Journal*, Volume 7, Issue 8, August 2020, Pages 7751–7763, DOI: 10.1109/JIOT.2020.2991401
- ☆ Synchrophasor Recovery and Prediction: A Graph-based Deep Learning Approach  
**James J.Q. Yu**, David J. Hill, Victor O.K. Li, and Yunhe Hou  
*IEEE Internet of Things Journal*, Volume 6, Issue 5, October 2019, Pages 7348–7359, DOI: 10.1109/JIOT.2019.2899395

## PROFESSIONAL ACTIVITIES

### JOURNAL EDITORSHIP

- Leading Editor, Sustainability Special Issue on Intelligent Transportation System in the New Normal Era 2022
- Leading Editor, IET Smart Cities Special Issue on Smart Transport for Smart Cities 2020
- Associate Editor, IET Smart Cities 2019–

### CONFERENCE ORGANIZATION

- IEEE International Joint Conference on Neural Networks 2021

### PROGRAM COMMITTEE

- International Conference on Artificial Neural Networks 2022, 2023
- AAAI Conference on Artificial Intelligence 2021–2023
- International Joint Conference on Artificial Intelligence 2020–2023
- IEEE International Conference on Vehicular Electronics and Safety 2018
- IEEE Intelligent Vehicles Symposium 2018
- International Conference on Intelligent Systems Design and Applications 2017
- IEEE International Smart Cities Conference 2017
- IEEE International Conference on Smart Grid Communications 2016, 2017
- IEEE World Congress on Computational Intelligence 2014, 2016
- World Congress on Nature and Biologically Inspired Computing 2013

### TECHNICAL COMMITTEE

- 中国自动化学会综合智能交通专业委员会委员 2023–
- Committee Member, Pre-College Activities Subcommittee, IEEE Computational Intelligence Society 2015
- Committee Member, Young Professionals Subcommittee, IEEE Computational Intelligence Society 2015
- Committee Member, Student Activities Subcommittee, IEEE Computational Intelligence Society 2014
- Committee Member, Webinars Subcommittee, IEEE Computational Intelligence Society 2013, 2014

### REVIEWER

- IEEE Transactions on Intelligent Transportation Systems

- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Industrial Informatics
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Power Systems
- IEEE Transactions on Smart Grid
- IEEE Transactions on Neural Networks and Learning Systems
- IEEE Transactions on Mobile Computing
- IEEE Transactions on Wireless Communications
- IEEE Transactions on Systems, Man, and Cybernetics: Systems
- IEEE Transactions on Cybernetics
- IEEE Internet of Things Journal
- plus 30+ other prestigious journals and top conferences

## UNIVERSITY AND DEPARTMENT SERVICE

- Postgraduate Study Support Advisor, Department of Computer Science, University of York 2023–
- Committee Member, Undergraduate Teaching Committee, Department of Computer Science and Engineering, Southern University of Science and Technology 2021–2023
- Committee Member, Postgraduate Admission and Management Committee, Department of Computer Science and Engineering, Southern University of Science and Technology 2021–2023
- Member, Undergraduate Admissions Division of Yunnan Province, Department of Computer Science and Engineering, Southern University of Science and Technology 2019–2023

## SELECTED CONSULTING AFFILIATIONS

- Shengfeng Development Limited (NASDAQ.SFWL), China
- Xixiangfeng Group (02473.HK), China
- JZY Electronic Technology Co., Ltd, China
- GWGrid Inc., China
- Fano Labs, Hong Kong

## RESEARCH SUPERVISIONS

### POST-DOCTORAL RESEARCHER

- Dr. Shiyao Zhang** 2020–2022
- Next hop: Research Assistant Professor at Southern University of Science and Technology
- Dr. Adnan Zeb** 2022–2024
- Next hop: Assistant Professor at Suzhou City University

### DOCTORATE

- Dr. Markos Christos** 2019–2022
- Thesis: Deep Learning for Trajectory-Based Transportation Mode Identification
- Co-supervisor: Dr. Richard Y.D. Xu (University of Technology Sydney, Australia)
- Next hop: Comcast Corporation, US
- Ying Wu** 2020–2024 (anticipated)
- Topic: Uncertainty Quantification in Transport Data
- Co-supervisor: Dr. Zheng Wang (University of Leeds, United Kingdom)

- Yuanshao Zhu** 2022–2026 (anticipated)
- Topic: Privacy Computing in Intelligent Transportation System
  - Co-supervisor: Dr. Xiangyu Zhao (City University of Hong Kong, Hong Kong)

## MASTER

- Yuanshao Zhu** 2019–2022
- Thesis: A Study of Travel Mode Identification with Privacy Preserving
  - Next hop: PhD at CityU-SUSTech Joint Program
  - China National Scholarship Award Winner

- Xiaozhuang Song** 2019–2022
- Thesis: Transfer Learning in Traffic Forecasting: A Domain-adaptation Based Approach
  - Next hop: PhD at CUHK-Shenzhen

- Yongchao Ye** 2020–2023
- Thesis: a study on travel time estimation based on urban road network
  - Next hop: PhD at UTokyo
  - China National Scholarship Award Finalist

- Yunjie Huang** 2020–2023
- Thesis: Traffic speed transfer prediction based on graph neural network
  - Next hop: PhD at HKUST(GZ)

- Ao Wang** 2021–2024 (anticipated)
- Topic: Vehicular Trajectory Imputation and Prediction

- Yuchen Jiang** 2022–2025 (anticipated)
- Topic: Traffic Prediction

- Zhipeng Zheng** 2022–2025 (anticipated)
- Topic: Traffic Data Visualization

## INVITED TALKS

[T7] Geo-Privacy Preservation Towards Trustworthy Intelligent Transport

- University of York, 2024.02
- University of Reading, 2024.02
- The University of Edinburgh, 2024.01
- Sun Yat-sen University, 2023.12

[T6] Towards Data-driven and Privacy-preserving Intelligent Transportation System

- University of York, 2023.10
- Annual meeting of Shenzhen Key Laboratory of Future Industrial Internet Security Assurance, 2023.04
- Beijing University of Technology, 2022.11

[T5] Artificial Intelligence: Addressing Challenges of Urban Transportation

- Shenzhen Polytechnic, 2022.05
- Shenzhen Technology University, 2022.03
- Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, 2021.12
- Annual meeting of Shenzhen Association for Artificial Intelligence, 2021.04

- [T4] Graph Deep Learning: Deep Learning on graphs and in transportation systems
- The Chinese University of Hong Kong (Shenzhen), 2020.08
  - SUSTech-UTokyo Joint Research Center Smart City Youth Scholars Forum, 2019.12
  - SUSTech Workshop on Artificial Intelligence and Autonomous Driving, 2019.10
- [T3] Geometric Deep Learning: Deep Learning on graphs and in smart cities
- IEEE Computational Intelligence Society Webinar, 2019.07
  - SUSTech-UTS Joint Workshop, Shenzhen, 2019.05
- [T2] Delay Aware Power System Synchronphasor Recovery and Prediction Framework
- The University of Hong Kong, 2018.10
  - Hong Kong University of Science and Technology, 2018.06
- [T1] From Smart Grids to Smart Cities: Opportunities and Challenges
- Southern University of Science and Technology, 2018.04

## ALL PUBLICATIONS

(\* Corresponding author, Students / scholars under my supervision, ' Equal contribution)

### JOURNAL ARTICLES

- [J54] Adaptive Modeling of Uncertainties for Traffic Forecasting  
Ying Wu, Yongchao Ye, Adnan Zeb, **James Jianqiao Yu\***, and Zheng Wang\*  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 25, Issue 5, May 2024, Pages 4427–4442, DOI: 10.1109/TITS.2023.3327100
- [J53] Uncertainty-Aware Temporal Graph Convolutional Network for Traffic Speed Forecasting  
 Weizhu Qian, Thomas Dyhre Nielsen, Yan Zhao, Kim Guldstrand Larsen, and **James Jianqiao Yu**  
*IEEE Transactions on Intelligent Transportation Systems*, in press, 2024, DOI: 10.1109/TITS.2024.3365721
- [J52] ST-AGNet: Dynamic Power System State Prediction with Spatial-Temporal Attention Graph-Based Network  
 Shiyao Zhang, Shuyu Zhang\*, **James J.Q. Yu**, Xuetao Wei  
*Applied Energy*, Volume 365, July 2024, Article 123252, DOI: 10.1016/j.apenergy.2024.123252
- [J51] CoPE: Composition-based Poincaré embeddings for link prediction in knowledge graphs  
 Adnan Zeb, Summaya Saif, Junde Chen, **James Jianqiao Yu**, Qingshan Jiang, and Defu Zhang  
*Information Sciences*, Volume 662, March 2024, Article 120197, DOI: 10.1016/j.ins.2024.120197
- [J50] Urban Internet of Electric Vehicle Parking System for Vehicle-to-Grid Scheduling: Formulation and Distributed Algorithm  
 Shengyu Zhang, Shiyao Zhang, Lawrence K. Yeung, and **James J.Q. Yu**  
*IEEE Transactions on Vehicular Technology*, Volume 73, Issue 1, January 2024, Pages 67–79, DOI: 10.1109/TVT.2023.3304718
- [J49] Generative Adversarial Networks: A Survey on Attack and Defense Perspective  
Chenhan Zhang, Shui Yu\*, Zhiyi Tian, and **James J.Q. Yu**  
*ACM Computing Surveys*, Volume 54, Issue 4, November 2023, Article 91, DOI: 10.1145/3615336
- [J48] SAM: Query-Efficient Adversarial Attacks Against Graph Neural Networks  
Chenhan Zhang, Shiyao Zhang, **James J.Q. Yu**, and Shui Yu  
*ACM Transactions on Privacy and Security*, Volume 26, Issue 4, November 2023, Article 49, DOI: 10.1145/3611307
- [J47] Online Joint Ride-Sharing and Dynamic Vehicle-to-Grid Coordination for Connected Electric Vehicle System  
Shiyao Zhang and **James J.Q. Yu\***  
*IEEE Transactions on Transportation Electrification*, Volume 10, Issue 1, March 2024, Pages 1194–1206, DOI: 10.1109/TTE.2023.3284423



- [J46] Traffic Prediction with Transfer Learning: A Mutual Information-based Approach  
Yunjie Huang, Xiaozhuang Song, Yuanshao Zhu, Shiyao Zhang, and **James J.Q. Yu\***  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 24, Issue 8, August 2023, Pages 8236–8252, DOI: 10.1109/TITS.2023.3266398
- [J45] A generalized feature projection scheme for multi-step traffic forecasting  
Adnan Zeb, Shiyao Zhang, Xuetao Wei, and **James J.Q. Yu\***  
*Expert Systems with Applications*, Volume 224, June 2024, Article 122962, DOI: doi.org/10.1016/j.eswa.2023.122962
- [J44] Noncooperative and Cooperative Urban Intelligent Systems: Joint Logistic and Charging Incentive Mechanisms  
Shiyao Zhang, Xingzheng Zhu, Shuai Wang, **James J.Q. Yu\***, and Derrick Wing Kwan Ng  
*IEEE Internet of Things Journal*, Volume 35, Issue 13, July 2023, Pages 11558–11575, DOI: 10.1109/JIOT.2023.3244550
- [J43] Traffic Prediction with Missing Data: A Multi-task Learning Approach  
Ao Wang, Yongchao Ye, Xiaozhuang Song, Shiyao Zhang, and **James J.Q. Yu\***  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 24, Issue 4, April 2023, Pages 4189–4202, DOI: 10.1109/TITS.2022.3233890
- [J42] Towards Large-Scale Graph-Based Traffic Forecasting: A Data-Driven Network Partitioning Approach  
Chenhan Zhang, Shuyu Zhang, Xiexin Zou, Shui Yu, and James J.Q. Yu\*  
*IEEE Internet of Things Journal*, Volume 10, Issue 5, March 2023, Pages 4506–4519, DOI: 10.1109/JIOT.2022.3218780
- [J41] Attention-Driven Recurrent Imputation for Traffic Speed  
Shuyu Zhang, Chenhan Zhang, Shiyao Zhang, and **James J.Q. Yu\***  
*IEEE Open Journal of Intelligent Transportation Systems*, Volume 3, October 2022, Pages 723–737, DOI: 10.1109/OJITS.2022.3215621
- [J40] Video Object Segmentation using Point-based Memory Network  
Mingqi Gao, Jungong Han\*, Feng Zheng, **James J.Q. Yu**, and Giovanni Montana  
*Pattern Recognition*, Volume 134, February 2023, Article 109073, DOI: 10.1016/j.patcog.2022.109073
- [J39] Deep Learning for Video Object Segmentation: A Review  
Mingqi Gao, Feng Zheng, **James J.Q. Yu\***, Caifeng Shan, Guiguang Ding, and Jungong Han\*  
*Artificial Intelligence Review*, Volume 56, January 2023, Pages 457–531, DOI: 10.1007/s10462-022-10176-7
- [J38] Citywide Estimation of Travel Time Distributions with Bayesian Deep Graph Learning  
**James J.Q. Yu**  
*IEEE Transactions on Knowledge and Data Engineering*, Volume 35, Issue 3, March 2023, Pages 2366–2378, DOI: 10.1109/TKDE.2021.3117986
- [J37] Long-term Origin-Destination Demand Prediction with Graph Deep Learning  
Xiexin Zou, Shiyao Zhang, Chenhan Zhang, **James J.Q. Yu\***, and Edward Chung  
*IEEE Transactions on Big Data*, Volume 8, Issue 6, Dec. 2022, Pages 1481–1495, Volume 8, Issue 6, December 2022, Pages 1481–1495, DOI: 10.1109/TBDATA.2021.3063553
- [J36] CatETA: A Categorical Approximate Approach for Estimating Time of Arrival  
Yongchao Ye, Yuanshao Zhu, Christos Markos, and **James J.Q. Yu\***  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 12, December 2022, Pages 24389–24400, DOI: 10.1109/TITS.2022.3207894
- [J35] Cross-Area Travel Time Uncertainty Estimation from Trajectory Data: A Federated Learning Approach  
Yuanshao Zhu, Yongchao Ye, Yi Liu, and **James J.Q. Yu\***  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 12, December 2022, Pages 24966–24978, DOI: 10.1109/TITS.2022.3203457

- [J34] Autonomous Vehicle Intelligent System: Joint Ride-Sharing and Parcel Delivery Strategy  
Shiyao Zhang, Christos Markos, and **James J.Q. Yu\***  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 10, October 2022, Pages 18466–18477, DOI: 10.1109/TITS.2022.3162609
- [J33] Bayesian Deep Learning for Dynamic Power System State Prediction Considering Renewable Energy Uncertainty  
Shiyao Zhang and **James J.Q. Yu\***  
*Journal of Modern Power Systems and Clean Energy*, Volume 10, Issue 4, July 2022, Pages 913–922, DOI: 10.35833/MPCE.2020.000939
- [J32] Graph Construction for Traffic Prediction: A Data-driven Approach  
**James J.Q. Yu**  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 9, September 2022, Pages 15015–15027, DOI: 10.1109/TITS.2021.3136161
- [J31] Resource-constrained Federated Edge Learning with Heterogeneous Data: Formulation and Analysis  
Yi Liu, Yuanshao Zhu, and **James J.Q. Yu\***  
*IEEE Transactions on Network Science and Engineering*, Volume 9, Issue 5, September 2022, Pages 3166–3178, DOI: 10.1109/TNSE.2021.3126021
- [J30] Collision Avoidance Predictive Motion Planning Based on Integrated Perception and V2V Communication  
Shiyao Zhang, Shuai Wang\*, Shuai Yu, **James J.Q. Yu\***, and Miaowen Wen  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 7, July 2022, Pages 9640–9653, DOI: 10.1109/TITS.2022.3173674
- [J29] Long-Term Urban Traffic Speed Prediction With Deep Learning on Graphs  
**James J.Q. Yu**, Christos Markos, and Shiyao Zhang\*  
*IEEE Transactions on Intelligent Transportation Systems*, Volume 23, Issue 7, July 2022, Pages 7359–7370, DOI: 10.1109/TITS.2021.3069234
- [J28] A Communication-Efficient Federated Learning Scheme for IoT-Based Traffic Forecasting  
Chenhan Zhang, Lei Cui, Shui Yu, and **James J.Q. Yu\***  
*IEEE Internet of Things Journal*, Volume 9, Issue 14, July 2022, Pages 11918–11931, DOI: 10.1109/JIOT.2021.3132363
- [J27] Towards Crowdsourced Transportation Mode Identification: A Semi-supervised Federated Learning Approach  
Chenhan Zhang, Yuanshao Zhu, Christos Markos, Shui Yu, and James J.Q. Yu\*  
*IEEE Internet of Things Journal*, Volume 9, Issue 14, July 2022, Pages 11868–11882, DOI: 10.1109/JIOT.2021.3132056
- [J26] Electric Vehicle Dynamic Wireless Charging System: Optimal Placement and Vehicle-to-Grid Scheduling  
Shiyao Zhang and **James J.Q. Yu\***  
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- [J25] Semi-supervised Federated Learning for Travel Mode Identification from GPS Trajectories  
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