

## 4 Universities Joint International Conference (4UJIC) in the University of Seoul

### 1. Programme

#### 27 June 2023 (Tuesday)

<b>17:00 – 18:00</b>	<b>Steering committee meeting</b> Location: International conference hall, 2F, The 21st Century Building
	<p><b>Faculty attendees</b></p> <ul style="list-style-type: none"> <li>- University of Seoul</li> <li>- Kumamoto University</li> <li>- Tongji University</li> <li>- University of Calgary</li> </ul> <p><b>Agenda</b></p> <ol style="list-style-type: none"> <li>1. Steering Committee to be Chaired by a host university delegate. (In 2023 it is Prof. Seungjae Lee)</li> <li>2. Approval of agenda with addition of any new items</li> <li>3. Location of next 4UniC meeting (2024)</li> <li>4. Should a special issue of a journal be published with selected, further peer reviewed, papers after each 4UniC?</li> <li>5. How can our 4 universities expand our cooperative activities?</li> </ol>

#### 28 June 2023 (Wednesday)

Time	Event				
09:30 – 09:50	Registration Location: International conference hall, 2F, The 21st Century Building				
09:50 – 10:00	<b>Welcome address</b>				
	Professor Seungjae Lee, University of Seoul Location: International conference hall, 2F, The 21st Century Building				
10:00 – 12:00	<b>Breaking session</b> Location: International conference hall, 2F, The 21st Century Building				
	<p><b>Smart Mobility in the City of Calgary</b> Professor Saeid Saidi, University of Calgary</p> <p><b>Smart Mobility in Shanghai</b> Professor, Tongji University</p> <p><b>Current status of smart mobility in Japan and Kumamoto-oriented MaaS</b> Professor Shoshi Mizokami, Kumamoto University</p> <p><b>Inducement of Smart Cities from Smart Mobility in Seoul</b> Professor Seungjae Lee, University of Seoul</p>				
12:00 – 13:30	<b>Conference lunch</b> Location: 2F, Student Hall				
13:30 – 15:10	<b>Session A1</b> Network modeling  <b>Room 131, 1F</b>	<b>Session A2</b> Travel behavior  <b>Room 133, 1F</b>	<b>Session A3</b> Traffic safety  <b>Room 135, 1F</b>	<b>Session A4</b> Outstanding undergraduate student paper award 1  <b>Room 137, 1F</b>	<b>Poster session</b>  <b>International conference hall, 2F</b>
15:10 – 15:30	Coffee break				

	Location: International conference hall, 2F, The 21st Century Building				
15:30 – 17:10	<b>Session B1</b> Traffic management and control <b>Room 131, 1F</b>	<b>Session B2</b> Transport modeling <b>Room 133, 1F</b>	<b>Session B3</b> Transit modelling <b>Room 135, 1F</b>	<b>Session B4</b> Outstanding undergraduate student paper award 2 <b>Room 137, 1F</b>	<b>Poster session</b>  <b>International conference hall, 2F</b>
17:10 – 17:30	Coffee break Location: International conference hall, 2F, The 21st Century Building				
17:30 – 18:00	<b>Closing address</b> Location: International conference hall, 2F, The 21st Century Building				
	<b>Introducing International Journal of Urban Sciences (IJUS)</b> Professor Dongjoo Park, University of Seoul <b>Award ceremony</b> Professor Seungjae Lee, University of Seoul <b>Closing comments</b> Professor Seungjae Lee, University of Seoul				
18:00 – 20:00	Conference banquet Location: 222 Jeonnonng-ro, Dongdaemun-gu, Seoul, Republic of Korea (02492)				

## 29 June 2023 (Thursday)

Time	Event			
10:00 – 10:20	Registration Location: International conference hall, 2F, The 21st Century Building			
10:20 – 12:00	<table border="1"> <tr> <td><b>Session C1</b> Smart city <b>Room 131, 1F</b></td> <td><b>Session C2</b> Smart mobility <b>Room 133, 1F</b></td> <td><b>Session C3</b> Transportation &amp; geography <b>Room 135, 1F</b></td> </tr> </table>	<b>Session C1</b> Smart city <b>Room 131, 1F</b>	<b>Session C2</b> Smart mobility <b>Room 133, 1F</b>	<b>Session C3</b> Transportation & geography <b>Room 135, 1F</b>
<b>Session C1</b> Smart city <b>Room 131, 1F</b>	<b>Session C2</b> Smart mobility <b>Room 133, 1F</b>	<b>Session C3</b> Transportation & geography <b>Room 135, 1F</b>		
12:00 – 13:30	Conference lunch Location: 2F, Student Hall			
13:30 – 17:00	<b>Technical tour: Mobility Conference in COEX (29 – 30 June 2023)</b> <a href="https://www.littfair.kr/index.html">https://www.littfair.kr/index.html</a>			



The 21st Century Building, 163, Seoulsiripdae-ro, Dongdaemun-gu, Seoul, Republic of Korea

## Oral presentation schedule

28 June 2023 (Wednesday)

13:30 – 15:10	<b>Session A1: Network modeling</b> Session chair: Hiroe Ando, Kumamoto University
13:30 – 13:55	Title: Eigenvector centrality analysis for criticality and susceptibility of network degradation Presenter: Hiroe Ando, Kumamoto University
13:55 – 14:20	Title: An Economic Impact Assessment Model for Low Emission Zone Policy Presenter: Madiha Bencekri, University of Seoul
14:20 – 14:45	Title: Fair Traffic Assignment Presenter: Mohammad Mahdi Zareian, University of Calgary
14:45 – 15:10	Title: Fair Congestion Pricing Scheme in Automated Environment Presenter: Mohammad Amin Ashena, University of Calgary

13:30 – 15:10	<b>Session A2: Travel behavior</b> Session chair: Takuya Maruyama, Kumamoto University
13:30 – 13:55	Title: Impacts of COVID-19 on social distancing in public transport- A study of customized bus seat choices in Shanghai, China Presenter: Yeting Lyu, Tongji University
13:55 – 14:20	Title: Predicting Truck Arrivals at Ports Integrating Voyage Data a Case Study of Shanghai Yangshan Port Presenter: Shiyu Wang, Tongji University
14:20 – 14:45	Title: Inferring in-home/out-of-home situations unreported in time-use surveys using machine learning Presenter: Takuya Maruyama, Kumamoto University
14:45 – 15:10	Title: A hybrid approach to predict congestion levels on an individual carriage at a subway Presenter: Juhyeon Kwak, University of Seoul

13:30 – 15:10	<b>Session A3: Traffic safety</b> Session chair: Shuji Yoshiki, Kumamoto University
13:30 – 13:55	Title: Understanding the actual situation of children's independent behavior and analyzing its relationship with urban characteristics Presenter: Shuji Yoshiki, Kumamoto University
13:55 – 14:20	Title: Development of Evaluation Indicators for order drivers Presenter: Juehyun Lee, University of Seoul
14:20 – 14:45	Title: Development of a Comprehensive Evaluation Measure for Identifying Highway Accident Prone Locations Presenter: Uibeom Chun, University of Seoul
14:45 – 15:10	Title: High-Frequency Pavement Distress Spatio-Temporal Matching Based on Deep Learning Presenter: Yishun Li, Tongji University

13:30 – 15:10	<b>Session A4: Outstanding undergraduate student paper award 1</b> Session chair: Seunghyeon Lee, University of Seoul Referees: Seunghyeon Lee, University of Seoul Jihye Byun, University of Seoul Alexandre De Barros, University of Calgary Chenglong Liu, Tongji University
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<b>13:30 – 13:55</b>	Title: Building a mobility hub based on parking demand management using TOPSIS analysis Presenter: Gahyun Kim
<b>13:55 – 14:20</b>	Title: Improvement of Video Image Detector's Traffic Volume Measurement Using Shockwave Theory Presenter: Seokmin Moon
<b>14:20 – 14:45</b>	Title: Establishment of UAM Environment: Focusing on CBD and Gimpo Airport Presenter: Juho Lee
<b>14:45 – 15:10</b>	Referees' discussion

<b>15:10 – 15:30</b>	Coffee break
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<b>15:30 – 17:10</b>	<b>Session B1: Traffic management and control</b> <b>Session chair: Yongwoo Park, University of Seoul</b>
<b>15:30 – 15:55</b>	Title: A Study on Determine Optimum Location of Vehicles with Lane Control System in Work Zone Using Driving Simulation Presenter: Yongwoo Park, University of Seoul
<b>15:55 – 16:20</b>	Title: Considering traffic congestion in Green Light Optimal Speed Advisory (GLOSA) Presenter: Dohyeon Kim, University of Seoul
<b>16:20 – 16:45</b>	Title: Bandwidth-Based Transit Control System Using Connected and Automated Vehicle Technology Presenter: Minji Kim, University of Seoul
<b>16:45 – 17:10</b>	Title: A Novel Approach to Headway Level of Service Presenter: Chan Wirasinghe, University of Calgary

<b>15:30 – 17:10</b>	<b>Session B2: Transport modeling</b> <b>Session chair: Yujing Zheng, Tongji University</b>
<b>15:30 – 15:55</b>	Title: En-route Recharging Scheduling Strategy for Electric Trucks Serving Inter-Terminal Container Transportation Presenter: Yujing Zheng, Tongji University
<b>15:55 – 16:20</b>	Title: Short-term Prediction of Bus Travel Time Using Bus Information System Data Presenter: Eunmo Gu, University of Seoul
<b>16:20 – 16:45</b>	Title: The Minimum Distance Between All-Way Stop Controlled and Signalized Intersections: A Simulation Study using SUMO Presenter: Jinmun Kwon, University of Seoul
<b>16:45 – 17:10</b>	Title: A review of railway logistics research in Korea using text mining Presenter: Jinwon Jang, University of Seoul

<b>15:30 – 17:10</b>	<b>Session B3: Transit modeling</b> <b>Session chair: Saeid Saidi, University of Calgary</b>
<b>15:30 – 15:55</b>	Title: A Data-driven Approach to Identifying Potential Zones for Airport Shuttle bus Services Presenter: Minhang Zhou, Tongji University
<b>15:55 – 16:20</b>	Title: How bus dispatchers determine deadheading A data-driven analysis Presenter: Yuansong Zhang, Tongji University
<b>16:20 – 16:45</b>	Title: Discovering Trip Purposes and Activity Patterns Using Transit Smart Card Data Presenter: Saeid Saidi, University of Calgary

<b>16:45 – 17:10</b>	Title: Spatiotemporal Change in Kumamoto City Tram Passengers under COVID-19 Presenter: Kazuki Miyazaki, Kumamoto University
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<b>15:30 – 17:10</b>	<b>Session B4: Outstanding postgraduate student paper award 2</b> Session chair: Seunghyeon Lee, University of Seoul Referees: Seunghyeon Lee, University of Seoul Jihye Byun, University of Seoul Alexandre De Barros, University of Calgary Chenglong Liu, Tongji University
<b>15:30 – 15:55</b>	Title: Introducing Urban DRT in Seoul to Alleviate Late-night Taxi Issues Presenter: Ara Cho
<b>15:55 – 16:20</b>	Title: Delivery Utilizing Bus System of Seoul Presenter: Jeongyun Bae
<b>16:20 – 16:45</b>	Title: Enhancement of Parking Lot Efficiency through More Parking Permits for Neighbors Presenter: Jungeun Ahn
<b>16:45 – 17:10</b>	Referees' discussion

## 29 June 2023 (Thursday)

<b>10:20 – 12:00</b>	<b>Session C1: Smart city</b> Session chair: Junghyun Woo, University of Seoul
<b>10:20 – 10:45</b>	Title: Automatic detection of road subsurface distress via curriculum learning learn like an expert Presenter: Guanghua Yue, Tongji University
<b>10:45 – 11:10</b>	Title: Potentials for Incorporating Schedule Delays and Capacity Constraints in Railway Demand Modeling Presenter: Heejo Kim, University of Seoul
<b>11:10 – 11:35</b>	Title: Inferring Boarding Stops of Individual Passengers based on Data from Unsynchronized Automatic Data Collection Systems Presenter: Weiyi Xu, Tongji University
<b>11:35 – 12:00</b>	Title: A Evaluation Framework for Walking and Local Commercial District Activation Policy based on UNA Index Presenter: Junghyun Woo, University of Seoul

<b>10:20 – 12:00</b>	<b>Session C2: Smart mobility</b> Session chair: Shoshi Mizokami, Kumamoto University
<b>10:20 – 10:45</b>	Title: A hierarchical framework for improving ride comfort of autonomous vehicles via speed planning and suspension control Presenter: Jing Chen, Tongji University
<b>10:45 – 11:10</b>	Title: The determinants of factors affecting transit station efficiency before and during the COVID-19 pandemic Presenter: Joongkwon Lee, University of Seoul
<b>11:10 – 11:35</b>	Title: Evaluation a new Ride-Sharing Mobility Service by Multi Agent-based Urban Mobility Simulator combining Mesoscopic Traffic Simulation Model with Dynamic Vehicle Allocation System Presenter: Shoshi Mizokami, Kumamoto University
<b>11:35 – 12:00</b>	Title: Sensitivity based approach for congested transit assignment on skip and stop metro system Presenter: Sion Kim, University of Seoul

<b>10:20 – 12:00</b>	<b>Session C3: Transportation &amp; geography</b> <b>Session chair: Difei Wu, Tongji University</b>
<b>10:20 – 10:45</b>	Title: Multimodal Trajectory Forecasting with Explicit Interactions Using Hypergraph and Probability Grid Map Presenter: Andi Song, Tongji University
<b>10:45 – 11:10</b>	Title: Quality Monitoring of Asphalt Pavement Construction Using 3D Laser Scanning Technology Presenter: Difei Wu, Tongji University
<b>11:10 – 11:35</b>	Title: In-depth exploration of the critical patterns of electric vehicle user survey Presenter: Reuben Tamakloe, University of Seoul
<b>11:35 – 12:00</b>	Title: Examining the Diversity of Factors Influencing Adoption of Shared Autonomous Vehicles: An Analysis Across Different Groups Considering Local Ride-Sharing Access and Past Experience Presenter: Hyerin Lee, University of Seoul

## Poster presentation schedule

**28 June 2023 (Wednesday)**

<b>13:30 – 17:10</b>	<b>Poster session</b> <b>International conference hall, 2F</b>	
1	Delivery Utilizing Seoul's intercity Bus System	JeongYun Bae
2	Please Use the Next Train : Measures to Improve Subway Operation Efficiency to Alleviate Congestion on Line 9	SangKyu Lee
3	Enhancement of Parking Lot Efficiency through More Parking Permits for Neighbors	JungEun Ahn
4	Building a mobility hub based on parking demand management using TOPSIS analysis	GaHyun Kim
5	Just Walk 15 min. : Time to Access	JungMin Kim
6	Effects on Emergency Vehicles' Priority Signal(Gwanak-gu)	Dadasi Choi
7	Scheduling Seoul Bike Timetable in Campus	HongJun Cho
8	Fully Autonomous Vehicle will transform Facilities related to Internal Combustion Engine Vehicle	JunHee Lee
9	Establishment of UAM Environment: Focusing on CBD and Gimpo Airport	JuHo Lee
10	Introducing Urban DRT in Seoul to Alleviate Late-night Taxi Issues	Ara Cho
11	Selection of the Optimal Percentage of Escalators in Metro Station	SeHyeon Kim
12	Reconstructing Bicycle Roads in Cheonggyecheon-ro	HyunWoo Jo
13	Improvement of Video Image Detector's Traffic Volume Measurement Using Shockwave Theory	SeokMin Moon
14	Logistic System Using Autonomous Trucks at Midnight - Namdaemun Market	JongWon Lee
15	DRT Introduce to Connect Blind Spots in Newly Developed Areas	MinSeo Kim
16	Indoor Navigation for Vulnerable Users in Subway Station	ChangBin Choi
17	The Proposal of S-BRT to Connect Wide Area Railway in Wangsuk New Town, Namyangju	GeumBi Lee
18	A solution to redistribute Seoul shared bike('ddareungee') among stations	WeonSuk Chae
19	Planning of Urban Logistics System through Underground Network	TaeHoon Kim
20	Restrictions on Entry to Cars for Environment	Jun Yang

21	Improvement of School Zone based on the Accident Case	JinHyeok Park
22	Development of a Map Application for the Elderly Population : Senior Map	SeoYeon Kim
23	Designing an underground bus transfer center to enhance pedestrian and transit accessibility	Hyunho Lee
24	Reduction of travel time using the cross-passage in the Seobu Underground Expressway	Jinho Son
25	Development of campus infrastructure for the deployment of Autonomous Mobile Robots	Minji Lee
26	Enjoy Free Time: Riding Seoul Forest By Bicycle	Minseo Lee