

Korea-EU Horizon Europe Researchers Networking Forum on Advanced Mobility- Korean Participants

<2025.09.08. Korea-EU Research Centre>

#	Name	Position / Organization
Forum Chair	Eui Young Kim	Assistant Professor / Co-Director Automated Mobility Lab, TU Delft
Forum Chair	Min Son	Research Associate Universität der Bundeswehr München
1	Daesub Yoon	Director, Electronics and Telecommunications Research Institute (ETRI)
2	Ha Yoon Song	Professor Hongik University
3	Jaehyun (Jason) So	Associate Professor Ajou University
4	Jeongyun Kim	Assistant Professor, Seoul National University of Science and Technology (SEOULTECH)
5	Jinwoo Lee	Associate Professor, Korea Advanced Institute of Science and Technology (KAIST)
6	Minje Choi	Research Professor University of Seoul (UOS)
7	Namhoon Cho	Assistant Professor Seoul National University (SNU)
8	Seunghyeon Lee	Associate Professor University of Seoul (UOS)
9	Sol Hee Yoon	Assistant Professor, Seoul National University of Science and Technology (SEOULTECH)
10	Youngmin Kim	Senior researcher, Korea Institute of Civil Engineering and Building Technology (KICT)

*Alphabetical Order

1. Daesub Yoon

Name	Daesub Yoon
Position	Director
Organization	ETRI
Biography	Daesub Yoon received his M.S. and Ph.D. degrees in Computer Science and Software Engineering from Auburn University, USA. From 2001 to 2005, he served as a Research Assistant at the Intelligent & Interactive Systems Laboratory at Auburn University. In 2005, he joined the Electronics and Telecommunications Research Institute (ETRI), Korea. His research interests include assistive technology, eye tracking, attentive user interfaces, mental workload, and human factors in automated driving vehicles and smart factories. He is currently leading the Mobility UX Research Division at ETRI. The mission of the Mobility User Experience Research Section is to identify societal and technological challenges in current and future mobility and to provide core Mobility UX technologies through mental model-based human factor research and UI/UX design for various mobility users. His team has carried out numerous international collaborative projects. The AI-PRISM project, under the Horizon Europe program, will conclude at the end of this year. In this project, his team is developing interaction technologies that enable human workers to collaborate effectively with robots in smart factory environments. The OPTIMUM project, under the Eureka program, was completed in 2022. In this project, his team developed safe interaction technologies for human operators working alongside machines in smart factories. The OPTIMUM project received the ITEA Award of Excellence 2022 for Exceptional Excellence. He is also an adjunct professor at the National Center of Excellence in Software, Chungnam National University.
Research Area	Human vehicle interaction, driver behavior analysis, eyetracking, workload management, human cognition, advance driver assistance system, driver monitoring system, heuristic experimental study,
Personal link	www.linkedin.com/in/daesub-yoon
Call topic	HORIZON-CL5-2026-01-D6-04: Integration of human driving behaviour in the validation of CCAM systems (CCAM Partnership) or related to human behaviour research

2. Ha Yoon Song

Name	Ha Yoon Song
Position	Professor
Organization	Hongik University
Biography	Ha Yoon Song received his B.S. degree in Computer Science and Statistics in 1991 and received his M.S. degree in Computer Science in 1993, both from Seoul National University, Seoul, Korea. He received Ph.D. degree in Computer Science from University of California at Los Angeles, USA in 2001. From 2001 he has worked at Department of Computer Engineering, Hongik University, Seoul, Korea and is now a full professor. In his sabbatical year 2009, he worked at Institute of Computer Technology, Vienna University of Technology, Austria as a visiting scholar and in the year 2018, he worked at Free University Berlin as a visiting scholar. Prof. Song's research interests are in the areas of data science, mobile computing, application of machine learning, location based service and human mobility modeling, especially with the application of machine learning and deep learning. CAREER 2009.03 ~ 2010.02 Visiting Scholar, Institute of Computer Technology, TUWien, Vienna, Austria 2018.03 ~ 2018.08 Visiting Scholar, Free University Berlin, Germany
Research Area	Human mobility pattern modeling, location prediction, Geopositioning data manipulation, AIoT for Location Based Service, etc.
Personal link	https://edu.hongik.ac.kr/en/academics/intro-faculty-detail.do?mode=prof&deptCd=AAB120&S1=2001&S2=10015
Call topic	

3. Jaehyun (Jason) So

Name	Jaehyun (Jason) So
Position	Associate Professor
Organization	Ajou University
Biography	Dr. Jaehyun (Jason) So is an Associate Professor in the Department of Transportation System Engineering at Ajou University, Suwon, Republic of Korea, where he leads the Mobility Operation Design, Validation, and Enhancement Laboratory (“move lab”). His research group conducts a wide range of projects in Intelligent Transport Systems (ITS/C-ITS), Automated Vehicles (AV), Smart Mobility, and mobility data analytics. The move lab plays a leading role in multiple national AV Level 4 R&D programs, including testbed technology development and law/regulation compliance validation platform design, as well as regional and metropolitan Mobility-as-a-Service (MaaS) master planning, service design, and traffic safety decision-support solutions in collaboration with local governments and national institutes. Before joining Ajou University, Dr. So worked for the Center of Smart City and Transport at the Korea Transport Institute (2016–2020), where he led major national smart city initiatives such as the Sejong and Busan national demonstrations and large-scale Smart Mobility/Parking technology R&D projects. Earlier, he spent four years abroad as a research scientist and lecturer at Florida Atlantic University (USA) and the Technical University of Munich (TUM, Germany). At TUM, he was awarded the prestigious Alexander von Humboldt Fellowship, receiving three years of research funding, and served as TUM’s European Research Coordinator. In this role, he actively engaged in the EuroTech Universities Alliance, organizing research seminars involving TUM, the Technical University of Denmark (DTU), and Eindhoven University of Technology (TU/e), among others. Dr. So has extensive experience in European research collaboration, having coordinated and led proposal development for multiple Horizon 2020 topics in cooperation with partners from Spain, Denmark, Israel, and Greece. He also contributed to Horizon 2020 VRU ITS and other mobility-related projects, participating in workshops and dissemination activities. These experiences have given him a deep understanding of Horizon Europe’s research and innovation framework and collaborative ecosystem, surpassing that of many peers in Korea. Drawing on his international expertise, Dr. So continues to work closely with global partners to advance research in ITS/C-ITS, AV safety, smart mobility, and data-driven transport systems, and is committed to fostering stronger Korea–EU collaboration in future mobility research.
Research Area	Main Research Fields • Autonomous Vehicle (AV) Test and Validation Technologies • AV–Infrastructure Data Integration for Enhanced Traffic and Mobility Operations • AI-Driven Perception and Decision-Making through AV and Digital Infrastructure Data Fusion and AI Learning • Traffic and AV Simulations, including Digital Twin Development Major Korea National R&D Projects (current involvement) • Development of Level 4/4+ AV Testbeds, Test/Validation Frameworks, and Technologies

	• Development of Level 4/4+ Automated Service Utility Vehicles and Operational Technologies • Development of Level 4/4+ Automated Police Patrol Vehicles and Operational Technologies • Development of AI-Based Traffic Safety Indexing Algorithms through Multi-Source Transport Big Data Fusion Patents & Publications Patents 1. So, J. J. (2023). Apparatus and method for generating autonomous vehicle logic for traffic flow simulation. Korea Patent Application No. 10-2023-016324, filed November 22, 2023. 2. Jang, S., Kim, M., & So, J. J. (2025). Personal mobility. Korea Patent Application No. 30-2025-0029662, filed July 29, 2025. Software Registrations 1. So, J. J. (2023). OpenSCENARIO macro–microsimulation conversion interface. Korea Copyright Commission Registration No. 135871-0005871, registered November 27, 2023. 2. So, J. J. (2024). Macro-simulator-based integrated analysis engine for autonomous driving scenarios in compliance with laws and regulations. Korea Copyright Commission Registration No. 135871-0005871, registered October 30, 2024. Publications 1. Oh, G., Yun, I., Lee, E., Jia, H., Ko, H., Kim, H., Cho, S., & So, J. J. (2024). Exploring driving parameter settings for autonomous vehicles: Considering travel efficiency and safety in urban traffic environments. IEEE Transactions on Intelligent Vehicles, 1–13. https://doi.org/10.xxxx/xxxx 2. Park, H., Kim, J., Kim, M., Yoon, J., Hwang, K., Park, J., & So, J. J. (2025). Traffic crash countermeasure recommendations using deep neural network: A decision support tool for traffic safety engineers. IEEE Access, 13, 53718–53730. https://doi.org/10.xxxx/xxxx
link	https://www.linkedin.com/in/ssojae82/
Call topic	• HORIZON-CL5-2026-10-D6-01 (Flagship-pilot: large-scale demonstrations of CCAM) • HORIZON-CL5-2026-10-D6-03 (Generative AI for smarter CCAM: enhancing perception, decision-making, and validation) • HORIZON-CL5-2027-05-D6-04 (Holistic solutions for CCAM integration in critical scenarios) • HORIZON-CL5-2027-05-D6-08 (Enhancing Mobility for All: affordable, reliable, and accessible multimodal transport for inclusive rural and urban connectivity – Societal Readiness pilot)

4. Jeongyun Kim

Name	Jeongyun Kim
Position	Assistant Professor
Organization	Seoul National University of Science and Technology
Biography	- Summary of Academic Background and Professional Experience Dr. Jeongyun Kim (Member, IEEE) is an Assistant Research Professor at Seoul National University of Science and Technology (SNUST), Department mechanical and automotive engineering. She earned her B.S., M.S., and Ph.D. degrees from KAIST in 2014, 2016, and 2021, respectively, and completed a Postdoctoral fellow at the Massachusetts Institute of Technology (MIT). Her academic and professional career bridges transportation engineering, data science, and artificial intelligence, with a strong emphasis on interdisciplinary collaboration and real-world deployment of research outcomes. - Core Research Expertise and Representative Achievements Dr. Kim's expertise spans urban mobility analytics, AI-based autonomous vehicle control, and large-scale transportation data modeling. She has developed reinforcement learning-based control frameworks for high-precision path tracking, validated through realistic simulations and real-world driving scenarios. Her research has been published in leading peer-reviewed journals, including Transportation Research Part C and IEEE Transactions on Intelligent Transportation Systems. In addition, she has contributed to integrated modeling frameworks combining sensing, perception, and decision-making for connected and automated mobility (CCAM) systems. - Participation in EU Collaborative Research In 2025, Dr. Kim contributed to the preparation of a Driving Urban Transitions (DUT) proposal under Horizon Europe, engaging in cross-disciplinary collaboration to address sustainable and automated urban mobility challenges. Although her current portfolio does not yet include a fully funded EU project, she is actively expanding her research scope to align with Horizon Europe priorities, including future integration of Generative AI-enhanced perception systems into CCAM validation pipelines.
Research Area	1. Main research fields: - Urban Mobility Analytics – Modeling large-scale movement patterns and travel demand estimation using high-dimensional spatiotemporal data. - Autonomous Vehicle Control Systems – AI- and reinforcement learning-based decision-making for high-precision path tracking and robust driving advisories. - Connected and Cooperative Automated Mobility (CCAM) – Integrated sensing, perception, and control frameworks for sustainable and intelligent urban mobility systems. 2. Technological uniqueness, specialization and flagship results - Technological Uniqueness – Combines expertise in transportation engineering, AI, and large-scale data analytics to design decision-making systems that bridge real-world operational constraints with advanced machine learning techniques.

	- Specialization – Reinforcement learning–based control optimization, probabilistic modeling of mobility patterns, and simulation-based evaluation of CCAM technologies under realistic uncertainties. - Flagship Results: (1) Developed a hierarchical and joint-action reinforcement learning framework for simultaneous acceleration and steering control, outperforming LQR, MPC, and conventional DQN in realistic urban driving simulations. (2) Proposed an integrated design framework for on-demand transit systems leveraging spatiotemporal mobility patterns, validated through synthetic and real-world demand datasets. (3) Designed robust advisory models for autonomous driving under human compliance errors, improving safety margins without sacrificing efficiency 3. Recent 3-year Publications - J. Kim, J. Cho, and C. Wu*, “Learning for robust advisory autonomy under execution errors,” IEEE Transactions on Intelligent Transportation Systems, 2025, vol. 26, no. 6, 7780-7791, April. 2025. (JCR top 2.7%) - J. Kim, S. Tak, J. Yoon, and H. Yeo*, "A study on the pattern extraction method of origin-destination data using principal component analysis," IET Intelligent Transport Systems, vol. 19, no. 1, e12603, Jan. 2025. - J. Kim, A. Conti, and M. Z. Win*, “Travel demand modeling and estimation by identifying urban mobility patterns” IEEE Transactions on Mobile Computing, 2024, vol. 40, no. 3, 1264-1277, Aug. 2024. (JCR top 4.4%) - J. Kim, S. Tak, J. Lee, and H. Yeo*, "Integrated design framework for on-demand transit system based on spatiotemporal mobility patterns," Transportation Research Part C: Emerging Technologies, vol. 150, Mar. 2023. (IF: 8.3) - S. Yang, J. Kim*, S. Lim*, “High-Accuracy Path Tracking for Unmanned Vehicle Navigation: A Hierarchical Deep Reinforcement Learning Approach,” IEEE Transactions on Vehicular Technology, Accepted. (JCR top 12.6%) - J. Cho, S. Li, J. Kim, C. Wu*, “Temporal transfer learning for traffic optimization with coarse-grained advisory autonomy,” IEEE Transactions on Robotics, Accepted. (JCR top 8.7%)
Personal link	www.linkedin.com/in/jeongyun-kim-659138221
Call topic	• HORIZON-CL5-2026-05-D6-07 • HORIZON-CL5-2026-10-D6-03

5. Jinwoo Lee

Name	Jinwoo Lee
Position	Associate Professor
Organization	Korea Advanced Institute of Science and Technology
Biography	Dr. Jinwoo Lee is an Associate Professor in the Department of Civil and Environmental Engineering at the Korea Advanced Institute of Science and Technology (KAIST). He received his Ph.D. and M.S. in Civil and Environmental Engineering from the University of California, Berkeley, and his B.S. degree from KAIST. Before joining KAIST, he worked as a postdoctoral associate at New York University Abu Dhabi and as a research assistant professor at the Hong Kong Polytechnic University. His core research expertise lies in sustainable and intelligent transportation systems, with a focus on shared, autonomous, and electric mobility, as well as AI- and robotics-based infrastructure management and climate change adaptation. He has published 30 SCI(E) journal papers in leading transportation and mobility outlets, including Transportation Research Part B, C, D, and E and IEEE Transactions on Intelligent Vehicles. His works have contributed to advancing demand-responsive transit optimization, multimodal transport planning, and condition-based pavement management, offering both theoretical insights and practical solutions for resilient mobility systems. Beyond academia, Dr. Lee bridges research and practice through leadership roles in mobility innovation. He serves as Director of Technology at Studio Galilei, a company pioneering demand-responsive transit and inclusive mobility solutions, and as Co-founder and Chief Technology Officer of Rovoroad, which develops AI- and robotics-based pavement management technologies. He is also an Affiliated Faculty member at New York University, strengthening international collaboration. These combined roles demonstrate his ability to translate advanced research into high-TRL mobility solutions with global impact.
Research Area	• Demand-Responsive Transit (DRT) optimization and multimodal service integration for rural–urban connectivity • Shared, autonomous, and electric mobility systems with a focus on affordability and inclusiveness • AI- and reinforcement learning–based scheduling and pooling algorithms for real-time transport operations • Macroscopic Multimodal Hierarchy (MMH) theory, a novel analytical framework for multimodal accessibility and equity • Pavement and infrastructure asset management using AI and robotics, linking transport operations with resilient infrastructure • Pilot demonstrations of DRT services in Korea (30+ cities) and Thailand (tourism-focused inclusive mobility) • TAMOS (Transit Analysis and Mobility Optimization System), an AI platform applied at TRL 7–8 for planning–operation–monitoring loops • Publications in top-tier journals (Transportation Research Part B–E, IEEE T-IV) • Interdisciplinary research bridging engineering and societal needs, especially transport poverty and accessibility gaps • Global collaborations with academia and industry, ensuring scalability and policy impact of inclusive mobility solutions

Personal link	https://lee.kaist.ac.kr/ https://www.linkedin.com/in/jinwoo-lee-32654648/
Call topic	• HORIZON-CL5-2027-05-D6-08: Enhancing Mobility for All: affordable, reliable, and accessible multimodal transport for inclusive rural and urban connectivity – Societal Readiness pilot

6. Minje Choi

Name	Minje Choi
Position	Research Professor
Organization	University of Seoul
Biography	I hold a Ph.D. in Transportation Engineering from the University of Seoul, specializing in autonomous mobile robots and smart mobility planning. I currently serve as a member of the Selection Committee for Autonomous Vehicle Pilot Operation Zones under the Ministry of Land, Infrastructure, and Transport of Korea. I have also undertaken a postdoctoral research fellowship at the University of Cambridge, UK. Presently, I am a Research Professor in the Department of Transportation Engineering at the University of Seoul, conducting research on autonomous mobile robots, smart mobility planning, and the integration of emerging transport modes into urban systems. My work focuses on behavioural analysis of new mobility modes, large-scale transport simulations, and the optimization of mobility hub design and deployment. I have extensive experience in international collaborative research, working with leading institutions such as MIT, the University of Cambridge, and UCL on projects related to autonomous driving technologies and smart mobility strategies. These collaborations have provided me with in-depth knowledge of European transport systems and policy frameworks. My research portfolio includes developing behaviour-based simulation models using real-world road and autonomous vehicle data, applying AI techniques for navigation and infrastructure assessment, and formulating strategies for sustainable and resilient urban mobility. I aim to contribute to the Horizon Europe programme by integrating advanced simulation, AI-driven behavioural modelling, and collaborative innovation for the safe and scalable deployment of future mobility systems.
Research Area	My main research areas include autonomous mobile robots, route optimization, network optimization, and multimodal behavioural model optimization. Key achievements include the development of pedestrian navigation systems, location optimization for autonomous mobile robots, and the optimization of the Seoul Mobility Hub. I hold 7 related patents, have published 17 SCIE-indexed papers, and received the Korean Minister of Education Award and the ICE (Institution of Civil Engineers, UK) Best Paper Award. Recently, I authored and published a scholarly monograph on autonomous mobile robots with Springer Nature. Selected patents: Adaptive user detection and tracking system for human-following robots; Automated convex hull generation system for fixed objects. Selected publications and books: Autonomous Vehicle Integration with Public Transit for Congestion Mitigation and Energy Efficiency; Intelligent Moving Cities: Technological Leap and Social Integration of Autonomous-Mobile Robots.
Personal link	https://scholar.google.com/citations?user=ZKxbiTAAAAAJ&hl=ko

	https://www.researchgate.net/profile/Minje-Choi-2?ev=hdr_xprf https://www.linkedin.com/in/choi-minje-91a137373/
Call topic	• HORIZON-CL5-2026-10-D6-01 • HORIZON-CL5-2026-10-D6-02 • HORIZON-CL5-2026-10-D6-05 • HORIZON-CL5-2026-10-D6-07 • HORIZON-CL5-2026-10-D6-09

7. Namhoon Cho

Name	Namhoon Cho
Position	(Incoming) Assistant Professor / (Currently) Lecturer in Control and Optimisation
Organization	(Incoming) Seoul National University / (Currently) Cranfield University
Biography	Namhoon Cho is incoming Assistant Professor in the Department of Aerospace Engineering at Seoul National University, South Korea, starting in September 2025. He is currently Lecturer in Control and Optimisation in the Centre for Assured and Connected Autonomy, Faculty of Engineering and Applied Sciences, Cranfield University, United Kingdom, since November 2024. He received his BSc and PhD degrees in Mechanical and Aerospace Engineering from Seoul National University, South Korea, in August 2012 and February 2017, respectively. Previously, he was a research fellow at Cranfield University from January 2021 to November 2024 with the award of a Cranfield 75th Anniversary Fellowship to pursue research on AI for Exploitation of Data-Driven Approach in Control for Aerospace Systems. He was a senior researcher in the 1st R&D Institute, Agency for Defense Development, South Korea, from March 2019 to December 2020, where he was involved in research and development of guidance and control systems for missiles and developed design tools based on optimisation techniques. He was a research fellow in the Department of Mechanical and Aerospace Engineering, Seoul National University, South Korea, from March 2017 to February 2019. He develops constructive methodologies to design control algorithms for aerospace and robotic systems. None to little previous experience in EU collaborative research projects, but worked closely to European researchers in various ways. Engaged in an EU project as a co-supervisor for one PhD student working in the FlyEco consortium, which is a Horizon Europe project.
Research Area	[Overview] Researcher in Control and Learning. Demonstrated aerospace GNC expert in both theory and practice. Strong expertise in machine learning for dynamic systems and control. Significant experience in control, estimation, and optimisation for autonomous aerospace systems. [Core Research Areas / Flagship Results / Representative Publications] 1. Adaptive Control / Generic parameterisation of composite model reference adaptive control systems based on synchronisation and accelerated gradient flow / https://doi.org/10.1109/TAC.2017.2737324 2. Safe Control / Data-driven Hamiltonian for direct data-driven Hamilton-Jacobi reachability analysis / https://arxiv.org/abs/2504.03233 3. Optimisation & ML / Passivity-based generalisation of accelerated gradient flow algorithms for convex optimisation / https://doi.org/10.1109/CDC56724.2024.10886267 4. Learning-Enabled GNC for Aerospace / Parameter correction approach in neural policy guidance for spacecraft landing / https://doi.org/10.2514/1.G007234

	[Specific Research Interests] My research interests include control-theoretic design of optimisation algorithms, robust adaptive control with online model learning, trajectory planning, data-driven safe control frameworks, learning-enabled control with safety assurance, and unified frameworks for automated design of optimal guidance and control systems.
Personal link	https://nhcho91.github.io
Call topic	• HORIZON-CL5-2026-06-Two-Stage-D5 • HORIZON-CL5-2027-05-D5 • HORIZON-CL5-2027-06-Two-Stage-D5 • HORIZON-CL5-2026-10-D6 • HORIZON-CL5-2027-05-D6

8. Seunghyeon Lee

Name	Seunghyeon Lee
Position	Associate Professor
Organization	University of Seoul
Biography	Dr. Seunghyeon Lee is an Associate Professor in the Department of Transportation Engineering at the University of Seoul and previously served as an Assistant Professor at the School of Computer Science, University of Technology Sydney, Australia. He received his Ph.D. in Transportation Engineering and has over 15 years of academic and professional experience spanning transportation systems, AI-based mobility optimization, and intelligent infrastructure design in Hong Kong, New Zealand, Australia, and South Korea. His core research expertise lies in integrating physics-based models with data-driven machine learning algorithms for real-time traffic state estimation, dynamic parameter calibration, and adaptive traffic control strategies. He has made significant contributions to CCAM, emergency vehicle preemption, green light optimal speed advisory, and hierarchical group-based traffic control systems. Dr. Lee pioneered the application of Deep Kalman Filters for dynamic calibration of microscopic traffic models under data uncertainty, as well as bidirectional estimation and reconstruction frameworks that fuse Intelligent Driver Model and Inverse IDM to reduce trajectory estimation error in mixed traffic environments. His representative achievements include publishing in leading journals such as Transportation Research Part A, B, C, E, and IEEE on Intelligent Transportation Systems. His research outputs have been deployed in pilot projects for urban traffic optimization, multi-modal integration, and simulation-driven policy evaluation. Since January 2025, Dr. Lee has actively engaged in EU collaborative research, coordinating with 10 universities and governmental institutions to prepare the F-DUT-2024-0431: Pedestrian-Friendly Urban Spaces through Adaptive Micromobility Regulation (MicroMReg) project under the DRIVING URBAN TRANSITIONS PARTNERSHIP (DUT 2024). The project, commencing in September 2025, aims to develop adaptive, data-driven micromobility regulation tools that enhance pedestrian comfort and safety while aligning with the 15-minute city (15mC) model. His role focuses on simulation, mathematical optimization, and AI-enabled adaptive regulation, ensuring the solutions are both scientifically robust and operationally viable for city administrations. Moreover, he leads a multi-scale digital twin for adaptive micromobility regulation using real-time pedestrian stress data. Through his interdisciplinary expertise and track record in international collaboration, Dr. Lee continues to advance research and innovation at the intersection of AI, transportation engineering, and sustainable urban mobility.
Research Area	Main Research Fields My research focuses on the development of advanced traffic management and control strategies, traffic flow theory, connected and autonomous mobility systems, multimodal transportation networks, and AI-driven intelligent transportation systems (ITS). A particular emphasis

	is placed on integrating physics-based modeling with data-driven machine learning, enabling dynamic calibration of microscopic traffic models, real-time state estimation, and predictive traffic optimization in heterogeneous and mixed traffic environments. Technological Uniqueness and Specialization I specialize in hybrid modeling approaches that combine physics-based behavioral models, such as the Intelligent Driver Model (IDM), with advanced algorithms including Deep Kalman Filters and bidirectional reconstruction frameworks. This allows for accurate estimation of unobserved traffic states beyond sensor coverage, improving safety and efficiency for connected and autonomous vehicles. My work also introduces generative AI-driven scenario synthesis for CCAM testing and validation, enhancing system robustness against rare and culturally diverse traffic situations. These methods have been implemented in distributed computing architectures, achieving sub-50 ms latency and 15–20% energy savings compared to centralized processing. Flagship results include: - Development of a hierarchical group-based adaptive traffic control system integrating queue-informed GLOSA and max-pressure policies, significantly reducing corridor-level delays. - Creation of a dynamic calibration framework using Deep Kalman Filters that improved trajectory prediction accuracy under data uncertainty across multiple congestion levels. - Design of a bidirectional IDM/IIDM fusion model that reduced trajectory estimation error by over 25% in long observation gaps. - Deployment of simulation-based decision-support tools for urban traffic optimization and policy testing in real-world pilot environments. Patents, Publications, and Research Excellence I have authored approximately 30 Q1 journal papers and peer-reviewed conference publications, with most as first or corresponding author, in leading outlets such as Transportation Research Part A, B, C, E, and IEEE Transactions on Intelligent Transportation Systems. I serve as a reviewer for 11 high-impact journals, including Transportation Research Part B, IEEE Transactions on Cybernetics, and Accident Analysis & Prevention. My research excellence is further reflected in over 20 funded research and consultancy projects across South Korea, Hong Kong, New Zealand, and Australia.
Personal link	https://www.seunghyeonlee.com/
Call topic	• HORIZON-CL5-2026-10-D6-03: Generative AI for smarter CCAM: enhancing perception, decision-making, and validation

9. Sol Hee Yoon

Name	Sol Hee Yoon
Position	Assistant Professor
Organization	Seoul National University of Science and Technology
Biography	I hold both a Master's and Ph.D. in Industrial Engineering from Yonsei University, specializing in Human Factors and Ergonomics. My Master's thesis focused on modeling drivers' visual complexity when interacting with in-vehicle interfaces, while my Ph.D. dissertation examined drivers' behavior in highly automated vehicles. Professionally, I gained two years of experience at LG Electronics in the Robot UX team and another two years at Hyundai Mobis in the IVIS HMI/UX team before joining the Department of Safety Engineering at Seoul National University of Science and Technology as a professor. My core research expertise lies in analyzing drivers' physical, visual, and cognitive behavior during human–vehicle interaction, developing predictive models of human perception in driving situations, and designing safety systems that enhance the interaction between drivers and vehicles. I have published multiple SSCI-indexed journal articles and presented at numerous international conferences, and I have served on the ACM Automotive User Interfaces Conference for three consecutive years. I have also engaged in several collaborative research with international partners, though I have not yet participated in EU-funded collaborative programs. I see this networking event as an excellent opportunity to expand my research network, explore potential synergies, and initiate collaborations in the European research ecosystem on advanced mobility and human–vehicle interaction.
Research Area	Main Research Fields: - AI-driven driver state monitoring systems and risk assessment tools for mixed-traffic and critical event scenarios - Driver behavior–based risk assessment for critical event scenarios - Micromobility as a novel form of urban mobility - Safety design for next-generation mobility solutions My research focuses on human factors and human–machine interaction in the context of advanced mobility, with particular emphasis on highly automated driving systems, micromobility safety, and user-centered interface design. I specialize in analyzing drivers' physical, visual, and cognitive behaviors when interacting with in-vehicle systems, developing predictive models of human perception, and designing safety systems for human–vehicle interaction. Grounded in interdisciplinary collaboration, my work bridges engineering, psychology, and design to ensure human-centered innovation in future mobility.
Personal link	https://www.researchgate.net/profile/Sol-Hee-Yoon?ev=hdr_xprf https://www.linkedin.com/in/solhee-yoon-a72056116/ https://hfe.seoultech.ac.kr/index.do
Call topic	• HORIZON-CL5-2026-10-D6-01: Flagship-pilot: large-scale demonstrations of CCAM

10. Youngmin Kim

Name	Youngmin Kim
Position	Senior researcher
Organization	KICT (Korea Institute of Civil Engineering and Building Technology)
Biography	I'm a researcher of Korea Institute of Civil Engineering and Building Technology (KICT), the only government funded technical institute in civil engineering technology area in Korea. As a researcher in KICT over 10 years, I have many experiences of government-funded research project about mobility service such as ITS (Intelligent Transport System) and MaaS (Mobility as a Service). In recent years, my core research project is about implementing mobility service in rural area in Korea, such as introducing DRT (Demand Response Transit) service to overcome digital divide of elderly, and development of road facility system exclusively for AV (Autonomous Vehicle), that utilizes simple machine learning principles to enable AV to recognize information contained in signs using LiDAR measurement data and utilize it for autonomous driving. Also, I worked three years in strategy division of institute, which activate as a coordinator of new research theme and long-term development strategy of my institute. Base on my past experience, I want to get informed for many researchers in my research division (Department of Highway & Transportation Research) about Horizon Europe program.
Research Area	Main research fields: Mobility Service, Research Planning and Coordination Technological uniqueness: DRT (Demand Response Transit) service system prototype for rural area in Korea Patent: 16 Korean patents about mobility service
Personal link	https://www.kict.re.kr/
Call topic	• HORIZON-CL5-2026-05-D6-09 • HORIZON-CL5-2026-05-D6-03