James Jianqiao Yu 余剑峤

Lecturer (Assistant Professor) | Department of Computer Science | University of York
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Personal Particulars

Gender: Male | Birth: Mar. 1990 | Nationality: Chinese (Hong Kong)

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 (Assistant Professor) 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 forecasting, decision making, and privacy preservation of future transportation systems, and artificial intelligence techniques for industrial applications. He was the World's Top 2% Scientists from 2020 to 2023 and of career by Stanford University, ranked at top 0.38% of all Artificial Intelligence scholars and top 0.24% in Transportation. He is an Editor of the IET Smart Cities journal and a Senior Member of IEEE.

余剑峤，本科、博士毕业于香港大学，主要研究方向和研究兴趣包括智能交通系统、隐私计算、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 90 余篇学术论文，包括 40 余篇第一/通信作者中科院一二区和中国计算机协会推荐 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 5100 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 Sept. 2015

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.) Aug. 2011

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

Professional Experience

Lecturer (Assistant Professor) Sept. 2023 – Present

Department of Computer Science, University of York

Assistant Professor Dec. 2018 – Aug. 2023

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

Post-doctoral Fellow Sept. 2015 – Dec. 2018

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

- Advisor: Prof. David John Hill

Visiting Scholar Jun. 2013 – Jul. 2013

Department of Computation, Center for Research and Advanced Studies of the National Polytechnic Institute

- Host: Prof. Carlos Artemio Coello Coello, Prof. Wen Yu

Representative Honors

- World's Top 2% Scientists (Career) 全球前 2% 顶尖科学家科学影响力榜单（终身） 2023
- World's Top 2% Scientists (Single Year) 全球前 2% 顶尖科学家科学影响力榜单（年度） 2020, 2021, 2022, 2023
  Top 0.24% in Transportation sub-field, top 0.38% in Artificial Intelligence sub-field.
- Overseas High-Caliber Personnel Level-C 深圳市海外高层次人才计划 C 类 2019

Research Grants

General Program of Shenzhen Natural Science Fund Jan. 2021 – Dec. 2022

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

- Number: 20200925155105002
- Size: RMB 500,000
- Role: Principal Investigator 主持

General Program of Guangdong Basic and Applied Basic Research Foundation Oct. 2019 – Sept. 2022

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

- Number: 2019A1515011032
- Size: RMB 100,000
- Role: Principal Investigator 主持

Key Laboratory Construction Program of Shenzhen, China Apr. 2022 – May 2024
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
- Number: ZDSYS20210623092007023
- Size: RMB 5M
- Role: Co-Investigator 参与

Construction Program of Nobel Prize Scientist Research Institute Jul. 2020 – Jul. 2025
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
- Number: 0102004-2019-ZXZJ-0079-79-0017
- Size: RMB 100M
- Role: Co-Investigator 参与

Key Laboratory Construction Program of Guangdong Province, China Jan. 2020 – Dec. 2022
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
- Number: 2020B121201001
- Size: RMB 3M + 7M supplement
- Role: Co-Investigator 参与

National Key Research and Development Program of China Jul. 2017 – Dec. 2020
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
- Number: 2017YFB0903200
- Size: RMB 62.56M
- Role: Co-Investigator 参与

National Natural Science Foundation of China (Young Scientists) Jan. 2018 – Dec. 2020
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
- Number: 51707170
- Size: RMB 200,000
- Role: Co-Investigator 参与

Teaching Experience

Intelligent Systems: Machine Learning and Optimisation S'24
Department of Computer Science, University of York
- Role: Course Instructor
- Language: English
- Website (S'24): `https://jqyu.me/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

- Role: Course Instructor
- Language: Bilingual (English and Chinese)
- Website (S'23): `https://jqyu.me/courses/CS109`
- Evaluation: 4.64 (F'21), 4.63 (F'20), 4.52 (F'19)

Digital Logic F'22, S'21, S'20, S'19

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

- Role: Course Instructor and Designer
- Language: English
- Website (F'22): `https://jqyu.me/courses/CS207`
- Evaluation: 4.69 (F'22), 4.72 (S'21), 4.67 (S'20), 4.01 (S'19)

Digital Logic (H) M'22, M'21

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

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

Introduction to Computer Programming (H) F'21, F'20

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

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

Embedded System F'16, F'17

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

- Role: Guest Lecturer
- Language: English

Engineering Management and Society F'14

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

- Role: Guest Lecturer
- Language: English

Sustainability and Climate Change S'14

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

- Role: Teaching Assistant

Communications Engineering S'12

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

- Role: Teaching Assistant

Selected Recent Publications

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

According to Google Scholar, my publications have 5168 citations. My h-index is 33 and i10-index is 76. Complete list of publications is attached to the end of this document.

- 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, Mar. 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*, and **James J.Q. Yu***
  Proc. Annual Conference on Neural Information Processing Systems, New Orleans, LA, US, Dec. 2023.
- 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, Dec. 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, Sept. 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, Jul. 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, Feb. 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, Feb. 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, Aug. 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, Oct. 2019, Pages 7348-7359, DOI: 10.1109/JIOT.2019.2899395.
- Online Vehicle Routing with Neural Combinatorial Optimization and Deep Reinforcement Learning
  James J.Q. Yu, Wen Yu, and Jiatao Gu
  IEEE Transactions on Intelligent Transportation Systems, Volume 20, Issue 10, Oct. 2019, Pages 3806-3817, DOI: 10.1109/TITS.2019.2909109.

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 –

Technical Committee

- Committee Member, Integrated Intelligent Transportation System Technical Committee, Chinese Association of Automation 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

Program 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

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

- GWGrid Inc., Zhuhai, China
- Fano Labs, Hong Kong

Research Supervisions

Post-doctoral Researcher

Dr. Shiyao Zhang 2020–2022
- Next hop: Research Assistant Professor at SUSTech

Dr. Adnan Zeb 2022–2024 (anticipated)

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

Ms. Ying Wu 2020–2024 (anticipated)
- Topic: Uncertainty Quantification in Transport Data
- Co-supervisor: Dr. Zheng Wang (University of Leeds, United Kingdom)

Mr. 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

Mr. 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

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

Mr. 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

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

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

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

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

Invited Talks

[T7] **Geo-Privacy Preservation Towards Trustworthy Intelligent Transport**
- University of York, Feb. 2024
- University of Reading, Feb. 2024
- The University of Edinburgh, Jan. 2024
- Sun Yat-sen University, Dec. 2023

[T6] **Towards Data-driven and Privacy-preserving Intelligent Transportation System**
- University of York, Oct. 2023
- Annual meeting of Shenzhen Key Laboratory of Future Industrial Internet Security Assurance, Apr. 2023
- Beijing University of Technology, Nov. 2022

[T5] **Artificial Intelligence: Addressing Challenges of Urban Transportation**
- Shenzhen Polytechnic, May 2022
- Shenzhen Technology University, Mar. 2022
- Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Dec. 2021
- Annual meeting of Shenzhen Association for Artificial Intelligence, Apr. 2021

[T4] **Graph Deep Learning: Deep Learning on graphs and in transportation systems**
- The Chinese University of Hong Kong (Shenzhen), Aug. 2020
- SUSTech-UTokyo Joint Research Center Smart City Youth Scholars Forum, Dec. 2019
- SUSTech Workshop on Artificial Intelligence and Autonomous Driving, Oct. 2019

[T3] **Geometric Deep Learning: Deep Learning on graphs and in smart cities**
- IEEE Computational Intelligence Society Webinar, Jul. 2019
- SUSTech-UTS Joint Workshop, Shenzhen, May 2019

[T2] **Delay Aware Power System Synchrophasor Recovery and Prediction Framework**
- The University of Hong Kong, Oct. 2018
- Hong Kong University of Science and Technology, Jun. 2018

[T1] **From Smart Grids to Smart Cities: Opportunities and Challenges**
- Southern University of Science and Technology, Apr. 2018

All Publications

Journal Articles

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

[J50] 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, in press, DOI: 10.1109/TITS.2023.3327100.

[J49] 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, DOI: 10.1109/TITS.2024.3365721.

[J48] 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, Page 120197, DOI: 10.1016/j.ins.2024.120197.

[J47] 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, Jan. 2024, Pages 67-79, DOI: 10.1109/TVT.2023.3304718.

[J46] Generative Adversarial Networks: A Survey on Attack and Defense Perspective
Chenhan Zhang, Shui Yu*, Zhiyi Tian, and **James J.Q. Yu**
ACM Computing Surveys, in press, DOI: 10.1145/3615336.

[J45] 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, in press, DOI: 10.1145/3611307.

[J44] 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, Volumn 10, Issue 1, Mar. 2024, Pages 1194-1206, DOI: 10.1109/TTE.2023.3284423.

[J43] 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, Volumn 24, Issue 8, Aug. 2023, Pages 8236-8252, DOI: 10.1109/TITS.2023.3266398.

[J42] 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 244, June 2024, 122962, DOI: doi.org/10.1016/j.eswa.2023.122962.

[J41] 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, Jul. 2023, Pages 11558-11575, DOI: 10.1109/JIOT.2023.3244550.

[J40] 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, Apr. 2023, Pages 4189-4202, DOI: 10.1109/TITS.2022.3233890.

[J39] 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, Mar. 2023, Pages 4506-4519, DOI: 10.1109/JIOT.2022.3218780.

[J38] 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, Oct. 2022, Pages 723-737, DOI: 10.1109/OJITS.2022.3215621.

[J37] 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, Feb. 2023, Pages 109073, DOI: 10.1016/j.patcog.2022.109073.

[J36] 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, in press, DOI: 10.1007/s10462-022-10176-7.

[J35] 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, Mar. 2023, Pages 2366-2378, DOI: 10.1109/TKDE.2021.3117986.

[J34] 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, DOI: 10.1109/TBDATA.2021.3063553.

[J33] 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, Dec. 2022, Pages 24389-24400, DOI: 10.1109/TITS.2022.3207894.

[J32] 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, Dec. 2022, Pages 24966-24978, DOI: 10.1109/TITS.2022.3203457.

[J31] 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, Oct. 2022, Pages 18466-18477, DOI: 10.1109/TITS.2022.3162609.

[J30] 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, Jul. 2022, Pages 913-922, DOI: 10.35833/MPCE.2020.000939.

[J29] Graph Construction for Traffic Prediction: A Data-driven Approach
James J.Q. Yu
IEEE Transactions on Intelligent Transportation Systems, Volume 23, Issue 9, Sept. 2022, Pages 15015-15027, DOI: 10.1109/TITS.2021.3136161.

[J28] 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, Jul. 2022, Pages 9640-9653, DOI: 10.1109/TITS.2022.3173674.

[J27] 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, Jul. 2022, Pages 7359-7370, DOI: 10.1109/TITS.2021.3069234.

[J26] 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, Jul. 2022, Pages 11918-11931, DOI: 10.1109/JIOT.2021.3132363.

[J25] 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, Jul. 2022, Pages 11868-11882, DOI: 10.1109/JIOT.2021.3132056.

[J24] Electric Vehicle Dynamic Wireless Charging System: Optimal Placement and Vehicle-to-Grid Scheduling
Shiyao Zhang and **James J.Q. Yu***
IEEE Internet of Things Journal, Volume 9, Issue 8, Apr. 2022, Pages 6047-6057, DOI: 10.1109/JIOT.2021.3109956.

[J23] FASTGNN: A Topological Information Protected Federated Learning Approach For Traffic Speed Forecasting
Chenhan Zhang, Shuyu Zhang, **James J.Q. Yu***, and Shui Yu
IEEE Transactions on Industrial Informatics, Volumn 17, Issue 12, Dec. 2021, Pages 8464-8474, DOI: 10.1109/TII.2021.3055283.

[J22] 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, Jul. 2021, Pages 4622-4634, DOI: 10.1109/TITS.2020.3036085.

[J21] 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, Feb. 2021, Pages 1093-1103, DOI: 10.1109/TITS.2019.2962741.

[J20] Citywide Traffic Speed Prediction: A Geometric Deep Learning Approach
James J.Q. Yu
Knowledge-Based Systems, Volume 212, Jan. 2021, Pages 106592, DOI: 10.1016/j.knosys.2020.106592.

[J19] 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, Aug. 2020, Pages 7751-7763, DOI: 10.1109/JIOT.2020.2991401.

[J18] Semi-supervised Deep Ensemble Learning for Travel Mode Identification
James J.Q. Yu
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