

**Symposium on Advanced Urban Traffic Operation and Control  
The 3<sup>rd</sup> Workshop on Intelligent Transport Systems between  
Tongji University and the University of Tokyo**

**先进的城市交通运行控制国际研讨会  
暨第三届同济大学-东京大学智能交通国际研讨会**

**Oct.20-21, 2017  
Shanghai, China**

# 会议手册

## Conference Book

同济大学（嘉定校区） 中国 上海

**Organizers 主办单位**



同济大学  
TONGJI UNIVERSITY



College of Transportation Engineering, Tongji University  
同济大学交通运输工程学院



東京大学  
The University of Tokyo



The Institute of Industrial Science, The University of Tokyo  
东京大学生产技术研究所

**Co-organizers 协办单位**

Transportation Safety Discipline "111 Project" Base  
交通安全学科创新引智基地

Joint International Research Laboratory of Transportation Safety  
同济大学交通安全国际合作联合实验室

**Sponsors 资助单位**



Natural Science Foundation of China (NSFC)  
国家自然科学基金委员会



Japan Society for the Promotion of Science (JSPS)  
日本学术振兴会

## Oct.20 (Friday)

### 08:30-08:40 **Opening**

(Moderator: Keshuang TANG, Associate Professor, Tongji University, China)

### 08:30-08:40 **Opening Remarks**

Jianming LING, Professor, Dean of College of Transportation Engineering, Tongji University, China

### 08:40-08:50 **Opening Remarks**

Takashi OGUCHI, Professor, The University of Tokyo, Japan

### 08:50-11:20 **Keynote Speech**

(Moderator: Xinghua LI, Professor, Tongji University, China)

### 08:50-09:20 **Promotion of Automated Driving and Advanced Rapid Transit as Next Generation Urban Transport in Japan**

Takashi OGUCHI, Professor, The University of Tokyo, Japan

### 09:20-09:50 **Study on Spatial Activity Patterns of Inhabitants based on Big Data**

Dongyuan YANG, Professor, Tongji University, China

### 09:50-10:20 **Coffee Break & Group Photo** ☕ 📷

### 10:20-10:50 **Next Generation Mobility by Automated Driving—Implementation by Establishment of Business Ecosystem**

Yoshihiro SUDA, Professor, The University of Tokyo, Japan

### 10:50-11:20 **Research on New Generation Traffic Control System**

Xiaoguang YANG, Professor, Tongji University, China

### 11:20-13:30 **Lunch & Lab Visit (Qiu Gu Yuan Canteen)**

### 13:30-15:10 **Technical Session 1**

Moderator: Takashi OGUCHI, Professor, The University of Tokyo, Japan)

### 13:30-13:50 **Accident Risk Simulation**

Toshio YOSHII, Professor, Ehime University, Japan

### 13:50-14:10 **Modeling Urban Activity Dynamics Using Massive Spatial-Temporal Data: An Activity Chain Inference and Pattern Recognition Approach**

Chao YANG, Professor, Tongji University, China

### 14:10-14:30 **Traffic Management using Moving Light Guide System**

Hiroyuki ONEYAMA, Professor, Tokyo Metropolitan University, Japan



- 14:30-14:50 **Day-to-Day Traffic Congestion Prediction for Urban Expressways Based on Convolutional Neural Network**  
Keshuang TANG, Associate Professor, Tongji University, China
- 14:50-15:10 **A Study on Post-trip Multi-Modal Information Provision**  
Shinji TANAKA, Associate Professor, Yokohama National University, Japan
- 15:10-15:30 **Coffee Break** ☕
- 15:30-17:10 Technical Session 2**  
(Moderator: Chao YANG, Professor, Tongji University, China)
- 15:30-15:50 **Inter-Vehicle Traffic Light as a Driver Assist System and Its Application to an Automated Driving Vehicle**  
Kimihiro NAKANO, Associate Professor, The University of Tokyo, Japan
- 15:50-16:10 **Analysis of Transport Network Flow with Multi-Source Big Data**  
Zhiyuan Liu, Professor, Southeast University, China
- 16:10-16:30 **Cooperative ITS for Safe and Sustainable Transportation Society**  
Koichi SAKAI, Associate Professor, The University of Tokyo, Japan
- 16:30-16:50 **An Extensive Investigation on Cooperative Eco-approach Controller Under Partially Connected and Automated Vehicle Environment**  
Jia HU, "Hundred Talent Program" Professor, Tongji University, China
- 16:50-17:10 **On-vehicle Camera Sensing and Space-time Video Processing**  
Shintaro ONO, Associate Professor, The University of Tokyo, Japan
- 18:00-21:00 **Reception Dinner**

## Oct.21 (Saturday)

- 08:30-08:50 Technical Session 3**  
(Moderator: Toshio YOSHII, Professor, Ehime University, Japan)
- 08:30-08:50 **Optimization of Traffic Flow by Lane-Based Dynamic Toll Pricing at Basic Segment Bottleneck on Expressways**  
Yasuhiro SHIOMI, Associate Professor, Ritsumeikan University, Japan



08:50-09:10 **Identifying Passengers Who Are at Risk of Reducing Public Transport Use: A Survival Time Analysis Using Smart Card Data**

Hiroaki NISHIUCHI, Assistant Professor, Kochi Institute of Technology, Japan

09:10-09:30 **Principle of Urban Congestion and Traffic Emission based on Didi Massive Car-hailing Data**

Jian SUN, Professor, Shanghai Jiaotong University, China

09:30-09:50 **Should On-Demand Ride Services be Regulated? An Analytical Evaluation of Chinese Government Policies**

Xiqun CHEN, "Hundred Talents Program" Professor, Zhejiang University, China

09:50-10:10 **Characteristics of Electric Carsharing and Its Impacts on Vehicle Holdings**

Jianhong YE, Associate Professor, Tongji University, China

10:10-10:30 **Coffee Break** ☕

10:30-12:10 **Technical Session 4**

(Moderator: Keping LI, Professor, Tongji University, China)

10:30-10:50 **Exploring the Transferability of Safety Performance Functions**

Xuesong WANG, Professor, Tongji University, China

10:50-11:10 **An Analysis of Attentional Disengagement Effect on Driver's Cognition of Road Gradient at Sag Sections**

Hirotoishi SHIRAYANAGI, Assistant Professor, Ehime University, Japan

11:10-11:30 **Connected Vehicles for Weight-based Traffic Safety Risk Management**

Huizhao TU, Professor, Tongji University, China

11:30-11:50 **Impact of Long-Continuous Driving Vehicles on Accident Risks**

Takahiro TSUBOTA, Assistant Professor, Ehime University, Japan

11:50-12:10 **Driving Behavior and Driving Safety under the Influence of Cross-Wind**

Feng CHEN, Associate Professor, Tongji University, China

12:10-13:30 **Lunch**

13:30-15:10 **Technical Session 5**

(Moderator: Hiroyuki ONEYAMA, Professor, Tokyo Metropolitan University, Japan)



- 13:30-13:50 **Optimality Characteristics of Pedestrian and Driver Maneuvers**  
Charitha DIAS, Project Researcher, The University of Tokyo, Japan
- 13:50-14:10 **Joint Optimization of Tram Timetables and Traffic Signal Timings**  
Yuxiong JI, Associate Professor, Tongji University, China
- 14:10-14:30 **Development and Application of an Algorithm for Autonomous Platooning Systems**  
Toshiyuki SUGIMACHI, Project Research Associate, The University of Tokyo, Japan
- 14:30-14:50 **New Thoughts for Urban Expressway Real-time Crash Risk Analysis**  
Rongjie YU, Associate Professor, Tongji University, China
- 14:50-15:10 **Policies of Bicycle Facilities and Cycling Characteristics of elderly people in Japan**  
Mio SUZUKI, Project Research Associate, The University of Tokyo, Japan
- 15:10-15:30 **Coffee Break** ☕
- 15:30-17:20 Technical Session 6 (Young Session)**  
(Moderator: Yuxiong JI, Associate Professor, Tongji University, China)
- 15:30-15:50 **Multi-Objective Optimization of Traffic Signal Settings for Isolated Intersections Considering Efficiency as well as Safety**  
Muhammad ABDULLAH, Ph.D. Candidate, The University of Tokyo, Japan
- 15:50-16:10 **A Comparative Study of Coordinated Ramp Metering Strategies for Complex Networks**  
Koki SATSUKAWA, Ph.D. Candidate, The University of Tokyo, Japan
- 16:10-16:30 **Experimental Investigation of Pedestrian Queue Formations in the Upstream of Different Types of Bottlenecks**  
Jiahua ZHANG, Ph.D. Candidate, The University of Tokyo, Japan
- 16:30-16:50 **Parking Choice Model under Parking Guiding Information System: Revealed and Stated Preference Experiment**  
Bowen YIXIE, Ph.D. Candidate, Tongji University, China
- 16:50-17:10 **Hybrid Cycle-based Volume Estimation Method for Signalized Intersections Based on Sampled Trajectory Data**  
Jiarong YAO, Ph.D. Candidate, Tongji University, China
- 17:10-17:20 **Closing Remarks**  
Takashi OGUCHI, Professor, The University of Tokyo, Japan  
Keshuang TANG, Associate Professor, Tongji University, China
- 18:30-21:30 **Farewell Dinner**

