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Centre for Transportation Research of Department of Civil and Environmental Engineering

Better Skid Management Saves Lives

By

Professor Jorge Prozzi

Department of Civil, Architectural and Environmental Engineering Cockrell School of Engineering The University of Texas at Austin

Host: Prof Meng Qiang, Director of Centre for Transport Research (CTR) of CEE

Date: 15 May 2023, Monday

Time: 10 am – 11 am Venue: E1-06-04

> National University of Singapore College of Design and Engineering

3 Engineering Drive 2,

Singapore 117578



Scan code to register

Seats are limited. Please register early. All are welcome and admission is free

Abstract

The skid resistance of a highway pavements is essential for providing road user safety. There is a strong correlation between pavement skid and the number of wet-weather crashes: as skid resistance doubles, the rate of wet-weather crashes could be halved. However, the measurement of skid resistance at the network level cannot be executed in an efficient manner and large highway networks are typically sampled less than ten percent annually. Besides, traditional skid equipment is associated with a high environmental impact in terms of water usage and tire wear.

This presentation will explain how using high-definition lasers and machine learning tools, surface profile information can be used to estimate skid with a high degree of accuracy. The preliminary models estimate skid resistance of flexible pavements with an accuracy eighty percent. This innovative approach has the potential to enable highway agencies to obtain full network coverage of reliable estimates of skid on an annual basis and, consequently, apply timely corrective actions, reduce the number of crashes, save lives and reduce the environmental impact.

Speaker's Biography



Dr. Jorge A. Prozzi is the Satish Endowed Engineering Professor in the Department of Civil, Architectural and Environmental Engineering at The University of Texas at Austin. He received his BSc. in Civil Engineering from the Universidad Nacional del Sur, Argentina in 1989. He obtained his BSc. (Hons.) in Civil Engineering from the University of Pretoria (South Africa) in 1996 and his M.S. and Ph.D. in Civil Engineering from the University of California, Berkeley in 1998 and 2001, respectively. He is currently member of the National Academies of Sciences,

Engineering and Medicine Oversight Committee of the Federal Highway Administration Bridge and Pavement Research Program. He is the past chair of the TRB International Activities Committee, the Data Analysis Working Group and the TRB Subcommittee for Latin American Activities. He serves as an expert panel member for projects funded by the National Cooperative Highway Research Program and he is an active member of the American Society of Civil Engineers (ASCE). He is (or has been) member of several technical committees of the Transportation Research Board.

Dr. Prozzi is a former Associate Editor of ASCE's Journal of Infrastructure System and the WCTRS's Journal on Case Studies on Transport Policy. He is current member of the Editorial Board of Springer's Journal "Frontiers of Structural and Civil Engineering". He has authored or co-authored 75 refereed archival journal publications, 136 refereed conference proceedings, and 133 technical reports.

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Map of Seminar Room E1-06-04, Engineering Drive 4, Singapore 117585

Seminar Room (E1-06-01) is on floor 6.

