

International Conference on Advances in Highway Engineering & Transportation Systems

JULY 2011



Transportation Engineering Division
Department of Civil Engineering
University of Moratuwa
Sri Lanka



International Conference on
Advances in Highway Engineering &
Transportation Systems



Abstracts

26th July 2011
Colombo, Sri Lanka

**Transportation Engineering Division
Department of Civil Engineering
University of Moratuwa**

Conference Program

International Conference on

Advances in Highway Engineering & Transportation Systems

Plenary Session		9.00 am – 10.30 am
Technical Session 1		11.00 am – 12.30 pm
Highway Engineering	Public Transport	
<ul style="list-style-type: none"> ★ A Large Scale Test System To Investigate MSE Soil Reinforcement-Backfill Interaction ★ Design Of Rigid Pavement Joint Spacing For Low Volume Roads ★ Role Of 3D-Finite Element Modeling In The Analysis Of Soil-Structure Interaction Problems ★ Stiffness Based Construction Quality Evaluation For Pavement Subgrade And Base Applications 	<ul style="list-style-type: none"> ★ Regular Bus Service Or Regular Plus Express Bus Service? ★ A Revisited Model Estimation For International Passenger Demand At Bandaranayake International Air Port, Sri Lanka ★ Impact Of Transfer On Transit Attractiveness ★ Pedestrian Facilities In Urban Environment Using "Walkability" Measures 	
Technical Session 2		1.30pm – 3.00 pm
Road Infrastructure & Safety	Transport Infrastructure	
<ul style="list-style-type: none"> ★ Hydroplaning Risk Evaluation In High Speed Low Traffic Volume Highways In Developing Countries ★ Low Cost Speed Management In High Speed Rural Roadways: Optical Speed Bars ★ Accommodating Road Accident Records In A Comprehensive Highway Management System 	<ul style="list-style-type: none"> ★ Decision Making Framework For Transportation Infrastructure Selection ★ The Influence Of Destination Location Factor And Transportation System Factor to Choice The Shopping Location ★ IT Based Evacuation Methodology For A Coastal Railway System Under A Tsunami Warning 	
Technical Session 3		3.30pm – 5.00 pm
Traffic Engineering & Planning	Accident Data & Road Users	
<ul style="list-style-type: none"> ★ Stepwise Genetic Fuzzy Logic Signal Control Under Mixed Traffic Condition ★ Geometric Design Standards For Narrow Curves In Hilly Terrain of Sri Lanka ★ Developing A Comprehensive Mode Choice Model To Capture The Preferences For Mass Rapid Transit In Dhaka 	<ul style="list-style-type: none"> ★ Identification of Factors Related to State Level Safety Belt Usage Rates In The United States ★ Identification of Safety Issues of Older Drivers Using Survey Data ★ Development of Road Accident Data Base For Sri Lanka 	

International Conference on
**Advances in Highway Engineering &
 Transportation Systems**

Parallel Session H1: Highway Engineering

1. A Large Scale Test System to Investigate MSE Soil Reinforcement-Backfill Interaction 05
 P.W. Jayawickrama, W.D. Lawson and T.A. Wood
2. Design of Rigid Pavement Joint Spacing for Rural Roads 07
 A.M.A.N.Karunaratne, W.K.Mampearachchi and S.M.A.Nanayakkara
3. Role of 3D-Finite Element Modelling in the Analysis of Soil-Structure Interaction Problems..... 09
 Asitha Senanayake, P.W. Jayawickrama and W.D. Lawson
4. Stiffness Based Construction Quality Evaluation for Pavement Subgrade and
 Base Applications 11
 Nishantha Bandara

Parallel Session T1: Public Transport

1. Regular Bus Service or Regular Plus Express Bus Service?
 Analysis of Mode Succession in a Public Transit Corridor..... 13
 R.S. Thilakaratne, S.C. Wirasinghe and J. Hubbell
2. A Revisited Model Estimation for International Passenger Demand at Bandaranaike
 International Airport, Sri Lanka..... 15
 L.W.D. Piyathilake, G.A.C. Priyadarshani and J.M.S.J. Bandara
3. Impact of Transfer on Transit Attractiveness..... 17
 M.S. Hossain, J.D. Hunt and S.C. Wirasinghe
4. Pedestrian Facilities in Urban Environments Using "Walkability" Measures..... 19
 Ishani Dias and J.M.S.J. Bandara

Parallel Session H2: Road Infrastructure & Safety

1. Hydroplaning Risk Evaluation in High Speed Low Traffic Volume Highways in
 Developing Countries..... 21
 Waruna Jayasuriya and Manjriker Gunaratne
2. Low Cost Speed Management in High Speed Rural Roadways: Optical Speed Bars..... 23
 Sunanda Dissanayake and Abdoulaye Balde
3. Accommodating Road Accident Records in a Comprehensive Highway Management System... 25
 J.M.S.J. Bandara, S.A. Silva and R.P.G.K.S Rajapaksha

Parallel Session T2: Transport Infrastructure

1. Decision Making Framework for Transportation Infrastructure Selection 27
U. Attanayake, A.W. Mohammed, Y. Hu, O. Abudayyeh and H.M. Aktan
2. The Influence of Destination Factor and Transportation System Factor to Choice the Shopping Location..... 29
Judiantono Tonny
3. IT Based Evacuation Methodology for a Coastal Railway System Under a Tsunami Warning..... 31
R.M.N.T. Sirisoma and S.C. Wirasinghe

Parallel Session H3: Traffic Engineering & Planning

1. Stepwise Genetic Fuzzy Logic Signal Control Under Mixed Traffic Condition..... 33
Yu-Chiun Chiou and Yen-Fei Huang
2. Geometric Design Standards for Narrow Curves in Hilly Terrain of Sri Lanka 35
S.A.S.T Salawavidana
3. Developing a Comprehensive Mode Choice Model to Capture the Preferences for Mass Rapid Transit in Dhaka..... 37
Annesha Enam and C.F. Choudhury

Parallel Session T3: Accident Data & Road Users

1. Identification of Factors Related to State Level Safety Belt Usage Rates in the United States..... 39
Sunanda Dissanayake
2. Identification of Safety Issues of Older Drivers Using Survey Data..... 41
Loshaka Perera and Sunanda Dissanayake
3. Development of Road Accident Reporting Mechanism for Sri Lanka..... 43
W.K.Mampearachchi