Conference Program

2026 14th International Conference on Traffic and Logistic Engineering (ICTLE 2026)

2026 12th International Conference on Innovation and Industrial Logistics (ICIIL 2026)

Macau, China | August 21-23, 2026

Co-Sponsored by

Technical Sponsored by

Venue: Sofitel Macau at Ponte 16
Address: Rua do Visconde Paco de Arcos, 999078 Macau
Web: https://www.sofitelmacau.com/
Tel: (853) 8861 0016 / Fax: (853) 8861 0018

Table of Content

Conference Information and Tips

1) Conference Venue

※Venue: Sofitel Macau at Ponte 16

Address: Rua do Visconde Paco de Arcos, 999078 Macau

Web: https://www.sofitelmacau.com/

Tel: (853) 8861 0016 / Fax: (853) 8861 0018

2) On-site Registration

※ Registration desk→ Inform the staff of your paper ID→ Sign-in→ Claim your conference kits.

3) Devices Provided by the Organizer

※ Laptops (with MS-Office & Adobe Reader) / Projectors & Screen / Laser Sticks

4) Materials Provided by the Presenter

※ Oral Session: Slides (pptx or pdf version). Format 16:9 is preferred.

※ Poster Display: A1(Length: 841mm, width:594mm) size

※ Official language: English.

5) Duration of Each Presentation

※ Keynote Speech: 40min, including Q&A

※ Invited Speech: 20min, including Q&A

※ Oral Presentation: 15min, including Q&A

6) Notice

※ **UTC+8. Please be aware of time difference between this and your region/country.**

7) Online Presentation Tips

	Room	Meeting ID	Link
zoom Zoom Download	A	811 6271 6948	https://us02web.zoom.us/j/81162716948
	B	869 2595 8194	https://us02web.zoom.us/j/86925958194

Note:

We recommend that you install the Zoom platform on your computer before the conference starts. New users can participate in the Zoom meeting without registration.

Participants who are going to do an online presentation are required to join the rehearsal in Zoom on Friday, August 21, 2026. Duration: 3min apiece. Feel free to leave after you finish the test.

◆Name Setting

Keynote Speaker: KN-Name

Committee: Position-Name

Author: Paper ID-Name

Delegate: Delegate -Name

◆Useful Links

✧ Conference Banner

✧ Zoom Background

Welcome Message

On behalf of Conference Committee, we welcome you to attend 2026 14th International Conference on Traffic and Logistic Engineering (ICTLE 2026) & 2026 11th International Conference on Innovation and Industrial Logistics (ICIIL 2026) held in Macau, China during August 21-23, 2026, Co-sponsored by Macau University of Science and Technology and IEEE, and technically sponsored by the Faculty of Science and Technology of the University of Macau.

ICTLE 2026 & ICIIL 2026 welcomes author submission of papers from any branch of traffic and logistic engineering; innovation and industrial logistics, and their applications or other topic areas. The areas covered by the include, but not limited to: Transportation Infrastructure and Technology; Transportation Planning and Management; Intelligent Transportation Systems; Supply Chain Management; Transportation Management, Route Optimisation; Warehouse Process Optimization; Reliability and Maintenance of Logistic Systems and so on.

The conference aims to provide an interactive communication platform for practitioners to learn about the most cutting-edge academic and industrial application trends, to share the latest scientific research and technological achievements, innovative ideas and scientific methods in the field of traffic and logistic engineering; innovation and industrial logistics, to improve the level of academic research and industrial application in the field of traffic and logistic engineering; innovation and industrial logistics, so as to serve the global strategic deployment of new and old kinetic energy conversion, and promotes technology research, development, and application home and abroad.

We feel deeply grateful to all that have contributed to make this event possible: authors, the conference steering committees, the conference speakers, and the peer reviewers. Thanks are also extended to the conference administrative committee and the supporters for their tireless efforts throughout the course of the conference.

We hope that all participants benefit from these two conferences.

With Warmest Regards,

Conference Organizing Committee

Conference Committee *(in no particular order)*

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Conference Chair
Felix T. S. Chan, Macao University of Science and Technology, Macau, China

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Muhammad Jawad Sajid, China University of Mining and Technology, China
Anna Borucka, Military University of Technology, Poland
Tianri Wang, Taiyuan University of Technology, China

Agenda Overview (UTC+8)

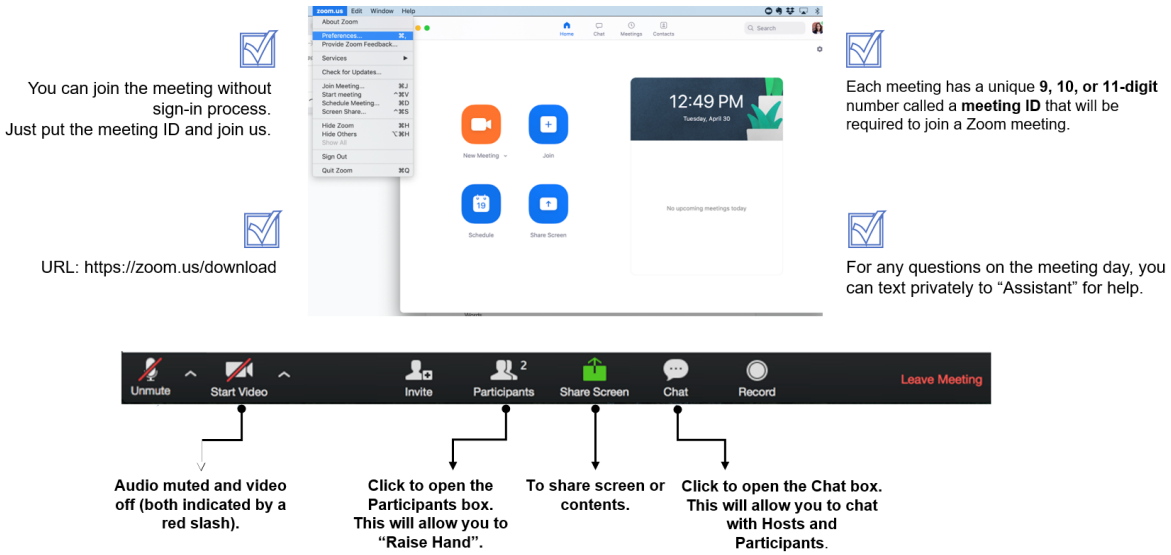
Friday, August 21, 2026		
On-site Registration	**13:30-17:00**	**Promenade Foyer, 6th Floor Sofitel Macau at Ponte 16**
Zoom Pre-test for Online Presenters	**14:00-16:30**	**Room A: 811 6271 6948 Link: https://us02web.zoom.us/j/81162716948**

Zoom Test Timetable

- ✧ Participants who are going to do an online presentation are required to join the rehearsal in Zoom on Friday, August 21, 2026. Duration: 3min apiece. Feel free to leave after you finish the test.
- ✧ We will test control panel including screen sharing, audio, video and "Raise Hand" feature, etc. Please get your presentation slides and computer equipment prepared beforehand.

14:00-14:30	CE5002, CE5004, CE524, CE542-A, CE550, CE565, CE567, CE586, CE512, CE594
14:30-15:00	CE501, CE585, CE599, CE327, CE560, CE317, CE540
15:00-15:30	CE5005, CE5010, CE506, CE525, CE527, CE546, CE588, CE504
15:30-16:00	CE545, CE302, CE305, CE318, CE544, CE511, CE514, CE591
16:00-16:30	Alternative time for participants who are unavailable at allocated time. Other online participants, includes but not limited to keynote speaker, session chair, committee member, delegate

Zoom Guidance



Saturday, August 22, 2026		
Plenary Session	**Conference Room: Promenade <6th floor >**	
Host: Assoc. Prof. Chi Man VONG, University of Macau, Macau, China		
08:50-09:00	Opening Speech: Prof. Felix T. S. Chan, Macao University of Science and Technology, Macau, China	
09:00-09:40	Keynote Speech I: Roles of Transportation Infrastructure in Logistics **Prof. Tien Fang Fwa,** National University of Singapore, Singapore	
09:40-10:20	Keynote Speech II: Door-to-door personal rapid transit system: concept and simulation **Prof. Toshiyuki Yamamoto,** Nagoya University, Japan	
10:20-10:50	Group Photo & Coffee Break	
10:50-11:30	Keynote Speech III: A multi-period asymmetric transit frequency design problem **Prof. Wai Yuen SZETO,** The University of Hong Kong, China	
11:30-12:10	Keynote Speech IV: Train scheduling optimization with consideration of passenger flows during disturbed operations **Prof. Andrea D'Ariano,** Roma Tre University, Italy	
12:10-13:30	Lunch Mistral Restaurant, 6th Floor/6 樓海風餐廳	
Saturday, August 22, 2026 | Parallel Session (Onsite)		
13:30-16:05	**Special Session 2: Advanced Analytics and Optimization for Transportation and Logistics Decision-Making** Invited Talk- Assoc. Prof. Song-Kyoo Kim (CE584), CE516, CE519, CE521, CE533, CE575, CE577, CE600, CE587, CE558	Promenade 1 6th Floor
13:30-15:50	**Onsite Session 1: Collaborative Scheduling for Multimodal Transport, Travel Behavior Modeling, and Safety Assessment Methods** Invited Talk- Assoc. Prof. Tianyu Li, CE520, CE556, CE563, CE571, CE583, CE578-A, CE592, CE528	Promenade 2 6th Floor
15:40-16:20	Coffee Break	6th Floor
16:15-18:50	**Special Session 1: Application of Artificial Intelligence in Transportation and Logistic Engineering** Invited Talk- Assoc. Prof. Xia Zhao, CE502-A, CE522, CE523, CE535, CE541, CE549, CE555-A, CE566-A, CE597	Promenade 1 6th Floor
16:00-18:45	**Onsite Session 2: Resilience Network Reconstruction and Logistics Response Strategy under Supply Chain Interruption Risk** CE559, CE601, CE313, CE316, CE322-A, CE323-A, CE325-A, CE602, CE538, CE309, CE314	Promenade 2 6th Floor
15:30-16:30	**Poster Display: Intelligent Transportation Infrastructure Development and Adaptive Signal Control Systems based on Vehicle-road Collaboration** CE5009-A, CE548, CE552, CE598	Promenade Foyer 6th Floor
19:00-20:30	Dinner Mistral Restaurant, 6th Floor/6 樓海風餐廳	

Sunday, August 23, 2026 | Parallel Session (Online)		
09:30-12:00	**Online Session 1: Traffic Flow Prediction and Intelligent Driving Behavior Risk Assessment based on Multi-source Sensing** CE5002, CE5004, CE524, CE542-A, CE550, CE565, CE567, CE586, CE512, CE594	Room A: 811 6271 6948
09:30-11:15	**Online Session 2: Quantitative Assessment of Supply Chain Resilience and Risk Management under Multi-source Uncertainties** CE501, CE585, CE599, CE327, CE560, CE317, CE540	Room B: 869 2595 8194
12:00-13:30	Break Time	
13:30-15:30	**Online Session 3: Low-carbon Logistics Route Optimization and Dynamic Scheduling Strategies for Multimodal Transport** CE5005, CE5010, CE506, CE525, CE527, CE546, CE588, CE504	Room A: 811 6271 6948
13:30-15:30	**Online Session 4: Multi-objective Optimization for Supply Chain Networks and Integrated Method of Transportation Safety Constraints** CE545, CE302, CE305, CE318, CE544, CE511, CE514, CE591	Room B: 869 2595 8194

Keynote Speaker I

Saturday, August 22, 2026
09:00-09:40

Prof. Tien Fang Fwa,
National University of Singapore, Singapore

Speech Title: Roles of Transportation Infrastructure in Logistics

Abstract: Transportation infrastructure is the physical backbone of global supply chains, facilitating the movement of raw materials to production sites and the delivery of finished goods to end consumers. Its performance is multifaceted and critically shapes the efficiency, reliability, and overall competitiveness of logistics networks. This presentation will analyze how the performance of key infrastructure components -- terminals, links, and carriers -- directly impacts logistics costs, operational efficiency, and safety. A primary focus will be placed on the transformative role of Artificial Intelligence (AI) in transportation logistics. The significant benefits arising from the deep integration of AI into these systems will be examined. The presentation will be illustrated with case studies showcasing successful AI implementations across various transportation sectors, highlighting practical pathways to enhanced performance.

Dr. T. F. Fwa is currently an emeritus professor in the Department of Civil & Environmental Engineering, National University of Singapore (NUS). He is also a Distinguished Professor at Chang'an University in China, where he serves as the Dean of the School of Future Transportation. He is a Fellow of the Academy of Engineering, Singapore. Dr. Fwa's main research effort has been focusing on transportation infrastructure performance evaluation and management. He is the Joint Editor-in-Chief of the Journal of Road Engineering. He also serves on the editorial boards of six other leading pavement engineering journals. He has published more than 200 technical papers in leading international journals, and has been invited to lecture in more than 20 countries. Dr. Fwa was the founding President of the Pavement Engineering Society (Singapore), and the Asia Pavement Engineering Society (APES). He was the President of the International Society for Maintenance and Rehabilitation of Transport Infrastructure (iSMARTi) from 2012 to 2016. He founded two international conference series, namely the International Conference on Road and Airfield Pavement Technology (ICPT), and the Asia Pacific Symposium on Transportation and the Environment (APTE).

Keynote Speaker II

Saturday, August 22, 2026
09:40-10:20

Prof. Toshiyuki Yamamoto,
Nagoya University, Japan

Speech Title: Door-to-door personal rapid transit system: concept and simulation

Abstract: Insufficient accessibility to public transit is one of the significant barriers to prevent transit usage. Especially, in super aging society including Japan, the distance to train/subway stations and bus stops is more important than ever. First- and last-mile service is preferred, but sometimes infeasible. Also, even if feasible, the transfer at the station significantly deteriorates the service level compared to private car. We introduce an innovative mobility service model that combines Personal Rapid Transit (PRT) technology with low-speed autonomous vehicles to enhance mobility and improve first- and last-mile connectivity through on-demand, door-to-door services. The analysis explored various configurations for PRT-dedicated lanes and tested different signal timing strategies. The findings highlight an optimal integration plan that ensures efficient PRT operations while minimizing disruptions to overall traffic flow. By aligning infrastructure design and signal control with the specific requirements of emerging mobility systems, this study addresses practical implementation challenges and provides actionable insights for deploying innovative mobility services.

Toshiyuki Yamamoto is Professor of Transportation Planning and Vice Director of Institute of Materials and Systems for Sustainability at Nagoya University, Japan. Prior to Nagoya University, he served as Research Associate at Kyoto University, Japan, where he obtained Doctor of Engineering in 2000. His research interests are next-generation mobility, activity-travel behavior, traffic safety, etc. He is Principal Investigator of the project, Optimization of carbon emission management policy and low-carbon travel induction strategies for demand-responsive transportation systems, bilaterally funded by NSFC and JSPS. He serves as Associate Editor for the journal, Transportation, and International Steering Committee Member for International Conference on Transport Survey Method.

Keynote Speaker III

Saturday, August 22, 2026
10:50-11:30

Prof. Wai Yuen SZETO,
The University of Hong Kong, China

Speech Title: A multi-period asymmetric transit frequency design problem

Abstract: Transit frequency design is critical in determining the performance of public transit services. In the literature, single-period frequency design is often considered but ignores the demand variation over time of day. Moreover, in high-demand bus networks, the demand patterns are asymmetric in both directions of some bus routes. This study investigates a bus operation strategy to address these two issues. In this strategy, for each route, a class of buses serves both directions while the other class only serves one direction with high travel demand, leading to the two directions having different frequencies. A bilevel optimization problem is formulated for this strategy. The upper level problem is a multi-period asymmetric transit frequency design problem, which aims to determine the route frequencies of different classes of buses associated with each period to maximize the operating profit or social welfare. This upper level problem also considers deadhead trips between the bus depot and terminals or between terminals of different routes across periods. The lower level problem is a schedule-based user equilibrium transit assignment problem, taking elastic demand, the common line choice of passengers, and capacity constraints into account. A hybrid algorithm combining an enhanced artificial bee colony algorithm with the method of successive averages is proposed to tackle the bilevel optimization problem and then applied to the study of the Tin Shui Wai bus network to demonstrate the model properties. The effectiveness of the proposed algorithm is also examined. The results indicate that the proposed algorithm can produce better solutions compared with the modified hybrid genetic algorithm. Moreover, the proposed multi-period asymmetric design outperforms the existing design, which can achieve less passenger travel time and greater demand satisfaction, operating profit, and social welfare.

Prof. Wai Yuen Szeto is a Professor and an Associate Head at the Department of Civil Engineering at The University of Hong Kong, and the Director of the Institute of Transport Studies at that university. He is a Top 0.05% Transport Scholar in 2024 and 2025 by ScholarGPS, a Top 1 % Scholar during 2015-2025 (according to Clarivate Analytics' Essential Science Indicators), and currently a World's Top 2% Scientist by Stanford University. His current h-index is 68 (Google Scholar). He is an author of over 170 refereed journal papers, with two papers in Operations Research and 35 papers in Transportation Research Part B. His publications have been cited over 15000 times (Google Scholar). The publications are related to shared mobility, smart sustainable transport, dynamic traffic assignment, transport network design, public transport, and transport network reliability. Currently, he is an Editor-in-Chief of Transportmetrica B, an Associate Editor of Transportation Research Part E, Journal of Intelligent Transportation Systems, an Area Editor of Networks and Spatial Economics, and an Editorial Board Member of Transportmetrica A, Travel Behaviour and Society, Transportation Research Part C, and International Journal of Sustainable Transportation.

Keynote Speaker IV

Saturday, August 22, 2026
11:30-12:10

Prof. Andrea D'Ariano,
Roma Tre University, Italy

Speech Title: Train scheduling optimization with consideration of passenger flows during disturbed operations

Abstract: Optimization models for railway traffic management tackle the problem of determining, in real-time, control actions to reduce the effect of disturbances. Two main research streams can be identified. On the one hand, train scheduling models are designed to include all conditions relevant to achieve feasible and efficient operation of rail services, keeping as much as possible train punctuality. On the other hand, delay management models focus on the impact of rescheduling decisions on the quality of service perceived by passengers. The resulting objectives are conflicting whenever train delay reduction requires cancellation of some connected services, causing extra waiting times to transferring passengers. The infrastructure manager and the train operating companies need to discuss on which connections to keep or drop.

This talk investigates hybrid railway traffic optimization approaches, merging these two streams of research. First, we consider the bi-objective problem of minimizing train delays and missed connections to provide a set of feasible non-dominated schedules, supporting the decisional process. We use a detailed alternative graph model to ensure schedule feasibility and develop heuristic algorithms to compute the Pareto front of non-dominated schedules. Second, we introduce a comprehensive mathematical model, incorporating the traffic regulations and the passenger rerouting options at a microscopic level. Third, we study this problem as a game theoretical approach, focusing on the solutions corresponding to Nash equilibria of a game involving passengers and infrastructure managers. Computational results based on a conventional Dutch railway network quantify the trade-off between the minimization of train delays and passenger travel times.

Andrea D'Ariano is Full Professor at Roma Tre University, Department of Civil, Computer Science and Aeronautical Technologies Engineering. He got the Italian Full Professor Scientific Habilitation in Operations Research and Transportation Science. His research publications were acknowledged by Industrial Engineering and Operations Management (IEOM) Society as Outstanding Professor Award; Airline Group of the International Federation of Operational Research Societies (AGIFORS), INFORMS Aviation Applications Section, INFORMS Railway Applications Section, International Association of Railway Operations Research (IAROR), Netherlands Research School on Transport, Infrastructure and Logistics (TRAIL) as best scientific papers; by IEEE Intelligent Transportation Systems Society as best PhD thesis; by Italian Operations Research Society (AIRO) as best Master thesis. He has published more than 250 peer-reviewed international publications (including top-cited papers in high-impact journals). He served as Editor and/or Reviewer for international journals and as External Expert and Rapporteur for European Commission and numerous National Foundations. Andrea D'Ariano is listed in the 2023 ranking of the top 2% of the world's best scientists, compiled by Stanford University, DOI:10.17632/btchxktzyw.6

Invited Speaker I

Saturday, August 22, 2026
13:30-13:50 **Promenade 1, 6th Floor**

Assoc. Prof. Song-Kyoo Kim,
Macao Polytechnic University, China

Speech Title: Novel Public Transport Prediction Systems with Dynamic Statistical Attention Technique

Abstract: A novel machine learning (ML) framework for accurate real-time bus arrival time prediction integrates the ML model with a lightweight Dynamic Statistical Attention (DSA) technique. Real-time GPS data from Macao bus routes, synchronized with weather records, constitute the primary dataset. The DSA technique blends ML predictions with historical average arrival times to mitigate random fluctuations and improve result stability. Experimental results indicate that the proposed models, particularly KNN combined with DSA, deliver superior performance through lower mean absolute error, root mean square error, and mean absolute percentage error relative to previous hybrid neural network approaches. This framework provides a computationally efficient solution suitable for deployment in resource-constrained smart city public transport systems while sustaining high prediction accuracy under varying traffic and weather conditions

Dr. Song-Kyoo (Amang) Kim received an M.S. degree in computer engineering and a Ph.D. degree in operations research from the Florida Institute of Technology in 1999 and 2002, respectively. He is currently an Associate Professor of the computing program at the Macao Polytechnic University, Macau, and a Research Scholar at Khalifa University, Abu Dhabi. He used to be an Associate Professor at several United Arab Emirates universities. Before moving to the Gulf Region, he was a Core Faculty Member of the Asian Institute of Management, providing courses in technology, innovation, and operations. Before his academic career, he was a Technical Manager with the Mobile Communications Division, Samsung Electronics, for more than ten years and mainly dealt with technology management in the information technology industry. He is the author of more than 70 research articles and ten patents relating to the mobile technology industries. He has been an Invited Speaker at many international conferences concerning technology management, innovation processes, operations research, and data sciences. He is also an external reviewer of various prestige journals including IEEE Access; ACM Transactions on Multimedia Computing, Communications, and Applications; and the Journal of Information Security and Applications.

Invited Speaker II

Saturday, August 22, 2026
13:30-13:50 **Promenade 2, 6th Floor**

Assoc. Prof. Tianyu Li,
Sanjiang University, China

Speech Title: Research Progress on Resilient Maintenance of Road Infrastructure in the Southern Coastal Region and AI-Based Decision-Making Technologies

Abstract: In the southern coastal region, highway infrastructure has long been subjected to the combined effects of high temperature and humidity, salt-mist corrosion, typhoon-induced storm surges, and soft-soil settlement, leading to accelerated structural degradation and heightened risks of functional disruptions. As a result, the resilience of lifeline systems faces severe challenges. The resilience-oriented maintenance paradigm focuses on the system's ability to absorb, adapt to, and rapidly recover its functions under disturbances. By quantifying resilience through metrics such as robustness, redundancy, resource availability, and responsiveness, the maintenance objectives have shifted from solely controlling failure probabilities to minimizing functional losses during disasters and shortening recovery times. The rapid advancement of artificial intelligence (AI) technologies has provided sophisticated sensing, prediction, and decision-making tools for resilience-driven highway maintenance, thereby driving a transformative shift in maintenance practices.

In damage identification and condition assessment, deep convolutional neural networks, generative adversarial networks, and Transformer models have significantly improved the accuracy of surface damage detection. Long Short-Term Memory networks and autoencoders can capture anomalous features in time-series monitoring data, while Bayesian fusion methods enable component-level condition classification. For performance degradation prediction, physics-informed neural networks embed corrosion diffusion mechanisms into the learning framework, enhancing their extrapolation capabilities with limited data; deep reinforcement learning and multi-objective evolutionary optimization offer solutions for maximizing network-level resilience under high-dimensional states and complex constraints, while also addressing temporal scheduling and resource allocation limitations.

More information, please visit: https://www.ictle.org/invite.html

Li Tianyu, Associate Professor of Sanjiang University, holds a Ph.D. in Civil Engineering and a postdoctoral degree in Hydraulic Engineering from Hohai University. He has published over 60 academic papers in core domestic and international journals, seven educational reform papers, and holds more than 30 authorized invention patents (including two international patents) and over ten computer software copyrights. He has authored two monographs, commercialized six research outcomes, led the drafting of one group standard, and participated in the formulation of one national standard and one group standard. He has delivered over ten academic presentations both domestically and internationally. He is the selected candidate for the 2023 Jiangsu Outstanding Postdoctoral Program and the 2025 Jiangsu Young Scientific and Technological Talent Support Project. Additionally, he serves as a review expert for the Academic Degrees & Graduate Education Development Center of the Ministry of Education, the Science and Technology Vice President of Jiangsu Wanstar New Materials Technology Co., Ltd., a peer reviewer for Engineering Structures, an expert committee member of the Ready-Mixed Concrete Branch of the China Concrete and Cement Products Association, a council member of the UHPC Branch of the China Concrete and Cement Products Association, a youth committee member of the Solid Waste and Ecological Materials Branch of the Chinese Ceramic Society, a member of the China Association for Standardization, a guest mentor at the Macau Science Publishing House - Strong Nation Youth Center, and a committee member of Youth Innovation and Exploration.

Invited Speaker III

Saturday, August 22, 2026
16:15-16:35 **Promenade 1, 6th Floor**

Assoc. Prof. Xia Zhao,
Beijing University of Civil Engineering and Architecture, China

Speech Title: Traffic Origin-Destination Demand Prediction via Multi-Channel Hypergraph Convolutional Networks

Abstract: Accurate prediction of origin-destination (OD) demand is critical for service providers to efficiently allocate limited resources in regions with high travel demands. However, OD distributions pose significant challenges, characterized by high sparsity, complex spatial correlations within regions or chains, and potential repetition due to the recurrence of similar semantic contexts. These challenges impede traditional graph-based approaches, which connect two vertices through an edge, from performing effectively in OD prediction. We present a novel multi-channel hypergraph convolutional neural network to overcome the above challenges. The model innovatively extracts distinctive features from the channels of inflows, outflows, and OD flows, to conquer the high sparsity in OD matrices. High-order spatial proximity within regions and OD chains are then modeled by the three adjacency hypergraphs constructed for the above three channels. In each adjacency hypergraph, multiple neighboring stations are treated as vertices, while multiple OD pairs constitute hyperedges. These structures are learned by hypergraph convolutional networks for latent spatial correlations. On this basis, a semantic hypergraph is created for the OD channel to model OD distributions lacking spatial proximity but sharing semantic correlations. It utilizes hyperedges to represent semantic correlations among OD pairs whose origins and destinations both possess similar Point-of-Interest (POI) functions, before learned by a hypergraph convolutional network. Both spatial and semantic correlations intrinsic to OD flows are accordingly captured and embedded into a gated recurrent unit to unveil hidden spatio-temporal dependencies among OD distributions. These embedded correlations are ultimately integrated through a multi-channel fusion module to enhance the prediction of OD flows, even for minor ones. Our model is validated through experiments on three public datasets, demonstrating its robust performances across long and short time steps. Findings may contribute theoretical insights for practical applications, such as coordinating traffic scheduling or route planning.

Dr. Zhao Xia is an associate professor at Beijing University of Civil Engineering and Architecture. Email: zhaoxia@bucea.edu.cn. She has been selected for the Young Talent Support Program of the Beijing Association for Science and Technology, and has been a visiting scholar at the University of Sydney and Beihang University. Her research focuses on traffic big data mining, traffic pattern recognition, and deep learning. She has led more than 20 provincial and ministerial research projects, including those funded by the National Natural Science Foundation of China, the National Social Science Fund, the General Program of the China Postdoctoral Science Foundation, and the Beijing Social Science Fund. She has been granted 13 invention patents and successfully commercialized some of them. She has published over 40 papers in SCI journals and Chinese core journals as first author or corresponding author, and has received more than 10 provincial and ministerial science and technology awards. She has also led multiple provincial and ministerial teaching research projects, contributed to one transportation textbook as a co-author, and guided her students to win more than 20 national and provincial awards in transportation science and innovation competitions.

Special Session 2(UTC+8)

Saturday, August 22, 2026 13:30-16:05	Promenade 1, 6th floor

Advanced Analytics and Optimization for Transportation and Logistics Decision-Making

Chairperson: Asst. Prof. Ma. Kathleen L. Duran, National University, Philippines

Invited Talk (CE584) 13:30-13:50	Novel Public Transport Prediction Systems with Dynamic Statistical Attention Technique ***Assoc. Prof. Song-Kyoo Kim,*** Macao Polytechnic University, Macao
CE516 13:50-14:05	A Last-Mile Delivery ETA Prediction Method Based on Pointwise Modeling and Spatio-Temporal Feature Engineering ***Jingwen Qu,*** Chongqing Vocational Institute of Engineering, China
CE519 14:05-14:20	Measuring the Contribution of Expressways to Regional Economic Development from a Spatial Perspective ***Li Wu,*** China Acedemy of Transportation Science, China
CE521 14:20-14:35	A Comparative Study of Neural Surrogate Models for Dynamic Traffic Policy Analysis ***Jincheng Ke,*** Université Gustave Eiffel, France
CE533 14:35:14:50	An Integrated Warehousing-Distribution-Return Cloud Logistics Mode for Large Commercial Market Clusters under Live-streaming E-commerce ***Lingling Xian,*** Southeast University, China
CE575 14:50-15:05	Two-Stage Site Selection Optimization for Emergency Drone Warehouses Under Extreme Rainstorm Scenarios ***Xiting Gao,*** Xi'an University of Posts and Telecommunications, China
CE577 15:05-15:20	Research on the Design of New Resilient Logistics Standards in the Yangtze River Delta and the New Mission of Zero-Carbon Leadership from a Symbiotic Perspective: Jiangsu's Strategic Countermeasures ***Chengwei Li,*** Nantong University, China
CE600 15:20-15:35	Modeling and Regulation of Metro Passenger Flow Distributions Using Real Entry and Exit Statistics ***Zhenqi Pan,*** Yangzhou University, China
CE587 15:35-15:50	Research on the Impact of Digital Economy on Carbon Emission Intensity of Logistics ***Liming Zhu,*** Guangdong University of Science and Technology, China
CE558 15:50-16:05	A Hybrid Machine Learning–MCDM Decision-Support Framework for Predicting and Prioritizing Lead-Time Risk in Plant-Level Parts Logistics ***Ma. Kathleen L. Duran,*** National University, Philippines

Onsite Session 1(UTC+8)

Saturday, August 22, 2026 13:30-15:50	Promenade 2, 6th floor

Collaborative Scheduling for Multimodal Transport, Travel Behavior Modeling, and Safety Assessment Methods

Chairperson: Assoc. Prof. Tianyu Li, Sanjiang University, China

Invited Talk 13:30-13:50	Research Progress on Resilient Maintenance of Road Infrastructure in the Southern Coastal Region and AI-Based Decision-Making Technologies ***Assoc. Prof. Tianyu Li,*** Sanjiang University, China
CE520 13:50-14:05	Integrated Route Design and Multi-Objective Arrival Flow Optimization in Extended Terminal Maneuvering Area for Hub Airport ***Zexuan Wu,*** Beihang University, China
CE556 14:05-14:20	Challenges and Pathways for Developing Think Tanks in the Civil Aviation Industry of China ***Weihua Wang,*** Civil Aviation Management Institute of China, China
CE563 14:20-14:35	A Study on Methods for Predicting Airspace Congestion in Flight Segments of Airport Clusters ***Huiyu Wu,*** Nanjing University of Aeronautics and Astronautics, China
CE571 14:35-14:50	A Vulnerability-Resilience-Criticality Framework for Airport Cluster Airspace Congestion Identification ***Ang Chen,*** Nanjing University of Aeronautics and Astronautics, China
CE583 14:50-15:05	A Structure-Aware Knowledge Retrieval Framework for Hybrid Table–Text Aeronautical Information Publications in Intelligent Air Traffic Management ***Yafei Chen,*** Beihang University, China
CE578-A 15:05-15:20	Generative Self-Supervised Learning for Cyberattack-Resilient EV Charging Demand Forecasting ***Duo Li,*** Huazhong University of Science and Technology, China
CE592 15:20-15:35	Exploring directional spatiotemporal mobility patterns of dockless bike-sharing in relation to land use: A case study of Shenzhen, China ***Hu Yang,*** Guilin University of Electronic Technology, China
CE528 15:35-15:50	An AI-Driven Edge System for Improving Safety in Public Bus Transport ***Paolo Roberto Massenio,*** Polytechnic University of Bari, Italy

Special Session 1(UTC+8)

Saturday, August 22, 2026 16:15-18:50	Promenade 1, 6th floor

Application of Artificial Intelligence in Transportation and Logistic Engineering

Chairperson: Prof. Li Zhihong, Beijing University of Civil Engineering and Architecture, China

Assoc. Prof. Zhao Xia, Beijing University of Civil Engineering and Architecture, China

Invited Talk 16:15-16:35	Traffic Origin-Destination Demand Prediction via Multi-Channel Hypergraph Convolutional Networks ***Assoc. Prof. Xia Zhao,*** Beijing University of Civil Engineering and Architecture, China
CE502-A 16:35-16:50	Federated Spatial-Temporal Synchronous Graph Convolutional Network for Cross-City Traffic Prediction ***Xian Yu,*** Nantong University, China
CE522 16:50-17:05	Centrality Measures for Public Utility Vehicle Routes in Road Networks ***Marjon D. Baldesimo,*** University of the Philippines - Baguio, Philippines
CE523 17:05-17:20	Integrating ADAM-based Neural Networks into Linear Optimization Models for Traffic Flow Prediction ***Josefin III Datu Fajardo,*** Polytechnic University of the Philippines and University of the Philippines Baguio, Philippines
CE535 17:20-17:35	A Lock-Aware Decomposed Framework for ETA Prediction in River–Sea Intermodal Transport Using AIS Data ***Zhu Chentao,*** Southeast University, China
CE541 17:35-17:50	R-VRUNet: A Fine-Grained Roadside Vulnerable Road User Detection Network ***Haochi Zhang,*** Chongqing Jiaotong University, Chongqing, China
CE549 17:50-18:05	Joint Optimization of Cooperative Perception and Vehicle Control for V2V-enabled Autonomous Driving ***Zixuan Kong,*** Beijing University of Posts and Telecommunications, China
CE555-A 18:05-18:20	Optimization of Extreme Case Management with Big Data Analytics: A Machine Learning Approach to Incident Duration Prediction ***Yun Hou,*** The Hang Seng University of Hong Kong, China
CE566-A 18:20-18:35	From Semantic Reservation Requests to Optimal Allocation: An LLM-Enhanced Framework for Shared Parking Systems with EV Charging ***Minghui Xie,*** Chang'an University, China
CE597 18:35-18:50	A Data-Driven Model for Metro Passenger Flow Retrospecting ***Qin Wei,*** Guangdong Baiyun University, China

Onsite Session 2(UTC+8)

Saturday, August 22, 2026 16:00-18:45	Promenade 2, 6th floor

Resilience Network Reconstruction and Logistics Response Strategy under Supply Chain Interruption Risk

Chairperson: Asst. Prof. Ferly Ann R. Revilloza, National University, Philippines

CE559 16:00-16:15	A Predictive Analytics of Lead Time Variability in Asia-Pacific Supply Chains Using Machine Learning ***Ferly Ann R. Revilloza,*** National University, Philippines
CE601 16:15-16:30	Digital Collaborative Innovation in Agricultural E-commerce and Cold Chain Logistics: An Empirical Study on Innovation Performance Enhancement ***Zhu Liming,*** Guangdong University of Science and Technology, China
CE313 16:30-16:45	Performance Evaluation of Coal-to-Methanol Supply Chain Based on Cloud Model and DEMATEL ***Juan Liu,*** Taiyuan University of Technology, China
CE316 16:45-17:00	Design and Simulation Validation of a Catering Delivery Planning System Based on BeiDou Navigation System ***Yang Xiao,*** Hunan University of Information Technology, China
CE322-A 17:00-17:15	Emergency Procurement Coopetition Under Supply Disruptions: Conversion Costs, Market Structure, and Welfare in New Energy Vehicle Supply Chains ***Beile Feng,*** Harbin Institute of Technology, China
CE323-A 17:15-17:30	The Optimal Decisions of Automakers and Charging Stations Considering Centralized Operation, Carbon Allowances and Charging Subsidies ***Peilun Sun,*** Harbin Institute of Technology, China
CE325-A 17:30-17:45	Operations Management of Computing-Electricity Synergy: Spatial-Temporal Task Scheduling and Game-Theoretic Mechanisms under Carbon-Electricity Coupling ***Yitong Zhao,*** Harbin Institute of Technology, China
CE602 17:45-18:00	Low-Altitude Economy and Innovation-Driven Transformation of Traditional Logistics ***Zhu Liming,*** Guangdong University of Science and Technology, China
CE538 18:00-18:15	Embedding Tide-Ecology Dual Constraints: An Improved MADDPG for Cooperative Scheduling of Pinglu Canal Cascaded Lock Group ***Mingxuan Teng,*** Southeast University, China
CE309 18:15-18:30	Human-AI Collaboration performance in Multi-Echelon Supply Chains: A Behavioral Experiment on DRL-Assisted Ordering ***Junyi Xiao,*** East China Jiaotong University, China
CE314 18:30-18:45	Service-Level Vulnerability in Seasonal Chinese Baijiu Last-Mile Delivery: A Vehicle Routing Case Study ***Rui Peng,*** Wuhan University of Technology, China

Poster Display

Saturday, August 22, 2026 15:30-16:30	Promenade Foyer 6th Floor
CE5009-A	Quantitative Validation of Service Performance and Rapid Repair Method of Cold-Mix Pavement Based on Waterborne Epoxy Composite Modification ***Rui Song,*** Changsha University of Science & Technology, China
CE548	Intelligent Traffic Signal Control Based on Critical Intersection Identification ***Hao Huang,*** Chongqing University of Posts and Telecommunications, China
CE552	Risk Assessment of High-Resilience Logistics Support for Vessels in Arctic Route Operations Based on an Interval-Valued Neutrosophic CRITIC-TODIM Model ***Peiwen Wang,*** Dalian Naval Academy, China
CE598	Analysis of multi-functional UGV platoons with ITS network architecture on robustness performance ***Yue Zhao,*** China North Vehicle Research Institution, China

Online Session 1(UTC+8)

Sunday, August 23, 2026 09:30-12:00	Room A: 811 6271 6948 Link: https://us02web.zoom.us/j/81162716948

Traffic Flow Prediction and Intelligent Driving Behavior Risk Assessment based on Multi-source Sensing

Chairperson: Dr. Kent Patrick G Ferraro, National University, Philippines

CE5002 09:30-09:45	Research on highway traffic situation prediction under unfavorable scenarios ***Jie Liu,*** Hebei Jiaotong Vocational and Technical College, China
CE5004 09:45-10:00	Legal Risk Analysis and Countermeasure Research on Construction Organization for Enhancing Highway Safety Resilience ***Minzheng Zhang,*** Research Institute of Highway, Ministry of Transport, China
CE524 10:00-10:15	Research on Container Freight Rate Prediction for Transpacific Routes Based on Multivariate LSTM: An Empirical Analysis Integrating Port Congestion and Capacity Indicators ***Guanhao Huang,*** The Chinese University of Hongkong, Shenzhen, China
CE542-A 10:15-10:30	Dilemma-Zone Risk at High-Speed Signalized Intersections with Advance Warning Signals: Data-Driven Analysis of Passenger Car and Heavy Vehicle Behaviors ***Homa Motavallian Naeini,*** University of Manitoba, Canada
CE550 10:30-10:45	A Smart Card Data-Driven Framework for Identifying Group Travel Patterns in Metro Systems ***Xinyi Yang,*** Beijing University of Civil Engineering and Architecture, China
CE565 10:45-11:00	Identification of high-risk AV accident scenarios based on machine learning and association rules ***Wanyue Ding,*** Beijing Jiaotong University, China"
CE567 11:00-11:15	Demand-Responsive Bus Route Planning Considering Passenger Behavior and Road Time Impedance ***Zikui Wang,*** Chang'an University, China
CE586 11:15-11:30	Review of Stability Assessment and Active Control Methods for Articulated Vehicles **Yu Wang,** State Key Laboratory of Robotics and System, Harbin Institute of Technology, China
CE512 11:30-11:45	Pavement Distress and Traffic Congestion Dynamics: Influence of Overloaded Trucks on the Operational Efficiency Along Maharlika Highway, Quezon Province, Philippines ***Janelle Gerio,*** National University, Philippines
CE594 11:45-12:00	A Sliding-Window Enhanced GAT-MPC Framework for Autonomous Car-Following Decision-Making ***Kechang Diao,*** Inner Mongolia University of Technology, China

Online Session 2(UTC+8)

Sunday, August 23, 2026 09:30-11:15	Room B: 869 2595 8194 Link: https://us02web.zoom.us/j/86925958194

Quantitative Assessment of Supply Chain Resilience and Risk Management under Multi-source Uncertainties

Chairperson: Assoc. Prof. Fenfang Ye, Guangdong University of Science and Technology, China

CE501 09:30-09:45	Association study of Logistics-Manufacturing Integration and Industrial Chain Resilience in China ***Fanfan Jia,*** Guangdong University of Science &Technology, Dongguan, China
CE585 09:45-10:00	Supply Chain Vulnerability Assessment Based on Improved ELECTRE Method: A Case Study of Chinese Express Industry During COVID-19 ***CHEN Linguo,*** Yunnan University of Finance and Economics, China
CE599 10:00-10:15	Safety Risk Analysis and Control Countermeasures of Cross-border E-commerce Air Cargo Based on STAMP-ISM ***Yajun Liang,*** Donghao Cheng, China Academy of Civil Aviation Science and Technology, China
CE327 10:15-10:30	Research on the Construction of Food Supply Chain Risk Assessment Indicator System ***Fenfang Ye,*** Guangdong University of Science and Technology, China
CE560 10:30-10:45	Sales-Popularity-Driven Storage Location Layout Optimization for Fabric Warehouses ***Siyuan He,*** Guangdong University of Science and Technology, China
CE317 10:45-11:00	Optimization Research on Dynamic Scheduling of Tobacco Leaf Acquisition Considering Inventory and Capacity Constraints: A Comprehensive Analytical Report ***Yingnan Hao,*** Shiyan Tobacco Company of Hubei Province, China
CE540 11:00-11:15	A Review of Scenario Complexity Assessment for Automated Vehicles ***Chen Chen,*** Beijing University of Technology, College of Metropolitan Transportation, China

Online Session 3(UTC+8)

Sunday, August 23, 2026 13:15-15:30	Room A: 811 6271 6948 Link: https://us02web.zoom.us/j/81162716948

Low-carbon Logistics Route Optimization and Dynamic Scheduling Strategies for Multimodal Transport

Chairperson: Dr. Kent Patrick G Ferraro, National University, Philippines

CE5005 13:30-13:45	Screening Key Factors Influencing Transportation Logistics Costs Using Elastic Net Regression ***Chang Liu,*** China Academy of Transportation Sciences, China
CE5010 13:45-14:00	Green Logistics Distribution Route Optimization Using Ant Colony Algorithm ***Pinhuan Wang,*** Yunnan University of Finance and Economics, China
CE506 14:00-14:15	Optimization of Multimodal Transport Routes for Large-Sized Components in the Pinglu Canal Project ***Chenyi Li,*** Beijing Jiaotong University， Beijing， China
CE525 14:15-14:30	Analysis of the Impact of Carbon Trading Prices on the Application of Electric Logistics Vehicles Based on System Dynamics ***Xiao Li,*** Research Institute of Highway Ministry of Transport, China
CE527 14:30-14:45	Design of Site Selection for Agricultural Product Distribution Centers Based on Data Mining ***Han Yin,*** ShenYang JianZhu University, China
CE546 14:45-15:00	Stress Analysis of Loading Contact Surfaces and Securing Scheme Optimization for Oversized Cargo Transportation in the Pinglu Canal Project ***Ke Wu,*** Beijing Jiaotong University, China
CE588 15:00-15:15	Heterogeneous Collaborative Delivery Optimization with Trucks, UAVs, and Motorcycles for Mountain Wildfire Emergency Logistics ***Yifan Zhai,*** Nanjing University of Aeronautics and Astronautics, China
CE504 15:15-15:30	Optimization of Inventory Control for Construction Materials in the Pinglu Canal Project ***Wenjing Li,*** Beijing jiaotong university, China

Online Session 4(UTC+8)

Sunday, August 23, 2026 13:30-15:30	Room B: 869 2595 8194 Link: https://us02web.zoom.us/j/86925958194

Multi-objective Optimization for Supply Chain Networks and Integrated Method of Transportation Safety Constraints

Chairperson: Prof. Ting Peng, Chang'an University, China

CE545 13:30-13:45	Demand Forecasting in Supply Chain Systems Using Machine Learning ***Ronin J Rajmohan,*** PES University, India
CE302 13:45-14:00	Research on Large-Scale Human-Robot Collaboration in Disassembly Line Balancing Based on Deep Reinforcement Learning ***Bowen Lang,*** Shanghai University, China
CE305 14:00-14:15	Research on E–commerce Supply Chain Decisions Considering Consumers' Rights Protection Behaviors ***Lin Sun,*** Xi'an University of Posts and Telecommunications, China
CE318 14:15-14:30	Traceability Investment and Pricing Decisions in a Live-Commerce Fresh-Product Dual-Channel Supply Chain Considering Return Risk ***Yanhua Cheng,*** Lanzhou University of Finance and Economics, China
CE544 14:30-14:45	A model of regional transport and logistics complex considering the road safety factor ***Evgeny Vladimirovich Miroshnikov,*** Ivan Alekseevich Novikov and Anastasia Gennadievna Shevtsova, BSTU named after V.G. Shukhov, Russia
CE511 14:45-15:00	Statistical Monitoring Indicator System for the Transportation Industry Under New Circumstances: A Case Study of Zhejiang ***Jiayu Chen,*** China Academy of Transportation Science, Beijing, China
CE514 15:00-15:15	Resilience Assessment of the Container Shipping Network at Shanghai Port ***Jingchun TANG,*** Wuhan University of Technology, Wuhan, China
CE591 15:15-15:30	Optimization of Container Shipping Networks Considering Hub Port Congestion under Emergency Disruption ***Xiaomeng Liu,*** Dalian Maritime University, China

Delegates List

Liang Sun	Civil Aviation Management Institute of China, China
Zandi Shang	China Acedemy of Transportation Science, China
Jian Zhou	China Acedemy of Transportation Science, China
Jinsong Ye	China Acedemy of Transportation Science, China
Junyin Luo	China Acedemy of Transportation Science, China
Chen Jiazhi	Sanjiang University, China
Hongfei Chen	Nanjing University of Aeronautics and Astronautics, China
Wenlei Liu	Nanjing University of Aeronautics and Astronautics, China
Xu Shi	Nanjing University of Aeronautics and Astronautics, China
Guangming Zheng	Guilin University of Electronic Technology, China
Saraleen Mae Manongsong	University of the Philippines Baguio, Philippines

Note