# CICCTP THE 19<sup>TH</sup> COTA INTERNATIONAL CONFERENCE OF TRANSPORTATION PROFESSIONALS



TRANSPORTATION

CONNECTING THE MORID

# 第十九届COTA国际交通科技年会 Conference Guide

JULY 5TH - JULY 8TH — 2019 NANJING, CHINA

TRANSPORTATION IN CHINA 2025:

# **CONNECTING THE WORLD**

中国交通 2025: 联通世界



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# Welcome Remarks

It is our great pleasure to welcome you all to the 19th COTA International Conference of Transportation Professionals (CICTP 2019) in Nanjing, China. The CICTP2019 is jointly organized by Chinese Overseas Transportation Association (COTA), Southeast University, and Jiaotong International Cooperation Service Center of Ministry of Transport. The CICTP annual conference series was established by COTA back in 2001 and in the past two decades benefited from support from the American Society of Civil Engineers (ASCE), Transportation Research Board (TRB), and many other organizations and partners.

We are pleased to announce that the CICTP2019 received a large number of high-quality technical contributions: among the nearly 1,200 paper submissions, a total of 500 full papers were accepted for publication in the proceedings. These published papers went through a rigorous technical review and English editing process for quality assurance. Centering around the theme "Transportation in China 2025: Connecting the World", the CICTP2019 proceedings papers address a wide range of topics. We hope the research and studies gathered in this conference will contribute to solving future needs of a multimodal transportation system, and help to advance transportation sustainability, energy independence, economic vitality, and quality of life. CICTP2019 will issue several awards, including Best Papers, Outstanding Area Editors, and Outstanding English Editing Chairs, to recognize the authors, reviewers and editors' contributions and their dedication to the conference and transportation research and practice in general. The authors of selected papers will also be invited to submit their papers to three journal special issues in Journal of Intelligent Transportation Systems, IET Intelligent Transportation Systems, and Journal of Transport and Land Use.

CICTP2019, the highest-quality, comprehensive transportation conference in China, has attracted more than 1500 participants internationally from countries and regions all over the world, including mainland China, United States of America, Hong Kong, Canada, Singapore, Australia, United Kingdom, Sweden, India, Japan, Belgium, Switzerland and more. Nearly fifty conference sessions such as plenary, invited, and technical sessions, as well as special forums are organized this year. All accepted papers are presented at the conference in podium or poster sessions. The CICTP2019 Executive and Organizing Committee has invited more than 40 internationally recognized, prestigious experts and scholars to deliver talks in keynote and plenary sessions. These invitees will share their insights, thoughts, visions, and experiences on a variety of current practices and state-of-the-art research topics. More than 50 additional internationally recognized researchers and practitioners are also invited to present recent research findings and best practices at CICTP 2019.



CICTP2019 special forums will focus on issues that are of interest to our attendees, including Government Forum for Transportation Policy, World Bank Transportation Development Forum, Deans' Forum for Chinese University Transportation Schools, and COTA Professional Development Forum for Young Scholars and Students. COTA will also present professional awards such as COTA life-time achievement award, outstanding leadership award, and/or outstanding service award, will be granted to individuals who have made outstanding contributions to the development of transportation systems in China and internationally. The 9th China Transportation Research and Technology Exhibition will be also held in conjunction with CICTP2019 to showcase the latest achievements of research and practices, which include the exhibition of innovative and creative research results by companies, agencies, researchers, and graduate students.

On behalf of the CICTP 2019 Organizing Council, we would like to express our sincere gratitude to all authors and conference participants for their great contributions. We are grateful to all paper reviewers and English editors for their excellent efforts. Special thanks go to Southeast University, COTA members including COTA Board of Directors, and Jiaotong International Cooperation Service Center staffs for their generous support to the conference and offering their time and efforts. Last but not least, we also wish to thank all conference committee members, sponsors, invited speakers, session chairs, conference staff members, and volunteers for their hard work that make CICTP 2019 a great success!

The CICTP conference series have been an open, high-quality, and inclusive platform for information exchange, experience sharing, and professional networking over the past nineteen years. We hope that you will enjoy the technical and social activities of this year's conference and that you will also find time to explore Nanjing, the capital of China's Jiangsu Province.

Sincerely,

### **Conference Chairs**

Dr. Lei Zhang, COTA President; University of Maryland, USA Dr. Guangjun Zhang, President; Southeast University, China Mr. Shaojun Shen, Director General; Professional Qualification Authority, Ministry of Transport, China Dr. Pan Liu, Vice President; Southeast University, China

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### **Chinese Overseas Transportation Association (COTA)**

Established in January 1996, COTA (formerly NACOTA or North America Chinese Overseas Transportation Association) is a non-profit professional organization registered in Maryland, USA. The main missions of COTA are to strengthen connections between overseas transportation professionals worldwide and their counterparts in China, promote transportation development in China by providing knowledge and expertise through its members, enhance networking and collaboration among its members and serve as an information and knowledge-sharing platform on transportation development for all transportation professionals. COTA has approximately 1000 members and friends in North America and other parts of the world.

The CICTP series, formerly ICCTP (International Conference of Chinese Transportation Professionals), is one of two major conferences that COTA organizes every year (the other is a winter symposium series held in conjunction with the Transportation Research Board (TRB) Annual Meeting every January in Washington D.C. CICTP is held in China every summer and is the premier gathering for Chinese transportation professionals worldwide and for those who are interested in contributing to or gaining a deeper understanding of the transportation development in China and other countries. CICTP has become the most influential academic conference in China. The Transportation Research Board (TRB) of the U.S. National Academies cosponsors CICTP.

### **School of Transportation**

The School of Transportation at Southeast University plays a significant role in the field of roadway transportation in China. The origin of the school can be traced back to the Highway Engineering Program in the Department of Civil Engineering at the National Southeast University in 1923.

The School has succeeded in establishing a cluster of programs with comprehensive research focuses, distinctive characteristics and outstanding strengths in the field of roadway transportation. The school consists of 7 departments, three research centers, and two industrial organizations. As the core discipline, the Transportation Engineering program is a national key primary discipline which has significant domestic and international influences. The program ranks first in the most recent national discipline ranking conducted by the Ministry of Education of China in 2017. The Transportation Engineering discipline in the School of Transportation has been listed in first batch of "double first-class" disciplines (world firstclass universities and first-class disciplines) in 2017.

The School has formed a high-level academic team, which includes an academician





of the Chinese Academy of Engineering, National Renowned Teachers, and National Distinguished Experts. The faculty team is nationally recognized in terms of the scholar achievements and the influence on the transportation industry in China. Currently the School of Transportation has 166 faculty members, including 61 professors, 65 associate professors and 71 assistant professors. We also boast one Innovation Research Team awarded by the Ministry of Education of China and two National Teaching Innovation Teams.

The School has been consistently leading the country in the areas of urban transportation planning, transportation system optimization, and pavement structures and materials. So far we have received fourteen National Scientific and Technological Progress Awards and National Technological Invention Awards.

The School has cultivated numerous graduates with solid foundation of knowledge, comprehensive qualities, strong sense of responsibilities, practical skills and innovation spirits. A great many of them have become leading figures in technology innovation and administrative leadership in transportation industry in China. At present, the school has 1289 undergraduates and 1009 graduate students in a total of six undergraduate programs, twelve master's degree programs, and nine doctoral programs.



### **Jiaotong International Cooperation Service Center**

As an affiliated institution of the Ministry of Transport, JICSC is established upon the coapproval of the central staffing department and the Ministry of Transport. It serves the MOT in promoting international exchanges and cooperation, and promotes the development of transport industry with its technical, intelligence and service strength. Formerly known as the Foreign Affair Center of Ministry of Transport since its establishment in 1989, not only the name has changed, but also the business of JICSC significantly expanded from merely providing traditional foreign affair service to strategy and policy study consulting concerning industrial development and openness, hosting international expo and international exchanges and cooperation events. In 2017, JICSC undertook the Facility Connectivity Parallel Session of "Belt and Road Forum for International Cooperation", started to operate the Global Environment Fund Office, hosted the 1st International Transport Safety Expo, organized the 9th China-US Transportation Forum, and conducted international policy studies on the topic of new energy automobiles promotion. Tiding the wave of development and openness, JICSC will forge ahead with firm determination and rigorously intend for innovation in the new era of 2019. We are committed to be a positive contributor to the global governance of transport industry.



### Administrative Committee of Nanjing Chi-Lin Technology Innovation Park

July 2010 witnessed the foundation of Nanjing Chi-Lin Technology Innovation Park. With total planning area reaching 83km<sup>2</sup>, 46.15km<sup>2</sup> has been planned for the actual construction area. Situated between Purple Mountain and Qinglong Mountain, the park is gifted with pleasant ecology, meandering and flowing here 3 ancient rivers deriving: Yunliang River, Shangba River & Baishui River. Chi-Lin takes distinctive advantages in location & traffic, surrounding by expressways and only 10 kilometers away from the center of Nanjing. It takes only 15 minutes to get to Nanjing South Railway Station. A 40 minutes' drive has well connected the park with Nanjing Lukou International Airport. Approaching Xianlin University Town in the north and connecting Jiangning University Town to the south, the park could reach 30 renowned universities including Nanjing University and Southeast University. Relying on the abundant science and education resources, Chi-Lin has obtained unlimited potential for science and technology innovation, capable to provide strong support for enterprise headquarters and R&D projects. As the core region of Nanjing Innovation renowned city, the main bearing area of comprehensive science center, and the scientific and technological innovation landmark of Jiangsu Province, by targeting on the headquarter economy and R&D as leading industries, Chi-Lin is concentrating on artificial intelligence industry and information technology industry to achieve highend development and industries agglomeration. A number of key projects are settled in Chi-Lin, including Nanjing branch of Chinese Academy of Sciences and University of Chinese academy of sciences Nanjing. Chi-Lin, as a growing science and technology zone, has already been settled a consolidated foundation through the past 8 years and it has gradually stepped into a key stage of innovation and development. With the tide of innovation and development within Nanjing, we sincerely welcome all enterprises and talents to visit, to invest, to share opportunities and to seek common development within Chi-Lin.



#### **Southeast University Education Foundation**

Southeast University Education Foundation (SEUEF) was established in 1987 and formally registered as a charitable organization in October 2005 upon approved by Jiangsu Provincial Education Department and Civil Affairs Department. With the registration of RMB 80 million, the foundation is rated as a 5A social organization and titled as "National Advanced Social Organization" by the Department of Civil Affairs. It is qualified for deducting public welfare donations before tax.

SEUEF is committed to strengthening contacts and cooperation with alumni and community both at home and abroad, raising various social resources, serving SEU's school-running thought of "frontier technology targeted, service-oriented, student-



based and talents in priority" school-running ideas and the development strategy of "multidisciplinary integration, science, engineering, literature and medicine integration, industry-university-research integration and internationalization integration" so as to provide strong support for the construction SEU to be one of the world-class universities with distinctive national characteristics and the characteristics of Southeast University to the people's satisfaction as soon as possible.

The fund of SEUEF is mainly used to support talent cultivation, teaching and scientific researches, faculty team building and campus construction as well as all projects conducive to promoting the development of SEU's education undertaking. For the projects with specific donation purposes, the fund can be directly used for targeted purpose according to the donor's expectations.

The SEUEF will uphold the principle of openness, standardized management and availability of supervision from all parties to guarantee the use of all donations in conformity with laws, regulations and social ethics. The SEUEF is eagerly supported by alumni and community from all walks of life.

### China Railway Major Bridge (NanJing) Bridge and Tunnel Inspecr&Retrofit Co., LTD.

China Railway Major Bridge (Nanjing) Bridge and Tunnel Inspect & Retrofit Co., Ltd. (CRBT) is a wholly owned subsidiary of China Railway Bridge Reconnaissance & Design Institute Co., Ltd. (BRDI), established in 2007, located in Nanjing Jiangbei New District. The predecessor was the Southeast Bridge Diagnostic Research Center jointly established by BRDI and Southeast University in 2002.

As a national high-tech enterprise and Jiangsu Provincial Bridge and Tunnel Disaster Prevention and Mitigation Engineering Research Center, The company is committed to the research and practice of structure life cycle intelligent monitoring and disaster prevention and mitigation of transportation infrastructure especially the bridges, and adheres to the integrated development model of production and research. The core technology is widely used in construction monitoring, health monitoring, maintenance management, testing and evaluation, reinforcement and modification, ship collision protection, inspection trolley, anti-corrosion dehumidification of hundreds large-scale bridges. The company actively fulfills its social responsibilities and undertakes dozens of emergency rescue tasks for bridges and tunnels, and its business area has expanded to nearly 30 provinciallevel regions and overseas. The business areas include railways, highways, municipal administration, covering the entire industrial chain of bridge and tunnel operation and maintenance.

# **Sponsors**







### **Xiamen Beifan Education Management Limited**

#### A warm top runner in the industry

Xiamen Beifan Education Management Limited is a Pre-IPO enterprise focus on the operation management of vocational education, which is the most professional leading enterprise of domestic field. Our business scope includes vocational education, K12 education and educational technology, through direct management, co-operative construction, school-enterprise cooperation and other modes.

By the 2019, the enterprise has operated more than 20 companies mainly distributed in Fujian, Guangdong, Anhui, Jiangxi, Hunan, Yunnan, Henan. The number of enrollment students has reached 180,000, occupying the front rank in the industry.

The Beifan Ltd, offers more than 40 popular majors, such as electromechanics, computer technique, e-commerce, infant education, hotel services and so on. Especially, the advanced vehicle maintenance majors enjoy the great reputation in domestic market by the latest teaching material, courseware development capability, vehicle teaching aids and new corporation's apprenticeship management system.







# **Instructions for Presenters**

1. Approximately 15 to 30 minutes are allocated to each speaker at plenary, invited, and technical sessions, including the time for Q&A.

2. Each presenter must report to her/his session chair at least 10 minutes before the session begins.

3. Each conference room is equipped with a computer. Presenters should carry their presentation (in PPT or PDF format) on a USB flash drive and upload it to the computer before the session begins.

4. We strongly recommend that presenters go through all their slides to ensure the presentation works well with the conference room equipment.

5. If a presenter elects to use her/his own laptop, s/he must inform the session chair and test the system before the session begins to ensure her/his own computer works well with the projector and other conference equipment.

6. Unless specified otherwise, speakers are expected to present in English.

# **Instructions for Session Chairs**

1. Session chairs should review the program prior to their sessions to get familiar with the presentations in their sessions. To ensure a smooth progress of the conference, session chairs are required to begin and finish their sessions on time.

2. Session chairs are expected to arrive in the session room at least 10 minutes before their session begins. Please collect the attendance information of the speakers.

3. Approximately 15 to 30 minutes are allocated for each speaker at plenary, invited, or technical sessions, including the time for Q&A.

4. Session chairs should closely monitor the progress to ensure their sessions begin and finish according to the schedule.

# **Program at a Glance**

TIME	FRIDAY, JULY 5, 2019	SATURDAY, JULY 6, 2019	
		Registration 7:30 – noon	
Morning	Registration 10:30 – noon	Opening Ceremony 8:30 – 9:20	
		Photographing and Coffee/Tea Break 9:20 – 10:00	
		Keynote Session 10:00 – 12:05	
		Supply Chain Design and Optimization 8:30 – 12:30	
Noon		Lunch	
Afternoon	Registration 13:30 – 23:00	Government Forum for Transportation Policy 13:30 – 18:00	
		Meet the Editors-in-Chief 15:50 – 17:40	
	International Forum of Young Scholars 14:00 – 17:50	Infrastructure Sustainability -Academic Seminar 14:00 – 17:30	
		Forum of Committee of Youth Scientific & Technological Professionals (CYSTP) 13:30 – 16:00	
	Deans' Forum of Transportation Schools 14:00 – 17:50	Plenary Session 1 to 3 13:30 – 18:00	
		Invited Session 1 to 8 15:50 – 18:00	
		Enterprise Exhibition 13:30 – 18:00	
Evening	VIP Welcome Dinner 18:30 – 20:30	Conference Banquet 19:00 – 21:00	



ТІМЕ	SUNDAY, JULY 7, 2019	MONDAY, JULY 8, 2019
	Plenary Session 4 to 6 8:30 – 12:00	The 10th COTA-World Bank China Transport Forum 8:30 – 12:00
Morning	Invited Session 9 to 18 8:30 – 12:00	Plenary Session 8 8:30 – 10:10
		Invited Session 19 to 21 10:20 – 12:00
	Enterprise Exhibition 8:30 – 18:00	Technical Session 8 to 14 8:30 – 12:00
		Enterprise Exhibition 8:30 – 12:00
Noon	Lunch	Closing Ceremony & Farewell Luncheon 12:30 –14:00
	Transportation Practitioner's Forum 13:30 – 18:00	
	China- Korea Transport Forum 13:30 – 15:30	
Afternoon	Workforce Development in Transportation Field 15:00 – 17:00	
	Plenary Session 7 13:30 – 15:40	
	Technical Session 1 to 7 15:50 – 18:00	
	Poster Session 1 to 4 13:30 – 17:30	
Evening		





# FRIDAY, JULY 5

Chair: Dr. Jun Chen, Dean, Southeast University, China Coordinator: Dr. Zhibin Li & Dr. Xuedong Hua, Southeast University, China

**Deans' Forum of Transportation Schools** 

14:00-17:50 Yangtze Room / 扬子厅

ТІМЕ	PROGRAM
14:00 – 14:10	Welcome and Opening Remarks Dr. Pan Liu, Vice President, Southeast University, China
14:10 – 15:00	Invited Presentations
15:00 – 15:30	Roundtable Discussion
15:30 – 16:00	Tea/Coffee Break
16:00 - 17:30	Roundtable Discussion
17:30 - 17:50	Closing Remarks

# International Forum of Young Scholars on Transportation Research

**FRIDAY, JULY 5** 

Chair: Dr. Xiaokun Wang, Associate Professor, Rensselaer Polytechnic Institute, USA Coordinator: Dr. Zhibin Li, Professor, Southeast University, China

14:00-17:30 303A+B

ТІМЕ	PROGRAM
14:00 – 14:10	Welcome and Opening Remarks Dr. Zhiyuan Liu, Professor, Southeast University, China
14:10 – 14:30	Dynamic Traffic Model and Dispatching Control Scheme for Urban Road Network with Ride Sharing Services Dr. Nan Zheng, Senior Lecturer, Monash University, Australia
14:30 – 14:50	A Generic Simulation Platform for Cooperative Adaptive Cruise Control Dr. Jia Hu, Professor, Tongji University, China
14:50 – 15:10	Integration of Public Transit with Emerging Mobility Systems Dr. Alireza Khani, Assistant Professor, University of Minnesota, USA
15:10 – 15:30	Cooperative Merging to Break the Roadway Capacity Limits of Platooning Systems Dr. Meng Wang, Assistant Professor, Delft University of Technology, Netherlands
15:30 – 15:50	Tea/Coffee Break
15:50 – 16:10	Temporal Change in the Driving Performance of Professional Driver Dr. Tony Sze, Assistant Professor, The Hong Kong Polytechnic University, China
16:10 – 16:30	Robust Local and String Stability for A Decentralized Car Following Control Strategy for Connected Automated Vehicles Dr. Yang Zhou, University of Wisconsin-Madison, USA
16:30 – 16:50	Spatiotemporal Modeling in Urban Transportation Dr. Lijun Sun, Assistant Professor, McGill University, Canada
16:50 – 17:10	Cooperative Adaptive Cruise Control for Connected Autonomous Vehicles by Factoring Communication-Related Constraints Dr. Siyuan Gong, Associate Professor, Chang'an University, China
17:10 - 17:30	Spatiotemporal Assessment of Pedestrian Air Pollutant Exposure at Signalized Intersection Dr. Chengcheng Xu, Associate Professor, Southeast University, China
17:30 - 17:50	High-Resolution Large-Scale Vehicle Trajectory Extraction from Unmanned Aerial Vehicle Videos Dr. Zhibin Li, Professor, Southeast University, China



### **Opening Ceremony**

Moderator: Dr. Pan Liu, Professor, Vice President, Southeast University, China Coordinator: Dr. Zhiyuan Liu, Professor, Southeast University, China **SATURDAY, JULY 6** 8:30 -10:00 Zijin Hall / 紫金厅

ТІМЕ	PROGRAM
8:30 - 8:40	Anniversary Promotional Film for the Transportation Discipline in China
8:40 - 8:45	Dr. Wei Zuo, Secretary of CPC, Southeast University
8:45 – 8:50	Dr. Xiaoming Liu, Vice Minister, Ministry of Transport, People's Republic of China
8:50 – 8:55	Representative of Jiangsu Province Government
8:55 – 9:00	Representative of Nanjing City Government
9:00 – 9:05	Dr. Lei Zhang, CICTP2019 Conference, COTA President, University of Maryland
9:05 – 9:10	COTA-TRB Collaboration Agreement Signing Ceremony, Neil Pedersen (via Video), Transportation Research Board Executive Director
9:10 – 9:15	ASCE Partnership Appreciation, ASCE TD&I President Yinghai Wang & ASCE TD&I Director, Muhammad Amer
9:15 – 9:20	Presentation of the COTA Lifetime Achievement Award
9:20 – 10:00	Photographing and Coffee Break

# **Keynote Session**

Chair: Dr. Lei Zhang, President of COTA, Professor, University of Maryland, USA10:00 – 12:05Coordinator: Dr. Wenbo Zhang, Assistant Professor, Southeast University, ChinaZijin Hall / 紫金厅

TIME	PROGRAM
10:00 - 10:25	Collaborative Development of Rail Transit in Metropolitan Area Dr. Xiangsheng Chen, Member of the Chinese Academy of Engineering, Professor, Shenzhen University, China
10:25 - 10:50	The Future of the US Interstate Highway System Dr. Michael Walton, Member of the U.S. National Academy of Engineering (NAE), Professor, The University of Texas at Austin, USA
10:50 - 11:15	New Advances in Transportation Safety Research Dr. Tarek Sayed, Fellow of the Canadian Academy of Engineering, Professor, University of British Columbia, Canada
11:15 - 11:40	Connected and Autonomous Transportation: Perspectives from Small- and Medium-Sized Metropolitan Areas of the United States Dr. Kumares Sinha, Member of the U.S. National Academy of Engineering (NAE), Professor, Purdue University, USA
11:40 – 12:05	Transit Fightback: Pushback on Technology Hype for Stronger City Futures Dr. Graham Currie, Fellow of Academy of Technology Science and Engineering (ATSE), Professor, Monash University, Australia

# **Data Motivation • Future Intelligence**

### (Supply Chain Design and Optimization)

# **SATURDAY, JULY 6**

8:30 – 12:30 Yangtze Room / 扬子厅

ТІМЕ	PROGRAM
8:00 - 8:30	Warm-up
8:30 - 8:40	Speakers Introduction by the Moderator & Opening Remarks The Ministry of Transport, China
8:40 - 9:05	Smart Supply ChainTheoretical Study and Practice Mingke He, Vice Principal, Beijing Wuzi University, China
9:05 - 9:30	Big Data-based Supply Chain Optimization Analysis Yugang Yu, Dean, University of Science and Technology of China, China
9:30 - 9:55	Enterprise Supply Chain Emulational Decision-making Lu Qin, Associate Professor, Beijing Jiaotong University
9:55 - 10:20	Supply Chain Transformation Motivated by Interconnection and Technological Progress Huanling Pu, Former General Manager of Supply Chain, Sany Heavy Industry, China
10:20 - 10:30	Tea/Coffee Break
10:30 - 10:55	Using Supply Chain Models to Build Enterprise Core Competitiveness Ping Ding, Director of Supply Chain Solution, LLamasoft, China
10:55 - 11:20	Supply Chain Professional Capacity Model and Attempts on Building Professional Training System Zhaohe Su, Vice General Manager, Beijing Logis Technology Co., Ltd, China
11:20 - 11:40	2019 Global Supply Chain Modeling Contest Plan Release Signing Ceremony by Professional Qualification Authority, Ministry of Transport & Beijing Logis Technology Co., Ltd
11:40 - 12:20	Roundtable Discussion: Supply Chain Designing and Optimization & Technological Professionals Development
12:20 - 12:30	Closing Remarks



## **Government Forum for Transportation Policy**

Chair: Mr. Shaojun Shen, Professional Qualification Authority of Ministry of Transport, China Coordinator: Dr. Xuedong Hua, Assistant Professor, Southeast University, China

# SATURDAY, JULY 6

13:30-18:00 Yangtze Room / 扬子厅

TIME PROGRAM

### **Meet the Editors-in-Chief**

Lhair: Dr. Hai Yang, Professor, The Hong Kong University of Science and Technology, China 15:50 Coordinator: Dr. Chen Wang, Associate Professor, Southeast University, China 30		15:50-17:40 302A+B
ТІМЕ	PROGRAM	
15:50 – 15:55	Opening Remarks and Introduction	
15:55 – 16:10	Dr. Yafeng Yin, Editor-in-Chief of Transportation Research Part C	
16:10 – 16:25	Dr. Hong Lo, Co-Editor-in-Chief of Transportmetrica B	
16:25 – 16:40	Dr. Qiang Meng, Co-Editor-in-Chief of Transportation Research Part E	
16:40 – 16:55	Dr. S.C. Wong, Co-Editor-in-Chief of International Journal of Sustainable Transportation	
16:55 –17:10	Dr. Asad Khattak, Editor-in-Chief of Journal of Intelligent Transportation Systems	
17:10 - 17:40	Q&A	

# Forum of Committee of Youth Scientific & Technological Professionals (CYSTP) SATURDAY, JULY 6

13:30-16:00

14:00-17:30

203

210

Chair: Dr. Chaozhong Wu, Professor, Wuhan University of Technology, China Coordinator: Dr. Min Yang, Professor, Southeast University, China

TIME	PROGRAM
13:30 – 13:40	Welcome and Opening Remarks Dr. Pan Liu, Professor, Vice President of Southeast University, China
13:40 – 14:10	New Notion for China Transportation Association Development Dr. Chunzhi Zhang, Vice President of China Transportation Association, China
14:10 – 14:30	Work Summary and Plan of CYSTP Dr. Di Zhang, Professor, Wuhan University of Technology, China
14:30 – 15:00	Preparation for the 13th National Conference of Young Scholars in the Field of Transportation Dr. Guozhu Cheng, Professor, Northeast Forestry University, China
15:00 – 16:00	Summary and Discussion Dr. Chaozhong Wu, Director of CYSTP, Professor, Assistant President of Wuhan University of Technology, China

### Infrastructure Sustainability - Academic Seminar

Chair: Mr. Chen Ling, Vice President, JSTI Group Coordinator: Ms. Gui Su, Planning Research Institute, JSTI Group

ТІМЕ	PROGRAM
14:00 – 14:10	Welcome and Opening Remarks Mr. Chen Ling, Vice President, JSTI Group, China
14:10 – 14:40	Research and Application of New Technology of Bridge Inspection and Monitoring in China Dr. Yufeng Zhang, Vice President of Academy of Transportation Sciences, JSTI Group, China
14:40 – 15:10	Introduction of the Method of Sustainable Urban Mobility Plan Yingjie Wu, Senior Specialist of GIZ Group, China
15:10 – 15:40	Funds for Sustainable Development of Highways in China Li Xu, Zhong Lu Jiao Ke Group (Executive Dean of New Oriental Transportation Think Tank), China
15:40 – 16:00	Tea/Coffee Break
16:00 – 16:30	Current Situation and Consideration of Highway Asset Management in China. Dr. Rongji Cao, Chief Engineer, JSTI Group, China
16:30 – 17:00	Reflections on Federal Road Asset Management in the United States Dr. Jun Wang, Federal Highway Administration, USA
17:00 – 17:20	Questioning and Communication
17:20 – 17:30	Summary
17:30	END



13:30-15:30

Zhongshan Ballroom / 钟山厅

# Plenary Session 1: Innovation in Multimodal Transportation Systems SATURDAY, JULY 6

Chair: Dr. Hong Lo, Professor, The Hong Kong University of Science and Technology, China Coordinator: Dr. Bojian Zhou, Associate Professor, Southeast University, China

ТІМЕ	PROGRAM
13:30 – 13:50	Recent Development of Stochastic User Equilibrium Models Dr. Anthony Chen, Professor, The Hong Kong Polytechnic University, China
13:50 – 14:10	Metro System Disruption Management: Initiation of Substitute Bus Services under Uncertain System Recovery Time Dr. Hong Lo, Professor, The Hong Kong University of Science and Technology, China
14:10 – 14:30	Modeling the Effects of Competition in Taxi Markets: Recent Advances Dr. Satish Ukkusuri, Professor, Purdue University, USA
14:30 – 14:50	Traffic System Performance Evaluation: A Polynomial-approximation-based BPR-x Model Dr. Xuesong Zhou, Professor, Arizona State University, USA
14:50 – 15:10	An Efficiency Paradox of Uberization Dr. Yu (Marco) Nie, Professor, Northwestern University, USA
15:10 – 15:30	Two Extensions for the Airline Fleet Assignment Problem: Models and Algorithms Dr. Zhe Liang, Professor, Tongji University, China

## **Plenary Session 2: Infrastructure Innovations**

Chair: Dr. Bjorn Birgisson, Professor, Texas A&M University, USA	13:30-15:35
Coordinator: Dr. Qiao Dong, Professor, Southeast University, China	302A+B

TIME	PROGRAM
13:30 – 13:55	Innovation: The Key to the Highway Infrastructure of Tomorrow Dr. Charles Schwartz, Professor, University of Maryland, USA
13:55 – 14:20	Data Automation for Pavement Surface Surveys: Sensors and AI based Solutions Dr. Kelvin Wang, Professor, Oklahoma State University, USA
14:20 – 14:45	Resilience Modeling of Disrupted Urban Mobility Subjected to Hazards-From Infrastructure to System Dr. Suren Chen, Professor, Colorado State University, USA
14:45 – 15:10	Interaction and Safety of Vehicles and Their Supporting Bridge in Harsh Environments Dr. Steve C.S. Cai, Professor, Louisiana State University, USA
15:10 – 15:35	Hurricane Hazards and Traffic Congestions During Hurricane Evacuations in Florida Dr. Wenrui Huang, Professor, Florida State University, USA

# **Plenary Session 3: Emerging Trends in Transportation**

Chair: Dr. Yu Zhang, Associate Professor, University of South Florida, USA Coordinator: Dr. Dawei Li, Associate Professor, Southeast University, China

# **SATURDAY, JULY 6**

15:50-18:10 Zhongshan Ballroom / 钟山厅

ТІМЕ	PROGRAM
15:50 – 16:10	Customize Machine Learning for Transportation Applications Dr. Yinhai Wang, Professor, University of Washington, USA
16:10 – 16:30	Paradigm Shift towards Smart and Healthy Cities—Systems Innovation at the Nexus of Transportation, Environment, and Public Health Dr. Huaizhu Oliver Gao, Professor, Cornell University, USA
16:30– 16:50	Applying A "Gossip-Based Algorithm" to Simulate Social Interactions in Driving Decisions Dr. Asad Khattak, Professor, University of Tennessee, USA
16:50– 17:10	A General Theory of Access Dr. David Levinson, Professor, University of Sydney, Australia
17:10 – 17:30	Emerging Trends in Microtransit and Micromobility: Benefits to Consumers, A Few Promising Directions and Many Terrible Ideas Dr. Amelia C. Regan, Professor, University of California, Irvine, USA
17:30 – 17:50	Energy-Optimized Routing with Application in Delivery Drones Dr. Ignatius Fomunung, Professor, University of Tennessee Chattanooga, USA
17:50 - 18:10	From Data to Information: Integrating Hard Data with Soft Information Dr. Yueyue Fan, Professor, University of California, Davis, USA



15:50-17:50

303A

### **Invited Session 1: ITS in Practices**

**SATURDAY, JULY 6** 

Chair: Dr. Guohui Zhang, Associate Professor, University of Hawai'i at Manoa, USA Coordinator: Dr. Zhibin Li, Professor, Southeast University, China

ТІМЕ	PROGRAM
15:50 –16:10	Real-Time Movement-Based Traffic Volume Prediction for Signalized Intersections Dr. Jeff Ban, Associate Professor, University of Washington, USA
16:10 -16:30	Clustering based Online Coordinated In-Vehicle Routing Dr. LiLi Du, Associate Professor, University of Florida, USA
16:30 –16:50	Modeling Spatial and Temporal Impact of Special Events on Roadway Network Around the Activity Center Dr. Ping Yi, Professor, University of Akron, USA
16:50 –17:10	Optimal Variable Speed Limit Control at a Lane Drop Bottleneck: Tabu Search Approach Dr. Wei Fan, Professor, University of North Carolina at Charlotte, USA
17:10 - 17:30	On the Impact of Prior Experiences in Car Following Models: Model Development, Computational Efficiency, Comparative Analyses and Extensive Applications Dr. Xiaobo Qu, Professor, Chalmers University of Technology, Sweden
17:30-17:50	Arterial Signal Coordination – The Cost-Effective Approach Dr. Zong Tian, Professor, University of Nevada, Reno, USA

# **Invited Session 2: Transport Network Modeling**

Chair: Dr. Jiancheng Long, Professor, Hefei University of Technology, China15:50-17:50Coordinator: Dr. Wenbo Zhang, Assistant Professor, Southeast University, China303B

TIME	PROGRAM
15:50 –16:10	A Network Flow Approach for Relocating Vehicles and Assigning Operators for Large-Scale Carsharing Systems Dr. Chi Xie, Professor, Tongji University, China
16:10 - 16:30	Optimizing Online Matching for Ride-Sourcing Services with Multi-Agent Deep Reinforcement Learning Dr. Feng Xiao, Professor, Southwestern University of Finance and Economics, China
16:30 –16:50	Dynamic System Optimum Simultaneous Route and Departure Time Choice Problems: Intersection-Movement- based Formulations and Comparisons Dr. Jiancheng Long, Professor, Hefei University of Technology, China
16:50 –17:10	Trial-and-Error Operation Schemes for Bimodal Transport Systems Dr. Renyong Guo, Professor, Beihang University, China
17:10 - 17:30	Integrated Optimization of Charging Facility Deployment and Vehicle Management for Electric Car-sharing Systems Dr. Yang Liu, Assistant Professor, National University of Singapore, Singapore
17:30 –17:50	Evacuating the Metro Passengers with Urban Bus System under Uncertain Disruption Recovery Time and Heterogeneous Risk-Taking Behavior Dr. Zhijia Tan, Professor, Dalian Maritime University, China

# Invited Session 3: Operation and Management for Autonomous Vehicles and Smart Transportation

**SATURDAY, JULY 6** 

15:50-17:50 201

15:50-18:10

202

Chair: Dr. Huizhao Tu, Professor, Tongji University, China Coordinator: Dr. Chen Wang, Associate Professor, Southeast University, China

TIME	PROGRAM
15:50 –16:10	Transportation, Air Pollution and Human Exposure Dr. Zhongren Peng, Professor, University of Florida, USA
16:10 –16:30	CAV-Data-Driven Self-Adaptive Traffic Signal Control Dr. Heng Wei, Professor, University of Cincinnati, USA
16:30 –16:50	Safety Risk Assessment of Autonomous Vehicles Road Testing Dr. Huizhao Tu, Professor, Tongji University, China
16:50 –17:10	Violation Behavior and Resilient Traffic Flow Status Dr. Junhua Wang, Professor, Tongji University, China
17:10 –17:30	Control Design for Stable Connected Cruise Control Systems to Enhance Traffic Safety Dr. Hao Wang, Professor, Southeast University, China
17:30 –17:50	Designing Corridor Systems with Modular Vehicles Enabling En-Route Docking: Continuous and Discrete Modeling Methods Dr. Xiaopeng Li, Associate Professor, University of South Florida, USA

### **Invited Session 4: Traffic Safety**

Chair: Dr. Yongjun Shen, Professor, Southeast University, China Coordinator: Dr. Yongjun Shen, Professor, Southeast University, China

TIME PROGRAM Road Safety Research: Where to Go? 15:50 - 16:10Dr. Helai Huang, Professor, Central South University, China Risk Factors Identification and Probability Prediction of Freeway Roadside Crashes Based on CHAID **Decision Tree and Bayesian Network** 16:10 - 16:30 Dr. Guozhu Cheng, Professor, Northeast Forestry University, China Safety Evaluation of Connected Vehicle System for Human Factors 16:30 - 16:50 Dr. Xiaohua Zhao, Professor, Beijing University of Technology, China **Brain Computer Interfaces** 16:50 - 17:10 Dr. Jing Jin, Professor, East China University of Science and Technology, China Risk Analysis and Traffic Safety Improvement of Heavy Trucks driving on Long Slopes of Mountain Highways 17:10 - 17:30 Dr. Jin Xu, Professor, Chongging Jiaotong University, China Mobile Phone Use While Cycling: A Study based on the Theory of Planned Behavior 17:30 - 17:50 Dr. Zhongxiang Feng, Professor, Hefei University of Technology, China Abnormal Driving Behavior Identification and Analysis based on Naturalistic Driving Test 17:50 - 18:10Dr. Yongfeng Ma, Associate Professor, Southeast University, China



### **Invited Session 5: Intelligent & Green Highway**

Chair: Dr. Tao Ma, Professor, Southeast University, China Coordinator: Dr. Tao Ma, Professor, Southeast University, China **SATURDAY, JULY 6** 

15:50-17:55 206

TIME	PROGRAM
15:50 –16:15	Prediction of Skid Resistance Performance of Concrete Pavement Dr. Dawei Wang, Professor, Harbin Institute of Technology, China
16:15 –16:40	Effects of In-Place Volumetric Properties on Field Rutting and Cracking Performance of Asphalt Pavement Dr. Weiguang Zhang, Associate Professor, Southeast University, China
16:40 –17:05	Precast Smart Pavement for Smart Road Dr. Hongduo Zhao, Professor, Tongji University, China
17:05 –17:30	Implementing a Visco-Elastic-Plastic Model for Rutting Prediction Dr. Tao Ma, Professor, Southeast University, China
17:30 –17:55	The Changes of Climatic Conditions Impacting Highways in China Dr. Yinghao Miao, Associate Professor, University of Science and Technology Beijing, China

# **Invited Session 6: Public Transit**

Chair: Dr. Lin Wang, Professor, Research Institute of Highway Ministry of Transport, China Coordinator: Dr. Min Yang, Professor, Southeast University, China 15:50-17:50 207

ТІМЕ	PROGRAM
15:50 –16:10	System Design of eVTOL On-Demand Service for Multimodal Urban Mobility Dr. Yu Zhang, Associate Professor, University of South Florida, USA
16:10 –16:30	Bus Lane Operation and Bus Signal Priority with Connected Vehicles Dr. Wanjing Ma, Professor, Tongji University, China
16:30 –16:50	Framework and Roadmap Design of Developing MaaS in China Dr. Xianglong Liu, Associate Professor, China Academy of Transportation Science, China
16:50 –17:10	Key Technologies of Ticketing and Information Service for Intermodal Transportation of Intercity Dr. Min Yang, Professor, Southeast University, China
17:10 –17:30	Stability Identification & classification of Public Transport Commute Passengers based on Association Rules Dr. Jiancheng Weng, Associate Professor, Beijing University of Technology, China
17:30 - 17:50	Jointly Optimizing of Scheduling and Capacity in Mixed Traffic with Autonomous and Human-driven Buses: A Dynamic Programming Approach Dr. Xiaolei Ma, Associate Professor, Beihang University, China

# **Invited Session 7: Transport Geography and GIS**

# **SATURDAY, JULY 6**

Chair: Dr. Hu Shao, Professor, China University of Mining and Technology, China Coordinator: Dr. Xiao Fu, Associate Professor, Southeast University, China

15:50-17:55 208

TIME	PROGRAM
15:50 –16:15	An Energy-Efficient Reliable Path Finding Algorithm for Stochastic Road Networks with Electric Vehicles Dr. Hu Shao, Professor, China University of Mining and Technology, China
16:15 –16:40	Network User Equilibrium of Battery Electric Vehicles Considering Flow-Dependent Electricity Consumption Dr. Ziqi Song, Assistant Professor, Utah State University, USA
16:40 –17:05	A Markov Process Model on Evaluating the Transit Vehicle Control Strategies Dr. Qiong Tian, Professor, Beihang University, China
17:05 –17:30	Modeling Double Time-Scale Travel Time Processes with Application to Assessing the Resilience of Transportation Systems Dr. Renxin Zhong, Associate Professor, Sun Yat-Sen University, China
17:30 –17:55	Exploring the Relationship between Urban Built Environment and the Vehicle Emission Effects of Road Pricing Policies Dr. Shaopeng Zhong, Associate Professor, Dalian University of Technology, China

### **Invited Session 8: Port and Waterway Engineering**

Chair: Dr. Lu Zhen, Professor, Shanghai University, China15:50-17:50Coordinator: Dr. Sudong Xu, Professor, Southeast University, China209

TIME	PROGRAM
15:50 –16:10	Green technology Adoption for Fleet Deployment in A Shipping Network Dr. Lu Zhen, Professor, Shanghai University, China
16:10 –16:30	Methodologies for Estimating Shipping Accident Frequency and Consequence Dr. Jinxian Weng, Professor, Shanghai Maritime University, China
16:30 –16:50	Liner shipping Service Planning under Sulfur Emission Regulations Dr. Shuaian Wang, Associate Professor, The Hong Kong Polytechnic University, China
16:50 –17:10	Risk Evaluation for Ship Navigation Security under Destructive Wind Dr. Sudong Xu, Professor, Southeast University, China
17:10 –17:30	Rapid Inventory of Ship Exhaust Emissions in Inland Waterway Transport: A Case Study for the Jiangsu Section of the Yangtze River Dr. Xuejun Feng, Professor, Hohai University, China
17:30 –17:50	Optimal Design for the Intercontinental Liner Container Shipping Service Dr. Yadong Wang, National University of Singapore, Singapore



### **Enterprise Exhibition**

Coordinator: Dr. Fei Wang, Associate Professor, Southeast University, China

# **SATURDAY, JULY 6**

13:30-18:00 Third Floor Hallway / 三楼走廊

### Plenary Session 4: Emerging Transportation Technologies

Chair: Dr. Jizhen Guan, Secretary General, China Intelligent Transportation Systems Association, China Coordinator: Dr. Chengcheng Xu, Associate Professor, Southeast University, China

08:30-10:30 Yangtze Room / 扬子厅

**SUNDAY, JULY 7** 

TIME	PROGRAM
8:30 - 8:50	Road Traffic Safety Needs A Rule Enlightenment Dr. Changjun Wang, Director, Traffic Management Research Institute of the Ministry of Public Security, China
8:50 - 9:10	Transportation 5.0: Toward Parallel Transportation Intelligence and Smart Mobility in Cyber-Physical-Social Space Dr. Feiyue Wang, Professor, Chinese Academy of Sciences, China
9:10 - 9:30	The Challenge, Opportunity and Countermeasure of Urban Traffic Development in China Dr. Wei Wang, Professor, Southeast University, China
9:30 - 9:50	Strategic Goal and Realization Pathway of Strong Transportation in China Dr. Huapu Lu, Professor, Tsinghua University, China
9:50 - 10:10	Intelligent Transportation Infrastructure Dr. Yiqiu Tan, Professor, Harbin University of Technology, China
10:10 - 10:30	Multi-modal Traffic Structure Regulation Method for Integrated Network Dr. Dianhai Wang, Professor, Zhejiang University, China
#### Plenary Session 5: Big Data and Mobility

Chair: Dr. Jianming Ma, Texas Department of Transportation, USA Coordinator: Dr. Dawei Li, Associate Professor, Southeast University, China

# **SUNDAY, JULY 7**

08:30-10:30 Zhongshan Ballroom / 钟山厅

TIME	PROGRAM
8:30 - 8:50	Optimization of Multi-Type Sensor Locations for Simultaneous Estimation of Link Travel Times and Origin- Destination Demands Dr. William Lam, Professor, The Hong Kong Polytechnic University, China
8:50 - 9:10	Development Perspectives and Roadmap of An Integrated Connected Automated Vehicle Highway System Dr. Bin Ran, Professor, University of Wisconsin at Madison, USA
9:10 - 9:30	Passively Collected Big Data for Transportation Applications Dr. Lei Zhang, Professor, University of Maryland, College Park, USA
9:30 - 9:50	Naturalistic Driving Eco-Metrics and Driver Feedback Dr. Nagui Rouphail, Professor, North Carolina State University, USA
9:50 - 10:10	Active Traffic Management Strategies at Expressway Merging Sections – A Driving Simulator Study Dr. Tom Brijs, Professor, Hasselt University, Belgium
10:10 - 10:30	Integration of Probe Data and Infrastructure Based Performance Measures Dr. Darcy Bullock, Professor, Purdue University, USA

## **Plenary Session 6: Pavement Design**

Chair: Dr. Linbing Wang, Professor, Virginia Polytechnic Institute and State University, USA	08:30-10:10
Coordinator: Dr. Tao Ma, Professor, Southeast University, China	302A+B

TIME	PROGRAM
8:30 - 8:50	Engineering Asphalt Paving Mixtures with Recycled Asphalt Shingles Dr. Baoshan Huang, Professor, University of Tennessee, USA
8:50 - 9:10	New Mechanics-Based Pavement Analysis System Dr. Bjorn Birgisson, Professor, Texas A&M University, USA
9:10 - 9:30	Integration of Experimentation Modeling and Data Analytics for MGI-based Civil Infrastructure Material Design Dr. Linbing Wang, Professor, Virginia Polytechnic Institute and State University, USA
9:30 - 9:50	Asphalt Mixture Design and Construction Practices Affecting Durability of Flexible Pavements Dr. Louay N. Mohammad, Professor, Louisiana State University, USA
9:50 - 10:10	Bio-Inspired Adaptive Transportation Infrastructure for Climate Resiliency Dr. Xiong Yu, Professor, Case Western Reserve University, USA



#### **Invited Session 9: Bridge and Tunnel Engineering**

**SUNDAY, JULY 7** 

Chair: Steve C.S. Cai, Professor, Louisiana State University, USA Coordinator: Dr. Wen Xiong, Associate Professor, Southeast University, China

08:30-10:00 303A+B

TIME	PROGRAM
8:30 - 8:45	Wind-Wave-Current Joint Action and its Effect on the Vehicle-bridge Coupling Vibration Dr. Yongle Li, Professor, Southwest Jiaotong University, China
8:45 - 9:00	Statistical Analysis of Three Dimensional Thermal Gradients for Wide Girders of Arch Bridge Dr. Tinghua Yi, Professor, Dalian University of Technology, China
9:00 – 9:15	Running safety analysis of high-speed train-bridge systems subjected to strong winds Dr. Xuhui He, Professor, Central South University, China
9:15 - 9:30	Nonlinear and nonstationary aerodynamic characteristics of a typical box girder under Forced Vibration Condition Dr. Lin Zhao, Professor, Tongji University, China
9:30 - 9:45	Study on Bridge Maintenance Cost under Different Axle Load Limits Dr. Lu Deng, Professor, Hunan University, China
9:45 - 10:00	Study on Flood-Induced Bridge Collapse and Its Multi-Field Coupling Simulation Dr. Wen Xiong, Associate Professor, Southeast University, China

#### **Invited Session 10: Technology Frontiers**

Chair: Dr. Heng Wei, Professor, University of Cincinnati, USA10:20-12:00Coordinator: Dr. Xiao Fu, Associate Professor, Southeast University, China203

TIME	PROGRAM
10:20 - 10:40	Rhythmic Control Scheme: Coordinating the Conflict Points in Road Intersections Dr. Meng Li, Associate Professor, Tsinghua University, China
10:40 - 11:00	Convergence of Social, Natural, and Engineered Systems through an Agent-based Evacuation Modeling Framework for Improved Community and Infrastructure Resilience Dr. Haizhong Wang, Associate Professor, Oregon State University, USA
11:00 - 11:20	A Q-learning-based Foresighted Approach to Ego-efficient Lane Changes of CAVs on Freeways Dr. Yibing Wang, Professor, Zhejiang University, China
11:20 - 11:40	A General Formulation for Multi-modal Dynamic Traffic Assignment Considering Multi-class Vehicles, Public Transit and Parking Dr. Sean Qian, Associate Professor, Carnegie Mellon University, USA
11:40 - 12:00	Automated Personal Transit (APT): the Business Model for Driverless Vehicles Dr. Rongfang Liu, Professor, New Jersey Institute of Technology, USA

#### **Invited Session 11: Pavement Design**

# **SUNDAY, JULY 7**

Chair: Dr. Baoshan Huang, Professor, University of Tennessee, USA Coordinator: Dr. Qiao Dong, Professor, Southeast University, China

10:20-12:00 302A+B

TIME	PROGRAM
10:20 - 10:40	Fracture Behavior of 2 Lift Concrete Pavement in Seasonal Frozen Area Dr. Changjun Zhou, Associate Professor, Dalian University of Technology, China
10:40 - 11:00	Application of Polymer Optical Fibers for Monitoring Cracks in Asphalt Pavement Dr. Jiupeng Zhang, Associate Professor, Chang'an University, China
11:00 - 11:20	Design Method of Durable Asphalt Pavement with Increasing Life of Structural Course Layer by Layer Dr. Songtao Lv, Professor, Changsha University of Science and Technology, China
11:20 - 11:40	Kinetics of Self-Healing of Asphalt Mixtures Dr. Xue Luo, Professor, Zhejiang University, China
11:40 - 12:00	Dynamic Response of Asphalt Pavement: from Analytical Solution to Field Monitoring Dr. Zejiao Dong, Professor, Harbin Institute of Technology, China

## **Invited Session 12: Connected and Automated Transportation Systems**

Chair: Dr. Jian Zhang, Associate Professor, Southeast University, China 10 Coordinator: Dr. Chengcheng Xu, Associate Professor, Southeast University, China		10:20-12:00 202
ТІМЕ	PROGRAM	
10:20 - 10:40	Swarm Intelligence for Cooperative Vehicle Infrastructure Systems Dr. Daxin Tian, Professor, Beihang University, China	
10:40 - 11:00	Communication Delay Boundary Modelling for CACC String Stability Dr. Zhigang Xu, Professor, Chang'an University, China	
11:00 - 11:20	Macro and Micro Traffic Flow Modeling, Simulation and Analyses under V2V Environments Dr. Liang Zheng, Associate Professor, Central South University, China	
11:20 - 11:40	Driving Environment Complexity Evaluation for Autonomous Vehicles Dr. Rongjie Yu, Associate Professor, Tongji University, China	
11:40 - 12:00	Experimental Study on Human Factors and Traffic Safety in Connected and Automated Vehicle Dr. Nengchao Lyu, Associate Professor, Wuhan University of Technology, China	



#### Invited Session 13: Transportation Policy, Planning and Modeling

**SUNDAY, JULY 7** 

10:20-12:00 201

Chair: Enjian Yao, Professor, Beijing Jiaotong University, China Coordinator: Dr. Dawei Li, Associate Professor, Southeast University, China

ТІМЕ	PROGRAM
10:20 - 10:40	From Transit-Oriented Development to Transit-Supportive Comprehensive Development: An Exploratory Research based on Non-Traditional Data Dr. Jiangping Zhou, Associate Professor, The University of Hong Kong, China
10:40 - 11:00	Local Government's Challenges and Opportunities in New Mobility Dr. Honglong Li, Program Manager, City of Honolulu, Hawaii, USA
11:00 - 11:20	Elderly People's Travel Behaviour Analysis during the Morning Peak Hours in the Context of the Free Bus Programme Dr. Enjian Yao, Professor, Beijing Jiaotong University, China
11:20 - 11:40	Metropolitan Seattle On the Cutting Edge Dr. Shuming Yan, Manager, City of Bellevue, Washington, USA
11:40 - 12:00	An Assessment of Hong Kong's Spatial Planning in New Towns: Job Accessibility, Transport Mobility, and Intra- Household Joint Travel Dr. Ying (Sylvia) He, Associate Professor, The Chinese University of Hong Kong, China

#### **Invited Session 14: Urban Planning and Transport Planning**

Chair: Dr. Fei Yang, Professor, Southwest Jiaotong University, China10:20-12:00Coordinator: Dr. Min Yang, Professor, Southeast University, China206

TIME	PROGRAM
10:20 - 10:40	The Reconstruction of Theory, Practice and Logic—Rethinking A Few Traffic Problems Dr. Tao Zhou, Professor, Chongqing Transport Planning and Research Institute, China
10:40- 11:00	China Bus System of Future Planning Research and Progress Dr. Haode Liu, Professor, China Academy of Transportation Science, China
11:00 - 11:20	Theories and Methods for Transit-Oriented Multimodal Evacuation Planning Dr. Gang Ren, Professor, Southeast University, China
11:20 - 11:40	Research on Connection Transportation Organization of Urban Rail Transit Dr. Wenquan Li, Professor, Southeast University, China
11:40 - 12:00	The Emerging Territorial Spatial Planning in China and its Impacts on Transportation Planning Dr. Jian Li, Associate Professor, Tongji University, China

## **Invited Session 15: Smart Transportation and Data Analytics**

**SUNDAY, JULY 7** 

Chair: Dr. Xiaopeng Li, Associate Professor, University of South Florida, USA Coordinator: Dr. Zhibin Li, Professor, Southeast University, China

10:20-12:00 207

TIME	PROGRAM
10:20 - 10:40	Computational Time Geography for Urban and Transport Analysis in the Era of Big Data Dr. Biyu Chen, Professor, Wuhan University, China
10:40- 11:00	Exploring Urban Air Quality with MAPS – Mobile Air Pollution Sensing Dr. Ke Han, Associate Professor, Imperial College London, UK
11:00 - 11:20	Deep Learning Based Congestion Prediction Using Probe Trajectory Data Mr. Ken Yang, Senior System Engineer, AECOM, USA
11:20 - 11:40	Demand Forecasting and Operations Management for On-Demand Ride Services Dr. Xiqun Chen, Professor, Zhejiang University, China
11:40 - 12:00	Data-Driven Solutions to Arterial Operations Issues Dr. Yao-Jan Wu, Associate Professor, University of Arizona, USA

#### **Invited Session 16: Transit Operation and Management**

Chair: Dr. Wei Shangguan, Professor, Beijing Jiaotong University, China10:20-12:00Coordinator: Dr. Xu Qu, Associate Professor, Southeast University, China208

ТІМЕ	PROGRAM
10:20 - 10:40	School Bus Operations Optimization Dr. Ali Haghani, Professor, University of Maryland, USA
10:40- 11:00	Strategic Planning of Battery Electric Bus System Dr. Cathy Liu, Assistant Professor, University of Utah, USA
11:00 - 11:20	An Investigation on Hazard of Passenger Loyalty to Customized Bus Dr. Kai Liu, Professor, Dalian University of Technology, China
11:20 - 11:40	The Hyperloop at the University of Cincinnati Dr. Shaaban Abdallah, Professor, University of Cincinnati, USA
11:40 - 12:00	Operation Optimization and Prognostic Health Management for Life-Cycle High Speed Train Control System of China Dr. Wei Shangguan, Professor, Beijing Jiaotong University, China



#### **Invited Session 17: Infrastructure Materials and Maintenance**

**SUNDAY, JULY 7** 

Chair: Dr. Weiguang Zhang, Associate Professor, Southeast University, China Coordinator: Dr. Weiguang Zhang, Associate Professor, Southeast University, China 10:20-12:00 303A+B

10:20-12:10

209

TIME	PROGRAM
10:20 - 10:40	Moisture Seepage Characteristics in Asphalt Mixture using X-Ray Imaging Technology Dr. Huining Xu, Associate Professor, Harbin University of Technology, China
10:40- 11:00	Development of High-Toughness Ultra-Thin Friction Course Dr. Jiangmiao Yu, Associate Professor, South China University of Technology, China
11:00 - 11:20	Sustainable materiALS FOR SMArt Road Dr. Xingyi Zhu, Professor, Tongji University, China
11:20 - 11:40	Towards Green Asphalt Materials with Lower VOCs Emission Dr. Yue Xiao, Associate Professor, Wuhan University of Technology, China
11:40 - 12:00	Research on Key Technology of Vehicle Bump Test for Small and Medium Span Bridges Dr. Guojin Tan, Professor, Jilin University, China

#### Invited Session 18: High-Speed Railway

Chair: Xianhua Chen, Professor, Southeast University, China Coordinator: Dr. Lei Zhang, Professor, Southeast University, China

**PROGRAM** TIME Intelligent Construction Technology for High-Speed Railway Subgrade 10:20 - 10:40 Dr. Degou Cai, Associate Professor, China Academy of Railway Sciences Corporation Limited, China Safety Monitoring Technology for Track Engineering of High-Speed Railway 10:40 - 10:55 Dr. Liang Gao, Professor, Beijing Jiaotong University, China Effect of Reflective Thermal Insulation Coating on Temperature Field of Ballastless Track 10:55 - 11:10 Dr. Rongshan Yang, Professor, Southwest Jiaotong University, China Research on Slab Track Irregularity and Dynamic Behavior under Frost Heave of Railway Subgrade 11:10 - 11:25 Dr. Xiaopei Cai, Professor, Beijing Jiaotong University, China Modeling and Measurement on the Vibration and Noise of Rail Transportation System 11:25 - 11:40 Dr. Xiang Liu, Professor, Central South University, China Dynamic Inspection Technology for High-Speed Railway Track 11:40 - 11:55 Dr. Xiubo Liu, Professor, China Academy of Railway Sciences Corporation Limited, China Mechanism Analysis of Post-Construction Settlement's Control Effect on Soft-Soil Subgrade for High-Speed Railway 11:55 - 12:10 Dr. Linrong Xu, Professor, Central South University, China

#### **Transportation Practitioner's Forum**

Chair: Mr. Kyle Liang, Department of Transportation, Montgomery County, Maryland, USA Coordinator: Dr. Xuedong Hua, Assistant Professor, Southeast University, China

# **SUNDAY, JULY 7**

13:30-17:00 303A+B

ТІМЕ	PROGRAM
Session I	Identification, Analysis and Correction of High-Accident Locations
13:30-13:35	Opening Remark Ping Sun, Dr. Xuesong Wang, Professor, Tongji University, China
13:35-14:05	Connectivity Analysis and Suggestion for the Sub-Center and Suburban in Beijing Ms. Chuanjiao Sun, RIOH, China
14:05-14:35	Identification and Improvements of High-Crash Locations, Case Studies Wenbin Wang, Senior Civil engineer, Tongji University, China
14:35-15:05	Traffic Engineering Design and Safety Improvements, Case Studies Ms. Mina Zeng, Shanghai Ji'an Transportation Consulting Co. Ltd., China
15:05-15:35	Measuring Traffic Congestion and Improvements in Central Business District Ms. Nale Zhao / Ms. Siyuan Hao, RIOH, China
15:35-16:05	Safety Analysis and Improvements on Long Downgrade Section Mr. Xiaoyi Mi, Bejing ZJHA Technology Co. Ltd
16:05-16:20	Coffee/Tea Break
Session II	Panel Discussion: How do We Review and Improve Intersection Operations and Safety in China? – Perspectives from Inside and Outside China
16:20-17:00	Traffic Operations and Safety Improvements on Highways and Accesses Panelist: Xuesong Wang, Tongji University Wenbin Wang, Tongji University  Kyle Liang, Montgomery Co.



## Transportation Innovation Perspective from South Korea: China-Korea Transport Forum

## SUNDAY, JULY 7 13:30-15:30

Yangtze Room / 扬子厅

Chair: Dr. Keechoo Choi, Chair, Metropolitan Transport Commission, South Korea & Dr. Lei Zhang, COTA President, University of Maryland, USA

Coordinator: Dr. Jian Zhang, Associate Professor, Southeast University, China

ТІМЕ	PROGRAM
	Dr. Keechoo Choi, Chair, Metropolitan Transport Commission, South Korea
	Dr. Jeon Kyoseok, Ajou University, South Korea
	Dr. Sigon Kim, Profesor, President, Korean Society of Transportation, South Korea
	Dr. Taewan Kim, Korean Society of Transportation, South Korea
	Dr. Jin Chung, Korean Society of Transportation, South Korea
13:30-15:30	Dr. Lei Zhang, COTA President, University of Maryland, USA
	Dr. Yu Zhang, Associate Professor, University of South Florida, USA
	Dr. Xiaokun Wang, Associate Professor, Rensselaer Polytechnic Institute, USA
	Dr. Heng Wei, Professor, University of Cincinnati, USA
	Dr. Inhi Kim, Senior Lecturer, Monash University, Australia

#### **Workforce Development in Transportation Field**

Chair: Dr. Yinhai Wang, Professor, University of Washington, USA Coordinator: Dr. Chao Wang, Assisstant Professor, Southeast University, China

#### Plenary Session 7: Connected and Automated Vehicle

Chair: Dr. Jianyang Zheng, Maryland Department of Transportation, USA Coordinator: Dr. Hao Wang, Professor, Southeast University, China

TIME **PROGRAM** IoT for Smart Roads: The Future of ITS 13:30 - 13:50 Dr. Guogiang Mao, Professor, University of Technology Sydney, Australia A General Framework for Accelerated Testing and Evaluation of Autonomous Vehicles 13:50 - 14:10 Dr. Henry Liu, Professor, University of Michigan, Ann Arbor, USA How Large Could the Autonomous Taxi Fleets Be? 14:10 - 14:30 Dr. Kay Axhausen, Professor, ETH Zurich, Switzerland Oueue Estimation and Platoon Prediction in a Connected Environment 14:30 - 14:50 Dr. Yunlong Zhang, Professor, Texas A&M University, USA Vision for a Safe and Connected Campus Community Testbed at the University of South Florida 14:50 - 15:10Dr. Robert Bertini, Professor, University of South Florida, USA Use of Connected Vehicle Technologies for Monitoring Passenger Vehicle Emissions 15:10 - 15:30 Dr. Scott Matthews, Professor, Carnegie Mellon University, USA

## **SUNDAY, JULY 7**

15:00-17:00 210

13:30-15:30

钟山厅

**Zhongshan Ballroom** 



Chair: Dr. Zhongxiang Feng, Professor, Hefei University of Technology, China

15:50-17:50 201

TIME **PROGRAM** Calibrating Car-following Models on Freeway Based on Naturalistic Driving Study 15:50 - 16:10 Ping Sun, Dr. Xuesong Wang, Professor, Tongji University, China Analysis on the Speed Behavior of the Helix Bridge based on Naturalistic Driving Pattern 16:10 - 16:30 Dr. Jin Xu, Professor, Chongging Jiaotong University, China Research on Pedestrian Crossing Behavior in Low-Grade Highway Segments Through Towns and Villages 16:30 - 16:50 Dr. Yongfeng Ma, Associate Professor, Southeast University, China Real-time Detection and Prediction of Driving Distraction with LSTM 16:50 - 17:10 Dr. Lanfang Zhang, Associate Professor, Tongji University, China Prediction Accuracy Improvement of Avoidance Driving Behavior Model Based On Game Theory: Introducing Jerk 17:10 - 17:30 To Refine Acceleration Dr. Zhao Zhang, Lecturer, Beihang University, China Simulation and Analysis of Kinematic Parameters of Vehicle Offset and Rear End Accident 17:30 - 17:50 Dr. Wenhui Zhang, Associate Professor, Northeast Forestry University, China

### **Technical Session 2: Public Transit**

Chair: Dr. Yusheng Ci, Associate Professor, Harbin Institute of Technology, China

TIME **PROGRAM** Assessing the Supply Volume of Dockless Bike-Sharing Using the Time–Space Consumption Model in Ningbo, China 15:50 - 16:10 Dr. Jibiao Zhou, Associate Professor, Ningbo University of Technology, China Forecasting Short-Term Entrance Passenger Flow of Urban Rail Transit Stations by the Improved Elman Neural Network 16:10 - 16:30 Dr. Mao Ye, Associate Professor, Nanjing University of Science and Technology, China Short-term Passenger Flow Forecast in Urban Rail Transit Based on Enhanced K-nearest Neighbor Approach 16:30 - 16:50 Dr. Chunyan Shuai, Associate Professor, Kunming University of Science & Technology, China A Study on Scale Characteristics and Influence Factors of Passenger Flow in Qinghai Lake Scenic Area 16:50 - 17:10 Ning Kong, Beijing University of Technology, China Study on Length Optimization of Bus Stop Zone 17:10 - 17:30 Haonan Jia, Chang'an University, China

**SUNDAY, JULY 7** 

hina

15:50-17:30 202

# Technical Session 3: Sustainable and Intelligent Transportation Systems SUNDAY, JULY 7

Chair: Dr. Jia Yao, Associate Professor, Harbin Institute of Technology, China

15:50-17:30 203

TIME	PROGRAM
15:50 –16:10	An Empirical Study on Travel Demand Spatiotemporal Patterns of Dynamic Internet based Ride-Sharing Zhiju Chen, Dalian University of Technology, China
16:10 –16:30	A Combined Prediction of Dynamic Traffic Flow Demand for Regional City Road Network Dr. Heng Ding, Associate Professor, Hefei University of Technology, China
16:30 –16:50	Urban travel time prediction based on Spatial-Temporal Graph Convolutional Networks Wei Chang, Zhejiang University, China
16:50 –17:10	Traffic States Recognition and Prediction based on Floating Car Data Yu Yuan, Southeast University, China
17:10 – 17:30	Influence of Electronic Bicycle on Mode Transition in Urban Transit Dr. Lu Bai, Southeast University, China

#### **Technical Session 4: Traffic Operations, Control and Management**

15:50-17:50 206

Chair: Dr. Liang Zheng, Associate Professor, Central South University, China

TIME	PROGRAM
15:50 –16:10	Connected Vehicle Control Algorithm for All-Way-Stop-Controlled Intersections Ruochen Hao, Ph.D. Candidate, Tongji University, China
16:10 -16:30	Traffic State Identification Based on Phase Transition Mengwei Xin, Ph.D. Candidate, Harbin Institute of Technology, China
16:30 –16:50	A Stochastic Simulation-based Optimization Method for Calibrating VISSIM Simulator under Uncertainties Xinfeng Xue, Master Candidate, Central South University, Chin
16:50 –17:10	Speed Guidance Model for Electric Bus at Signalized Intersection Based on Cooperative Vehicle Infrastructure System PeiPei Mao, Master Candidate, Southeast University, China
17:10 –17:30	Distant Downstream Bottlenecks in Local Ramp Metering: Comparison of Fuzzy Self-Adaptive PID Controller and PI-ALINEA Ling Zhao, Master Candidate, Southeast University, China
17:30 –17:50	A real-time Deployable Model Predictive Control-based Cooperative Platooning Approach for Connected and Autonomous Vehicles Dr. Jian Wang, Associate Professor, Ningbo University, China



#### **Technical Session 5: Port and Waterway Engineering**

Chair: Dr. Sudong Xu, Professor, Southeast University, China

**SUNDAY, JULY 7** 

15:50-17:30 207

ТІМЕ	PROGRAM	
15:50 –16:10	Simulation for Evaluating Traffic Performance of an Inland Waterway Lock Peng Liao, Southeast University*; Xin Ll, Southeast University, China; Zhuang KONG, Shanghai Waterway Engineering Design and Consulting Co., Ltd; Bing NI, Anhui Transportation Research Institute, China	
16:10 -16:30	Analysis of Topology and Routing Strategy of Container Shipping Network on "Maritime Silk Road" Liupeng Jiang, Hohai University, China	
16:30 –16:50	Application of Regression Analysis and Time Series Models for Freight Demand Estimation and Forecast at Lianyungang Port Shuang Tang, Sudong Xu, Jianwen Gao, Mengdi Ma, Southeast University, China	
16:50 –17:10	The Impact of Vessel Speed on Traffic Organization under Safety in a One-way Waterway with Multi-junction Zhenxuan Chen, Dalian University of Technology, China	
17:10 - 17:30	The Influence of the Hydrodynamic Conditions on Navigation near Bridge Area Yanfen Geng, Southeast University*; Xing KE, Southeast University; Wang Zhili, Nanjing Hydraulic Research Institute; Yaolu Ma, Southeast University; Xin ZHENG, Southeast University	

**Poster Session 1:** 

## **SUNDAY, JULY 7** 13:30-14:30

Chair: Dr. Weiguang Zhang, Associate Professor, Southeast University, China		Zhonghua Exhibition Hall A / 中华厅 A
ТІМЕ	PROGRAM	
Poster Ses	ssion 2:	14:30-15:30
Chair: Dr. Weig	guang Zhang, Associate Professor, Southeast University, China	Zhonghua Exhibition Hall A / 中华厅 A
TIME	PROGRAM	
Poster Sea	ssion 3.	
Chair: Dr. Weig	guang Zhang, Associate Professor, Southeast University, China	15:30-16:30 Zhonghua Exhibition Hall A / 中华厅 A
TIME	PROGRAM	
Poster Ses	ssion 4:	16:30-17:30
Chair: Dr. Weig	guang Zhang, Associate Professor, Southeast University, China	Zhonghua Exhibition Hall A / 中华厅 A
TIME	PROGRAM	
University	v Recruitment	13:30-18:00
Coordinator: D	Dr. Jing Hu, Assistant Professor, Southeast University, China	Zhonghua Exhibition Hall A / 中华厅 A
Enterprise	Exhibition	08:30-18:00
Coordinator: Dr. Guangji Xu, Assistant Professor, Southeast University, China		Third Floor Hallway / 三楼走廊



# The 10th COTA-World Bank China Transport Forum – Path toward 2025: Smart City Cluster and Low-Carbon Transport in China

**MONDAY, JULY 8** 

08:30-12:00 Yangtze Room / 扬子厅

Chair: Mr. Jason Wang, Appalachian Regional Commission, USA Coordinator: Dr. Jing Hu, Assistant Professor, Southeast University, China

ТІМЕ	PROGRAM
8:30 - 8:45	Remark 1 – Representative of China Transport News Remark 2 – Representative of COTA Remark 3 – World Bank Representative
	Speech Session
8:45 – 9:05	Path to 2025: WSDOT Strategic Plan Goals and Future Trends Roger Millar, Secretary of Transportation, Washington State DOT
9:05 – 9:25	Smart City from ASCE's Perspective Amer Muhammad, Director, ASCE's Transportation & Development Institute
9:25 – 9:35	Q&A
9:35 – 9:55	City Cluster Transport Development in China Chen Shidong, Institute of Comprehensive Transportation, NDRC
9:55 – 10:15	Jing-Jin-Ji Regional Transport Integration Zhang Shuai, Beijing Transport Research Institute
10:15 – 10:25	Q&A
10:25 – 10:40	Tea/Coffee Break
10:40 – 11:00	Smart Mobility for City Cluster DiDi Chuxing
11:00 – 11:30	World Bank: City Cluster, Low Carbon Transport and TransFORM Knowledge Sharing Wang Jin, Transport Specialist, World Bank
11:30 – 11:40	Q&A
	Panel Discussion: Path toward China Transport 2025 – Challenges and Opportunities
11:40 – 12:20	COTA, China Transport News, WB, Roger, Amer, Cheng Shidong, Zhang Shuai, DiDi
	Closing Remark
12:20 – 12:30	World Bank

## **Plenary Session 8: Multimodal Transport and Logistics Systems**

# **MONDAY, JULY 8**

Chair: Dr. Xiaoning Zhang, Professor, Tongji University, China Coordinator: Dr. Bojian Zhou, Associate Professor, Southeast University, China

08:30-10:10 Zhongshan Ballroom / 钟山厅

TIME	PROGRAM
8:30 - 8:50	Some Research Issues in Planning and Scheduling of Urban Rail Transit Dr. Hai Yang, Professor, Hong Kong University of Science and Technology, China
8:50 – 9:10	Temporal Patterns of Driving Fatigue and Driving Performance Among Male Taxi Drivers in Hong Kong: A Driving Simulator Approach Dr. S.C. Wong, Professor, University of Hong Kong, China
9:10 – 9:30	Drone-based Humanitarian Logistics for Timely Delivery of Perishable Items Dr. Pitu Mirchandani, Professor, Arizona State University, USA
9:30 – 9:50	A Four-step Method for Electric-vehicle Charging Facility Deployment in a Dense City: An Empirical Study in Singapore Dr. Qiang Meng, Professor, National University of Singapore, Singapore
9:50 – 10:10	Freight Mode Choice and its Influencing Factors: Chief Results from a National Study in the US Dr. José Holguín-Veras, Professor, Rensselaer Polytechnic Institute, USA

#### **Invited Session 19: Pavement Design**

Chair: Dr. Bo Tian, Professor, Research Institute of Highway, Ministry of Transport, China	08:30-10:10
Coordinator: Dr. Bin Yu, Professor, Southeast University, China	209

ТІМЕ	PROGRAM
8:30 - 8:50	Design and Application of Exposed Aggregate Concrete Pavement Dr. Bo Tian, Professor, Research Institute of Highway, Ministry of Transport, China
8:50 – 9:10	Experimental Investigation of the Interface Performance Between Asphalt Pavement Layers using Four-point Shear Set-up Dr. Changfa Ai, Professor, Southwest Jiaotong University, China
9:10 – 9:30	Characterization of Ultra Violet (UV) Aging of Asphalt Dr. Huanan Yu, Professor, Changsha University of Science and Technology, China
9:30 – 9:50	Characterizing and Optimizing on the Evaluation Index Test for Fog Seal with Sand Dr. Hainian Wang, Professor, Chang'an University, China
9:50 –10:10	Study on Mechanism and Multiscale Evaluation Method of Interfacial Interaction between Asphalt Binder and Mineral Aggregate Dr. Meng Guo, Professor, Beijing University of Technology, China



# Invited Session 20: Progress on Traffic Flow Theory and Driving Simulation MONDAY, JULY 8

10:20-12:00 303A

Chair: Dr. Hao Wang, Professor, Southeast University, China Coordinator: Dr. Hao Wang, Professor, Southeast University, China

TIME	PROGRAM
10:20 – 10:45	The Impact of Heterogeneous Driving Behavior on Traffic Flow Dr. Guangquan Lu, Professor, Beihang University, China
10:45 – 11:10	Investigation and Exploration of In-Depth Traffic Flow Simulation Model Dr. Jian Sun, Professor, Tongji University, China
11:10 – 11:35	On the Role of Speed Adaptation and Stochasticity in Traffic Instability: Evidence from Car-Following Experiments and Its Stochastic Model Dr. Rui Jiang, Professor, Beijing Jiaotong University, China
11:35 – 12:00	Analysis on the Traffic Characteristics of Specific Road Zone under the Context of Connected Vehicle: A Driving Simulation Study Dr. Xiaohua Zhao, Professor, Beijing University of Technology, China

#### Invited Session 21: Information Sharing Platform of Traffic Safety Research

Chair: Dr. Yan Gao, Associate Research Fellow, Traffic Management Research Institute of the Ministry of Public Security, China Coordinator: Dr. Chengcheng Xu, Associate Professor, Southeast University, China		8:30-12:10 303B
ТІМЕ	PROGRAM	
8:30 - 9:00	Hotspot Analysis of International Research on Road Traffic Safety Dr. Jian Lu, Professor, Southeast University, China	
9:00 – 9:30	Which is more dangerous, external distractions or in-vehicle distractions Dr. Wei Yuan, Professor, Chang'an University, China	
9:30 - 10:00	Investigation and Evaluation of Public Traffic Safety Awareness Dr, Zhongxiang Feng, Professor, Hefei University of Technology, China	
10:00 – 10:10	Coffee/Tea Break	
10:10 – 10:40	Multi-Dimensional Safety of Intelligent and Connected Vehicles Dr. Quan Yuan, Associate Professor, Tsinghua University, China	
10:40 – 11:10	Behavior, Traffic Flow and Real time Prediction in Work Zone Dr. Junhua Wang, Professor, Tongji University, China	
11:10 – 11:40	Opportunities of Intelligent Network Connection for Road Traffic Safety Liu Gan, Director, Jiangsu Kechuang Traffic Safety Industry Research Institute Co., Ltd., China	
11:40 – 12:10	Urban Road Traffic Safety Analysis Dr. Pingfan Li, Associate Research Fellow, Traffic Management Research Institute of the Ministry of Public Security	ı, China

## Technical Session 8: Traffic Safety and Emergency Responses

Chair: Dr. Yanyong Guo, University of British Columbia, Canada

## **MONDAY, JULY 8**

10:20-12:00 201

10:20-12:00

202

TIME	PROGRAM
10:20 –10:40	Identifying Significant Injury Severity Risk Factors in Traffic Accidents Based on the Machine Learning Methods Wei Zhang, Nanjing University of Science and Technology, China
10:40 –11:00	Research on Color Combination of Colored Pavements in Tunnels Based on Indexes of Lighting and Eye Movement Lulu Tang, Fuzhou University, China
11:00 –11:20	Is Road Safety Moving Forward in Europe between 2011-2015? Muhammad Nabeel Yasin, Southeast University, China
11:20 –11:40	Study on Accident Impact Situation Cluster Analysis Ruiyuan Liu, Chang'an University, China
11:40 –12:00	Invulnerability Reliability Evaluation Method of Urban Road Network in Emergent Evacuation System in Unexpected Disasters Hao Song and Junhua Wang, Tongji University, China

#### Technical Session 9: Transportation Energy, Environment and Sustainability

Chair: Dr. Yang Wang, Associate Professor, Beijing University of Technology, China

ТІМЕ	PROGRAM
10:20 –10:40	Comprehensive Evaluation of Eco-driving Behavior Under Three Road Conditions Based on Driving Simulator Dr. Chang Liu, Beijing University of Technology, China
10:40 –11:00	Optimization of energy efficient line vertical alignment based on multiple stop plan in rail transit Dr. Dewei Li, Beijing Jiaotong University, China
11:00 –11:20	A Traffic Signal Control Method Based on Intersection Fuel Consumption Calculation Model Dr. Xiaolin Che, Research Institute of Highway, Ministry of Transport, China
11:20 –11:40	CO Emission Rate in Relation to Road Density of Different Road Grades and Travel Time in Beijing Dr. Yuan Han, Beijing University of Technology, China
11:40 –12:00	Short-Term Traffic Flow Prediction based on Hybrid Traffic State Transition Analysis and LSTM Neural Network Dr. Weibin Zhang, Professor, Nanjing University of Science and Technology, China
12:00 -12:20	Discretization of Continuous Traffic States for Reinforcement Learning Signal Control Based on Improved SOM Clustering Dr. Gang Tao, Duolun Technology, China



#### **Technical Session 10: Transportation Planning and Management**

Chair: Dr. Yong Wang, Professor, Chongqing Jiaotong University, China

**MONDAY, JULY 8** 

10:20-12:20 203

TIME	PROGRAM
10:20 - 10:40	Prediction Model of Electric Vehicle Charging Demand in Cold Regions Considering Environmental Adaptability Dr. Xiaowei Hu, Associate Professor, Harbin Institute of Technology, China
10:40 –11:00	The influence of Travel Distance on Mode Share for Regional Trips in China Dr. Xuedong Hua, Assistant Professor, Southeast University, China
11:00 -11:20	Policy Solutions for Transportation-Related Problems in Kabul; Lessons from Major Cities of China and India Ali Danesh, Tongji University, China
11:20 –11:40	Research on Location Optimization for Bus Depots Considering Dead Kilometers: A Case Study in Xi'an, China Shuimiao He, Changʻan University, China
11:40 -12:00	Sensitivity-based Uncertainty Analysis of Transit Assignment Models Dr. Muqing Du, Associate Professor, Hohai University, China
12:00 -12:20	Green Logistics Location-Routing Problem with Eco-Packages Shouguo Peng, Chongqing Jiaotong University, China

### **Technical Session 11: Automated Vehicles and Intelligent Infrastructure**

Chair: Dr. Wei Hao, Professor, Changsha University of Science and Technology, China10:20-12:00Co-Chair: Dr. Kefu Yi, Changsha University of Science and Technology, China206

TIME	PROGRAM
10:20 -10:40	Vision-Based Vehicle Behavior Analysis: A Structured Learning Approach via Convolutional Neural Networks Luntian Mou, Haitao Xie  and Yanyan Chen, Beijing University of Technology, China
10:40 -11:00	Autonomous Vehicles' Behavior Decision Making in Complex Driving Environment Using Deep Reinforcement Learning Xiao Qi, Yingjun Ye and Jian Sun, Tongji University, China
11:00 –11:20	Researching the Architecture of Intelligent Road System Yu-lin Luo, Ke-jun Long, Changsha University of Science and Technology, China
11:20 – 11:40	Real-time Indoor Positioning Using Enhanced Ultra-Wideband Technology for Model Cars Benny Wijaya, Kun JIANG and Nanshan DENG, Tsinghua University, China
11:40 - 12:00	Modified Car-Following Model in the Intelligent Vehicle Infrastructure Cooperative Environment Shu Gao, Chunfang Feng and Biao Li, Traffic Management Research Institute of Public Security Ministry, China

#### **Technical Session 12: Travel Behavior and Activities**

Chair: Dr. Peng Chen, University of South Florida, USA

# **MONDAY, JULY 8**

10:20-12:20 207

10:20-12:00

208

ТІМЕ	PROGRAM
10:20 –10:40	Investigating the Impact of Travel Mode, Travel Duration and Personal Attributes on Commuters' Subjective Well-beings Mofeng Yang, The University of Maryland, USA
10:40 –11:00	Using Mobile Phone Data to Understand Residents' Habitual Activity Space: A Case Study in Shanghai, China Miji Tan, Tongji University, China
11:00 –11:20	Research on School Children's Activity Space on the Metro Network using Smart Card Data Yang Liu, Southeast University, China
11:20 –11:40	Resident's Travel Frequency and Its Influential Factors in Large-Scale Residential Areas on the Megacity Periphery: Case Study of Shanghai, China Kai Zhang, Tsinghua University, China
11:40 –12:00	Exploring Factors Affecting Young Travelers' Mode Choice Considering e-Hailing Service Hao Yu, The University of Hawaii, USA
12:00 -12:20	Regret-Based Travel Behavior Modeling: Evolving Methodological Perspectives Sunghoon Jang, Eindhoven University of Technology, Netherlands

#### **Technical Session 13: Transportation Infrastructure**

Chair: Dr. Wen Xiong, Associate Professor, Southeast University, China

TIME **PROGRAM** Capacity Evaluation of the Lateral Loading Distribution for Hollow Beam Bridges Based on Visual Inspection 10:20 - 10:40 Zichen Wang, Southeast University, China Comparative Study on Fatigue Design of Orthotropic Steel Bridge Deck Based on Different Codes 10:40 - 11:00 Sijie Peng, Harbin Institue of Technology, China Empirical Analysis of Expressway Tunnel Crashes Using a Six-Zone Approach 11:00 -11:20 Amiad Pervez, Central South University, China Non-Contact Video-Based Identification for Dynamic Behaviors of Beam Structures 11:20 - 11:40Yu Cheng, Southeast University, China Study on the Computing Method of Shear Connector in Steel-Concrete Composite Beam. 11:40 - 12:00 Kunpeng Zhao, Shandong Jiaotong College, China

## **Technical Session 14: Pavement Engineering**

Chair: Dr. Jing Hu, Assisstant Professor, Southeast University, China

10:20-12:20 209

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ТІМЕ	PROGRAM
10:20 - 10:40	Study on the New Technology for Health Detection of Asphalt Pavement. Dr. Guanglai Jin, Senior Engineer, Jiangsu Sinoroad Engineering Technology Research Institute Co., Ltd, China
10:40 –11:00	Effect of Base Temperature on Early Stress Strength Ratio for Concrete Pavement. Dr. Yancong Zhang, Engineer, Key Laboratory of Road Structure & Material, Ministry of Transport, China
11:00 –11:20	Self-cleaning Performance of Double-layer Porous Asphalt Pavements with Different Granular Diameters and Layer Combinations. Dr. Gongyun Liao, Associate Professor, Southeast University, China
11:20 –11:40	Preparation and Properties of High Ductility Cementitious Composites. Ms. Shuyin Wu, Graduate student, Southeast University, China
11:40 -12:00	Effect of Surface Texture Variation on Skid Resistance of Asphalt Pavement. Mr. Hanyu Zhang, Graduate student, Southeast University, China

#### **Enterprise Exhibition**

Coordinator: Dr. Jing Hu, Assistant Professor, Southeast University, China

#### 08:30-12:00 Third Floor Hallway / 三楼走廊

### **Closing Ceremony & Farewell Luncheon**

Chair: Dr. Jianming Ma, COTA Vice President Coordinator: Dr. Wenbo Zhang, Assisstant Professor, Southeast University, China 12:30-14:00 Zhongshan Ballroom/ 钟山厅

ТІМЕ	PROGRAM
12:30 – 12:35	Opening Remarks
12:35 – 12:45	Conference Summary
12:45 – 12:55	Best Paper Award
12:55 – 13:00	Best Area Editor Award
13:00 – 13:05	Other Awards
13:05 – 13:15	Handover Ceremony from the CICTP 2019 Organizers to the CICTP 2020 Organizers
13:15 – 14:00	Luncheon

# MONDAY, JULY 8

Transportation in China 2025: Connecting the World 55

#### **Poster Session 1**

Chair: Dr. Weiguang Zhang, Associate Professor, Southeast University, China

13:30-14:30 Zhonghua Exhibition Hall A / 中华厅 A

Paper ID	Paper Title
8	Research of Continuous Compaction Detection Method Based on Embedded System
10	A New Collaborative Positioning Technology for Pavement Construction Monitoring
23	Work Zone Opitimized Length Estimation for a Motorway Construction Project
27	Study on Method and Decision Making Model for Preventive Maintenance Planning of Asphalt Pavement
54	Gradation Variability of Asphalt Mixture in Construction Process
99	Research on Network Level Pavement Maintenance Decision-making Based on Matter-element Model
220	Speedy measuring technology of pavement texture depth based on high precision 3D line laser scanning
353	BIM Application Approach on Highway Reconstruction and Management
368	Traffic Risk Assessment Model for Expressway Maintenance Work Zones Based on Risk Index
370	The Research of freeway composite card allocation problem based on improved genetic algorithm
456	Estimation of the most unfavorable condition of freeze-thaw cycle subgrade
661	Self-cleaning performance of double-layer porous asphalt pavements with different granular diameters and layer combinations
701	The effects of indenter size used in repeated loading test on permanent deformation behavior of asphalt mixture
832	A study of provincially regional tourist highway plan based on the analysis of the local tourist resources
840	The Blocking Effect of Sound Barrier on Road Noise under Road Expansion Conditions
868	A Novel Method to Measure Pavement Roughness Using Android-based Smartphone Application
869	Risk Assessment Index System for Soil-similar Slopes and Application in Highway Engineering
876	Research on evaluation index system and assessment method of tourist highway route
899	Grey related degree model for the optimization of tourist highway route
943	Investigating the Effect of Corrective Maintenance on the Pavement Life Cycle and the Optimal Maintenance Strategies
957	Study on Optimization and Simulation Evaluation of Traffic signs for Expressway complicated interworking
1173	A Laboratory Study on Rutting Resistance Performance of High Modulus Asphalt Mixture
1380	Optimized Strategy Design for Network-Level Transportation Infrastructure Asset Management
12	Effect of curing methods on early crack for joint concrete pavement
46	Modeling the Raveling Propagation in Hot and Dry Climate by Using the Statistical Analysis Concepts
48	Temperature Scanning Test by Dynamic Shear Rheometer for Emulsified Bio-binder
55	Discrete Element Modeling of Aggregate Gradation Influence on the High Temperature Stability of Structural-Layer Asphalt Mixtures
88	Dynamic response of roller-compacted concrete-base asphalt pavement
137	Influence of Aggregate on Mechanical Behavior of Interfacial Transition Zone in Asphalt Mixture
181	Study on Applicability of Physiological Method for Evaluating Pavement Roughness
189	Micromechanical response of asphalt mixture during field compaction using discrete element method



195	Modeling the Linear Viscoelastic Behavior of Asphalt Concrete via Optimization Method
196	Performance Evaluation of SBS+CR Composite Modified Asphalt Binder and Mixture for Railway Substructure
232	Development of A Portable Pavement Surface Macrotexture Measurement System Applied in China
245	Lateral Permeability of Open-Graded Asphalt Mixture
268	Study on purification effect evaluations of filter media to pavement runoff pollution
272	Electrical and Mechanical Properties of Self-sensing Carbon Black SHCC
316	A Verification Method and Its Criterion of Shear Strength in Porous Asphalt Pavement
343	Properties of Poro-elastic road surface with different compositions
444	Analysis of flexural fatigue failure and degradation reliability of cement concrete for highway pavements
449	Electrical Conductivity and Rheological Properties of Asphalt Binder Containing Graphite
451	Influence of Low Atmospheric Pressure on Air Content and Air Void Structures of Air-Entrained Concrete
457	Effect of Low-Pressure of Environment on Air Content and Bubble Stability of Concrete
502	High and Low Temperature Performance of SBS/Crumb Rubber/Chemically Composite Modified Asphalt Concrete (SBS/CR/C)
531	Rejuvenating Mechanism of Aged Asphalt with Bio-Rejuvenator from Micro Aspect
690	Evaluation of Mechanical Properties of Concert Under High Thermal Loading
785	Overview of design of ultra-thin wear layer and evaluation of road performance
940	Allowable rutting depth based on residual stress state near the rutting
951	Long-term Field Transverse Cracking Performance of Asphalt Pavement Constructed with Semi-Rigid Base
976	Grey Correlation Analysis of Bio-oil Rejuvenated Asphalt Performance and Components
977	Study on Transverse Profile Shapes of Rutting on Asphalt Pavement Using LTPP Data
1026	Study of Bond Performance of the Road Modified Asphalt Using Pull-off Test
1063	Research on Intelligent Recognition Method of Pavement Crack Based on Combination of Spatial and Frequency Domain Enhancement Technologies
1147	Modification of Asphalt Rubber with Nanoclay towards Enhanced Storage Stability
1223	Evaluation on the high temperature performance indices of SBS modified asphalt
1225	Feasibility of vacuum decompression capillary method for measuring the dynamic viscosity at 60°C of SBS modified asphalt
1226	Effect of SBS modifier dosage on the properties of SBS modified asphalt and its FTIR characterization
1229	High precision detection of SBS modifier content based on split band and three dimensional infrared spectroscopy analysis
1239	Study on the Development Law of Transverse Cracks in Asphalt Pavement With Semi-Rigid Base
1257	Study on Composite Geosynthetics-reinforced Method of Soft Soil Subgrade
1277	Effect of Base Temperature on Early Stress Strength Ratio for Concrete Pavement
1303	Effects of Reclaimed Asphalt Pavement Contents on Construction Characteristics of Asphalt Mixtures
1327	Preparation and Properties of High Ductility Cementitious Composites
1346	Rejuvenating Mechanism of Aged Asphalt with Bio-Rejuvenator from Micro Aspect
22	A Study on the game pricing optimization of high speed train and aviation in the transport market
56	CROWD RISK ASSESSMENT OF METRO STATIONS USING SMART CARD DATA
145	Study on the Optimization of Traffic Organization in Railway Passenger Transport Terminals

271	Research on Train Operation Plan Optimization of High Speed Railway Network Based on Station Accessibility
289	Research on the Standard System of High Speed Maglev Transportation Technology
290	Analysis of Dynamic Response of the Large Span Continuous Beam Bridge in Urban Rail Transit and Train Operation
297	Research on Optimization of Locomotive Assignment based on Two-Stage Adjustment for Shoulder-Circuit Routing
346	Intelligent Video Surveillance and Early Alarms Method for Railway Tunnel Collapse
425	EFFECT OF SHIFT WORKE SYSTEM ON CIRCADIAN RHYTHM OF RAIL TRANSIT DRIVER
454	FUNCTION ORIENTATION OF REGIONAL RAIL TRANSIT IN DIFFERENT URBAN DEVELOPMENT PATTERN
565	Profit-oriented Railway Passenger Transportation Scheduling: An Integration Model of Line Planning and Ticket Allocation
579	Study on the Structure of Rail Rapid Transit Trunk Line Oriented to the Development Mode of Compact Urban Agglomeration
582	Wind speed forecasting along high-speed railway based on WDD, EWT, ARMA and SVR
635	Circuity in a high-speed rail network: a case study in China
643	Logit-based itinerary choice and advance ticket booking for high-speed-railway network services with elastic demand
652	Concrete-filled rectangle hollow section tubes for bridge pier construction
688	Optimizing Train Operational Plan In An Urban Rail Corridor With Two Terminal Yards
709	Development of Structure Light Sensor based Maglev Track Inspection System
727	Analysis of the Influence Mechanism of High-speed Railway on Employment in Underdeveloped Areas along the Line
750	The Forecasting of Train Occupancy Rate on High-speed Railway Based on Long Short-term Memory
806	Urban Rail Transit Hourly Ridership Evolution Model under Rainfall Weather
808	Fault diagnosis network design for vehicle on-board equipments of urban rail transit based on deep learning approach
812	Study on the Influence of Beijing-Shanghai High-speed Railway on Urban Spatial Interaction in Jiangsu Province
829	Fault Prediction of Metro Door System Based on Bayesian Network
870	The application of asphalt waterproofing layer in China high-speed railway track: a review
872	Study on the distribution of railway passengers' arrival time in advance
874	Research on the Passenger Flow Forecast of Interurban Railway of Central Henan urban Agglomeration in the Future
916	Research on Adjustment Strategy of Urban Rail Transit Based on Driving Intervals
921	China's high speed going-out under the B&R Initiative: rail Risk and Protection
929	Optimizing High-Speed Railway Operation Plan based on the Train Capacity and Service Frequency
962	Research on Highway Traffic Flow Prediction Method Based on Kalman Filter
978	A Method of Traffic State Estimation for Freeway
979	Ticket Price Sensitivity of Airport Rail Link——A Case Study of Changsha Maglev Express
983	Selection method of the access in the joint of suburban highway
991	Safety life analysis of high speed maglev running mechanism parts based on strength degradation
1032	Research on the influence of high-speed railway on traffic development of small and medium-sized cities along the route
1084	A Comprehensive Review on Train Positioning Technique in Industries with Maglev Included Based on Cross Coding Inductive Loop Wire
1087	Distribution Situation and Developing Tendency Analysis of Communication Based Train Control Related Patents during Recent 20 Years
1153	Research on Auxiliary Power Supply System of High-speed Train Using Bayesian Network
1204	A global optimization method of pricing and seat allocation for passenger railway system



1217	Passenger travel identification of rail transit based on WiFi information
1232	A global optimization method for suspension parameters of high-speed vehicle based on RBF surrogate model
1269	Analysis Method for Passenger Flow Characteristics of Urban Rail Transit under Emergent Events Based on AFC Data
1280	Study on the necessity of reconstruction and speed up of baotou-huinong section of Baotou-Lanzhou railway
1292	High-speed rail network Circuity in China
1296	Research on Early Warning Method of ZPW-2000A Joint-less Track Circuit Based on historical data
1344	Suburban highway entrances spacing optimization research
1347	Optimizing layout of suburban highway accesses based on network microcirculation
1349	Safety evaluation of access of suburban highways
71	Can Special Traffic Engineering Design Improve The Safety Of Off-Ramp Areas With Poor Visibility – A Study Based On Driving Simulator
74	Design Criteria for Clothoid Curve of Expressway Reconstruction Based on Driving Simulation
124	Operation analysis of symmetric continuous flow intersections
131	Optimization of Curve design for Mountain Roads Based on a Vehicle-Road Coordination Model
221	Influence of Longitudinal Gradient of Highway Superelevation Transition Section on Road Surface Runoff
231	Feasibility study on reducing turning radius of Urban Road intersection
285	Optimization Method of Superelevation Transition for Oval Racing Track
439	Comparison on Main Parameters of Highway Geometric Design between China and Foreign Countries
520	A New Method of Modern Road Surveying and Safety Auditing
822	Research on the Calculation Method of Terminal Curbside Length
850	Research on Urban Expressway Lane Width Based on Driving Simulator
944	Relationship Between Driving Behavior and Geometric Alignment Characteristics on Loop Ramps Based on Drone Videos
963	Effect of Combined Horizontal and Vertical Curve on Vehicle Longitudinal Acceleration of Mountainous Freeway
1040	Impacts on the Highway Geometric Design: Non-Autonomous to Autonomous Trucks
1101	Research on Setting Method of Guide Line of Separate Dual-Left Turn Lanes
1176	Review and Outlook of Design Consistency Measures
1187	Speed Prediction Model of passenger cars for Curve Sections on the urban road
96	Thermal Effects in Prestressed Concrete Cable-Stayed Bridge during Replacement of Closure Segment
97	Shear Behavior of Prestressed Concrete Box Girders with Corrugated Steel Webs: An Overview
98	Analysis on the Long-term Deflection in Prestressed Concrete Continuous Rigid Frame Box Girder Bridge
236	Seismic capacity estimate of RC columns considering different sources of uncertainties
240	Study on the Computing Method of Shear Connector in Steel-concrete Composite Beam
286	Finite element analysis of interfacial normal stress in concrete-filled rectangle hollow section under concentric load
384	The application of PLAXIS software in deformation analysis of Shanghai maglev line due to nearby foundation pit excavation.
395	Design Innovation and Study on Pot Bearings for Highway Bridges Convenient for Maintenance
651	Capacity Evaluation of Lateral Loading Distribution for Hollow Beam Bridges Based on Visual Inspection
718	Research on temperature field and temperature effect of midium-low speed maglev guideway girder
892	Numerical analysis on RC beams strengthened by steel plate-MPC composite technique

920	Research on Assembly Deviation of the Top Slab of Orthotropic Steel Bridge Deck Structure
1023	Effectiveness of a pergola pre-tunnel structure on light environment and driver's adaptation
1300	Study on shear bond behavior of PUFA-to-Concrete Interface
31	Far Lead Mid-block Actuated Pedestrian Crossing Signal Control System Design
109	Recognition of Vehicle Abnormal Behaviors Using Combined Features
111	Price and wage setting in the ride-sharing service with fixed-commission contract: a steady state method
112	Indentifying the influencing factors of campus bike-sharing usage and its implications
125	Bike-and-ride service location design and pricing for profit maximization in a linear monocentric city
135	Dynamic Pricing Scheme for Demand Balancing of One-way Carsharing System
141	A Mixed Equilibrium Model for EVs Promotion: to Subsidize Vehicles or Charging Infrastructure?
149	A Lane-level Vehicle Positioning Method Based on Fusion of MM and RSSI-DR for Vanet Environment
158	Effects of DSRC-Based Safety Messages on Heterogeneous Traffic Flow Stability
170	Learn to Be Observant: Large-scale Transportation Network Forecast under Special Event Conditions based on Residual Attention Network
186	Prediction of Distribution of Traffic Congestion on High Traffic Density Region Based on Deep Learning
228	Sensing Vehicle Selection Scheme Based on Road Importance in Vehicular Crowdsensing
257	Comparative analysis of several area detection methods of vehicle front windshield
327	Day-to-day dynamics with advanced traveler information
341	Analyzing of Impact Factors of Residents' Choice of Autonomous Vehicle: A Network Questionnaire Survey in Nanchang, China
342	A Real-Time Car-Following Data Collecting Method Based on Binocular Stereo Vision
344	Research on Transportation Mode Split Based on Random Forest
385	Driver Status Recognition Based on Multiple Facial Features of Landmarks
388	A Deep Convolution Neural Network for Pedestrian Detection based on HOG Feature of Image
398	Learning Based Square Root Unscented Kalman Filter for Indoor Vehicle Positioning
407	Vehicle retrieval using features of vehicle front windshield
430	Planning wireless charging facilities for electric vehicles: Optimal location and pricing strategy
434	Effect of Automated Driving in Road Network Environment
466	Control strategy of Self-driving vehicle based on Time-Division Multiplexing
481	Vehicle Trajectory Reconstruction Based on Tensor Decomposition Algorithm
487	Research and Simulation on Cooperative Adaptive Cruise Control Vehicles Based on PTV VISSIM
581	Evaluation of the effect of cooperative systems on driver behavior under fog conditions
584	An Urban Topological Map Generation Method for Traffic Flow Prediction Based on Road Segment Clustering with Floating Vehicle Trajectory Dataset
606	Highway Traffic Volume Prediction Based on Xgboost and LightGBM Models
629	Vehicle Decision Model in Virtual Traffic Scene
658	Generative Adversarial Nets based Real-time High-Resolution Volume Prediction
687	Analysis of Malicious Information Propagation on a platoon of connected vehicles



704	Sustainable and Intelligent Transportation Systems
706	An Innovative Business Model on the Integration of MaaS and Consuming Service in China
757	Trajectories prediction of vehicles at the intersection based on LSTM neural network
776	Mode Shift from Car to Sharing Bike: A Travel-Mode Choice Model Considering Sharing Bike and Private Bike as Two Modes
784	Real-time induction model of electric vehicle based on group intelligence data
799	Short-term Traffic Flow Prediction: A Long Short-Term Memory Model Enhanced by Temporal Information
863	Intelligent Traffic Light Control Based on Image Analysis
900	Location of Electric Vehicle Charging Stations with Elastic Demands and Path Distance Constraints
922	Prediction model for short-term traffic flow based on SDAE-DBN hybrid deep learning
973	Visibility estimation using roadside cameras: a calibration-based method
994	A classification method of 'Mobility as a Service' based on clustering analysis
1012	Analysis on Factors Influencing Potential Usage of Free-Floating Bike Sharing Based on Structural Equation Modelling
1025	A real-time signal control method for pedestrian crossing considering different time periods
1065	Key Fundamentals and Evaluation of a Thriving MaaS Ecosystem in China
1104	Research and Comparison of Several Vehicle Detection Methods in Urban Traffic Scenes
1124	Research on Traffic Flow Characteristics under the Condition of Speed Limit in the Bottleneck of Expressway Based on Cellular Automata
1125	Short term traffic flow prediction based on deep learning
1142	Short-Term Traffic State Prediction Based on Support Vector Machine
1172	Influence of Big Data and New Technology on Traditional Transportation Development Mode: Research in Guangzhou as an Example
1291	A Model of Injury Severity Prediction in Traffic Accident Based on GA-BP Neural Network
1329	Public Transit Mode Selection for An Urban New District Corridor
1343	Deep Learning in Transportation Research: A Preliminary Overview
1367	Research on the travel cost model of SVs and TVs under three traffic conditions
239	Study on Oversized Precast Pile Construction in Soft Soil Foundation Pit
300	Numerical simulation and optimization of ventilation mode of underground garage in Jinan Ginza shopping plaza
351	A Simulation Analysis of Subway Passengers' Per Capita Boarding and Alighting Time's Influence Rule Based on CA
551	Research on Optimization Design of Underground Interchange Ramp Radius Based on Driving Simulation
614	Subsidence Characteristics of Shield Tunneling Underneath Airport Pavement in Composite Strata
668	Analyzing passenger boarding and alighting dynamic characteristics in urban metro stations
684	Differentiated passenger flow guidance with the predictive congestion information in urban rail transit network
804	The Analysis and Optimization of Evacuation Capacity in Rail Transit Station
848	Comprehensive Evaluation Model of Urban Rail Transit Network Nodes Importance
885	Optimization of Bottleneck Facilities in Subway Stations Based on WiFi Data
902	Research on LCC Model of Urban Rail Transit Signal System based on RAMS
956	Co-presence in Beijing Urban Rail Transit——a case study on line 5
1107	Study on passenger traffic organization method of urban rail transit interchange hub

1122	Total cost calculation method for operation phase of urban rail transit system coupled with safety, performance and environment
1177	Research on the Setting of Guide Signs in the Public Transfer Zone of Large-scale Railway Integrated Passenger Transportation Hubs
1357	Research on Improved AHP of Urban Rail Transit Signal System Based on RAMS
1375	Study on the Influence Mechanism of Underground Space in Accessibility and Diversity of Station Area——Taking Shapingba Station as an Example
26	Research on Development Methods of Service Quality Evaluation System of Highway Network
52	Research on Service Quality Evaluation and Investment decision system of Rural Roads
69	Utility Evaluation of Intersection Area of Highway and Urban Road Traffic Guide Sign based on Driving Simulation Experiment
160	Research on Stain Detection method of Traffic Sign Based on Shape Template Matching
165	The Impact of transportation infrastructure and global urbanization on economic development
172	Multi-scale 3D display of the internal quality of the pavement based on BIM
199	Improving the quality of pavement performance data in pavement management system
552	Parking Demand Analysis and Optimized Scheme of Comprehensive Hospitals
713	Framework of a 3D GIS Based Airport Pavement Management System
1004	Multiobjective trade-off analysis for transportation investment decision-making considering project portfolio risks
1243	A Review of the Research Methods on Vulnerability of Transportation System
1245	Layout Study of the Variable Message Signs on Urban Road Networks
1368	Pavement Cracking Detection and Classification Based on Depth Image Using Multi-scale Clustering Model
6	A Study about Ridesourcing Travelling Choice Model for Beijing Central City
34	Ground penetrating radar numerical modeling for disease detection using COMSOL
85	Construction of highway concrete traffic barriers using copper tailing and tire derived aggregates
694	Research on the Flow Characteristics of Diesel Engine with Helical Intake Port Based on XFlow
830	Theoretical and numerical simulation research on reasonable spacing of bearing plate of pressure dispersed anchor cable
996	Shenzhen Port Competitiveness Evaluation Based on the Construction of the Guangdong-Hong Kong-Macao Greater Bay Area
1068	Influence of Typhoon Induced Siltation on Waterway Transportation in Navigation Channel of Guan River Estuary
1384	Sensitivity Analysis of Physical Parameters of Asphalt Pavement in Ultrasonic Testing Based on Finite Element Simulation

#### **Poster Session 2**

Chair: Dr. Weiguang Zhang, Associate Professor, Southeast University, China

#### 14:30-15:30 Zhonghua Exhibition Hall A/ 中华厅 A

Paper ID	Paper Title
78	Simulation of Vessel Traffic Flow in Inland Waterway Based on Cellular Automata
82	Simulation Model for Estimating Water Area of Inland Waterway Service Area
134	A stochastic programming approach for uncertain unidirectional quay crane scheduling problem
213	Research on Air Traffic Flow Management Strategies Based on Reinforcement Learning
284	Research and Analysis of International Shipping Market Freight Index
359	A novel airspace safety assessment method based on conflict probability model



459	A visualized schedule analysis for seawall closure gap using BIM technology: A case study from Yangtze estuary
547	Study of Risk Evaluatcion for Ship Navigation Security on Qiongzhou Strait in Hainan Province under Destructive Wind
549	Research on Structural Characteristics of Homogeneity Development of Multi-Airport in Yangtze River Delta Region
637	Research on Spatial Structure of Aviation Logistics Network in Jiangsu-Zhejiang-Shanghai Based on SNA
695	Container Terminal Logistics Computing Engine Farm Micro-Architecture
743	Pot Sustainability Evaluation Based on Cloud-Matter Element Model
823	Modeling the Behavior of Pedestrians in a Group at Signalized Intersections
833	Economic Risk Analysis Based on Deep Sea Platform Construction
865	A Method of Assessing the Impact of Convective Weather on a Departure Route
912	Aircraft Trajectory Prediction Using Deep Long Short-Term Memory Networks
1018	An Optimization Method for Strategy Flight Schedule to Reduce Delays
1045	The Impact of Speed Heterogeneity on Contingent Flow Control in 4D En-route Operation
1060	Network Flow Dynamics Modeling and Analysis of Arrival Traffic in Terminal Airspace
1076	Study on the competition between aviation and high-speed rail based on mobile signaling data
1126	Modeling and Heuristic Algorithm of Ground Ferry Vehicle Scheduling for Large Scale Airports
1184	Calibrating The Stochastic Fundamental Diagram For First-order Freeway Traffic Flow Models
1227	A statistical study of the weather and propagation impact on departure punctuality at Guangzhou Airport
1322	STATISITICAL MODEL FOR FLIGHT DEPARTURE DELAY AT SHANGHAI PUDONG INTERNATIONAL AIRPORT
1352	Traffic Control Strategy for Expressway under Foggy Weather
7	Finite Mixture Models for Vehicle Headway in Port Roads
14	Analysis of Pedestrian-Crossing Speed Characteristics at Traffic Intersections
16	A Method for Driving Distraction Detection Based on OLS-RBF Neural Network Model
28	Modeling Individualized Travel Time With a Back Propagation Neural Network
61	Factors Influencing Parking Behaviors in Bike-sharing: An Empirical Study in Beijing
101	Analysis of Novice and Expert Drivers Behavior under Different Risk Levels Scenarios
127	A Quantitative Evaluation Strategy of Anthropomorphic Degree of Self-driving Vehicle Based on Subjective Feeling and Artificial Neural Network
182	Rapidly Driving Pattern Recognition Based on Rear-End Collision Risk
192	Assessment Model on Cyclists' Road Behaviors in University of China: A Case of Simplified Cycling Behavior Questionnaire
203	Questionnaire Design and Test of its Reliability and Validity for Distracted Driving Behavior
204	Utilizing Random Forest and Neural Network to Extract Lane Change Events on Shanghai Highway
211	Reinforcement Learning with MPC for Personalized Longitudinal Control in Autonomous Driving
212	Correlation between vigilance level and driving performance: influence of the driving duration and circadian rhythm
225	A Study of How Drivers' Subjective Workload and Driving Performance Change under Varying Levels of Automation and Critical Situations
255	Investigating Effects of Temporal and Locational Factors on Traffic Violations of Taxi Drivers: Data from Off-Site Enforcement Camera System
270	A Data-based Approach to Path Following Controller Design for Autonomous Vehicles
329	Research on the health management system of operating vehicle drivers

358	A New Algorithm Based on Cascaded Convolutional Neural Network for Driver Fatigue Detection
364	Exploring Factors Affecting E-Bike Riders' Red-light Running Behaviors at Signalized Intersections in China
369	Design of Real-time Monitoring System for Physiological Status of Metro Train Drivers
375	Study on the Threshold Values of the Slow Traffic in the Old City Zone
390	The Driver Model With The Consideration of Driving Skill
437	Behavior of Speed Choice Based on the Prospect Theory
443	Correlation Analysis of Traffic Conflicts and Driving Behaviors in Interchange Diverging Areas
490	Research on Cruising Mode for Curb Parking
507	Modeling the Impacts of Emotional Intelligence for Female Drivers with Poor Sense of Direction using Dimensional Theory
580	Research on Vehicle Lane Changing Demand and Condition Based on Velocity Difference and Headway
583	Research on the Service Level of the Departure Curbside Based on Pedestrian
598	A Low-cost Deep Learning-based Driver and Passenger Activity Detection System: Case Study of Naturalistic Driving Data
604	Driving risk research under dangerous conditions based on driver characteristics
626	Traffic Flow Characteristics of Ramp Merging Bottleneck on Urban Expressway
628	Gaze Characteristics of Drivers in Curved Sections
641	Influence of Sidewall Color of Highway Long Tunnel on Driving Safety
653	Study on Lighting Optimization of Tunnel Entrance Section Based on Driver's Visual Adaptation Model
673	Car-following Model of Turning at The Intersection and Its Stability Analysis
682	Active traffic management strategies at expressway merging sections – A driving simulator study.
699	Analysis and Modeling of Pedestrian Crossing Behavior at Intersections
724	Analysis of Factors Affecting Horizontal Distribution of Vehicles in Road Sections
746	Driving behavior characteristics based on psychological field effect
756	Study on the cognitive ability of novice drivers under lateral interference scenes
777	Study on Individual Differences of Driver's Eye Movement Characteristics under Simulated Driving Environment
779	Study on Individual Differences of Driver's Eye Movement Characteristics under Simulated Driving Environment
786	Lane Change Data Extraction from Naturalistic Driving Data: An Automatic Method
803	Estimates of Driver's Reaction Time in Car-Following Simulation
818	Driver's Auditory Reaction Characteristics in Lane Change Behavior on Urban Expressway Based on Simulated Driving Experiment
820	Drivers Fatigue Behavior Detection Model of Urban Rail Transit on Recurrent Neural Network
847	What factors influence drivers' choice of deceleration mode? Analysis of naturalistic driving data
852	Prediction Accuracy Improvement of Avoidance Driving Behavior Model Based On Game Theory: Introducing Jerk To Refine Acceleration
854	User Preferences Regarding Ridesourcing and Informal Intermediate Public Transport
871	Impact of risk attitude and risk perceptual conditioning on the driving decision making among young driver
888	
	Research on speed optimization strategy of hybrid electric vehicle based on driver's driving style
890	Research on speed optimization strategy of hybrid electric vehicle based on driver's driving style A Review of Automotive Head-up Display



941	Driving Performance of Heavy-Duty Truck Drivers under Different Fatigue Levels at Signalized Intersections
954	Driving Behaviour at Merge/Diverge Sections on Urban Express Road
967	Traveling Mode Choice Model under Bounded Rationality
975	Analysis of Human Factors and Case Studies in Subway Operation Accidents
980	Intelligent monitoring and early warning system based on driver's physiological data
1034	Exploring the Influence of Traffic Enforcement on Speeding Behavior on Low-speed Limit Road
1067	Multi-Channel Resource Demand Structure Model of Subway Traffic Dispatch based-on the Task-Network Description Method
1083	Parameters Calibration of Microscopic Traffic Simulation Model Based on Improved Genetic Algorithm
1091	Driving Style Recognition using Collision Surrogate Measurements and Vehicle Trajectory Data
1092	Driver's Lane Change Behavior Prediction Based on Deep Learning
1094	Drunk Driving Detection Based on Deep Learning
1154	Traffic Safety for E-bike Riders in China: Attitudes, Risk Perception, Confidence and Risky Riding Behaviors
1160	Modeling of charging station choice among EV drivers based on prospect theory
1181	Safety Improvement of Children' Night Crossing Based on Drivers' Visual Illusion
1194	The Method of Analysis and Calculation of the Influence Degree of the Heavy Vehicle on the Driver in the Rear Vehicle
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Chair: Dr. Weiguang Zhang, Associate Professor, Southeast University, China

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139	A Spatiotemporal Deep Learning Approach for Citywide Short-term Free-floating Bikesharing Demand Prediction
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151	Research on the Traffic State Threshold of Saturated Flow in Eight-lane Expressway Merging Area
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Chair: Dr. Weiguang Zhang, Associate Professor, Southeast University, China

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1097	Optimal Charging Station Locations for Taming Range Anxiety and Routing Detours of Electric Vehicles
1098	A Methodological Framework for Evaluating Disrupted Transportation Networks under Different Information Situations
1099	Balancing bike-sharing system using station level data and POI data
1108	A Deep Neural Network Approach for Evaluating a Large Batch of Transportation Network Scenarios
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1258	Measuring Accessibility to Jobs for the Urban Poor- Case study of Ahmedaba, India



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1324	Impacts of Intermodal Connection by Bicycle on service coverage of Urban Rail Transit
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1342	Research on multi-objective optimization method for flexible customized bus lines
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118	Evaluate the Impact of License Plate Restriction Policy to Urban Traffic using Taxi GPS Data: A Case Study of Chengdu
243	Analyzing the Implementation of the Policy of Online Car-hailing Based on a Structural Equation Model
275	Enlightenment from the Development of Comprehensive Transport in China's State-Level New Areas to Xiongan New Area
304	Study of Factors Impacting on Passenger Satisfaction with High-Speed Train Based on Structural Equation Modeling
455	Investigating the impacts of congestion pricing on travel mode choice behavior combing the automobile use habit heterogeneity
725	Research on the development of urban online-booked car types based on System Dynamics
752	Exploring the impact of social economic variables on traffic safety in China: A multivarate time-series study
792	Effects of Truck Age on Frequency of Truck Crashes Due to Mechanical Failure: A Case Study in the United States
827	Analyzing connectivity of cycle lane network based on public-bikes' trajectories
880	Research on land concession policy of underground parking lot based on cost-benefit analysis
931	Research on Online Car-hailing Service Quality Evaluation Based on SERVQUAL
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990	COMPARISON OF WALKING AND CYCLING TO SCHOOL IN UNITED STATES: EVIDENCE FROM NHTS 2017 AND 2009 DATA
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**Conference Venues & Maps** 





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Nanjing International Expo Centre Parking Lot 来可聞知識定 中心傳生活

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# Nanjing International Youth Cultural Center Hotel Vicinity Map





#### **Conference Registration**

Conference registration desk is located in the lobby of Conference Rooms. Registration can be made at July 5, 10:30-23:00, and July 6-8, 7:30 – noon.

#### **Conference Banquet**

The conference banquet is held in Zhongshan Ballroom ( 钟山厅 ), Saturday, July 6, 19:00 – 20:30.

## **Conference Buffet Lunch**

A buffet lunch is provided on Saturday and Sunday, July 6-7, 12:00 – 13:30 to all registered conference participants in Zhonghua Exhibition Hall B (中华厅 B).

#### **Farewell Luncheon**

The farewell lunch is held in Zhongshan Ballroom ( 钟山厅 ), Monday July 8, 12:30. A brief closing ceremony will take place, followed by an award ceremony and a handover ceremony from the CICTP 2019 organizers to the CICTP 2020 organizers.

#### **Conference Secretariat**

Dr. Xiao Fu, Associate Professor, Southeast University

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The conference secretariat, based in Southeast University, provides additional support to all participants. If you have any questions or concerns during the conference, please do not hesitate to contact the conference secretariat.

# Conference Speakers & Organizers



## Anthony CHEN

Ph.D.



### Professor Hong Kong Polytechnic University Department of Civil and Environmental Engineering +852 3400-8327 anthony.chen@polyu.edu.hk www.polyu.edu.hk/cee/people/anthony.chen/

Dr. Anthony Chen is a Professor in the Department of Civil and Environmental Engineering at the Hong Kong Polytechnic University (PolyU) in Hong Kong. Prior to joining PolyU, Dr. Chen was a Professor in the Department of Civil and Environmental Engineering and Head of the Transportation Division at Utah State University in the United States for seventeen years. Dr. Chen was a recipient of the prestigious Faculty Early Career Development (CAREER) Award from the National Science Foundation (NSF) in 2002 and the Chang Jiang Chair Professor from China in 2015. Dr. Chen is currently serving as an associate editor for Transportmetrica A: Transport Science, Networks and Spatial Economics, and Journal of Advanced Transportation, and an editorial board member of Transportation Research Part B: Methodological.

#### Ali HAGHANI Ph.D.



Professor

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Dr. Ali Haghani is a Professor of Civil Engineering at the University of Maryland. He was the Department Chairman from Fall 2003 through Fall 2013. Dr. Haghani is an expert in Intelligent Transportation Systems, freight transportation and logistics, emergency response, dynamic fleet management, real time network optimization, mass transit operations, and traffic data collection, analysis and evaluation. Dr. Haghani has over thirty years of experience in research and education as well as vast experience in managing research programs and administrative expertise. He has over 200 publications in archival journals, in refereed conference proceedings and as research reports. Dr. Haghani has served as the chairman of the TRB Committee on Transportation Network Modeling. He has also served as a member of the Editorial Advisory Board of Transportation Research and is currently Associate Editor of the Journal of Intelligent Transportation Systems.



#### Alireza KHANI Ph.D.



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Dr. Alireza Khani's research is on equilibrium modeling, routing algorithms, and system optimization in the context of multimodal transportation networks for evaluation of current and future transportation systems with autonomous vehicles and shared mobility services. His other research is on transit planning and operations using automatically collected transit data. His research is sponsored by National Science Foundation, US Department of Transportation, and Minnesota Department of Transportation. He has received his PhD in Civil Engineering from the University of Arizona and worked as a postdoctoral researcher at University of Texas at Austin.

# Asad KHATTAK

Ph.D.



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Dr. Asad J. Khattak is Beaman Distinguished Professor of Civil & Environmental Engineering at The University of Tennessee, Knoxville. He serves as the Coordinator for the Transportation Group in the Department, and is Associate Director for the Collaborative Sciences Center for Road Safety—a National University Transportation Center devoted to safety. Dr. Khattak's research focuses on various types of innovations related to intelligent transportation technologies, transportation safety, and sustainable transportation. Dr. Khattak received his Masters and Ph.D. degrees in Civil Engineering from Northwestern University. Dr. Khattak is Editor of Science Citation Indexed Journal of Intelligent Transportation Systems, with a 2-year impact factor of 2.164, and Associate Editor of International Journal of Sustainable Transportation (IF = 1.892).

#### Conference Speakers & Organizers

## Amelia REGAN

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#### Professor

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Amelia Regan is a Professor of Computer Science and Transportation Systems Engineering at the University of California, Irvine. Her research interests include dynamic and stochastic network optimization, optimal contracting, logistics systems, sensor and vehicular networks, connected and automated vehicles, pedestrian and cyclist safety, and mitigation of environmental impacts of transportation systems. A graduate of the University of Pennsylvania, Regan later earned an MS in Applied Mathematics from the Johns Hopkins University, and MSE and PhD degrees in Civil Engineering from the University of Texas, Austin.

# **Bjorn BIRGISSON**

Ph.D.



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Dr. Bjorn Birgisson currently serves as a TEES Eminent Professor in the Zachry Department of Civil Engineering at Texas A&M University. Formerly, he served as the inaugural Director of the Center for Infrastructure Renewal. He has published over 200 technical papers in journals and proceedings and been a Principal Investigator or Co-Principal Investigator of over 54 million dollars in research funding during his academic career. Prior to joining Texas A&M, he served as a Pro Vice-Chancellor for Aston University and the Executive Dean for the School of Engineering and Applied Science and Chaired Professor of Transport Science at Aston University from January 2014 to August, 2016. Prior to that, Dr. Bjorn Birgisson was the vice president responsible for research and Chaired Professor of Highway and Railway Engineering at the KTH Royal Institute of Technology in Stockholm, Sweden. Dr. Birgisson has served on over 20 boards of centers, institutes and companies during the last 10 years. Dr. Birgisson led the creation of the TRB Task Force (AFN15T) for Nanotechnology-Based Concrete, the RILEM Technical Committee on Nanotechnology for Bituminous Materials, and most recently coestablished the new Academy for Pavement Science and Engineering (APSE), which includes over 40 universities from all over the world, for which he serves on the executive board.



## **Biyu CHEN**



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Dr. Bi Yu Chen is a full Professor at State Key Laboratory of Information Engineering in Surveying, Mapping and Remote Sensing, Wuhan University, China. His major research interests span GIS for Transportation, Spatiotemporal Big Data Analytics, Intelligent Transportation Systems, Transport Geography, Urban Geography and Urban Information System. He is the author of about 40 articles in the leading journals of Geography, GIS and Transportation fields, such as Annals of AAG, IJGIS, TRA and TRB. He is also the Associate Editor of Transportmetrica B (2016 - ).

## **Baoshan HUANG**

Ph.D.



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Dr. Baoshan Huang joined the faculty of the Department of Civil and Environmental Engineering at the University of Tennessee in January 2002. His research areas include pavement material characterization, transportation infrastructure asset management and resilient pavement design. Over the last eighteen years of his professional career, Huang has secured over 6.5 million dollars of research funding to support his research activities and published over 100 peer reviewed journal papers. Currently, he serves as associate editors for several SCI-indexed journals. He is registered as a professional engineer in Louisiana. Bin RAN Ph.D.



Professor and Director Institute on Internet of Mobility Southeast University and University of Wisconsin-Madison Room 1318, School of Transportation, SEU No.2 Southeast University Road, Jiangning, Nanjing, 211189, P.R. China +86 25-83795356 bran@seu.edu.cn Vilas Distinguished Achievement Professor Director of Wisconsin ITS Program Director of Connected Automated Transportation Program Department of Civil & Environmental Engineering University of Wisconsin at Madison 1415 Engineering Drive, Madison, WI 53706, USA +1 608-262-0052 bran@wisc.edu directory.engr.wisc.edu/cee/Faculty/Ran\_Bin/

Dr. Bin Ran serves as the Director of the Joint Research Institute on Internet of Mobility, founded by Southeast University, China and University of Wisconsin at Madison (UW). Dr. Ran is the Vilas Distinguished Achievement Professor and Director of ITS Program at the University of Wisconsin at Madison. He also served as the Director of the Traffic Operations and Safety Lab (TOPS) at the University of Wisconsin at Madison. Dr. Ran holds the title of National Distinguished Expert in China.

Dr. Ran is an expert in dynamic transportation network models, traffic simulation and control, traffic information system, Internet of Mobility, and Connected Automated Vehicle Highway (CAVH) System. He has led the development and deployment of various traffic information systems and technologies in the US and China. He has trained younger generations of professors and experts in traffic engineering and Intelligent Transportation Systems (ITS) in the US, China, Korea, and other countries.

Dr. Ran is the author of two leading textbooks on dynamic traffic networks. He has coauthored more than 210 journal papers and more than 260 referenced papers at national and international conferences. He co-authored 6 books on intelligent highways in China. He holds 3 US patents and 12 Chinese patents, and has more than three dozen patents pending in the US, China, and other countries. He is an associate editor of Journal of Intelligent Transportation Systems. He is the Founding President of Chinese Overseas Transportation Association (COTA) from 1996 to 1998.

Earlier in his career, Dr. Ran held positions at the Massachusetts Institute of Technology and the University of California at Berkeley. He is active in the Transportation Research Board and Intelligent Transportation Society of America. Dr. Ran received his PhD from the University of Illinois at Chicago in 1993, his MS from the University of Tokyo in 1989, and his BS from Tsinghua University in 1986.

#### Conference Speakers & Organizers



Bo TIAN Ph.D.



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Dr. Bo Tian was born in China in 1973. He holds the B.S. and M.S. degrees from Harbin Institute of Technology and Ph.D. degree from Tongji University. He has been working on concrete pavement-related issues in Research Institute of Highway, Ministry of Transportation in China since 2001. He was a visiting scholar at Technische Universität München during 2008 to 2009. Dr. Bo Tian devotes himself in the developing of concrete pavement technologies in China through research, consulting and organizing professional conferences and seminars. Ha has over 100 publications in the area of sustainable, durable concrete materials and pavement. He has hosted over 50 projects from NSFC, Ministry of Transportation, and DOTs in many provinces. His research interests also extend to functional concrete pavements, modified cement concrete pavement and ballastless track plate in high-speed rail engineering recently.

## Changfa Al

Ph.D.



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Dr. Al' researches mainly focus on the design theory and method of pavement structure, new asphalt material and its application technology. In recent years, he is mainly engaged in the interface bonding characteristics of pavement, special pavement technology in cold plateau area and new high visco-elastic modified asphalt and its mixture. Till now, he has completed nearly 30 research projects as the project leader or participant, published more than 60 research papers, including 12 SCI papers, 14 El papers, and obtained 4 invention patents and 8 utility model patents, and received 4 scientific awards. Also, he participated in writing and editing the technical code of railway waterproof asphalt mixture, and the textbook of Introduction of Civil Engineering

#### Charles W. SCHWARTZ Ph.D.



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Dr. Charles W. Schwartz is a Professor and Chair of Civil and Environmental Engineering at the University of Maryland College Park. His teaching and research activities encompass pavement design and analysis, advanced soil mechanics, computational geomechanics/pavement mechanics, and material characterization and constitutive modeling. He has played leadership roles in many national research projects and regularly assists federal, state, and local agencies and private firms on pavement-related topics. He is a member of TRB (Immediate Past Chair, AFD80—Pavement Structural Modeling and Evaluation), ASCE (Immediate Past Chair, Geo-Institute Pavements Committee), AAPT, and ISAP and serves on the editorial boards of the International Journal of Pavement Engineering and Transportation Geotechnics. He is a co-developer of the NHI course Geotechnical Aspects of Pavements.

## **Changjun WANG**



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Changjun Wang, the director of the Traffic Management Research Institute of the Ministry of Public Security, a deputy leader of the National Team for Prevention of Traffic Accidents. graduated from Nanjing Institute of Technology (Southeast University) in 1985, majoring in radio technology. Wang has been engaged in the research, design development and project implementation in road traffic safety, traffic control and intelligent transportation, traffic management information system. Wang has successively presided over 10 National High-Tech Research and Development Program, obtained 2 second prizes for national science and technology progress: Key Technology and Application of Expressway Monitoring and Warning and Public Security Traffic Safety Law Enforcement, Equipment Development and Engineering Application of Urban Transportation System Management and Control. The research results have been applied across the country, and have made important contributions to the development of science and technology for traffic management and industrial progress in China.



## Chaozhong WU Ph.D.



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Professor Wu is currently the President Assistant of Wuhan University of Technology, he is also the director of the Youth Transportation Committee of the China Communications and Transportation Association, the member of the China Intelligent Transportation Association, the member of the National Intelligent Transportation System Standardization Committee, the editor and president of the Journal of Traffic Information and Security. In 2002, he graduated from Wuhan University of Technology, majoring in transportation engineering, and obtained the doctor's degree. From September 2006 to August 2007, he was sponsored by China Scholarship Council (CSC) to study in Regina University of Canada for one year. Professor Wu has in changed of over more than 10 projects such as the National High Technology Research and Development Program, the National Natural Science Foundation, and the National Key Projects in the Science & Technology of China. In recent years, he has published 68 academic papers, 47 of which have been retrieved by SCI/EI. He applied for 18 patents for invention (14 authorization), and obtained 5 scientific research awards.

# Chengcheng XU

Ph.D.



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Dr. Chengcheng Xu received a B.S. degree from the Southeast University in 2008, a M.E. degree from the Southeast University in 2010, and a Ph.D. degree in transportation engineering from the Southeast University in 2014. Xu's research interests include traffic safety, traffic environment and intelligent transportation systems. He has been the leading Pl of more than ten high-level research projects. He has published more than sixty SCI/SSCI indexed journal papers. He is the recipient of the first award of technology innovation granted by China Ministry of Education, the first award of transportation science and technology granted by the China Highway and Transportation Society, the National Excellent Doctoral Dissertation in ITS area, and the Excellent Doctoral Dissertation of Jiangsu Province.

Chi XIE Ph.D.



Professor

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Prof. Chi Xie is currently a Professor in the School of Transportation Engineering at Tongji University and has been teaching at University of Texas at Austin, Shanghai Jiaotong University and Tongji University over the past decade. His main research areas include transportation network management and control, travel demand analysis and forecasting, and freight transportation and logistics systems, in which his research interest is focused on developing innovative methods to analyze and optimize large-scale urban and regional systems on the strategic and tactic levels. Over past years, his research activities have been sponsored by the U.S. National Science Foundation, National Natural Science Foundation of China, Ministry of Science and Technology of China, Ministry of Education of China, China Recruitment Program of Global Experts and other domestic and international funding sources; his research results have been published in more than 90 journal and conference papers, book chapters, and technical reports, a half of which are SCI-indexed journal papers.

Prof. Chi Xie is a 2005 champion of the Richard E. Rosenthal Competition sponsored by the U.S. Military Operations Research Society, a 2006 recipient of the John E. Perry Prize granted by Cornell University, a 2013 recipient of the Young 1000-Talent Award from the China Recruitment Program of Global Experts, a 2014 UNSW Visiting Professorial Fellow from University of New South Wales, a 2017 Outstanding Young Scholar of Frontiers of Engineering in China and an elected speaker of the 5th China-America Frontiers of Engineering Symposium from the Chinese Academy of Engineering and U.S. National Academy of Engineering, and a 2018 recipient of the Best Paper Award from World Transport Convention. Currently, he serves as an appointed Associate Editor of International Journal of Transportation Science and Technology (IJTST) and an Editorial Board Member or Guest Editor of three other journals, the Chair of the Freight Transportation Planning and Logistics Committee and Waterborne Logistics Optimization and Management Committee of World Transport Convention (WTC), a Member of the Freight Transportation Planning and Logistics Committee of Transportation Research Board (TRB), and an Advisory Committee Member of the South China Transportation and Logistics Development Research Center.



#### Changjun ZHOU Ph.D.



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Dr. Changjun Zhou research area includes pavement structure design, paving material characterization, paving material durability, etc. In recent five years, he has published 25+ SCI-Indexed journal papers. He earned Scientific and Technological Progress 1st Award as the fourth scholar. He got financial supports from NSFC, China Postdoctoral Science Foundation, and enterprises. He is served as members in academic organizations, including ASCE bituminous materials committee, TRB AFD50 rigid pavement design, China Highway and Transportation Society. He is an expert reviewer for China Ministry of Science and Technology. He is the co-chair of comittee of pavement inspection, evaluation, and rehabilitation in the branch of pavement inspection and maintainence in pavement engineering in the World Transportation Convention. He is now a reviewer in ASCE Journal of Materials in Civil Engineering, ASCE Journal of Transportation Engineering, Part B: Pavements, Elsvier Construction and Building Materials, Journal of Cleaner Production, etc.

## **Chunzhi Zhang**



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Ms Chunzhi Zhang is Vice President of China Transportation Association, Guest Professor of Civil Aviation University of China, former Secretary of the CCP Committee of the Operation Monitoring Center of Civil Aviation Administration.

# Darcy BULLOCK



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Dr. Darcy Bullock is the Lyles Family Professor of Civil Engineering at Purdue University and serves as the director of the Joint Transportation Research Program (JTRP). Bullock is a Registered Professional Engineer in Indiana and has 25 years of experience in the industry working closely with transportation agencies, airports and private sector partners. Bullock's teaching, research and consulting interests have been in the general area of connected vehicles, traffic signal performance measures, transportation systems and implementation of advanced technology. He received a B.S. in Civil Engineering from the University of Vermont, and a M.S. and a Ph.D. in Civil Engineering from Carnegie Mellon University.

Degou CAI Ph.D.



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Dr. Degou Cai, research fellow, is the deputy director of the Railway Engineering Research Institute. He is engaged in the theoretical and technical research work of high-speed railway subgrade engineering, and he has achieved innovative achievements in the highspeed railway subgrade structural technical standard system and BIM-based subgrade information monitoring. He organized or participated in compilation of 8 specifications, such as Technical Regulations For Monitoring Frost Heave Of Seasonal Frozen Ground In High-speed Railway. He has be authorized more than 20 patents for invention.



#### David LEVINSON Ph.D.



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Prof. David Levinson teaches at the School of Civil Engineering at the University of Sydney, where he leads TransportLab and the Transport Engineering group. He held the Richard P. Braun/CTS Chair in Transportation (2006-2016) at the University of Minnesota. Levinson has authored or edited several books, including

- A Political Economy of Access
- Elements of Access,
- Spontaneous Access,
- The End of Traffic and the Future of Access,
- The Transportation Experience, and
- Metropolitan Transport and Land Use: Planning for Place and Plexus.

He won the 2005 CUTC/ARTBA New Faculty Award. He earned a Ph.D. from the University of California at Berkeley in 1998.

#### Daxin TIAN Ph.D.



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Dr. Daxin Tian is a professor and the vice dean in the School of Transportation Science and Engineering, Beihang University, Beijing, China. He is awarded by Young Scholars of the Yangtze River and National Outstanding Youth Science Foundation. He has authored/co-authored about 100 journal/conference papers and book chapters. His current research interests include connected vehicles, vehicular ad hoc networks, swarm intelligence, and intelligent transportation systems. He is a senior member of IEEE, CCF and ITSC. He is serving on the editor in chief of International Journal of Smart Vehicles and Smart Transportation, the editorial board of Journal of Intelligent and Connected Vehicles.
#### Dawei WANG Ph.D.



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Prof. Dawei Wang is the professor and doctoral supervisor in the School of Transportation Science and Engineering at Harbin Institute of Technology. He graduated from Department of Civil Engineering in Tsinghua University in 2003. In 2007 and 2011 he received his Diploma's and Doctor's degree in RWTH Aachen University, respectively. He served as the senior research engineer of the Institute of Highway Engineering in RWTH-Aachen University and the leader of the group of "Pavement Analysis and Modelling" from 2011 to 2016. By 2016, he has been promoted to the professor and director of Institute of Highway Engineering (W2), the director of the Road-Materials Testing Center in University Siegen in Germany. In 2017, he was granted Habilitation based on the research and effort he contributed to highway engineering in Germany. The same year, he was granted the Young Scientist by Harbin Institute of Technology. His research interests and expertise focus primarily on asphalt pavement skid resistance, multi-scale characterization of the asphalt pavement mechanical behavior and functional pavement theory and technology. So far, he has directed or participated in more than 24 government-aided scientific research projects. Over the last years, he has published nearly 150 academic publications including more than 80 SCI indexed papers.

#### **Dianhai WANG**

Ph.D.



#### Professor

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Professor Dianhai Wang is currently a Full Professor and Director of Institute of Intelligent Transportation Systems in College of Civil Engineering and Architecture, Zhejiang University, Hangzhou, China. As a Principal Investigator, he has led 1 project of the Key Science and Technology Innovation Team (on ITS) of Zhejiang Province, 13 projects funded by the National Natural Science Foundation of China. He has held more than 30 patents of invention and won many rewards in the field of transportation including National Science and Technology Progress Award. He is one of the first candidates of National Hundred, Thousand and Ten Thousand Talent Project.



Di ZHANG Ph.D.



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Di Zhang is Professor and Director of Intelligent Transportation Systems Research Center (ITSC) of Wuhan University of Technology, Vice Director of National Engineering Research Center for Water Transport Safety (WTS Center), China. He received his BSc in Navigation Technology, MSc in Traffic Information Engineering & Control and PhD in Vehicle Operation Engineering from Wuhan University of Technology in 2005, 2008 and 2011 respectively. With the financial support from the China Scholarship Council, he was a full time researcher at Liverpool John Moores University from October 2010 to September 2011, and at the Garrick Institute of UCLA from July to September 2017. Dr. Zhang's major research interests include risk assessment and decision science applied in marine systems. He is associate fellow of Royal Institute of Navigation (AFRIN).

# Enjian YAO

Ph.D.



#### Professor

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Dr. Yao is a professor of Beijing Jiaotong University. He received his Ph.D. degree at Nagoya University. He served as research fellow in ITS Research Center, NEC Corporation up to September 2009. His research interests include transportation planning, intelligent transportation systems, travel behavior analysis, urban rail transit passenger flow analysis, low-carbon transportation technology and policy, etc. He has hosted and participated in over 50 national level, provincial level and enterprise-funded research projects in the past 5 years. He currently serves as the vice-chairmen of the National Teaching Advisory Committee of Traffic Engineering Major in Higher Education Institutions under MOE, the council member of urban transportation Brunch, China Highway and Transportation Society, etc.

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Professor Fei-Yue Wang received his Ph.D. in Computer and Systems Engineering from Rensselaer Polytechnic Institute, Troy, New York in 1990. Currently, he is the Director of the State Key Laboratory for Management and Control of Complex Systems, Chinese Academy of Sciences. He is EiC of IEEE Transactions on Computational Social Systems, Founding EiC of IEEE/CAA Journal of Automatica Sinica. His current research focuses on methods and applications for parallel systems, social computing, parallel intelligence and knowledge automation.

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Dr. Xiao is currently a professor at the School of Business Administration, and associate dean of the Institute of Big Data of Southwestern University of Finance and Economics. He is the Yangtze River Scholar (Young Scholar) of the Ministry of Education, and currently presides over many national and provincial-level projects such as the Excellent Youth Fund of the National Natural Science Foundation of China. He also enrolled in the Sichuan Province's 100-person plan. Dr. Xiao's research interests include artificial intelligence algorithms and traffic data mining, transportation network modeling and optimization, road pricing, multi-modal integrated traffic system research, and intelligent transportation systems. He has published more than 30 SCI/EI indexed papers in internationally renowned journals and conferences such as Transportation Science, Transportation Research Part A, B, C, D and ISTTT.

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Professor Yang is the selected expert of New Century Talent Supporting Project by Chinese Education Ministry, dean of the department of traffic engineering, the vice president of Chengdu non-party intellectuals association, and the vice president of regional science association of professional committee of the Yangtze River economic belt research academic committee. He graduated from Tongji University with PHD in 2007 and visited University of Wisconsin-Madison as a research scholar in 2011. Professor Yang has undertook three National Science Foundation of China (NSFC) programs, two province departmental level projects, and more than 30 engineering projects. In recent years, he has published nearly 40 academic papers. He has also published 2 monographs. He applied for 9 national patents (5 authorization,4 pending) and accessed 2 computer software copyrights.

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Mr. Liu Gan is an industry professor, senior engineer and a member of the National Road Traffic Management Standardization Technical Committee. He has been engaged in road traffic safety management research, design and product development for a long time. He has presided over or participated in the drafting of 19 technical standards for road traffic safety, and has won more than 80 patents. His works are New Recognition of Traffic Safety and Research and Application of Active Emitting Traffic Signs.

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Prof. Guangquan Lu is the Associate Dean of School of Transportation Science and Engineering, Beihang University. In recent years, his research has been carried out on driving behavior, V2V and traffic system reliability. He introduced the homeostatic risk theory into the micro-driving behavior modeling and then proposed the desired safety margin car-following model based on subjective risk perception. He has been published more than 30 papers in the SCI journals and 4 academic books in transportation field.

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Guoqiang Mao joined the University of Technology Sydney in 2014 as Professor of Wireless Networking. Before that, he was with the University of Sydney. He has published three books and over 200 papers in international conferences and journals, including over 100 papers in IEEE journals, that have been cited over 7,000 times. He is an editor of the IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Wireless Communications, IEEE Transactions on Vehicular Technology, and a co-chair of IEEE Intelligent Transport Systems Society Technical Committee on Communication Networks. His research interest includes intelligent transportation systems, vehicular networks, Internet of Things, next generation mobile communication systems, and wireless localization techniques. He is a Fellow of IEEE and IET.

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Dr. Tan is engaged in bridge detection and reinforcement, bridge structural dynamics and so on. In recent years, he has undertaken more than 10 scientific research projects, including the National Natural Science Foundation of China projects and the National High Technology Research and Development Plan(863 Project). He published more than 60 SCI/EI indexed papers, obtained more than 10 authorized patents, including 8 invention patents. He now serves as a special expert of Jilin Provincial Highway Engineering Association, and serves as an expert in the review of many academic journals, such as "American Journal of Mechanics and Applications", "Journal of Vibration Engineering", "Construction & Building Materials" and so on.

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Professor Ren is currently the director of the major project and collaborative innovation office of the research institute of Southeast University. His main research interests include traffic behavior and safety, emergency traffic management, and active traffic optimization. He has published 14 SCI papers and more than 50 El papers in domestic and foreign academic journals and international conferences, written 3 monographs and 1 textbook, authorized 3 national invention patents and 1 utility model patent, and obtained 3 software Copyrights. He supervised 11 doctoral students and 29 master students (including 2 provincial excellent master thesis recipients). He has won many academic awards, personal honors and grants from talent programs.

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Dr. Gao, Director of Cornell Systems Engineering and Director of Center for Transportation, Environment, and Community Health (CTECH), is a Professor with the School of Civil and Environmental Engineering at Cornell University. He is an elected member in the graduate fields of 1) Civil and Environmental Engineering, 2) Air Quality in Earth and Atmospheric Science, 3) Cornell Institute of Public Affairs (CIPA), and 4) Systems Engineering at Cornell University. His research focuses on quantitative modeling and development of engineering systems solutions for sustainable and intelligent infrastructure and lifeline systems, low carbon and low emission transportation systems, and the closely related environment (especially air quality and climate change)-energy systems. He also studies alternative transportation/energy technologies, systems innovation, and green supply chain and logistics (e.g., sustainable food systems, quantifying and mitigating greenhouse gas emissions from food supply chains). Gao received his graduate degrees (Ph. D. in Civil and Environmental Engineering, M.S. in Statistics, and M.S. in Agriculture and Resource Economics) from the University of California at Davis in 2004, M.S. degree in Civil Engineering in 1999, and duel undergraduate degrees in Environmental Science and Civil Engineering in 1996 from Tsinghua University, China. He served as the Editor-in-Chief of Transportation Research Part D: Transport and Environment 2014-2018. Before joining Cornell, Gao was a QUANT in the mathematical and econometrical modeling division at the Rohatyn Group, LLG, a Wall Street hedge fund specializing in emerging markets including the BRIC countries.



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Professor Liu has long engaged in the research field of urban transportation and rail transit. A number of his decision-making research results have been adopted by the ministry of transport and local people's government transport administrative departments. He also participated in 2 national standards compilation, participated in drafting 9 industry standards. In 2019, he was awarded the title of "young talents in transportation science and technology" by the ministry of transport, and obtained 2 national invention patents and 8 computer software copyrights. He has published more than 30 papers and won the first prize once and second prize of science and technology of China highway society twice, and the second prize of science and technology of provincial people's government twice.

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Professor Hainian Wang has engaged in diverse research directions, including: design theory and method of regionally specific road engineering, road material microstructure characterization and modeling, environmental paving materials development and evaluation, etc. He has hosted 6 projects from NSFC and more than 10 projects funded by MOT and provincial DOT and published more than 130 papers, including more than 60 SCI papers. The citation is 1126 times with a h-impact factor of 17. He has hosted 5 international academic conferences, and served as the guest editor to publish 4 issues of international journals, and was invited to give more than 20 international academic reports in the United States, Germany, the United Kingdom, South Africa and other countries.

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Dr. Hao Wang received his B.S. degree in traffic engineering and his Ph.D. degree in transportation planning and management from Southeast University in 2002 and 2008. Now he is a professor at the School of Transportation of the Southeast University. His research interests include traffic flow theory, traffic control and traffic safety. Dr. Wang has been in charge of 4 sub-topics of the National High Technology Research and Development Program of China, 3 projects of the National Natural Science Foundation of China. In 2018, Dr. Wang won the second prize of the Science and Technology Awards of China. In 2016 and 2017, he won the first prize twice of the Science and Technology Awards of China Highway and Transportation Society.

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Dr. Heng Wei invented a video-capture-based method for extracting vehicle trajectory data on multiple lanes from video and developed a software tool, VEVID which was later combined with image processing technique into the a "hybrid" system (VIEW-TRAFIC) to make the video-based traffic extraction suitable for all traffic conditions. He has developed two GIS-based analysis systems, Traffic Air Environmental Health Impact Analysis (TAEHIA) and Air Impact Relating Scenario-based Urban Settings and Transportation Assets In Network (AIR-SUSTAIN) to facilitate analysis of the land-social-travel-environment nexus. Recently, Dr. Wei has created a model and algorithm that uses data from connected vehicles to adjust the timing of traffic lights for maximizing throughput, while formulating the infrastructure-CAV nexus. He has served as the Chair of IEEE ITSS Travel Information and Traffic Management Committee, Chair of Energy and Environment Committee under Urban Planning Track for the World Transportation Convention, and Past President of COTA.

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Prof. Hai Yang is currently a Chair Professor at The Hong Kong University of Science and Technology. He is internationally known as an active scholar in the field of transportation, with more than 240 papers published in SCI/SSCI indexed journals and a SCI H-index citation rate of 53. Most of his publications appeared in leading international journals, such as Transportation Research, Transportation Science and Operations Research. Prof. Yang received a number of national and international awards, including National Natural Science Award bestowed by the State Council of PR China (2011). He was appointed as Chang Jiang Chair Professor of PR China; Prof. Yang served as the Editor-in-Chief of Transportation Research Part B (2013-2018) and is now a distinguished editorial board member of this journal.

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Jia Hu works as a "Hundred Talent Program" Professor in the College of Transportation Engineering at Tongji University. Before joining Tongji, he was a research associate at the Federal Highway Administration, USA (FHWA). Dr. Hu is a recipient of Best Paper Award from the TRB Air Quality Committee, Best Scientific Paper-Americas Award from the ITS World Congress 2016, and Research Associateship Award from the National Academy of Sciences. He is an Associate Editor of the American Society of Civil Engineers Journal of Transportation Engineering. Furthermore, he is a member of TRB (a division of the National Academies) Vehicle Highway Automation Committee, Freeway Operation Committee and Simulation subcommittee of Traffic Signal Systems Committee.

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Dr Jin is a full professor and the head of the Lab for Brain-Computer Interfaces and Control. He was also IEEE Senior Member and the chair of the department of automation in the East China University of Science and Technology. He published more than 80 research papers in BCI related journals and conferences including Journal of Neural Engineering, IEEE Transactions on Neural Systems and Rehabilitation Engineering, International Journal of Neural Systems, Acta Automatica Sinica and International BCI Conference and Meeting (2006-2019). From 2015 to 2019, he was selected as Most Cited Chinese Researchers in the field of biomedical engineering. His citations in google scholar is more than 2500 times and the H-index is 30. He is the editorial board of Brain-Computer Interfaces, Journal of Neural Engineering, Journal of Neuroscience Methods and Applied science and guest editor of Computational Intelligence and Neuroscience. He won the Second Class Nature Science Prize of Shanghai in 2018 (Rank first).

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Dr. Ma has been invited to serve on numerous research panels such as TxDOT, the National Cooperative Highway Research Program (NCHRP), the Strategic Highway Research Program 2 (SHRP2), the American Association of State Highway and Transportation Officials (AASHTO) CAV Working Group, Cooperative Automated Transportation (CAT) Coalition, and the Connected Vehicle Pooled Fund Study (CV PFS). Dr. Ma serves as the Editor-in-Chief for the International Journal of Smart Vehicles and Smart Transportation (IJSVST) and served as Associate Editor for the 15th International IEEE Conference on Intelligent Transportation Systems. Dr. Ma is Vice President of Chinese Overseas Transportation Association (COTA)

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Dr. JIN XU devotes himself to the study of highway safety design, driver behavior and modelling, driving simulation, and coordination of "driver – vehicle -road". He proposed a dynamic decision algorithm to determine target "path & speed" for complex roads, prediction model of operating speed for heavy trucks driving on 3D complex alignment, a new tolerant design method of mountain highway alignment based on multi-mode driving behavior. He has published more than 100 papers, of which some were published on "Science CHINA", "IEEE T-ITS", "SIMULATION", and "J.Transp Eng". He published a monograph title "A New Method for Mountain Road Horizontal Alignment Design". He also developed six software related to safety evaluation of mountain roads, and was granted three software copyrights. Dr. Xu was awarded in 2017 Science and Technology Prize by ITS China and by Chongqing government in 2018. He has awards from the Ministry of Transport of the People's Republic of China in 2014 and 2017.

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Dr. Kai LIU received his Ph.D. degree in Transportation Engineering from Nagoya University. His areas of specialties include transportation planning and management, ATIS, travel behavior modeling, GIS in Transportation. Dr. Liu has been appointed as the Chair of Transportation and Environment.

Discipline of Cross-cutting Track of World Transport Convention. He also served as the International Scientist Committee Member of Eastern Asia Society for Transportation Studies. His studies focus on key technologies and methodologies in transportation field, including elaborate data collection and treatment, data fusion, pattern recognition, visualization and information mining. Dr. Liu has published more than one hundred academic papers in professional journals and conference proceedings.

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Dr. Sinha has been involved in transportation education, research and practice for five decades. He has authored or co-authored more than 450 technical publications and a book on transportation investment decision making. He has served as the President of the Transportation & Development Institute of the American Society of Civil Engineers, President of the Research and Education Division of the American Road and Transportation Builders Association, President of the Council of University Transportation Centers and as a member of the Executive Committee of the Transportation Research Board. He is currently on the editorial board of five journals including the Journal of Transportation Engineering (Editor-in-Chief Emeritus). He is a Member of the US National Academy of Engineering.

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Dr. Wang received degrees in China and the US. He started his professional career at the Arizona Department of Transportation (ADOT) in 1989. Later he became a faculty member at the University of Arkansas and Oklahoma State University. He is known for his service at ASCE and became president of ASCE Transportation and Development Institute in FY 2017. He has worked on automated survey of surface distresses on transportation infrastructure. His technologies are used in the US, China, Japan, South Africa, and Brazil. His innovations and leadership experience earned him two ASCE awards (2011 Masters, and 2018 Turner).

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## Xiaokun (Cara) WANG Ph.D.



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Dr. Cara Wang got her B.S and M. S. degrees from Tsinghua University, China, and Ph.D. from the University of Texas at Austin. Her research mainly focuses on the analysis of the interactions between land use, transport (both passenger and freight), energy and environment, and the spatial dependence of travel behavior. She has published over 60 papers in peer-reviewed journals and conference proceedings. She is a recipient of the Pikarsky Award for Outstanding Ph.D. Dissertation, and INFORMS Franz Edelman Award. Dr. Wang is member of TRB Committee ABJ70 (Artificial Intelligence and Advanced Computing Applications) and AT015 (Freight Transportation Planning and Logistics). Dr. Wang has been PI and Co-PI of research projects sponsored by National Science Foundation (NSF), National Cooperative Highway Research Program (NCHRP), National Cooperative Freight Research Program (NCFRP), New York State Energy Research and Development Authority (NYSERDA), U.S. State Department of Transportation, among others.
#### Xiong (Bill) YU Ph.D.



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Dr. Xiong (Bill) Yu is a professor at the Department of Civil Engineering, Case Western Reserve University. His research emphasizes the use of interdisciplinary approaches to address the engineering problems in geosystem and civil infrastructure. His research activities include multiscale and multiphysics processes in geomaterials, smart sensors and materials, intelligent infrastructure and systems. He is a recipient of a NSF CAREER award in 2009. He is committed to graduate student mentorship with large number of students successfully launched academic career, including 2 received NSF CAREER awards. He has published over 250 papers in journals and referred conference proceedings. He serves as the chair of the Geo-Institute Engineering Geology and Site Characterization committee and Chair of Case School of Engineering Executive Committee.

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#### Xuesong ZHOU Ph.D.



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Xuesong Zhou is a professor at Arizona State University (ASU) in Tempe, Arizona. Dr. Zhou's research work focuses on dynamic traffic assignment, traffic estimation and prediction, large-scale routing and rail scheduling. Dr. Zhou is currently an Associate Editor of Transportation Research Part C, an Associate Executive Editor-in-Chief of Urban Rail Transit, and an Editorial Board Member of Transportation Research Part B. He was the former Chair of INFORMS Rail Application Section (2016), and a subcommittee chair of the TRB Committee on Transportation Network Modeling (ADB30). He has created an open-source traffic assignment package DTALite and published many papers with an H-index of 35.

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Dr. Zhu's research interests include smart road materials and structures, multi-scale analysis and numerical simulation of road materials and structures. She has authored and coauthored more than 70 peer-reviewed international journal papers (including 50+ SCIindexed papers). She undertakes 3 projects from NSFC, and 10+ projects from Shanghai Municipal Education Commission, etc. She gives more than 20 conference reports. She now serves as the associate editor of Journal of Materials in Civil Engineering, and once served as the responsible editor of Appl. Math. Mech.-Engl. Ed.(SCI-indexed).

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#### Yonele Ll Ph.D.



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Dr. Yongle Li is currently a Professor and head of Department of Bridge Engineering, School of Civil Engineering, Southwest Jiaotong University (SWJTU). He joined in SWJTU since 1998 and was successively appointed as Teaching Assistant, Lecturer, Associate Professor, and Professor. Given his long-term commitment to the interdisciplinary studies of bridge structural dynamics, aerodynamics and vehicle dynamics, he is now in the field of bridge aerodynamics and wind-vehicle-bridge coupled dynamics. So far, Dr. Li has undertaken over 50 research projects and published over 200 scientific papers. Due to his significant contributions to both academia and industry, Dr. Li has won many awards, among which include The National Science Fund for Distinguished Young Scholars and Distinguished Professor of Chang Jiang Scholars.

#### Yang LIU Ph.D.



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Dr. Liu Yang is an Assistant Professor at the National University of Singapore. Dr. Liu's research covers various topics in the areas of travel demand and congestion management, ridesharing and carsharing systems operations and design, and information provision in risky networks. Her work has been published in the major journals in the field such as Transportation Research Part A, Part B, and Part C. She served as a member on the editorial advisory board of Transportation Research Part B and an Area Editor for 2017 COTA International Conference for Transportation Research Part C. She is a member on the editorial advisory board of Transportation Research Part C. She is a member of IEEE ITS Education Committee, a member of Transportation Research Board Committee on Emerging and Innovative Public Transport and Technologies (AP020), and a member of International Scientific Committee (ISC) of Eastern Asia Society for Transportation Studies (EASTS). She has worked on the research projects funded by US and Singapore public agencies, including US Federal Highway Administration, National Science Foundation, and Singapore Ministry of Education.

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Dr. Yongfeng Ma is an Associate Professor in the School of Transportation, Southeast University, China. He received his Ph.D. in Transportation Engineering from Southeast University in 2007. He has been working at the position of visiting scholar in the School of Civil Engineering, Purdue University, from August, 2014 to September, 2015. His research interests focus on traffic safety, driving behavior and road traffic design. He has served as Pl or co-Pl of 15 research projects. He is the chair of the road traffic design subcommittee of World Transportation Conference. He has published over 50 referred journal and conference articles. He serves as reviewer for multiple top journals and conferences, such as IET Intelligent Transport Systems, TRR.



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Professor Tan Yiqiu has been engaged in the teaching and scientific research of road engineering structure and materials. In 2012, she was awarded the Outstanding Youth Fund of the National Natural Fund Commission, and was appointed as a special professor of the Yangtze River Scholar Award Program of the Ministry of Education in 2014. She has granted one second prize for National Technology Invention Award, twice second prizes for National Science and Technology Progress Award, more than 50 national invention patents granted, published more than 150 domestic and foreign journal papers and 2 monographs.

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Dr. Yue Xiao received his PhD degree at Delft University of Technology in Road and Railway Engineering in 2013, with the supervisor of Prof. A.A.A. Molenaar. His research interests include eco-efficient pavement materials and construction materials recycling. He designed the green asphalt materials with lower VOCs emission by synthetic zeolite. Dr. Xiao has three NSFC projects and is now serve as Direct in the Sub-lab of Construction Materials Recycling in the State Key Laboratory of Silicate Materials for Architectures. He received the title of CHUTIAN Scholar in material science and engineering from Hubei provincial department of education in 2014 and 16th Fok Ying Tung Outstanding Young Teacher of Higher Education from the Ministry of Education in 2018.

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Dr. Zhang serves as the Chair for Transportation Research Board (TRB) Airfield and Airspace Capacity and Delay (AV060) committee, the Immediate Past President for Chinese Overseas Transportation Association (COTA). Dr. Zhang holds Ph.D. and M.S. from the University of California Berkeley in Civil and Environmental Engineering and Bachelors from Southeast University of China in Transportation Engineering. Dr. Zhang is the recipient of the 2010 Fred Burggraf Award, for excellence in transportation research by researchers 35 years of age or younger, presented by TRB of the National Academies of Science.

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Dr. Tan is currently the professor of School of Maritime Economics and Management at Dalian Maritime University (DMU). He was educated at Geoscience University of China (Wuhan) and Fudan University (Shanghai) where he was awarded the BS and MS degrees in Applied Mathematics in 2000 and 2005, respectively. And then he studied at The Hong Kong University of Science and Technology and received his PhD degree in Transportation and Traffic Engineering in 2010. The major portion of his research focuses on modeling and analysis of transportation systems, transportation infrastructure franchising, and inland waterway transportation.

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Dr. Tian joined the University of Nevada Reno in 2004 and is currently a professor and director of the Center for Advanced Transportation Education and Research (CATER) at UNR. He is also the director of a USDOT University Transportation Center consortium that includes five universities in Nevada, Arizona, and New Mexico. He obtained his Ph.D. degree from Texas A&M University. He held a position of associate research scientist at the Texas Transportation Institute between 2000 and 2004. He was employed at Kittelson and Associates, Inc. in Portland, Oregon between 1995 and 1999. Dr. Tian is active in various professional organizations. He is a member of the Traffic Signal Systems Committee of TRB and has served as a member of Highway Capacity and Quality of Service Committee for 9 years. He serves as the Topic Area Manager (TAM) for Area C of the World Conference for Transport Research Society (WCTRS), overseeing four Special Interest Groups. His research is in traffic signal control, highway capacity analysis, and integrated freeway-arterial operations.



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Dr. Zhigang Xu is a Professor with the School of Information Engineering. He is currently the chair of CAVs Committee of World Transport Convention, and also a member of ASCE T&DI and IEEE ITS society. He had worked in University of California, Davis as a visiting scholar. His research focuses on connected and automated vehicles, image processing and intelligent transportation systems. On these topics, he has published more than 70 journal or conference papers, 3 of them were recommended as best papers. Dr. Xu won 1 National and 3 Provincial Scientific and Technological Progress Rewards in China. As a coleader, he built a field test-bed at CU named CAVTest for testing CAVs. He also developed an autonomous vehicle named Xinda, on this platform he carries on many academic researches and won several awards. In China, he conducts wide collaboration with the industries. For his special contribution on scientific research and education, Dr. Xu was awarded the title of Outstanding Young Scientist of Shaanxi Province in 2018.

# Pre- and Post-CICTP2019 Events



## The Pre-CICTP2019 Workshop on Big Data and Emerging Vehicle Technologies

July 4, 2019

Grand Gongda Jianguo Hotel, Beijing University of Technology 100 Pingleyuan, Chaoyang District, Beijing 100124, China For more information, please contact Dr. Yanyan Chen at +86 13671283646 or cdyan@bjut.edu.cn



## The Post-CICTP2019 Yangzhou Symposium on Smart City and Future Transportation

July 9-11, 2019 Yangzhou Xiyuan Hotel, Yangzhou University 1 Fengle Upper St, Weiyang District, Yangzhou, Jiangsu 225002, China For more information, please contact Dr. Shejun Deng at +86 13852727958 or yzrx6@163.com

# CICTP 2019

#### 联合举办:

东南大学



海外华人交通协会 Chinese Overseas Transportation Association



Southeast University



交通国际合作事务中心 Jiaotong International Cooperation Service Center

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- 北京络捷斯特科技发展股份有限公司 Logis Logis



高德软件有限公司 AMAP



Manbang Group 美团点评





