



北京交通大学
BEIJING JIAOTONG UNIVERSITY



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大学



兰州交通大学
LANZHOU JIAOTONG UNIVERSITY

第十二届交通运输研究国际会议

ICTTS'2026

The 12th International Conference on Traffic & Transportation Studies

会议议程

CONFERENCE PROGRAM

2026年 8 月

August, 2026

中国·香港

Hong Kong·China

主办/Host: 北京交通大学/Beijing Jiaotong University(BJTU)

承办/Organizer: 香港理工大学/The Hong Kong Polytechnic University(PolyU)

兰州交通大学/Lanzhou Jiaotong University(LZJTU)

大会简介

Conference introduction

第十二届交通运输研究国际会议（ICTTS2026）于2026年8月14日至16日在中国香港举办。交通运输研究国际会议（ICTTS）由北京交通大学发起，首届会议于1998年召开，至今已举办十一届，历届会议得到了有关单位组织及广大与会者的积极肯定与支持。会议已累计吸引了世界各地1000余名交通学者和专业人士前来开展学术交流和合作，已发展成为交通运输研究和实践发展领域的国际知名学术会议。

本届会议以“超越智慧出行”为主题，探讨AI与LLM背景下的轨道交通运营管理、城市交通管理、民航运输、低空经济、多模式综合交通、交通基础设施运维、交通运输安全、交通运输经济与政策、物流管理等议题。会议采取大会报告和分组报告的形式，邀请海内外学者、研究人员和专业人士集聚一堂分享成果、交流理念、共话前景。会议还特别设置了技术参观，为与会者零距离接触和了解中国交通运输系统重要创新与实践发展成果提供宝贵机会。

本届会议由北京交通大学主办，香港理工大学与兰州交通大学共同承办。会议组委会真诚欢迎您及您的团队成员与会交流，分享研究进展与成果，非常感谢您对本次会议的支持！

The 12th International Conference on Traffic and Transportation Studies (ICTTS2026) will be held in Hong Kong, China, from August 14–16, 2026. Initiated by Beijing Jiaotong University (BJTU), ICTTS was first held in 1998 and has successfully convened eleven editions. Over the past two decades, the conference has received strong support from academia, industry, and participants worldwide. With more than 1,000 scholars, researchers, and transportation professionals participating in previous conferences, ICTTS has become a well-established international forum for transportation research and practice.

Under the theme "Beyond Smart Mobility: AI and LLMs Reshaping Transportation", ICTTS2026 will cover topics including: rail transit operation management, urban transportation management, civil aviation transportation, low-altitude aerial system, multimodal & integrated transportation systems, transportation infrastructure maintenance, transportation safety, transportation economics and policy, and logistics management in the context of AI and LLMs. The conference program will feature plenary and parallel technical sessions, providing an international platform for participants to present cutting-edge research, exchange innovative ideas, foster interdisciplinary collaboration, and explore future directions in transportation research and practice. Additionally, the conference will organize technical visits, offering participants valuable opportunities to experience firsthand China's latest innovations and practical achievements in transportation systems and infrastructure.

ICTTS2026 is hosted by Beijing Jiaotong University (BJTU) and co-organized by The Hong Kong Polytechnic University (PolyU) and Lanzhou Jiaotong University (LZJTU). The Organizing Committee sincerely welcomes you and your team members to participate, exchange ideas, and share your latest research achievements. We sincerely appreciate your support for this conference!

大会指南

Conference Guide

会议时间：2026 年 8 月 14 日 -16 日
Conference time: August 14-16, 2026

会议地点：香港理工大学
Venue: The Hong Kong Polytechnic University (PolyU)

会议地址：香港特别行政区九龙红磡育才道 11 号
Conference Address: 11 Yuk Choi Road, Hung Hom, Kowloon,
Hong Kong, China.

前往香港理工大学交通指南

Transportation Guide to The Hong Kong Polytechnic University

香港国际机场 · 香港西九龙高铁站 · 罗湖／落马洲口岸
Hong Kong International Airport · Hong Kong West Kowloon Station · Lo Wu / Lok Ma Chau Control Points

目的地 / Venue

香港理工大学主校园（红磡）
The Hong Kong Polytechnic University, Main Campus (Hung Hom)

的士下车点 / Taxi drop-off: 畅运道正门 Main Entrance, Cheong Wan Road

港铁到达 / MTR arrival: 红磡站 Hung Hom Station, Exit A1（或 D1）行人天桥

交通比较 / Transportation Quick Comparison

出发地 / Origin	推荐公共交通 / Recommended public transport	费用 / Fare	总时间 * / Total time*	的士估算 / Taxi estimate
香港国际机场 Hong Kong International Airport	机场快线 + 港铁 Airport Express + MTR	HK\$82.5（八达通） HK\$82.5 (Octopus)	约 50–60 分钟 Approx. 50–60 min	约 HK\$280–380; 30–45 分钟 Approx. HK\$280–380; 30–45 min
香港西九龙高铁站 Hong Kong West Kowloon Station	步行至柯士甸站 + 屯马线 Walk to Austin + Tuen Ma Line	约 HK\$5.5–6.5 Approx. HK\$5.5–6.5	约 20–30 分钟 Approx. 20–30 min	约 HK\$45–80; 10–20 分钟 Approx. HK\$45–80; 10–20 min
罗湖口岸 Lo Wu Control Point	东铁线直达红磡 East Rail Line direct to Hung Hom	HK\$41.6（成人） HK\$41.6 (adult)	约 50–65 分钟（不含过关） Approx. 50–65 min, excluding immigration	/
落马洲／福田口岸 Lok Ma Chau / Futian Control Point	东铁线直达红磡 East Rail Line direct to Hung Hom	HK\$41.6（成人） HK\$41.6 (adult)	约 55–70 分钟（不含过关） Approx. 55–70 min, excluding immigration	/

抵达红磡站后 / After arriving at Hung Hom Station

按“香港理工大学 / The Hong Kong Polytechnic University”指示前往 A1 出口，经有盖行人天桥进入校园。正常步行约 5–10 分钟；携带大型行李时建议使用升降机并预留更多时间。
Follow signs for “The Hong Kong Polytechnic University” to Exit A1 and use the covered footbridge to enter the campus. The normal walk takes about 5–10 minutes; allow extra time and use lifts when carrying large luggage.



香港理工大学校园导览图
PolyU campus navigation map

恶劣天气安排
Adverse Weather Arrangements

如遇恶劣或极端天气，请留意香港天文台的最新公告（www.hko.gov.hk）。当八级及以上台风信号或“极端情况”发布时，为安全起见，当日的会议将取消。
In the event of adverse or extreme weather, please check the Hong Kong Observatory for the latest announcements www.hko.gov.hk. When Typhoon Signal No. 8 or above, or “Extreme Condition” is issued, the conference for that day will be cancelled for safety reasons.

目录
CONTENTS

A	会议组织架构 //Conference Structure
FIRST	大会主席 General Committee
SECOND	顾问委员会 Advisory Committee
THIRD	组织委员会 Organization Committee
B	大会安排 //Conference Arrangements
FOURTH	大会日程 Conference Schedule
FIFTH	报告日程 Report Schedule
SIXTH	分组报告详情 Group Report Details
C	大会报告嘉宾 //Keynote Speakers
SEVENTH	大会报告嘉宾 Keynote speakers
D	学院简介 //University School Profiles
EIGHTH	北京交通大学交通运输学院简介 Introduction to School of Traffic and Transportation, Beijing Jiaotong University
NINTH	香港理工大学及其电机电子工程学系简介 Introduction to The Hong Kong Polytechnic University and Department of Electrical and Electronic Engineering (EEE)
TENTH	兰州交通大学交通运输学院简介 Introduction to School of Traffic and Transportation, Lanzhou Jiaotong University

会议组织架构
Conference Structure

大会主席	主席 /Chairs
General Committee	Beijing Jiaotong University The Hong Kong Polytechnic University
	Prof. Lingyun Meng Prof. C.Y. Chung
顾问委员会	主席 /Chairs
Advisory Committee	Beijing Jiaotong University MTR Academy The Hong Kong Polytechnic University University of Nevada Hong Kong University of Science and Technology Arizona State University
	Prof. Baohua Mao Dr. Tinkin Ho Prof. William Lam Prof. Zongzong Tian Prof. Hai Yang Prof. Xuesong Zhou
	委员 /Members
	Kun An Tongji University Xiqun Chen Zhejiang University Taku Fujiyama University College London
	Valentina Cacchiani University of Bologna Italy Andrea D'Ariano University of Rome Tre Ziyou Gao Beijing Jiaotong University
	Jian Chen Chongqing Jiaotong University Lianbo Deng Central South University Zhengbing He Massachusetts Institute of Technology
	Haijun Huang Beihang University Jiling Lei Kunming University of Science and Technology Tianliang Liu Beihang University
	Peng Jia Dalian Maritime University Zhichun Li Huazhong University of Science and Technology Yang Liu National University of Singapore
	Haibo Kuang Dalian Maritime University Christian Liebchen Technische Fachhochschule Wildau Xiaolei Ma Beihang University
	Stephen W. K. Ng The Hong Kong Polytechnic University Chunfu Shao Xinjiang University
	Lei Nie Beijing Jiaotong University Lishan Sun Beijing University of Technology
	Huimin Niu Lanzhou Jiaotong University Qipeng Sun Chang'an University
	Zhongbei Tian University of Birmingham Lixing Yang Beijing Jiaotong University Kuiling Zhang Michigan Technological University
	Binglei Xie Harbin Institute of Technology Fangni Zhang The University of Hong Kong Nan Zheng Monash University
	Xuedong Yan Southwest Jiaotong University Junyi Zhang Southeast University Zuduo Zheng University of Queensland
	Ming Zhong Wuhan University of Technology
	Changzheng Zhu Xi'an University of Posts & Telecommunications
	Bo Zou University of Illinois at Chicago

会议组织架构
Conference Structure

组织委员会 主席 /Chairs

Organization Committee	The Hong Kong Polytechnic University	Prof. Edward Chung
	Beijing Jiaotong University	Prof. Yuanjie Tang
	Beijing Jiaotong University	Prof. Yun Bai
	Beijing Jiaotong University	Prof. Yizheng Wu

委员 /Members

Yao Chen	Wenbo Fan	Jia Feng
Beijing Jiaotong University	The Hong Kong Polytechnic University	Beijing Jiaotong University
Weihoa Gu	Man Li	Zhengwen Liao
The Hong Kong Polytechnic University	Beijing Jiaotong University	Beijing Jiaotong University
KangLin Liu	Long Pan	Pan Shang
Beijing Jiaotong University	Beijing Jiaotong University	Beijing Jiaotong University
Lingjiangfei Wu	Qi Xu	Wenyi Zhang
Beijing Jiaotong University	Beijing Jiaotong University	Beijing Jiaotong University

大会日程
Conference Schedule All times are Beijing Time (UTC+8)

2026 年 8 月 13 日 (August 13, 2026)		
14:00-18:00	会议报到注册 /Conference Check-in and Registration	PolyU DE306
2026 年 8 月 14 日 (August 14, 2026)		
08:00-09:00	会议报到注册 /Conference Check-in and Registration	主会场入口处 PolyU Lecture Theater-TU201
09:00-09:30	开幕式 /Opening ceremony	PolyU Lecture Theater-TU201
09:30-12:00	大会报告 A/B Plenary Speeches A/B	PolyU Lecture Theater-TU201
12:00-13:30	午餐 /Lunch	聚贤阁 Ju Yin Court, 4/F, Communal Building
14:00-15:30 (Session A)	A01 Transportation Data Intelligence & Analytics	PolyU DE307
	A02 Intelligent Transportation Systems Management & Control	PolyU DE306
	A03 Data-Driven Urban Integration & Development	PolyU DE304
	A04 Transportation Safety, Security & Resilience	PolyU DE303
	A05 BJTU-Meet with Editors// 期刊主编面对面	PolyU DE302
	A06 BJTU Recruitment for the School of Traffic and Transportation// 北京交通大学交通运输学院人才恳谈交流	PolyU DE301
15:30-15:45	茶歇 /Coffee Break	
15:45-17:15 (Session B)	B01 Transportation Data Intelligence & Analytics	PolyU DE307
	B02 Intelligent Transportation Systems Management & Control	PolyU DE306
	B03 Transportation Planning, Operations & Optimization	PolyU DE304
	B04 Transportation Safety, Security & Resilience	PolyU DE303
	B05 Intelligent Logistics & Supply Chain Management	PolyU DE302
	B06 BJTU Recruitment for the School of Traffic and Transportation 北京交通大学交通运输学院人才恳谈交流	PolyU DE301
17:30-20:00	晚餐 /Conference Dinner (Invitation Only)	彩福皇宴饭店 Choi Fook Royal Banquet

大会日程

Conference Schedule

2026 年 8 月 15 日 (August 15, 2026)		
09:00-09:30	会议注册 /Conference Registration	主会场入口处 PolyU Lecture Theater-TU201
09:30-12:00	大会报告 C Plenary Speeches C	PolyU Lecture Theater-TU201
12:00-13:30	午餐 /Lunch	聚贤阁 Ju Yin Court, 4/F, Communal Building
14:00-15:30 (Session C)	C01 Low-altitude Aerial System and General Aviation	PolyU DE303
	C02 Transportation Planning, Operations & Optimization	PolyU DE304
	C03 Smart Infrastructure & Predictive Maintenance	PolyU DE306
	C04 Multimodal & Integrated Transportation Systems	PolyU DE307
15:30-15:45	茶歇 /Coffee Break	
15:45-17:15 (Session D)	D01 Sustainable Mobility & Environmental Impacts	PolyU DE303
	D02 Transportation Planning, Operations & Optimization	PolyU DE304
	D03 Smart Infrastructure & Predictive Maintenance	PolyU DE306
	D04 Multimodal & Integrated Transportation Systems	PolyU DE307
17:30-18:00	闭幕式 /Closing Ceremony	PolyU Lecture Theater-TU201

2026 年 8 月 16 日 (August 16, 2026)	
10: 00-12: 00	技术参观（港铁运作控制中心） Technical Visit (the MTR Operation and Control Centre) (Registration Required)

报告日程

Report Schedule

2026 年 8 月 14 日 (August 14, 2026)			
09:00-09:30	开幕式 /Opening Ceremony	PolyU Lecture Theater-TU201	主持人 /MC: Beiyu Song/ 宋蓓钰
香港理工大学电力系统工程系主任（首席教授） Head of Department and Chair Professor of Power Systems Engineering, PolyU		Prof. Chi-yung Chung	致辞 Welcome Address
北京交通大学交通运输学院院长 Dean of the School of Traffic and Transportation, BJTU		孟令云 教授 Prof. Lingyun Meng	致辞 Welcome Address
兰州交通大学交通运输学院副院长 Vice Dean of the School of Traffic and Transportation, LZJTU		吕斌 教授 Prof. Bin Lv	致辞 Welcome Address
合影 //Group Photo			
09:30-10:15	大会报告 A / Plenary Speech A	PolyU Lecture Theater-TU201	主持人 /Chair: 孟令云 /Lingyun Meng
09:30-10:15	Prof. Michael J. Cassidy University of California, Berkeley Adaptive Cruise Control and Urban Traffic Congestion		
10:15-10:30	茶歇 /Coffee Break		
10:30-12:00	大会报告 B / Plenary Speech B	PolyU Lecture Theater-TU201	主持人 /Chair: 孟令云 /Lingyun Meng
10:30-11:15	Prof. Xiaopeng (Shaw) Li University of Wisconsin-Madison(UW) Physics-Enhanced Artificial Intelligence (AI) for Transportation Autonomy		
11:15-12:00	Prof. Dennis Huisman Erasmus Universiteit Rotterdam Challenges and Solutions in European Passenger Railways		
12:00-13:30	午餐 /Lunch	聚贤阁 Ju Yin Court, 4/F, Communal Building	
14:00-15:30	分组报告 A01-A06 / Parallel Sessions A01-A06	地点 /Location	主持人 /Chair
A01 Transportation Data Intelligence & Analytics		PolyU DE307	Babak Mehran
A02 Intelligent Transportation Systems Management & Control		PolyU DE306	Hao Wu/ 吴浩
A03 Data-Driven Urban Integration & Development		PolyU DE304	Yang Zhang/ 张扬
A04 Transportation Safety, Security & Resilience		PolyU DE303	Zhixian Tang/ 唐志贤
A05 BJTU-Meet with Editors 期刊主编面对面		PolyU DE302	Dewei Li/ 李得伟
A06 BJTU Recruitment for the School of Traffic and Transportation 北京交通大学交通运输学院人才恳谈交流会		PolyU DE301	Yizheng Wu/ 吴亦政
15:30-15:45	茶歇 /Coffee Break		

报告日程
Report Schedule

15:45-17:15	分组报告 B01-B06 / Parallel Sessions B01-B06		地点 /Location	主持人 /Chair
B01 Transportation Data Intelligence & Analytics			PolyU DE307	Xiexin Zou/ 邹颢鑫
B02 Intelligent Transportation Systems Management & Control			PolyU DE306	Zong Tian/ 田宗忠
B03 Transportation Planning, Operations & Optimization			PolyU DE304	Li Zhen/ 甄理
B04 Transportation Safety, Security & Resilience			PolyU DE303	Hao Yu/ 俞灏
B05 Intelligent Logistics & Supply Chain Management			PolyU DE302	Zhengwen Liao/ 廖正文
B06 BJTU Recruitment for the School of Traffic and Transportation 北京交通大学交通运输学院人才恳谈交流会			PolyU DE301	Yizheng Wu/ 吴亦政
17:30-20:00	彩福皇宴饭店 Choi Fook Royal Banquet 晚餐 /Conference Dinner (invitation only) Address: Hong Kong, Hung Hom, Fortune Metropolis, Floor 8, Choi Fook Royal Banquet 地址: 红磡都会道 6-10 号置富都会 8 楼 858 号铺, 彩福皇宴			
2026 年 8 月 15 日 (August 15, 2026)				
09:30-12:00	大会报告 C / Plenary Speech C		PolyU Lecture Theater-TU201	主持人 /Chair: Weihua Gu
09:30-10:15	Prof. S.C. Wong University of Hong Kong Quantifying the Variability of Connected Vehicle Penetration Rate Estimates from Single-Source Data			
10:15-11:00	Prof. Yahua(Shane) Zhang Adelaide University Global Value Chain Partnerships for Sustainable Aviation Fuel: Implications for Australia-China			
11:00-11:45	Prof. Zuduo Zheng The University of Queensland (UQ) 100 Days with Tesla FSD: Four Lessons for the Future of Autonomous Driving			
12:00-13:30	聚贤阁 Ju Yin Court, 4/F, Communal Building 午餐 /Lunch			
14:00-15:30	分组报告 C01-C04/ Parallel Sessions C01-C04		地点 /Location	主持人 /Chair
C01 Low-altitude Aerial System and General Aviation			PolyU DE303	Sida Luo/ 罗斯达
C02 Transportation Planning, Operations & Optimization			PolyU DE304	Wenbo Fan/ 范文博
C03 Smart Infrastructure & Predictive Maintenance			PolyU DE306	Yong Zhuang/ 庄勇
C04 Multimodal & Integrated Transportation Systems			PolyU DE307	Jinwoo Lee
15:30-15:45	茶歇 /Coffee Break			

报告日程
Report Schedule

15:45-17:15	分组报告 D01-D04/ Parallel Sessions D01-D04	地点 /Location	主持人 /Chair
	D01 Sustainable Mobility & Environmental Impacts	PolyU DE303	Gaojunjie Li/ 李高俊杰
	D02 Transportation Planning, Operations & Optimization	PolyU DE304	Yao Chen/ 陈垚
	D03 Smart Infrastructure & Predictive Maintenance	PolyU DE306	Yong Zhuang/ 庄勇
	D04 Multimodal & Integrated Transportation Systems	PolyU DE307	Ming Zhong/ 钟鸣
17:30-18:00	闭幕式 /Closing ceremony	PolyU Lecture Theater-TU201	主持人 /Chair: Yizheng Wu/ 吴亦政
	大会组委会联合主席 Co-chair of ICTTS2026 organizing committee, PolyU	Prof. Edward Chung	致辞 Closing Address
	大会组委会联合主席 & 北京交大交通运输学院副院长 Co-chair of ICTTS2026 organizing committee; Vice dean of the School of Traffic and Transportation, BJTU	吴亦政 教授 Prof. Yizheng Wu	致辞 Closing Address
	大会组委会联合主席 & 兰州交大交通运输学院副院长 Co-chair of ICTTS2026 organizing committee; Vice dean of the School of Traffic and Transportation, LZJTU	吕斌 教授 Prof. Bin Lv	致辞 Closing Address

分组报告详情

Group Report Details

2026 年 8 月 14 日下午 (August 14, 2026, afternoon)

14:00-15:30	Session A01: Transportation Data Intelligence & Analytics	PolyU DE307	主持人 /Chair: Babak Mehran
1	Multi-source Data Fusion and GWR-Enhanced Machine Learning for Hourly Grid-level Truck Accident Risk Prediction		孙冬媛 /Dongyuan Sun
2	A Time-Decay Attention-Based Federated Short-Term Traffic Flow Prediction Method for MaaS Platforms		Yinlian Zeng
3	SIGNet: Multi-agent Trajectory Reconstruction with Hierarchical Social-Interactive Graph Attention		孙杰 /Jie Sun
4	A Smartphone-Based Ride Comfort Evaluation Method for Subways		陈明 /Ming Chen
5	A Sentiment Classification Method for Passenger Satisfaction Survey Texts Based on LLM Fine-Tuning		Maosheng Wang
6	A Machine Learning Approach for Road Freight Network Extraction		Babak Mehran
14:00-15:30	Session A02: Intelligent Transportation Systems Management & Control	PolyU DE306	主持人 /Chair: 吴浩 /Hao Wu
1	Real-Time Optimization of Train Movement in Urban Rail Transit: A Hierarchical Expert-Guided Multi-Agent Deep Reinforcement Learning Approach		姜淑涵 /Shuhan Jiang
2	Scenario-Based Passenger Flow Control Optimization for Railway Hub under Disruption-Induced Train Delays		戴智丞 /Zhicheng Dai
3	OptiRescheduling: An LLM-based Train Rescheduling Method		Wenwen Bao
4	Electric multiple unit circulation rescheduling under bounded timetable rescheduling		刘帝权 /Diquan Liu
5	Electric Multiple Unit (EMU) Circulation Rescheduling Method Based on Task-Chain Vulnerability		胡逸群 /Yiqun Hu
6	Collaborative Optimization of Urban Arterials: Integrating Signal Control with Multiple Variable Lane Types		Hao Wu

14:00-15:30	Session A03: Data-Driven Urban Integration & Development	PolyU DE304	主持人 /Chair: 张扬 /Yang Zhang
1	Affective and Evaluative Responses to Future Urban Street Environments: Evidence from an Integrated Virtual Reality Experiment Using Computer Vision, EEG, and Survey Measures		Seung-Nam Kim
2	Joint Design of Point-to-Point Transit and Fixed-Route Transit atop Hybrid Urban Road Networks		朱印 /Yin Zhu
3	An LLM-based Framework for Determining Public Transport Choice Set		Yidong Wei
4	Assessing the Accessibility of Electric Vehicle Charging Infrastructure: A Time-Period Decomposed Gaussian Two-Step Floating Catchment Area Approach		王飞龙 /Feilong Wang
5	Measuring and Optimizing the Effect of Fare Discount Programs on Station Accessibility in China’ s High-Speed Railway Network		王苏国 /Suguo Wang
6	A Study on Weaving Indicators for Risk Prediction in Mixed Traffic Flow Using Probe Vehicle Trajectory Data		Jongwoo Lee
14:00-15:30	Session A04: Transportation Safety, Security & Resilience	PolyU DE303	主持人 /Chair: 唐志贤 /Zhixian Tang
1	A Federated Learning Implementation Framework for Multi-Agency Highway Safety Analysis		Huaguo Zhou
2	Freeway Traffic Safety Risk Prediction Based on Logistic-ISO-CNN-BiGRU		何庆龄 /Qingling He
3	Identifying Risk Scenarios in Autonomous Vehicle Crashes: A Latent Class Analysis and Correspondence Analysis Approach		路珍珍 /Zhenzhen Lu
4	Assessing the Near-Accident Zone on Freeways in a Connected and Automated Vehicle Environment Based on Traffic Wave Theory		卢霄娟 /Xiaojuan Lu
5	Enhancement Method of Timetable Resilience in High-speed Railway Line System based on Multi-agent Deep Reinforcement Learning Algorithm		Xinyue Hu
6	Real-Time Road Segment Risk Prediction in Mixed Traffic with Autonomous Vehicles: Compensation Strategies for Missing Variables		Hyorim Han, Soongbong Lee
14:00-15:30	Session A05: BJTU-Meet with Editors// 期刊主编面对面	PolyU DE302	主持人 /Chair: 李得伟 /Dewei Li
14:00-15:30	Session A06: BJTU Recruitment for the School of Traffic and Transportation// 北京交通大学交通运输学院人才恳谈交流会	PolyU DE301	主持人 /Chair: 吴亦政 /Yizheng Wu

15:45-17:15	Session B01: Transportation Data Intelligence & Analytics	PolyU DE307	主持人 /Chair: 邹颢鑫 /Xiexin Zou
1	Text Mining-Based Accident Causation Network Analysis of Urban Rail Transit		彭俊豪 /Junhao Peng
2	BERT-Based Hierarchical Semantic Re-ranking for Railway Passenger Evaluation Text Classification		汪岩 /Yan Wang
3	Measuring Taxi Supply-Demand Mismatch and Its Underlying Mechanisms: A Case Study in Beijing		梁艳平 /Yanping Liang
4	A Framework for Proactive Take-over Prediction in Autonomous Vehicles Using Real-world Driving Data		Eungju Lee
5	The Measurement Methods of Economic Shipping Distance between Highway and Railway		Zhongning Fu
6	A Weakly Supervised Framework for Traffic Data Quality Diagnosis via Spatial and Structural Consistency		Xiexin Zou
15:45-17:15	Session B02: Intelligent Transportation Systems Management & Control	PolyU DE306	主持人 /Chair: 田宗忠 /Zong Tian
1	Train Rescheduling Optimization for a Metro Circle Line		王菡露 /Hanlu Wang
2	Automatic Train Diagram Compilation for Express-Local Operation in Urban Rail Transit Under Cross-Line Through-Service Scenarios		周家烨 /Jiaye Zhou
3	Deep Reinforcement Learning based Large Neighborhood Search Algorithm for Train Rescheduling		Tongyu Xu
4	Optimizing Train Cancellation Decisions for High-Speed Railway Lines under Natural-Hazard-Induced Disruptions		杜博宇 /Boyu Du
5	Joint optimization of express freight trains insertion and EMU circulation in saturated high-speed railway networks by NSALNS approach		Xinbo Yang
6	From Semantic Reservation Requests to Optimal Allocation: An LLM-Enhanced Framework for Shared Parking Systems with EV Charging		Minghui Xie
15:45-17:15	Session B03: Transportation Planning, Operations & Optimization	PolyU DE304	主持人 /Chair: 甄理 /Li Zhen
1	Collaborative optimization of train timetable and maintenance window of heavy-haul railway		刘心悦 /Xinyue Liu
2	Passenger Assignment Method for High-Speed Railway Considering Passenger Income Levels		李紫馨 /Zixin Li
3	Railway Line Planning with Combining and Splitting of Trains: A Benders Decomposition Approach		刘娟利 /Juanli Liu

4	Ticket Allocation for High-Speed Rail Services Considering Passenger Heterogeneity: A Two-Stage Method Combining Gaussian Mixture Segmentation and Bid-Price Optimization		王思睿 /Sirui Wang
5	A Two-Stage Optimization Model for Urban Rail Crew Rostering Based on a Bi-level Space-time Network		Chengcheng Peng
6	A Discrete-Continuum Joint Model for the Optimal Design of General Skip-Stop Transit Services		甄理 /Li Zhen
15:45-17:15	Session B04: Transportation Safety, Security & Resilience	PolyU DE303	主持人 /Chair: 俞灏 /Hao Yu
1	Train Rescheduling for High-speed Railways under Snowstorm Disruptions: Considering Rolling Stock Circulation and Proactive Ticket Control		刘杨天一 Yangtianyi Liu
2	Resilient Train Cancellation Strategy for High-Speed Railways under Severe Disruptions: A Capacity Evaluation Approach		Peiyu Zhang
3	Evaluation and Verification of Eye Movement Characteristics of Metro Drivers' Alertness in Dual Situations		汪晨 /Chen Wang
4	Impact of Noise Exposure on the Emergency Response Performance of Metro Drivers		郑有良 /Youliang Zheng
5	Evaluating Performance Bounds of Contingency Strategies under Disruption Uncertainty in High-Speed Railways		石锦扬 /Jinyang Shi
15:45-17:15	Session B05: Intelligent Logistics & Supply Chain Management	PolyU DE302	主持人 /Chair: 廖正文 /Zhengwen Liao
1	Truck and trailer routing problem with time windows: Vehicle flow formulation and ALNS-based algorithm		李红启 /Hongqi Li
2	A Random Generation Method for Shipment Path and Train Design Instances Used in LLM Fine-Tuning		郭琪宁 /Qining Guo
3	A Hierarchical Truck Platooning Scheduling Model Based on Mixed-Integer Nonlinear Programming and Its Engineering Application		李佩萱 /Peixuan Li
4	Electric Vehicle Pickup and Delivery Routing Optimization Considering Queuing Effects and Wireless Charging Lanes		梁程炬 /Chengju Liang
5	Data-driven Railway Automobile Logistics Product Design considering Differentiated Timeliness		陈彦甫 /Yanfu Chen
15:45-17:15	Session B06: BJTU Recruitment for the School of Traffic and Transportation// 北京交通大学交通运输学院人才恳谈交流会	PolyU DE301	主持人 /Chair: 吴亦政 /Yizheng Wu

2026 年 8 月 15 日下午 (August 15, 2026, afternoon)

14:00-15:30	Session C01: Low-altitude Aerial System and General Aviation	PolyU DE303	主持人 /Chair: 罗斯达 /Sida Luo
1	Drone Location-Routing Problem with Tourism Highway Inspection		梁新茹 /Xinru Liang
2	Evaluation of Average Speed Estimation Methods at Urban Signalized Intersections Using Drone-Based Trajectory Data		Saurav Barua
3	Dynamic Calibration and Comparative Assessment of Drone-Based Traffic Density Estimation Methods at an Urban Intersection		Subrata Roy
4	Truck-HSR-Drone Intermodal Transport Planning under Time-varying Networks and Payload-Energy Coupling		郭文静 /Wenjing Guo
5	Service Satellite Scheduling Problem with On-orbit Refueling		段雅梅 /Yamei Duan
6	Effects of Drone Height and Hazard Perception on Pedestrian Perceived Comfort During Movement: An Experimental Study		Yifan Zhuang
14:00-15:30	Session C02: Transportation Planning, Operations & Optimization	PolyU DE304	主持人 /Chair: 范文博 /Wenbo Fan
1	A Continuum Optimization Framework for Heterogeneous Transit Networks in Grid Cities		毛浩洋 /Haoyang Mao
2	Coordinated Vehicle Scheduling and Rescheduling Under Demand Variability		Ying Zhang
3	A Bidirectional A*-Based Heuristic Search Algorithm for Passenger Travel Path Planning under Dynamic Timetable Constraints		吴思宇 /Siyu Wu
4	Branch-and-Price for Integrated Rolling Stock Scheduling and Train Platforming Problem		Kewei Cao
5	Rolling stock scheduling with overnight operations: A case study on Beijing–Shanghai corridor		Jinchao Huang
6	ADMM-DP Based Spatio-Temporal Trajectory Planning for Heavy-Haul Train Groups		Yuying Chen
14:00-15:30	Session C03: Smart Infrastructure & Predictive Maintenance	PolyU DE306	主持人 /Chair: 庄勇 /Yong Zhuang
1	A Lightweight Real-time Framework for Pavement Distress Detection in Complex Road Environments		卢涛 /Tao Lu
2	Study on the Equivalent Relationship of Skid Resistance Deterioration in Asphalt Surface Courses in Hot-Humid Regions Based on Field Core Samples and Laboratory Accelerated Polishing Tests		石睿 /Rui Shi

3	A Vehicle-storage Separated Mobile Energy Storage Scheduling Framework for Highway Service-Area Overload Mitigation		刘隍宁 /Lining Liu
4	Determination of Maximum Slope Length Limits for Highway Longitudinal Grades Based on Dynamic Simulation		王玥 /Yue Wang
5	Highway Horizontal Alignment Parameter Optimization Method Based on Case Fusion and Particle Swarm Optimization		李金晶 /Jinjing Li
6	Spatiotemporal Propagation of Freeway Congestion Under Coupled Work-Zone and Incident Disturbances Simulation Analysis and a Traffic-Wave-Based Estimation Model		Yao Zhang
14:00-15:30	Session C04: Multimodal & Integrated Transportation Systems	PolyU DE307	主持人 /Chair: Jinwoo Lee
1	Optimizing High-Speed Rail Timetable for Reliable Air-Rail Transfers in Indirectly Connected Cities		文怡丹 /Yidan Wen
2	A Continuous Approximation Framework Coupled with Inter-Regional Vehicle Routing for High-Speed Rail Feeder Service Optimization		Lu Jiang
3	Hierarchical Reinforcement Learning for the E-Hailing Routing Problem in High-Speed Railway Hub Connections		Jingkai Shen
4	Optimization of Rolling Stock Allocation for Multimodal Rail Transit Systems		李晓莹 /Xiaoying Li
5	Chain-Level Identification and Spatial Stratification of Bus–Metro Relationships in Beijing		Junhui Cai
6	Dynamic Congestion-Aware Hub Prioritization for Integrated Ride-Hailing and Metro Networks		赵一阳 /Yiyang Zhao
15:45-17:15	Session D01: Sustainable Mobility & Environmental Impacts	PolyU DE303	主持人 /Chair: 李高俊杰 /Gaojunjie Li
1	The Effects of Rapid New Energy Vehicle Adoption on Urban Air Quality in China		周芊 /Qian Zhou
2	A Study on Low-Carbon Travel Mode Choice Considering Attitudinal Heterogeneity		熊志华 /Zhihua Xiong
3	Life-Cycle Greenhouse Gas Assessment of Shared Autonomous Electric Vehicles: A Seoul Case Study		Yoojin Kim
4	Integrated Optimization Model for Loaded and Empty Railcar Flow Routing and Train Formation Planning		Yuwen Pan

5	How do the intelligent technology and environmental performance of electric vehicles influence consumers' purchase intentions?		刘东宁 /Dongning Liu
6	How does vehicle supply influence users' Intention to use a shared bicycle system? An exploratory survey in China.		Muhamad Nazri Borhan
15:45-17:15	Session D02: Transportation Planning, Operations & Optimization	PolyU DE304	主持人 /Chair: 陈垚 /Yao Chen
1	Integrated Train Timetabling and Passenger Routing in Multimodal Rail Transit Systems		张鑫 /Xin Zhang
2	Optimization model for high-speed railway timetabling with variable marshalling		石贇 /Yun Shi
3	Optimization of Freight Transport Services under an Existing Passenger Train Timetable		程薛 /Xue Cheng
4	Integrated Scheduling of Train and Locomotive Operations at Railway Passenger Stations Using ADMM		沈欣鹏 /Xinpeng Shen
5	Train Timetable Optimization for Virtually Coupled High-Speed Trains Considering Dynamic Coupling and Decoupling and Heterogeneous Line Planning		Yuzhou Ji
6	Coordinating Scenic Spot Visit Scheduling and Customized Tourist Bus Routing under Scenic Spot Flow Control: A Bilevel Optimization Approach		Zhiqing Li
15:45-17:15	Session D03: Smart Infrastructure & Predictive Maintenance	PolyU DE306	主持人 /Chair: 庄勇 /Yong Zhuang
1	Joint Optimization of Depot Configuration and Multi-Day Scheduling for Railway Maintenance Planning: A Bi-Level Programming Approach		田源 /Yuan Tian
2	Study on Advance Distance and Guidance Scheme of Exit Advance Signs for Highway Underground Interchanges		Liangsheng Zhang
3	Rail Corrugation Detection Method Based on Speed Adaptive Frequency Domain Decomposition and Dispersion Transition Matrix		黄凯 /Kai Huang
4	A Reliability-Based Stopping Sight Distance Model for Curved Highway Sections		刘宇莹 /Yuying Liu
5	Collaborative Diversion Routing and Traffic Assignment under Traffic Incident Conditions in Expressway Reconstruction and Expansion Work Zones		董家和 /Jiahe Dong

15:45-17:15	Session D04: Multimodal & Integrated Transportation Systems	PolyU DE307	主持人 /Chair: 钟鸣 /Ming Zhong
1	Collaborative Optimization of Line Planning and Passenger Assignment in Multi-Mode Rail Transit: A Bi-level Programming Approach		Xue Li
2	Emergency Resource Allocation Optimization in Multi-mode Regional Rail Transit Networks		李秀岩 /Xiuyan Li
3	Integrated Optimization of Train Timetabling and Rolling Stock Circulation in Multimodal Rail Transit Systems		赵睿琪 /Ruiqi Zhao
4	Coordinated Optimization of Train Line Plan for Multi-station Railway Hubs: A Service Extension Approach		黄海鑫 /Haixin Huang
5	A Study on Spatial Development Pattern of the Gan-Yue Canal Economic Belt Based on Regional Integrated Land-Use Transport Modeling		Ming Zhong

报告嘉宾 Keynote Speaker



Michael J.
Cassidy

Adaptive Cruise Control and Urban Traffic Congestion

University of California, Berkeley, Chancellor's Professor and Vice Chair for Undergraduate Studies

嘉宾介绍 /Biography

Michael J. Cassidy is a Chancellor's Professor and the Robert Horonjeff Professor in the Department of Civil and Environmental Engineering at the University of California, Berkeley, where he also serves as the Vice Chair for Undergraduate Studies. He earned his Ph.D. in Transportation Engineering from UC Berkeley.

With over 30 years of academic expertise, Professor Cassidy's research primarily focuses on traffic and transportation operations, traffic control, and public transit systems. He is dedicated to enhancing urban sustainability through the reorganization of traffic flows, the segregation of multimodal travel, and the design of dedicated lanes. His representative work includes using agent-based simulations to explore the synergistic effects of congestion pricing and left-turn prohibitions, as well as developing urban network optimization strategies aimed at reducing vehicle miles traveled (VMT) and vehicle hours traveled (VHT). A renowned international expert in transportation engineering, Professor Cassidy has published over 80 papers in leading peer-reviewed journals and has supervised more than 25 Ph.D. dissertations.

Abstract

Adaptive Cruise Control, or ACC, is a technology available on most new cars sold today and is a prominent feature in self-driving vehicles. Researchers have long been concerned with the queue discharge flows of (meaning the bottleneck capacities produced by) ACC-engaged cars. The talk shows that the concern should be something else: The queue storage needs of ACC-rich traffic. Field experiments confirm that in very dense, stopped traffic, ACC-engaged cars typically adopt spacings that are much larger than those that human drivers select. These larger vehicle spacings mean that queues will be less compacted in the future, when ACC becomes a more regular part of driving. This, in turn, means that queues will expand and occupy more road space. We explore this unintended consequence for various ACC-rich futures, adopting conservative assumptions at every turn. The efforts feature carefully calibrated simulations of idealized street grids that roughly resemble Midtown Manhattan in New York City, and Los Angeles in California. Findings show that physically expanded queues in the future will likely wreak havoc on city streets, particularly in older downtown areas where street links are short and queue storage space is thus in short supply.

We present a possible, and less-than-obvious solution to the impending problem and discuss the roles that governments would need to play in realizing this solution. We also discuss the mindset that has seemingly led to the present predicament and the relevance of these matters to China.

报告嘉宾 Keynote Speaker



Dennis
Huisman

Challenges and Solutions in European Passenger Railways

Erasmus University Rotterdam, Part-time Professor; Netherlands Railways, Expertise Manager

嘉宾介绍 /Biography

Dennis Huisman is a part-time professor Public Transport Optimization at the Econometric Institute, Erasmus School of Economics, Erasmus University Rotterdam. In addition, he has a part-time position as expertise manager logistic processes at Netherlands Railways (NS). Dennis' current research focuses on Operations Research models and techniques that can support the planning and operations of public transport operators in relation to complex logistical issues. At NS, he gives advice to senior management on complex logistical issues and coordinates NS' research activities in a large European innovation project within Europe's Rail (Motional).

He was a member of Netherlands Railways team that won the Franz Edelman Award, also known as the Super Bowl of Operations Research, in 2008. Professor Huisman is a co-founder of the Erasmus Center for Optimization in Public Transport. He obtained his PhD from Erasmus University Rotterdam in 2004. His PhD thesis dealt with integrated and dynamic vehicle and crew scheduling.

Abstract

The COVID-19 pandemic has reshaped travel patterns across Europe, resulting in a shift in demand during the day and between different days of the week. At the same time, other challenges such as ageing infrastructure and growing difficulty in attracting new crew, increased significantly. In this talk, we show how recent advances in Operations Research can help to meet these challenges.

In particular, we will discuss a novel approach to generate strategic timetables that better matches supply and demand, new methods to adjust timetables during construction works, and algorithmic support to schedule crew members in a novel way.

While the developed scientific approaches are broadly applicable to European railways, we illustrate their practical impact with concrete applications at Netherlands Railways, the largest passenger railway operator in the Netherlands.

报告嘉宾 Keynote Speaker



Xiaopeng
(Shaw) Li

Physics-Enhanced Artificial Intelligence (AI) for Transportation Autonomy
University of Wisconsin-Madison (UW), Harvey D. Spangler Professor and Director of USDOT Rural Autonomous Vehicle Program

嘉宾介绍 / Biography

Dr. Xiaopeng (Shaw) Li is currently the Harvey D. Spangler Professor in the Department of Civil and Environmental Engineering and an affiliate in the Department of Electrical and Computer Engineering at the University of Wisconsin-Madison (UW). He founded the Connected and Automated Transportation Systems (CATS) Lab and developed a multi-scale CAV testbed. He serves as the Founding Executive Director of the Smart Highway Research Center (SHRC) at UW. He directs the Center for Tribal and Rural Autonomous Vehicles Center for Efficiency, Livability, and Safety (TRAVELS), the USDOT Rural Autonomous Vehicle Program for Passenger Transportation. Previously, he directed a USDOT National University Transportation Center, the National Institute for Congestion Reduction (NICR). He is a recipient of the NSF CAREER Award and has led over \$40 million in federal, state, and industry-funded projects, plus \$30 million in matching funds, mostly as the PI. He has published 160+ peer-reviewed journal papers and numerous conference presentations and invited talks. He serves as the Interim Vice President for Education of IEEE ITSS and was the founding chair of IEEE ITSS Emerging Transportation Technology Testing Committee (ET3). He holds a P.E. license in Wisconsin, is an ASCE Fellow, and leads the ASCE Smart Infrastructure Task Force. He has served as a Co-Editor-in-Chief for Communications in Transportation Research and an associate editor for several journals, including ASCE Journal of Urban Planning & Development, ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Transportation Research Part E, IEEE TITS, and IEEE ITSM. His research interests include autonomous vehicles (AV) evaluation, connected vehicles (CV), transportation systems analysis, and agentic AI. He received a B.S. degree (2006) in civil engineering from Tsinghua University, an M.S. degree (2007), and a Ph.D. degree (2011) in civil engineering, along with an M.S. degree (2010) in applied mathematics from the University of Illinois at Urbana-Champaign, USA.

Abstract

Artificial Intelligence (AI) is being applied to fundamental transportation problems—ranging from individual automated vehicle control to network management—at an accelerating rate. This shift has prompted transportation researchers to re-evaluate the utility of physics-based and behavioral models developed by domain experts over decades. In this presentation, we introduce a research paradigm that integrates classic physics models with cutting-edge AI methods to tackle emerging challenges in transportation autonomy across vehicles, infrastructure facilities, and system management. We first introduce the basic structure and fundamental theory of the Physics-Enhanced Residual Learning (PERL) framework. We then showcase a suite of PERL applications for multimodal autonomy and system state prediction, supported by both computational analysis and physical experiments conducted on our unique automated vehicle testbed. Furthermore, we discuss ongoing work to generalize this approach by verifying "Foundation AI" outputs with physics models in agentic applications—such as quality control inspection and automated vehicle evaluation—leveraging real-world data collected with our laboratory instruments.

报告嘉宾 Keynote Speaker



S.C. Wong

Quantifying the Variability of Connected Vehicle Penetration Rate Estimates from Single-Source Data

University of Hong Kong, Chair Professor of Civil Engineering and Associate Dean of Engineering

嘉宾介绍 / Biography

Professor S.C. Wong is Chair Professor of Department of Civil Engineering and Associate Dean of Faculty of Engineering, and was conferred the Francis S Y Bong Professorship in Engineering, at the University of Hong Kong. He received his BSc(Eng) and MPhil degrees from the University of Hong Kong and a PhD in Transport Studies from University College London. Professor Wong has published more than 410 papers in refereed journals, in addition to numerous conference papers and presentations. His journal articles have attracted more than 14,000 citations, garnering him an h-index of 63 according to the ISI Web of Science. He is currently Editor-in-Chief of International Journal of Sustainable Transportation and Transportmetrica A: Transport Science.

Abstract

Accurate knowledge of the connected vehicle (CV) penetration rate is essential for enabling many beneficial applications throughout the extended transition toward full CV deployment. A recent investigation introduced a novel single-source data penetration rate estimator (SSDPRE) that estimates the CV penetration rate using only CV data. Although the SSDPRE is an unbiased estimator, it provides only point estimates. As transportation systems are generally nonlinear, employing the SSDPRE in model estimation or system optimization without accounting for its variability may result in biased model outcomes or suboptimal decisions. To address this issue, this study develops a probabilistic penetration rate framework to quantify the variability associated with SSDPRE estimates. A key input to the framework is the constrained queue length distribution, defined as the distribution of the number of stopped vehicles within a signal cycle. To estimate this distribution, both an exact probabilistic dissipation time model and a simplified constant dissipation time model are formulated. Furthermore, to enhance estimation accuracy under real-world operating conditions, vehicle braking and start-up behaviors are incorporated through a constant time-loss model used to calibrate the dissipation time models. Results from VISSIM simulations show that the calibrated models can accurately characterize constrained queue length distributions and effectively estimate the variability of SSDPRE outputs. In addition, applications involving the Next Generation Simulation dataset and a simple CV-based adaptive signal control strategy demonstrate both the practicality of the proposed models in real-world settings and their ability to support improved system optimization.

报告嘉宾 Keynote Speaker



Yahua(Shane)
Zhang

Global Value Chain Partnerships for Sustainable Aviation Fuel: Implications for Australia–China

Adelaide University, Professor of Aviation

嘉宾介绍 /Biography

Yahua(Shane) Zhang is a Professor of Aviation at Adelaide University. He is recognized for his research in transport economics, aviation management and policy, and sustainable aviation fuel. Professor Zhang has published widely in leading transport and economics journals and has led and contributed to research projects funded by organizations including the World Bank, APEC, Meat & Livestock Australia, the Queensland Government, the Marine Bioproduct Cooperative Research Centre, and the National Foundation for Australia–China Relations.

His topic will focus on sustainable aviation fuel (SAF) development in Australia and China, with particular attention to the cooperation potential between the two countries in advancing SAF production, policy frameworks, and industry partnerships.

Abstract

This study develops a text-mining pipeline as a content analysis tool, integrating named entity recognition, co-occurrence network analysis, and thematic classification to examine 203 sustainable aviation fuel (SAF)-related news articles curated by the International Civil Aviation Organisation between June and December 2025. The analysis identifies emerging industry trends and is further contextualised through a timely Australia–China case study. Results show that hydrotreated esters and fatty acids derived from used cooking oil remain the dominant technological pathway, while hydrogen occupies the most central position in the innovation network, with SAF activity diffusing from early adopters to emerging regions. The case study highlights complementary strengths, with Australia contributing abundant feedstock resources, research capability, and a supportive policy environment, while China contributes technological expertise, industrial scale, and manufacturing capability, supported by joint certification, co-investment, and workforce development initiatives. Overall, the findings underscore the importance of global cooperation in accelerating SAF deployment and demonstrate the value of grey literature as a timely and policy-relevant data source.

报告嘉宾 Keynote Speaker



Zuduo Zheng

100 Days with Tesla FSD: Four Lessons for the Future of Autonomous Driving

The University of Queensland (UQ), Professor in School of Civil Engineering

嘉宾介绍 /Biography

Dr Zuduo Zheng is a Professor in the School of Civil Engineering at The University of Queensland (UQ), an Australian Research Council (ARC) Future Fellow, a former ARC DECRA Fellow, and a member of the ARC College of Experts. He also serves as the Deputy TAP Chair, sponsored by the Queensland Department of Transport and Main Roads, and is the founder of the Multi-Modal Connected & Automated Transport Lab (M2CAT; <http://www.connectedandautonomoustransport.com/>).

Professor Zheng's research focuses on emerging mobility technologies, especially connected and automated vehicles, and their impacts on transportation systems. His work is highly cited, and he has received numerous awards for both his research and teaching, including the Cunard Award, Greenshields Prize, David Willis Memorial Prize, Awards for Excellence in Higher Degree by Research Supervision, Citation for Excellence in Student Learning (winner at the EAIT Faculty and a finalist at UQ), and others. He also serves and has served on the editorial boards of several leading journals.

He is a strong advocate for reproducible research and open science, having co-founded the REproducible Research In Transportation Engineering (RERITE) Working Group (<https://www.rerite.org/>), and received UQ's inaugural Open Research Fellowship in 2024 and Research Culture Award in 2025. He hosts "Small Talk with Myself" (<https://smalltalkwithmyself.podbean.com/>) — a podcast for PhD students and early-career academics.

Abstract

Autonomous driving is no longer a distant vision—it is rapidly becoming a practical reality. Based on more than 100 days of systematic real-world testing of Tesla's Full Self-Driving (FSD) system across a wide range of urban, suburban and motorway environments, this keynote reflects on what current-generation autonomous driving systems are already capable of, where they still struggle, and what these observations imply for future research and deployment.

Rather than presenting Tesla as either a success or a failure, the talk uses real-world case studies to illustrate four broader lessons for the autonomous driving community. First, we are closer than ever to achieving practical autonomous driving, with recent advances demonstrating remarkable progress in perception, planning and decision-making. Second, future development should focus less on chasing increasingly rare edge cases and more on systematically improving the vast number of common driving situations encountered every day. Third, road infrastructure should be viewed as an active partner rather than a passive environment; AV-friendly infrastructure has the potential to help autonomous systems cross critical performance thresholds that would be difficult to achieve through vehicle intelligence alone. Finally, human factors remain fundamental—not only in the interaction between drivers and automated systems today, but also in shaping trust, acceptance and the design of future autonomous mobility.

北京交通大学交通运输学院简介 School of Traffic and Transportation, Beijing Jiaotong University (BJTU)

As one of the three origins of the Jiaotong University, BJTU grew out of Beijing Railway Management Institute, China's first higher educational institution which was committed to fostering railway management talents and initiated modern China's education in railway management and telecommunication. The School of Traffic and Transportation has the same age with BJTU, and it is the birthplace of Chinese modern transportation education.



The School of Traffic and Transportation has seven departments, including Department of Transportation Management Engineering, Department of Traffic Engineering, Department of Traffic Information Management Engineering, Department of Urban Rail Transit, Department of Logistics Engineering, Institute of Systems Engineering and Control (Department of Civil Aviation Transportation), and Department of Transport Intelligent Systems and Safety.

The School currently has 203 faculty members, including 66 professors, 81 faculty members with associate senior title, 31 lecturers or ones with intermediate title and 25 management persons (full-time or part-time).

Over the past century, the School has cultivated more than 20,000 graduates, including about 1,800 junior college students, more than 12,067 undergraduates and about 7,107 postgraduates (including doctoral, master of engineering, as well as international students).

The School of Traffic and Transportation has grown into a high-level school with research in the field of railway as advantage and characteristic. At the core of traffic and transportation, it explores expansions to the fields of logistics, E-Commerce, safety science, systems control and others. So far, the School has presided over 100 national research projects, major and key China Railway Projects. According to the statistics, the average research funding of the latest 3 years has hit over 100 million Yuan.

The School regards international cooperation and exchanges as an important way to improve education and research quality. At present, it has established cooperation exchange relations in the fields of education and research with universities and research institutes in more than 30 countries and regions including the United States, Britain, Germany, France, the Netherlands, Japan, etc. With the purpose of building a global academic exchange platform for the rail transit, the School hosts and undertakes important international academic conferences such as RailBeijing, ICTTS, ISROR, etc. The School has successively completed more than 50 foreign training programs for administrative officials, engineers from relevant units of railway and transportation department and university teachers from more than 20 countries along "the Belt and Road". As recorded, over 1,300 people attended the training.

香港理工大学及电机电子工程学系简介 The Hong Kong Polytechnic University (PolyU) and Department of Electrical and Electronic Engineering (EEE)

With over 89 years of rich heritage, The Hong Kong Polytechnic University (PolyU) has evolved alongside Hong Kong, making pivotal contributions to the city's social and economic development, as well as to the Nation and the wider world. Guided by its motto, "To learn and to apply, for the benefit of mankind", PolyU aspires to be an innovative world-class university that pursues excellence in education, research and knowledge transfer, and is consistently ranked among the world's top 100 universities.



The Department of Electrical and Electronic Engineering (EEE) is one of the largest and most research-active departments at PolyU, offering a comprehensive suite of undergraduate and postgraduate programmes that cultivate innovative engineers and researchers. With a strong focus on future technologies, EEE is globally recognised for its strengths in Artificial Intelligence (AI), Smart Energy, Photonics, Wireless Communications, the Internet of Things (IoT) and Intelligent Transportation Systems (ITS). Key transport-related research areas include smart mobility and ITS, high-speed railway power and signalling, electric vehicle technologies, autonomous driving sensors and systems, and smart grid integration for electrified transport.

As the proud host of the International Conference on Traffic and Transportation Systems (ICTTS 2026), PolyU and the Department of EEE provide a premier global academic exchange platform that connects distinguished scholars, industry leaders and policymakers, further reinforcing the University's commitment to advancing innovative transport solutions for the benefit of society.

兰州交通大学交通运输学院简介
School of Traffic and Transportation,
Lanzhou Jiaotong University (LZJTU)

The School of Traffic and Transportation of Lanzhou Jiaotong University is formerly known as the Railway Transportation Department of Lanzhou Railway Institute. It was established along with the Institute was founded in 1958, and it was one of the first five established departments. The Department was led by Professor Lin Damei, the dean of Transportation Department of Beijing Railway Institute (currently the Beijing Jiaotong University). During the reorganization of the departments and schools of Lanzhou Jiaotong University in 2003, the department was finally renamed to the School of Traffic and Transportation.



The school has built up great school-running capabilities over the past 66 years. More than 30,000 students have graduated from our school. Some outstanding alumni have emerged, among whom are Liu Xueliang, the Vice-governor of Heilongjiang Province, Guo Yunchong, the Vice-minister of Ministry of Housing and Urban-Rural Development, Huang Min, the Director-general of National Development and Reform Commission, Xu Ruihua, Doctoral Supervisor of Tongji University, etc. The graduates of our school enjoy a high reputation in the departments of railway transportation, especially in those West Region ones.

There are more than 100 teaching and staff members in the school currently, including 13 doctoral supervisors, 28 professors and 35 associate professors. Among them, 64 teachers are doctors. There is 1 national candidate for the "100 Million Talents Project", 1 candidate for the "New Century Excellent Talents Support Plan of the Ministry of Education". 5 candidates for the "Science and Technology Leaders in Gansu Province", 6 candidates for the "555 Innovation Talents in Gansu Province", 5 candidates for the "Flying Scholars (in Gansu Province)", and 1 member is listed on the World's Top 2% Scientists List. The school has a current enrollment of approximately 2,200 undergraduate students and 600 graduate students.

At present, there is 1 post-doctoral research mobile station in transportation engineering, 1 doctoral and master's authorization point in transportation engineering first-level discipline; Transportation, traffic engineering, logistics management, information management and information system are four undergraduate majors, among which transportation, traffic engineering and logistics management are national first-class undergraduate majors. The school was awarded with the Advanced Collective of Gansu Gardener Award.

Teachers of the School has published articles in top journals recent years, those journals are listed in the international transportation and operations management class. Such as Transportation Research Part B, Part C and Part D, in where more than 500 academic papers have been published, and undertaken more than 200 national research and educational projects, including National Key Research and Development, CHINA National Natural Science Foundation and National Social Science Foundation.

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ICTTS 2026