SAFETY, FRICTION AND MONITORING TO FIT UNDER INFRASTRUCTURE

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GENERAL DESCRIPTION OF THE SPECIAL SESSION

This special session is organized in order to share the knowledge about the safety, friction, and monitoring to fit under infrastructure. While considering a big trend of the society such as aged-society, rapid change of climate, more populated city living, the safety of vehicle users, bicyclists and pedestrians is getting important. This special session has a focus on the relationship between the safety service provided by infrastructure with related to the pavement for vehicular movement and walking and riding surface for the bicyclists and pedestrians. Through the special session, the organizers hope to share the international practice about this topic, and more safety and sustainable infrastructure can be reached.

1. A STUDY ON DESIGN CRITERIA FOR SLOPE WALKING FACILITIES TO REDUCE THE AGED’S FALLING

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This study is about the design criteria for slope walking facilities to reduce the falling accidents of the elderly. Indoor experiment was carried out to find the movement behavior of the elderly by using sensors to detect the movement in more exact manner. The result of the study is used to develop the design criteria for the slope walking facilities.
2. A DEEP LEARNING APPROACH FOR PAVEMENT EVALUATION USING 2D AND 3D IMAGING SYSTEMS

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This study is about the development of the pavement evaluation system by utilizing a deep learning approach for pavement evaluation. 2D and 3D imaging system is used to detect the pavement condition and this system is believed to detect the pavement condition in more exact manner.

3. A SIMPLE METHOD FOR AUTOMATIC INCIDENT DETECTION USING VEHICLE DETECTOR DATA

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This study is about quick detection of the incidents such as crash, roadwork, debris, stopped vehicles etc. Vehicle detector data is used to identify the incident by utilizing a simple but robust AID(Automatic Incident Detection) method. The developed method is evaluated with road-world data on a motorway in the vicinity of Seoul, Korea, and the satisfactory consequences were resulted.

4. FRICTION IN ROAD DESIGN SAFETY

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This study is to assess the quantity of the friction demand which reflects the drivers speed choice behavior. A field speed survey was carried out at four lane rural roads and the friction demand was derived by using point mass equation. Comparison of the friction demand and friction assumed at design stage was made for the reference of the friction balance, so curve design safety.