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Future of Traffic Management and Road Safety

Qualified for 2 PDUs by PEB

IES has brought together experts who will share on traffic management technology and road safety data that can shape Singapore's future. Join us to discover how smarter traffic management technology can improve key decision making, and bolster city infrastructure, transport services and liveability.

2.00 PM - 4.30 PM

29 APRIL 2022, FRIDAY

Zoom Webinar



Please click here
or scan QR code to register

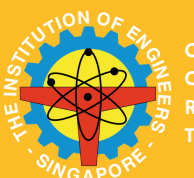
IES / CEng Members

S\$ 21.40 per pax

Non-members

S\$ 42.80 per pax

Price inclusive 7% GST



Organised by
Outreach Sub-Committee,
Railway and Transportation
Technical Committee

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Mr Alan Quek
Director and General
Manager,
Willers Pte Ltd

The Relevance of GNSS for Autonomous Shuttles' Safe Operation

Autonomous shuttles have the potential to radically transform the transport system and create a more liveable and sustainable environment. Autonomous-enabled mobility would be a feature in future town planning, enabling commuters to get around effortlessly with first-and last-mile connectivity within neighbourhoods. The autonomous shared mobility will reduce number of vehicles on the roads, thereby increasing convenience to commuters. As autonomous technology matures along with high location precision of the vehicle, it is likely that the roads will become safer as accidents resulting from human errors are gradually eliminated. Hence, a highly precise and reliable GNSS is becoming increasingly important for safe autonomous shuttles' operations.



Dr Prateek Bansal
Assistant Professor,
Department of Civil and
Environmental
Engineering, National
University of Singapore

Driving Behaviour and Road Safety: Potential of Neuroimaging Data

This presentation will discuss the application of neuroimaging methods such as Functional Magnetic Resonance Imaging (fMRI) and Electroencephalography (EEG) in understanding driving behaviour from a road safety perspective. Technological advances in fMRI, EEG and driving simulators have made this research affordable and thus, increased their application in understanding driving behaviour. The new insights derived from these methods, especially driver brain activities in partially autonomous vehicles, and avenues of future research would be discussed in the context of road safety.



Er. Emily Tan
Managing Director,
TSM Consultancy Pte
Ltd

Harnessing Technology in Transportation Planning and Engineering

The future of Transportation Planning and Engineering is to harness technology to facilitate the planning and design of better facilities. Using the available technology, we can upskill our workforce and reduce dependency on external forces that delay works. We can also simulate traffic manoeuvres on plan before construction thus reducing expensive rectification works. We predict potential pinch points for vehicles and pedestrians by making use of local junction software to microsimulation modelling software. We can alleviate the present situation and expect the future to have better tools and technology to manage traffic and transport planning for a safer design.



Dr Koh Puay Ping
Assistant Chief
Specialist,
Land Transport Authority

The Bloom in Active Mobility in Singapore and How do We Manage Safety

This presentation discusses about how active mobility has transformed over the past few decades, with emphasis on key policy formulation and infrastructure development to further enhance safety for active mobility users. Various safety management systems (including walking and cycling plan, cycle safety audit) with good and bad practices will be shared. Lessons learnt and evaluation studies (including before after studies) are presented with insights drawn to shape the future active mobility landscape for safer coexistence and sustainability. New technologies for safety management will also be discussed.

Listening with your Eyes – Understanding the Active Mobility

User in 36 Frames

It is common for engineers to get overwhelmed by tender specifications, and design becomes almost like cookie-cutter solutions to address the requirements in tenders. This also happens in the design of cycling and walking infrastructure. In this presentation, there will be a focus to adopt human-centred design thinking into building purposeful and meaningful active mobility infrastructure. This is through the power of observation with the use of a (film) camera to try to understand the type of typical user in each unique location. Questions such as the 5W1H will form the fundamentals of design when the answers address safety concerns, traffic management measures, and more.



Mr Tham Chen Munn
Director Of Business
Development,
PTV Group Asia Pacific

Programme - - - - -

2.00pm - 2.05pm Opening Address

Mr Lew Yii Der

Chairman, Railway and Transportation Technical Committee

2.05pm - 2.15pm Introduction to Chartered Engineers

Ms Hnin Nu Wai

Assistant Manager, IES Professional Registries

2.15pm - 2.30pm The Relevance of GNSS for Autonomous Shuttles' Safe Operation

Mr Alan Quek

Director and General Manager, Willers Pte Ltd

2.30pm - 2.45pm Driving Behaviour and Road Safety: Potential of Neuroimaging Data

Dr Prateek Bansal

Assistant Professor, Department of Civil and Environmental Engineering, National University of Singapore

2.45pm - 3.00pm Harnessing Technology in Transportation Planning and Engineering

Er. Emily Tan

Managing Director, TSM Consultancy Pte Ltd

3.00pm - 3.05pm **BREAK**

3.05pm - 3.20pm The Bloom in Active Mobility in Singapore and How do We Manage Safety

Dr Koh Puay Ping

Assistant Chief Specialist, Land Transport Authority

3.20pm - 3.35pm Listening with your Eyes – Understanding the Active Mobility User in 36 Frames

Mr Tham Chen Munn

Director of Business Development, PTV Group Asia Pacific

3.35pm - 4.20pm **Q&A Session**

4.20pm - 4.25pm Promoting the Intelligent Transport System at Work Course

Mr Joel Chua

Manager, IES Academy

4.25pm *Presentation of eCertificates to Speakers*

4.30pm **END**

About the Speakers

Mr Alan Quek

**Director and General Manager,
Willers Pte Ltd**

Alan is an engineer by training. He has 24 years of working experience, of which 15 years was spent in the public sector with the Land Transport Authority (LTA) and 9 years in the private sector where he was involved in the research, development and deployment of Intelligent Transport Systems. He is currently a Director and General Manager with WILLERS Pte Ltd and is responsible for the business development and operations in the Asia Pacific region delivering new mobility services, including operations of autonomous vehicles. Alan has been actively involved in the ITS Singapore association since 2011 and had served as its Secretary from 2015 to 2020 and is currently a Councillor of ITSS for the past 2 years. He was a key member in the Organising Committee for the 2019 ITS World Congress in Singapore. He is also currently a Chartered Engineer with The Institution of Engineers, Singapore.

Dr Prateek Bansal

**Assistant Professor,
Department of Civil and Environmental
Engineering, National University of Singapore**

Dr Prateek is a Presidential Young (Assistant) Professor in the Department of Civil and Environmental Engineering at NUS. Before joining NUS, he was a Leverhulme Trust Early Career Fellow at Imperial College London. Prateek is interested in creating methodological innovations at the intersection of Bayesian Machine Learning, Econometrics, and Computational Psychology to address challenging questions in travel/consumer behavior modelling and traffic safety. He is interested in advancing the field of travel/consumer behavior by calibrating the newly developed models with the emerging experimental datasets collected using virtual reality, eye tracking, and EEG.

Er. Emily Tan

**Managing Director,
TSM Consultancy Pte Ltd**

Emily is the Managing Director of TSM Consultancy Pte Ltd, a Singapore-based Traffic and Transport Consultancy firm. She has a wealth of experience gained from working on major projects globally and in Singapore. She served as a District Councillor from 2011 to 2014 and as a Town Councillor from 2013 to 2017 at the North-East Community Development Council. She also served in the Citizen Consultative Committee from 2012 to 2016. She was a Board Member with the Professional Engineers Board and the Board of Architects from 2018 to 2020, and is currently a Board Member of the Chartered Institute of Logistics and Transport. She is the Founding President of the Association of Women in Construction (Singapore).

Dr Koh Puay Ping, PhD, CEng(SG)

**Assistant Chief Specialist, Road Safety Engineering
Road and Traffic Specialist Group
Senior Manager, Active Mobility Planning, Active
Mobility Group
Land Transport Authority**

Puay Ping graduated from the Nanyang Technological University of Singapore with Philosophy of Doctorate in Civil Engineering (Transportation) in 2014. Throughout her 15 years of service in LTA, she was involved in road safety engineering and active mobility (AM) planning, formulated AM planning principles, guidelines and standards, established cycle safety audit process, conducted trials, collaborated with research partners and conducted several accident black spot analysis and road safety audits on existing/planned roads and implemented cost-effective treatments. She is certified for Road Safety Engineering Accident Investigation & Prevention under the Royal Society for the Prevention of Accidents (RoSPA/UK) and Road Safety Review for Cyclists Programme under The Chartered Institute of Logistic and Transport (CILT/UK). She has been conferred Chartered Engineer (IES) with effect from 1 Oct 2020.

Mr Tham Chen Munn

**Director of Business Development,
PTV Group Asia Pacific**

Tham Chen Munn has more than 22 years of experience in the transportation industry, most recently as Director of Business Development at PTV Asia Pacific. He is passionate about the promotion of active mobility in Singapore, having started the ball rolling (or wheels turning!) at Tampines New Town since 2005 and being a founding member of the Safe Cycling Task Force. Chen Munn is currently advocating for safer streets in residential zones and areas with a higher proportion of walking and cycling. He believes that setting the speed limits to 30km/h – aligned with the UN 2nd Decade of Action for Road Safety – will help to raise awareness, reduce severe road accidents, increase active mobility, improve placemaking, and also make Singapore more car-lite.