

# 4 Universities Joint International Conference

## : Toward Carbon-Neutral Urban Mobility

12-14 May 2024

Civic Auditorium Sears Home Yume Hall

1-3 Sakuramachi, Chuo Ward, Kumamoto City, Kumamoto Prefecture, Japan

### Program

#### Day1\_12 May

17:00 - 17:45	Steering committee meeting	Conference Room 1.
18:15 - 20:15	Welcome dinner	Hachigotei

#### Day2\_13 May

9:40 - 10:00	Registration	Main conference room (small hall)
10:00 - 10:10	Welcome address	Main conference room (small hall)
10:10 - 11:10	Breaking session	Main conference room (small hall)
11:10 - 11:20	Break	-
11:20 - 12:40	Session1(A1,B1)	Main conference room (small hall) & B:Conference Room 9.
12:40 - 13:00	Travel time	-
13:00 - 14:15	Conference lunch	Buffet restaurant GINNAN
14:15 - 14:30	Travel time	-
14:30 - 15:50	Session2(A2,B2)	A: Main conference room (small hall) & B:Conference Room 9.
15:50 - 16:00	Break	-
16:00 - 17:40	Session3(A3,B3)	A: Main conference room (small hall) & B:Conference Room 9.
17:40 - 17:45	Break	-
17:45 - 18:00	Closing address	A: Main conference room (small hall)
18:00 - 18:30	Travel time	-
18:30 - 20:30	Gala dinner	Dining café SAI

#### Day3\_14 May

9:50 - 10:00	Registration	Entrance @ Richmond Hotel Kumamoto Shinshigai
10:00 -	Technical tour	

Host:



Collaboration:



Participants:



## Timetable (Day 2\_13 May)

### Breaking session (10:10-11:10)

**Chair** Takuya Maruyama (Kumamoto University)

**Place** A: Main conference room (small hall)

**10:10** Transitioning to Carbon-Neutral Urban Mobility: Challenges and Pathways in the Anthropocene Epoch

**-10:30** Seungjae Lee (University of Seoul)

**10:30** Cooperative Decision-making for Connected and Autonomous Vehicles: A Coalitional Game Theory Approach for Cooperative Lane-Changing Decisions

**-10:50** Seiran Heshami, Lina Kattan (University of Calgary)

**10:50** Greening transport corridors using emerging AI techniques

**-11:10** Chenglong Liu (Tongji University)

### Session1 (11:20-12:40)

**Session** A1

B1

**Chair** Seunghyeon LEE (University of Seoul)

Yu Shen (Tongji University)

**Place** A: Main conference room (small hall)

B: Conference Room 9.

**11:20** Study on memory of urban landscapes based on walking experiences

Adaptability of Street View Image Data to Traffic Accident Analysis at Residential Road Intersections

**-11:40** Naoto Tanaka, Ippo Matsumoto (Kumamoto University)

Koki Yoshimoto, Syuji Yoshiki (Kumamoto University)

**11:40** Autonomous Intelligent Detection of Urban Sidewalks Based on Quadruped Robot

Analysis of Traffic Characteristics in Urban Underpass using VDS Data

**-12:00** Lunpeng Li, Yishun Li, Jinze Luo, Chenglong Liu, Difei Wu, Yuchuan Du (Tongji University)

Juehyun LEE, Dongmin LEE (University of Seoul)

**12:00** Toward a Multi-Core Compact City, Evaluation of Compacting to District Centers and Identification of Issues

A Delay-Aware Cooperative Perception Framework for Autonomous Vehicles Based on Driving Risk Quantification

**-12:20** Chihiro Fujita, Hiroe Ando, Ryuji Kakimoto (Kumamoto University)

Delong Ding, Cong Zhao, Yuxiong Ji, Yuchuan Du (Tongji University)

**12:20** Assessment of a Sustainable Urban Transportation Indicator based on Structural Equation Modeling: Empirical Analysis in Korea

A traffic safety evaluation method using Co-simulation for Self-driving vehicle

**-12:40** Juho Lee, Ryujeong Lee, Ilho Jung, Juhyeon Kwak, Sion Kim, Minje Choi, Seungjae Lee (University of Seoul)

Hyun Seop Sim, Min Ji Kang, Soobeom Lee, Shin Hyoung Park (University of Seoul)

**Session2 (14:30-15:50)**

Session	A2	B2
<b>Chair</b>	Merkebe Getachew Demissie (University of Calgary)	Saeid Saidi (University of Calgary)
<b>Place</b>	A: Main conference room (small hall)	B: Conference Room 9.
<b>14:30-14:50</b>	Integrating pavement friction mechanism and neural networks using attention mechanism for friction coefficient estimation Zihang Weng, Yuchuan Du, Difei Wu, Chenglong Liu (Tongji University)	Carbon Reduction through Multiple Bandwidth Optimization Minhyeok Kim, Youngchan Kim (University of Seoul)
<b>14:50-15:10</b>	Enhanced adapted PageRank algorithm based on temporal-modal dual coupling effect in multi-modal mobility network Zhiwei Zhang, Takuya Maruyama (Kumamoto University)	Does Implicit Attitude Affect Travel Mode Choice Behaviours? A Study of Customized Bus Attraction to Urban Railway Riders Xinyun Lao, Yu Shen, Jing Cao, Yuxiong Ji, Yuchuan Du (Tongji University)
<b>15:10-15:30</b>	A simulation approach for analyzing metro resilience under operational incidents Yuxiong Ji, Wenxuan Fan, Minhang Zhou, Yu Shen (Tongji University)	Transit-induced commercial gentrification and existing businesses' closure: A survival analysis approach Geonmin Kim, Suji Kim, Seunghyeon Lee, Jihye Byun (University of Seoul)
<b>15:30-15:50</b>	Development of autonomous driving risk factor detection algorithm based on video analysis Ho-Hyuk Na, Do-Gyeong Kim (University of Seoul)	Adapting Cities for Climate Change: The Case of Municipality of Copenhagen in Denmark Naoya Nakajima, Yuji Hoshino (Kumamoto University)

**Session3 (16:00-17:40)**

Session	A3	B3
<b>Chair</b>	Shin Hyoung Park (University of Seoul)	Yishun Li (Tongji University)
<b>Place</b>	A: Main conference room (small hall)	B: Conference Room 9.
<b>16:00-16:20</b>	Robust Bus Scheduling based on Multistage Decision Process with Fuzzy Logic Searching Chenlong Xu, Yu Shen, Tianshu Chu, Yuxiong Ji, Yuchuan Dun (Tongji University)	Comparing Tram Users Estimated from Person Trip Survey and Smartcard Data without Visitors: A Case Study in Kumamoto, Japan Kazuki Miyazaki, Takuya Maruyama (Kumamoto University)
<b>16:20-16:40</b>	Analyzing diversity in shared cycle usage in Kumamoto, Japan Teru Kawamoto, Takuya Maruyama (Kumamoto University)	Taxiing Route Planning for Aircraft on Airport Surface Considering Conflicts with Ground Service Vehicles Yu Shen, Peng Zhou, Yujing Zheng, Yuefeng Zheng, Yuxiong Ji, Yuchuan Du (Tongji University)
<b>16:40-17:00</b>	Economic Theoretical Review of 'Railway Demand' : focused on 'Excess Demand' Hyungkeun Son, Heejo Kim, Dongjoo Park (University of Seoul)	A Hybrid Optimization Approach for Surface Express Transit System Planning for Extending an Existing Network Reza Mahmoudi, Saeid Saidi, S.C. Wirasinghe (University of Calgary)
<b>17:00-17:20</b>	A two-stage framework for parking search behavior prediction through adversarial inverse reinforcement learning and transformer Tianyi Ji, Cong Zhao, Yuchuan Du (Tongji University)	ENHANCING ACTUATED SIGNAL CONTROL POLICIES WITH OPTIMAL SPEED ADVISORY CONSIDERING REAL-TIME QUEUE LENGTHS Dohyeon Kim, Jihye Byun, Ziyuan Pu, Seunghyeon Lee (University of Seoul)
<b>17:20-17:40</b>	Modeling the Demand for Dockless Electric Scooter Sharing Services Merkebe Getachew Demissie (University of Calgary)	Pavement maintenance decision-making model: a reinforcement learning approach from fine-grained expert feedback Wenyuan Cai, Chenglong Liu, Yuchuan Du (Tongji University)

\*13 minutes for presentation, 6 minutes for question and answer, 1 minute for alternation