The Institution of Engineers, Malaysia

Organised by Engineering Education Technical Division (E2TD), IEM

WEBINAR TALK ON

SCENARIO BASED SIMULATION TESTING OF AUTONOMOUS VEHICLE USING VIRTUAL TESTING PLATFORM

28 APRIL 2022
THURSDAY
2.30PM - 4.30PM

CPD: APPLYING

presented by
Ts. Dr. Vimal Rau Aparow

IEM Students: FOC
IEM Members: RM15
Non-IEM Members: RM70

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SYNOPSIS

It is well known facts that developing countries are already suffering from overcrowding or traffic conditions. Most of the governments have been investing heavily to ensure that their cities can cope with the growing demands on infrastructure while maintaining a high quality of life for the people. Mobility, accessibility and efficiency are main considerations when it comes to assessing a city's quality of life. In terms of the mobility, intelligent vehicle systems have become one of the key solution to overcome the traffic conditions. One of most important technology to improve the traffic conditions is the autonomous vehicle. Autonomous vehicles are known as one of the promising technology to decrease the traffic congestions and road accidents. Generally, autonomous vehicles have been tested to adopt automatically while driving on multiple road conditions with different types of traffic situations. However, large part of it has been conducted in controlled environments and human movements. Besides, the autonomous vehicle is tested in the developed countries and mostly on highway driving scenarios with less pedestrian's movements. Meanwhile in Malaysia, most of the automotive researchers have initiated researches related to autonomous vehicle based on controlled environment only. The researchers explore this research on theoretical based simulation and then directly implemented in actual vehicle for on road testing. This kind of testing not sufficient enough to optimize the performance of autonomous vehicle based on Malaysian environment. To further enhance the capability of autonomous vehicle in Malaysia, a scenario based simulation testing is required using virtual testing platform in order to adopt with Malaysian road and traffic environment before on-road testing.

ABOUT SPEAKER

Ts. Dr. Vimal Rau Aparow began his career at Nanyang Technological University (NTU), Singapore, in 2017 as a Postdotorate Researcher in Energy Research Institute@NTU (ERI@N) under project called CETRAN. In September 2018, he was appointed as Assistant Professor in the Department of Electrical and Electronics Engineering in Faculty of Science and Engineering, University of Nottingham Malaysia. Then, he was appointed as the Director of Mechatronics in this department to lead teaching and research in the area of robotics and automation focusing IR 4.0. His research mainly focusses on active safety system for passenger and heavy vehicles such as active braking and steering system, active disturbance rejection system for passenger and heavy vehicle, hybrid and autonomous vehicle. His recent research interests also focus on scenario based testing for autonomous vehicle and unmanned aerial vehicle using virtual simulation platform.