

WEBINAR TALK ON

“Passenger Safety Perception Modeling Study for Buses on Mountainous Roads”

Organised by: Highway & Transportation Engineering Technical Division, IEM
BEM Approved CPD/PDP Hours: 2 Hours Ref No: IEM20/HQ/260/T(w)

21 November 2020 | 9.00 am – 11.00 am

SYNOPSIS

A passenger safety perception model is developed to explain the potential risk of accident for buses traveling on mountainous area. Several important factors are considered, namely driver characteristics, environmental conditions, and bus characteristics using Bayesian Network. The behaviour of bus driver is observed through the bus motion profile, measured in longitudinal, lateral, and vertical accelerations. The road geometry is recorded using GPS and is computed with the aid of the Google map while the perceived bus safety is rated by the passengers in the bus in real time. A total of 13 variables were derived and used in the model development. The developed Bayesian Network model shows that the type of bus and the experience of the driver on the investigated route could have an influence on passenger's perception of their safety on buses. Road geometry is an indirect influencing factor through the driver's behavior. The findings of this model are useful for the authorities to structure an effective strategy to improve the level of perceived bus safety. A high level of bus safety will definitely boost passenger usage confidence which will subsequently increase ridership.

SPEAKERS BIODATA



Ir. Dr. Khoo Hooi Ling is an Associate Professor in the Department of Civil Engineering at the Universiti Tunku Abdul Rahman, Bandar Sungai Long Campus. She graduated with a Bachelor of Civil Engineering from the University of Malaya in 2002 and a Master of Engineering Science in 2005. She obtained her PhD in 2008 from the National University of Singapore. Her research interests include traffic modelling and optimization, traffic safety, public transport, and travel demand management. She is also actively involved in consultancy projects. At current, she is the chairperson of the Highway and Transport Technical Division (HTETD) and has obtained the Fellow membership with IEM.



Mr. Muaid Abdulkareem is a PhD (Engineering) candidate in the Lee Kong Chian Faculty of Engineering & Science (LKC FES) at Universiti Tunku Abdul Rahman, Bandar Sungai Long Campus. Muaid graduated with a Bachelor of Engineering (Civil) from Swinburne University of Technology in 2013, and a Master of Engineering Science in 2017 from Universiti Tunku Abdul Rahman. Currently, he is pursuing PhD (Engineering) program in the field of traffic control systems. Muaid is graduate member with Board of Engineers Malaysia (BEM) as well as Engineers Australia (EA).

Registration fees

(Effective 1st August 2020)

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