



Organised by: Highway and Transportation Engineering Technical Division (HTETD)
In collaboration with Institution of Civil Engineers (ICE)

PHYSICAL TALK ON ALTERNATIVE JUNCTION DESIGN SOLUTION IN URBAN NETWORKS

DATE: 31 MARCH 2026 | TIME: 6:00 PM - 8:00PM

Venue: The Plenary Theatre, Building 2,
Monash University

BEM Approved CDP: 2 Hours Ref. No.: IEM26/HQ/097/T

Synopsis

This talk explores alternative junction design solutions that move beyond conventional layouts to improve performance across urban road networks. Using real-world examples, it examines how junction form, control strategy, and network context influence capacity, safety, and operational resilience.

The session will review existing alternative junction designs implemented in Malaysia, highlighting where they work well and where limitations remain. It will also introduce the XT Junction concept alongside a real-world Malaysian case study, demonstrating how strategic, network-aware design can improve overall performance rather than simply shifting congestion from one location to another.

In addition to technical design considerations, the talk reflects on the thinking skills that define high-impact transport engineers. It highlights the role of systems thinking, informed judgement, and the ability to challenge conventional solutions in delivering balanced, efficient, and context-appropriate outcomes at a network level.

Speaker's Biodata



Mark Omar Mohsen
Project Manager - MIEAust, GMICE, GIEM

Mark Omar Mohsen, a Project Manager at MDS Traffic Planners & Consultants, is a traffic and transport engineer with over a decade of international experience across Malaysia, Australia, and the United Kingdom. He has led numerous projects in both public and private sectors, specializing in junction design, urban traffic modelling, and system-level thinking to deliver data-driven strategies that improve traffic flow and promote sustainable urban mobility. Notably, Mark spearheaded the development of the innovative "XT Junction" design, an intersection solution that enhances capacity, safety, and urban connectivity.

Beyond his project work, Mark is an active industry leader who serves on the ICE Malaysia committee and previously chaired its Graduate Network, where he championed professional development among young engineers. He also engages with other professional engineering institutions, such as Engineers Australia and the Institution of Engineers Malaysia (IEM), underscoring his commitment to advancing the field and fostering knowledge-sharing across the engineering community.

Registration fee

Student Member: Free
IEM Member: RM15.00
Non-Member: RM70.00

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