

# 2022 INTERNATIONAL CONFERENCE FOR ROAD ENGINEERS

by Korean Society of Road Engineers

## Tuesday, October 4

17:00 - 18:30 **Welcome Reception**

## Wednesday, October 5

09:00 -

**Registration**

09:15 - 09:30

**Opening Ceremony of Exhibition Booth**

09:30 - 10:00

**Opening Speech**

◆ *Seong-Min Kim, President, Korean Society of Road Engineers, Korea*

**Welcome Speech**

◆ *Young-Hun Oh, Governor of jeju Special Self-Governing Province, Korea*

**Congratulatory Speech**

◆ *Hee-Ryong Won, Minister, Ministry of Land, Infrastructure and Transport, Korea*

◆ *Won-Wook Lee, Member of the National Assembly, Korea*

◆ *Byung-Wook Kim, Member of the National Assembly, Korea*

◆ *Byung-Suk Kim, President, Korea Institute of Civil Engineering and Building Technology, Korea*

◆ *Ju-Gi Cho, Executive Manager Director, Korea Expressway Corporation, Korea*

◆ *George K. Chang, President, International Society of Intelligent Construction, USA*

10:00 - 10:50

**Keynote Speech**

"Role of Concrete Curing and Joint Sealant Performance Factors in Pavement Design"

- **Dan Zollinger**, Professor, Texas A&M University, USA

10:50 - 11:40

**Keynote Speech**

"Changes and Innovations in Road Engineering in the Era of Digital Transformation"

- **Keechoo Choi**, President of Ajou University, Korea

11:40 - 13:00

**Luncheon**

Diamond Restaurant, Hotel 1F

13:00 - 15:00	<b>Emerald A</b> <b>Workshop</b> Asphalt Concrete Pavement 1	<b>Emerald B</b> <b>Workshop</b> Cement Concrete Pavement 1	<b>Board Room 1</b> <b>Workshop</b> Maintenance and Repair 1	<b>Board Room 3</b> <b>Workshop</b> Transportation Engineering 1
15:00 - 15:30	<b>Coffee Break &amp; Poster Session</b>			
15:30 - 17:00	<b>Emerald A</b> <b>Workshop</b> Asphalt Concrete Pavement 2	<b>Emerald B</b> <b>Workshop</b> Cement Concrete Pavement 2	<b>Board Room 1</b> <b>Workshop</b> Maintenance and Repair 2	<b>Board Room 3</b> <b>Workshop</b> Transportation Engineering 2
17:30 - 19:30	<b>Banquet</b> <b>Sapphire Hall</b>			

## Thursday, October 6

09:00 - 09:50	<b>Keynote Speech</b> "Shared Mobility - Can It be Our Solution for Future Mobility?" - <b>Young Jae Lee</b> , Professor, Morgan state University, USA			
09:50 - 10:40	<b>Keynote Speech</b> "Intelligent Construction – Present and Future" - <b>George K. Chang</b> , President of the ISIC, Director of Research, The Trastec Group, USA			
10:40 - 12:30	<b>Emerald A</b> <b>Oral Presentation</b> <Session A> Asphalt Concrete Pavement	<b>Emerald B</b> <b>Oral Presentation</b> <Session D> Cement Concrete Pavement 1	<b>Board Room 1</b> <b>Oral Presentation</b> <Session G> Transportation Design & Planning	<b>Board Room 3</b> <Special Session> Safety and Noise of Expressways
12:30 - 13:30	<b>Luncheon</b> <b>Diamond Restaurant, Hotel 1F</b>			

13:30 - 15:00	<b>Emerald A</b> <b>Oral Presentation</b> <Session B> New & Advanced Technology	<b>Emerald B</b> <b>Oral Presentation</b> <Session E> Cement Concrete Pavement 2	<b>Board Room 1</b> <b>Oral Presentation</b> <Session H> Traffic Operation1	<b>Board Room 3</b> <Special Session> An Interdisciplinary Approach to Road Transport and Human Values
15:00 - 15:30 <b>Coffee Break &amp; Poster Session</b>				
15:30 - 17:30	<b>Emerald A</b> <b>Oral Presentation</b> <Session C> Pavement Maintenance	<b>Emerald B</b> <b>Oral Presentation</b> <Session F> Composite Pavement & Bridge Deck	<b>Board Room 1</b> <b>Oral Presentation</b> <Session I> Traffic Operation2	<b>Board Room 3</b> <Special Session> R&D Project Session of KNPA

## Friday, October 7

09:00 - 14:00	<b>Technical Tour of Jeju Island</b> 09:00 Departure from Buyoung Hotel 10:20 Pyoseon-Seongeup Prosperity Road (Expansion and pavement section of the natural preservation road) 10:40 Saryani Forest Road 11:20 A Mysterious Road 12:30 Lunch 14:00 Airport 15:00 Arrival at Buyoung Hotel
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# Wednesday, October 5

# Emerald A

## PLENARY KEYNOTE SPEECH



10:00 - 10:50

**Dan Zollinger**

Professor, Texas A&M University, USA

"Role of Concrete Curing and Joint Sealant Performance Factors in Pavement Design"



10:50 - 11:40

**Keechoo Choi**

President of Ajou University, Korea

"Changes and Innovations in Road Engineering in the Era of Digital Transformation"

## Workshop of Asphalt Concrete Pavement



Presiding by **Cheol Min Baek**  
Senior Researcher, KICT, Korea

Theme : Towards Sustainable and Eco-Friendly Asphalt Pavement



**Y. Richard Kim**  
Jimmy D. Clark Distinguished University Professor,  
North Carolina State University, USA

"Mix Design Procedures for Asphalt Mixtures Containing  
Reclaimed Asphalt Pavement (RAP)"



**Hosin David Lee**  
Professor and Director, University of Iowa, USA

"Development of Quality Standards and Performance Database  
for Sustainable Asphalt Pavements"



**Keizo Kamiya**  
Senior Expert, NEXCO Central, Japan

"The Design and Construction of Composite Pavement in Japan"



**Dae Wook Park**  
Professor, Kunsan National University, Korea

"Innovative Materials and Methods for Asphalt Pavement"



**Kyung Won Park**  
Research Director, SG Corporation, Korea

"Long-Term Field Monitoring on the Performance of  
the Steel Slag Hot Mix Asphalt Pavement"

October 5, 13:00 - 17:00 Emerald B

## Workshop of Cement Concrete Pavement



Presiding by **Jeong Hee Nam**  
Research Fellow, KICT, Korea

Theme : Forecasting the Future of Concrete Pavement



**Dan Zollinger**  
Professor, Texas A&M University, USA

"Future of Concrete Pavement Design and Construction: A Perspective"



**Seung Wook Lim**  
Senior Pavement Engineer, California DOT, USA

"Concrete Pavement Sustainability in California"



**Tatsuo Nishizawa**  
Professor emeritus, Ishikawa College, Japan

"Development of Strategic Design and Maintenance Technology  
for 100 Year Serviceable Concrete Pavements in Japan"



**Sung Il Jeon**  
Senior researcher, KICT, Korea

"How to Make Concrete Pavement more Sustainable and Predictable?"



**Sung Woo Ryu**  
Principal researcher, Korea Expressway Corporation, Korea

"The Past, Present, and Future of Concrete Pavement on Expressway in Korea"

## Workshop of Maintenance and Repair



Presiding by **Hyun Wook Kim**  
Executive Director, IRIS Technology, Korea

Theme : **Advanced Pavement Management for the 4th Industrial Generation**



**Ulf Sandberg**  
Senior Research Leader, VTI, Sweden

"Experience in Sweden About the Design and Performance of Noise-Reducing Porous Asphalt Pavements"



**George K. Chang**  
Director of Research The Transtec Group, USA

1. Qualification and Certification for High-speed 3D Pavement Surface Condition Survey Systems
2. Real-Time Construction Quality Monitoring with Intelligent Construction Technologies



**Sung Hee (Sonny) Kim**  
Professor, University of Georgia, USA

"Detecting Subsurface Anomaly Utilizing Synthetic GPR Images and Deep Learning Algorithm"



**Aldous O. Madlangsakay**  
Researcher, Sejong University, Korea

"Development of a Node Based GPR Signal Evaluation Algorithm for Pavement Profiling and Bridge Deck Evaluation"



**Hyun Sik Hwang**  
Associate Research Engineer, Chung-Ang University, Korea

"A Study on Structural Performance Evaluation Logic for Airport Pavement using Meta-Heuristic"



**Jong Ho Kim**  
Senior Managing Director, ROADTECH, Korea

"Application of the 4th Industrial Revolution Technology in Road Asset and Safety Management"



**Tran Thai Son**  
Researcher, IRIS Technology, Korea

"AI-based Pavement Distress Evaluation and Network-Level Pavement Management Considering Homogenized Sections"

October 5, 13:00 - 15:00 Board Room 3

## Workshop of Transportation Engineering 1



Presiding by **Seoung Bum Kim**  
Professor, Gyeongsang National University, Korea

Theme : Transportation, the Way to Go



**Chang Mo Kim**  
Associate Project Scientist, UC Davis, USA

"Effect of Public Bus Electrification on Carbon Footprint in USA and UAE"



**Tai Jin Song**  
Professor, Chungbuk University, Korea

"Classification of High Speed Trains Stations based on Car-Sharing Travel Patterns"



**Bum Joon Bae**  
Associate Research Fellow, Korea Transport Institute, Korea



**Soo Hyuk Bang**  
Associate Research Fellow, Korea Transport Institute, Korea



October 5, 15:30 - 17:00 Board Room 3

## Workshop of Transportation Engineering 2



Presiding by Dr. **Choong Heon Yang**  
Research Fellow, KICT, Korea

Theme : Road Safety Ahead



**Tea Jung Kwon**  
Professor, University of Alberta, Canada

"Advancing Winter Transportation Safety, Mobility, and Sustainability using Geostatistics and Deep Learning"



**Cheol Oh**  
Professor, Hanyang University, Korea

"Detection of Riding Risk Events using Inertial Measurement Unit (IMU) Sensor Data"



**Gunwoo Lee**  
Associate Professor, Hanyang University, Korea

## WELCOME BANQUET

Sapphire Hall

17:30 - 18:10 Magic Show

18:10 - 19:30 Banquet

# Thursday, October 6

# Emerald A

## PLENARY KEYNOTE SPEECH



09:00 - 09:50

**Young Jae Lee**

Professor, Morgan state University, USA

"Shared Mobility - Can it be Our Solution for Future Mobility?"



09:50 - 10:40

**George K. Chang**

President of the ISIC, Director of Research, The Trastec Group, USA

"Intelligent Construction – Present and Future"

# Thursday, October 6

## Emerald A

### ORAL PRESENTATION

Emerald A  
10:40 - 12:30

Session Chair :  
**Kyung Won Park,**  
Research  
Director,  
SG Corporation

#### <Session A> Asphalt Concrete Pavement

- A1. Feasibility Study for Circular Pavement Wheel Tracker (CPWT) for Rut-potential Estimation of Asphalt Concrete  
◆ **Yeongsam Kim, Wonbae Kim, Sung Un Kim, Kwang W. Kim**
- A2. Research on the Development of Pavement Methods of High-Strength Medium-Low Temperature Asphalt Modifier for Carbon and Odor Reduction  
◆ **Jong Yul Lee, Choon Soo Kim, Young Wook Kim, Kang Hwi Lee, Youn Ik Kim**
- A3. A Study on the Field Applicability of Block Pavement for Sustainable Road Environment  
◆ **Jeong A Kim, Ho Jun Yoo, Won Ok Baek, In Tai Kim**
- A4. Development of Freeze-and-Thaw Testing Set-up for Subgrade Soils  
◆ **Yonathn Alemu Yami, Dong Hyun Kim, Ji Hoon Kim, Yoon Ho Cho**
- A5. Microbial Attempt to Improve Unpaved Road in Developing Countries as Low Cost and Easy Implementation  
◆ **Jin Ung Do, Hyeong Joon Kim, Yong Joo Kim, Kang Hun Lee, Hae Won Park**
- A6. Use of Waste Fishing Net to Reinforce Lightweight-Foamed Soil  
◆ **Jin Ung Do, Sun Bin Kim, Gil Lim Yoon**

12:30 - 13:30

**Luncheon**

**Diamond Restaurant, Hotel 1F**

Emerald A  
13:30 - 15:00

Session Chair :  
**Ki Hoon Moon**,  
Principal  
researcher,  
Korea  
Expressway  
Corporation

### <Session B> New & Advanced Technology

- B1. Investigation of Pavement Temperature by Depth Using Deep Learning  
◆ **Yonathn Alemu Yami, Hyun Sik Hwang, Young In Im, Yoon Ho Cho**
- B2. AI-Based Pavement Distress Evaluation and Network-Level Pavement Management Considering Homogenized Sections  
◆ **Thai Son Tran, Hyun Jong Lee, Hyun Wood Kim, Ki Deok Kim, Van Phuc Tran, SonDong Nguyen, Jun Sik Lee, Jeong Hun Song**
- B3. Development of a Node Based GPR Signal Evaluation Algorithm for Pavement Profiling and Bridge Deck Evaluation  
◆ **Julius Marvin Vinoya Flores, Hyun Jong Lee, Hyun Wook Kim, Aldous Madlangsakay, Ki Deok Kim**
- B4. Evaluation of Nighttime Visibility over Luminating Road Marking using Brightness Contrast Ratios under Virtual Reality  
◆ **Jiwon Kim, Yu Seop Park, Heung Un OH**
- B5. A Machine Learning-based Approach for Predicting Road Surface Frictions using Dashcam Images  
◆ **Qian Xie, Tae J. Kwon**
- B6. Winter Road Surface Conditions Recognition using Semantic Segmentation and Generative Adversarial Network – A Case Study of Iowa, US  
◆ **Mingjian Wu, Tae J. Kwon**

15:00 - 15:30

### Coffee Break & Poster Session

Emerald A  
15:30 - 17:30

Session Chair :  
**Dong Woo Cho**,  
Managing  
Director,  
Hyundai  
Bridge Co.

### <Session C> Pavement Maintenance

- C1. Development of Korean Airport Pavement Management System Framework Considering Multi Facilities  
◆ **Seung Hyun Roh, Je Il Lee, Yoon Ho Cho**
- C2. Development of Present Performance Prediction model for Local Roads Pavement in Jeju Island  
◆ **Jae Hoon Lee, Jae Hoon Lee, Yeon Tae Kim, Byoung Chan Woo, Byung Sik Ohm, Jin Hoon Jeong**
- C3. Development of the Present Performance Prediction Model for National Road Pavement in Gangwon-Do  
◆ **Byoung Chan Woo, Yeon Tae Kim, Jae Hoon Lee, Hee Won Kwon, Jun Hyeok Ko, Jin Hoon Jeong**
- C4. Development of Black Ice Prediction Computer Program Based on GIS and Meteorology Data  
◆ **Tam Minh Phan, Jung Woo Seo, Tae Hyeong Jin, Anh Truong Nguyen, Dae Wook Park**
- C5. Application Rate of Prewetted Salt for Winter Maintenance  
◆ **Woong Jin Nah, Jin Hwan Jang**
- C6. Correlations Between NOx/PM2.5 Concentrations and Weather Conditions/Traffic Information in Underpass Section  
◆ **Moon Kyung Kim, Ji Su Kang, Eun Seok Choi, Jong Won Gwark**
- C7. Application of Traffic Speed Deflectometer for Road and Airport Pavement Management  
◆ **Karsten Jensen**
- C8. A Study on the Estimation of Road Suspended Dust in Urban Area  
◆ **Ho Jun Yoo, Jeong Yeon Cho, Sung Jin Hong, Gyu Min Yeon, In Tai Kim**

# Thursday, October 6

## Emerald B

### ORAL PRESENTATION

Emerald B  
10:40 - 12:30

Session Chair :

**Byoung Hooi Cho,**  
Professor,  
Sangmyung  
University

#### <Session D> Cement Concrete Pavement 1

- D1. Early-Age Performance of Precast Continuously Reinforced Concrete Pavement at Central Bus Stations  
 ◆ **Sang Min Jeong, Soon Ho Baek, Jeong Hyun Whang, Sang Cheol Park, Seong Min Kim, Eui Seung Hwang, Nock Hee Han**
- D2. Image Clustering Method to Evaluate Consistency of Sprayed Curing Compounds on Concrete Pavements  
 ◆ **Jeong Hyun Whang, Soon Ho Baek, Sang Min Jeong, Kang In Lee, Seong Min Kim**
- D3. Development of Concrete Pavement Profile Measurement Method During Construction Using IoT System  
 ◆ **Moon Gyu Choi, Jin Su Kim, Gye Ju Na, Jin Hoon Jeong**
- D4. Uniformity of Crack Spacing in Advanced Reinforced Concrete Pavement  
 ◆ **Soon Ho Baek, Jeong Hyun Whang, Sang Min Jeong, Kang In Lee, Seong Min Kim, Jun Ho Lee**
- D5. A Case Study: Remedial Methods for Crack Control During the Construction of Airport Apron Pavement Quality Concrete (PQC)  
 ◆ **Sheau Feng Lee, Nur Najwani Kamarulzaman**
- D6. Fundamental Research for Securing the Mechanical Performance of Permeable Concrete using Photocatalyst  
 ◆ **Gi Hyun Kim, Tae Jin Jang, Seung Won Choi, Oli Topendra, Seung Won Kim, Cheol Woo Park**
- D7. Mechanistic-Based Damage Cost Evaluation of Concrete Pavement Systems Subjected to Superloads  
 ◆ **Yong Sung Koh, Halil Ceylan, Sung Hwan Kim, In Ho Cho**

12:30 - 13:30

**Luncheon**

**Diamond Restaurant, Hotel 1F**

Emerald B  
13:30 - 15:00

Session Chair :

**Han Jin Oh,**  
Senior Researcher,  
Seoul Institute  
of Technology

### <Session E> Cement Concrete Pavement 2

- E1. Sensitivity Analysis of Factors Affecting the Potential of Concrete Pavement Growth and Blow-up  
◆ **Young Kyu Kim, Hui Rak Ahn, Lyhour Chhay, Seung Woo Lee**
- E2. Investigation of the Relationship Between Tire-Pavement Interaction Noise and Pavement Texture Condition  
◆ **Jae Hoon Kim, Gwang Hyun Kim, Woo Hyung Jung, Seung Woo Lee**
- E3. Plastic Shrinkage Cracking, Rheology and its Interaction in Latex-Modified Concrete at the Plastic Stage  
◆ **Valerii Panov, Kyoung Ku Yun**
- E4. Combined Effects of PVA Fibers and EOGO Nanoflakes on flexural behaviors of Cement Composite  
◆ **Joo Kyeung Sung, Seok Ju Park, Jung Heum Yeon, Byoung Hooi Cho**
- E5. Microstructure and Mechanical Properties Analysis of Various Carbon Fibers Reinforced Cement Composites  
◆ **Mohammad Shakhawat Hossain, Seung Yeon Han, Kyong Ku Yun**
- E6. Comparative Evaluation of Heat Generation Performance and Mechanical Properties of Carbon-Based Conductive Materials  
◆ **Tae ho Ha, Seung Hak Choi, Chang Seok Song, Kyong Ku Yun**

15:00 - 15:30

### Coffee Break & Poster Session

Emerald B  
15:30 - 17:30

Session Chair :  
**Jae Joon Lee,**  
Profesor,  
Jeonbuk  
University

### <Session F> Composite Pavement & Bridge Deck

- F1. Characterization of Interfacial Shear Strength of Thin Epoxy Overlay for Bridge Deck  
◆ **Jae Hoon Lee, Moon Gyu Choi, Seung Ho Hong, Dong Hyuk Kim, Jin Hoon Jeong**
- F2. Development of Mechanistic-Empirical Design Logic to Predict the Reflection Cracking Life of Composite Pavement  
◆ **Debby Marcelia Andryanti, Phung My Lam, Phat Tien Nguyen, Bruce Alfred Aplicano, Dae Wook Park**
- F3. Tensile Behavior Analysis of Rebar Exposure to High Temperature for Tunnel Fire Damage Diagnosis Method  
◆ **Seungwon Choi, Gi Hyun Kim, Tae Jin Jang, Oli Topendra, SeungWon Kim, Cheol Woo Park**
- F4. Development of Bridge Slab's Bottom Rehabilitation Process using Dry Mix Shotcrete  
◆ **Seung Hak Choi, Tae Ho Ha, Chang Seok Song, Kyong Ku Yun**

# Thursday, October 6

## Board Room 1

### ORAL PRESENTATION

Board Room 1  
10:40 - 12:30

Session Chair :  
**Gunwoo Lee**,  
Associate  
Professor,  
Hanyang  
University

#### <Session G> Transportation Design & Planning

- G1. Evaluating Competitiveness in Land Transport on the Expressway  
◆ **Jung Yeol Hong, You Jeong Kang, Jeong Hoon Moon, Ho Won Lee, Jun Ho ye, Yoon Hyuk Choi**
- G2. A Study on the Optimal Location of Shared E-scooter Parking Space using Regression Model and Survey Technique  
◆ **Dae Won Kim, Su Hwan Kim, Na Yeon Kim, Dong Min Lee**
- G3. Traffic Impact Analysis of Underground Expressway Construction in Seoul: Focused on the Seobu Underground Expressway  
◆ **Hyung Joon Bang, Tae Young Kim, Young Kyun Kang, Jae Young Jung**
- G4. Analysis of Effectiveness of Installation of E-Bike Charging Station Based on E-Bike Sharing Service Data  
◆ **Jae Young Jung, Young Kyun Kang, Tae Kyoung Kim**
- G5. A Scenario for the Capacity Calculation of Mixed and Uninterrupted Traffic Flow Based on Lv4+ Autonomous Cooperative Driving  
◆ **Seong Chae Baek, Je Jin Park**
- G6. The accuracy of Road Traffic Forecasts: Forecast Bias and Forecast Efficiency  
◆ **Ki Min Kim, Dong Joo Park**
- G7. A Study on the Systematic Standard Model of School Zone Reflecting Various Road Factors  
◆ **Ui Bum Chun, So Myoung Shin, Vo Dinh Quang Nhat, Soo Beom Lee**

12:30 - 13:30

**Luncheon**

**Diamond Restaurant, Hotel 1F**

Board Room 1  
13:30 - 15:00

Session Chair :  
**Ho Cheol Park,**  
Professor,  
Myongji University

### <Session H> Traffic Operation1

- H1. Effect of No Lane Changing in Tunnel Section  
◆ **Seung Jun Lee, Seung Kirl Baek**
- H2. Estimation of a Traffic Accident Probability Model for Underground Road Junctions using VISSIM  
◆ **Zion Park, Byong Chan Shin, Gun Woo Lee, Choong Heon Yang**
- H3. Investigating Factors Influencing the occurrence time of Drowsiness  
◆ **Chae Rim Lee, Seo Hyeon Park, Do Gyeong Kim**
- H4. Enhancement of Warning Signs for Black Ice based on Driving Simulator Experiments  
◆ **Ghang Shin Lee, Soon Cheon Hwang, Dong Min Lee**
- H5. A Study on Economic Benefit Measurement of Seoul Subway Tagless System Using CVM Method  
◆ **Ho Hyuk Na, Ung Seok Yu, Do Gyeong Kim**
- H6. Mode Choice in Transportation of Immigrants in Seoul, South Korea  
◆ **Dinh Quang Nhat Vo, So Myoung Shin, Soo Beom Lee**

### 15:00 - 15:30 Coffee Break & Poster Session

Board Room 1  
15:30 - 17:30

Session Chair :  
**Bum Joon Bae,**  
Associate  
Research Fellow,  
Korea Transport  
Institute

### <Session I> Traffic Operation2

- I1. A Survival Analysis of Traffic Breakdown on Urban Freeways  
◆ **Jin Hak Lee, Young Jun Han, Ha Sik Lee**
- I2. A Study on Relief of Transportation Inconvenience for the Local Resident through the Installation of the 3rd Maritime Bridge  
◆ **Rae Jin Park, Yong Hui Choi, In Hui Jang, Hyung Chan Lee**
- I3. Performance Evaluation of Speed Humps by Shape Using Vibration Dose Value  
◆ **Hong Kyun Kim, Do Gyeong Kim**
- I4. Smart Queue Management System  
◆ **Tavanam Vishnu Vardhan Reddy**
- I5. Prioritization of Factors Considered for the Application of Tagless Gate System in Subway Stations  
◆ **Ji Hye Kang, Young Shin Kim, Do Gyeong Kim**



## SPECIAL SESSION

October 6, 10:40 - 12:30 Board Room 3

# Safety and Noise of Expressways



Presiding by Dr. **Seung Hwan Han**  
Senior Research Adviser,  
Korea Expressway Corporation Research Institute, Korea



**Hyung Bae Kim**  
Division Director, Korea Expressway Corporation Research Institute, Korea  
"Welcome Address & Introduction"



**Tae Hun Lee**  
Deputy Principal Researcher,  
Korea Expressway Corporation Research Institute, Korea  
"Safety Performance of Climbing Lanes under Various Traffic Volume Conditions"



**Byung Chan Lee**  
Professor, Korean National University of Transportation, Korea  
"Noise Assessment of Porous Asphalt Pavement in South Korea Expressways"



**Ulf Sandberg**  
Senior Research Leader, VTI(Swedish Road Research Institute), Sweden  
"Noise Measurement Technology for Noise-Reducing Pavements"



**Keizo Kamiya**  
Senior Expert , NEXCO(Japan Expressway Corporation), Japan  
"Noise Mitigation of Porous Asphalt Pavement in Japan Expressways"

October 6, 13:30 - 15:00 Board Room 3

# An Interdisciplinary Approach to Road Transport and Human Values



Presiding by Dr. **Soo Ahn Kwon**

Research Fellow,  
KICT (Korea Institute of Civil Engineering and Building Technology), Korea



**Jin Woo Park**

Research Associate, Kyonggi University, Korea

"Flexible Curb Space Use in the Era of Autonomous Vehicles:  
On the Modeling and Simulation of Allocation"



**Su Ji Kim**

Research Associate,  
KAIST (Korea Advanced Institute of Science and Technology), Korea

"Non-Linear Impacts of Pandemic on Intra-City Mobility Patterns:  
a Comparative Analysis of Private Car and Public Transport"



**Ji Hye Byun**

Assistant Professor, University of Seoul, Korea

"Analysis of the Bus Drivers' Job Satisfaction Based on the Survey in South Korea"



**Hyeon Mi Kim**

Assistant Professor, Korea Aerospace University, Korea

"Design and Performance Evaluation of Unconventional Interchange and  
Intersection Designs: Analysis Tools and Practices"



**Ho Jung Kim**

Senior Research Associate,  
KRIHS (Korea Research Institute for Human Settlement), Korea



**Heung Un Oh**

Professor, Kyonggi University, Korea



**Young Soo Chang**

Executive Vice President, HDC Hyundai PCE, Korea

October 6, 15:30 - 17:30 Board Room 3

# R&D Project Session of KNPA(KoROAD)



Presiding by Dr. **Ki Tae Jang**  
Associate Professor, KAIST, Korea

**Theme : Development of Automated Traffic Violation Enforcement Equipments Eased on the Image Processing Technology and its Operating Platform**



**Shin Hyoung Park**  
Associate Professor, University of SEOUL, Korea

"Development of Video Processing-Based Automated Traffic Violation Enforcement Equipment and its Operating Platform"



**Yo hee Han**  
Research Professor, University of SEOUL, Korea

"Development of Video Processing-Based Automated Traffic Violation Enforcement Equipment and its Operating Platform"



**Seung Ryong Chae**  
Executive Director, BISTelligence, Korea

"Development of Traffic Control Equipment Based on AI Image Analysis Technology"



**Sun Jung Kim**  
Managing Director, PINTEL, Korea

"Development of Operating Platform Implementing Smart Traffic Enforcement System"



**Kyung Sik Hong**  
Senior Researcher, KoROAD, Korea

"Development of Video Processing-Based Automated Traffic Violation Enforcement"



**Ji Sup Shim**  
Research Fellow, KAIST Eco-friendly and Smart Vehicles Research Center, Korea



**Sang Hoon Son**  
Research Fellow, Jeju Research Institute, Korea

# Woojung Hall Robby

10:00, October 4, Wednesday - 17:30, October 7, Thursday

## POSTER PRESENTATION

### Asphalt Concrete Pavement

- P1. A Fundamental Study of Recycled Warm-mixed Asphalt with 50% RAP  
◆ Su Min Park, Chi Su Lim, Dae Seong Jang, Sang Hyeok Youn, Yu Seung Choi, Jae Jun Lee
- P2. A Pilot Project for the Maintenance Case of Asphalt Pavement Using Basalt Aggregate  
◆ Deok Soon An, Hee Beom Park
- P3. A Study on the Characteristics of Recycled Asphalt Mixtures Using Foamed Asphalt  
◆ Sang Gu Park, Jin Hoon Jeong
- P4. A Study on the Properties Evaluation before and after Construction for the Preventive Maintenance Method of Highway asphalt Pavement  
◆ Sung Ho Bae, Dong Hyun Lee, Soon Min Kwon, Hyung Bae Kim
- P5. Analysis on Performance of Asphalt Bridge Deck Pavement using Expressway LTPP Data  
◆ Hee Young Park, Jae Hoon Lee, Hyung Chul Mun, Tae Soo Kim, Jung Hun Lee
- P6. Basic Physical Property Test on Aging Characteristics of Recycled Warm-Mix Asphalt Mixture  
◆ Byeong Jun Kim, Soon Je Jeon, Joo Hong Park, Oh Sun Kwon, Kyung Ha Lee
- P7. Behaviour Analysis of Unpaved Roads by Surface Treatment Materials  
◆ Yong Joo Kim, Hae Won Park, Kyung Nam Kang, Kang Hun Lee, Hong Jun Kwon
- P8. Characteristics Evaluation of Asphalt Mixture for Efficient Road Management  
◆ Yeong Min Kim, Kyung Nam Kim, Byung Sik Uhm, Cesar Fernando Paiva Lezcano, Miguel Matias Flores G.
- P9. Evaluating the Physical Properties of the Warm Mix Asphalt  
◆ Nam Ho Kim, Jae Won Jo, Jung Hee Lee, Byeong Jun Kim, Joo Hong Park
- P10. Evaluation of Basic Properties and Laboratory Performance of Asphalt Mixtures using Basalt Aggregates  
◆ Soo Hyun Han, Cheol Min Baek
- P11. Evaluation of NOx Reduction Effect on Asphalt Pavement of Including TiO<sub>2</sub> and Asphalt Rejuvenator  
◆ Jong Won Lee, Sung Lin Yang
- P12. IoT Systemization of Marshall stability Test with Various Control Condition  
◆ Jun Seong Choi, Sang Jin Kim, Hyeon Ho JIN
- P13. Korea Expressway Field Investigation to Evaluate Noise Reduction Rate of Porous and Stone Mastic Asphalt Pavement Using CPX  
◆ Woo Young Cho, Oh Sun Kwon, Jong Sub Lee, Kyung Ha Lee, Yu Joong Hwang
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