

Prof. Radin Umar Biennial Memorial Lecture No. 4 - 2021

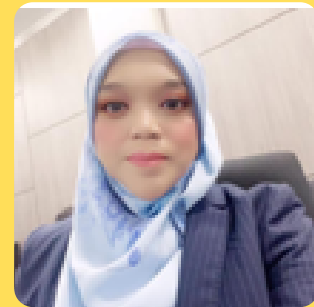
(Organised by: Highway & Transportation Engineering Technical Division, IEM)

BEM Approved CPD/PDP Hours: 4 Ref No. IEM21/HQ/460/L(w)

Title 1: RAMS Management Implementation in Railway Engineering Project – Process & Practices

SYNOPSIS

Railway RAMS, as seen in the context of the European standard EN50126, is a combination of reliability, availability, maintainability, and safety characteristics appropriate to the operational objectives of a railway system into the inherent product design property through railway systems engineering. In the recent years it has become a rapidly growing engineering discipline because it can achieve a defined railway traffic service timely, safely and cost effectively. Railway RAMS is thus a characteristic of the railway systems' long-term operation and is achieved by application of different engineering concepts, methods, and tools. The RAMS process goes on from the early planning phases until the operation phases of the system. In any railway-infrastructure engineering, the aim is to incorporate RAMS requirements in all decisions concerning the system design, starting with the concept selection, through the detail- and development of concepts, through the design and final layout, and finally the construction of planned solutions. The aim of this webinar is to share the basic concept of RAMS management and discuss some of experiences from an ongoing engineering project and suggests some thoughts about effective work processes and continuous RAMS implementation. The project covered engineering of railway electrification system consisting of Traction Power System and Power SCADA. The suggestions are connected to effective RAMS processes, and the most favorable is an approach to RAMS meetings that take part among different disciplines from main contractor, sub-contractor, suppliers in engineering projects.



Assoc Prof. Dr. Nor Aziati Abdul Hamid
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SPEAKER'S BIODATA

Dr. Nor Aziati Abdul Hamid received her PhD in 2014 and currently an Associate Professor and Principal Researcher at Industry Centre of Excellence for Rail, Universiti Tun Hussein Onn Malaysia (UTHM). With a background in Computer Science and System Assurance, she is now actively involved in rail project research and consulting services. She is involved as a railway RAMS consultant for infrastructure projects involving electrification systems and underwent professional RAMS certification with TUV. With more than 10 years of experience in education, she is also involved in teaching Railway Technology's master's degree programs in addition to supervising students in research. Her research interests include railway operation & maintenance, quality assurance, big data analytics, IoT and system development. She is actively involved as technical committees for various international conferences locally and internationally. She has experience involved with MRT2 RAMS for Network and Communication, SCADA System and Traction Power System. She also the leader of the RAMS Consortium for 3 universities in Malaysia. She actively involves with RAMS research on system engineering KTMB, on-train data logger analysis for train incident and accident, big data management & analytics, management information system, cloud computing and Internet of Things (IoT). She has been appointed as Ministry of Transport Advisory Panel for Railway Safety under System Safety Assurance cluster.



Ts. Dr Rizati Binti Hamidun

Research officer in Malaysia Institute of Road Safety Research (MIROS)

SPEAKER'S BIODATA

Ts. Dr. Rizati Binti Hamidun is currently a senior research officer in Malaysia Institute of Road Safety Research (MIROS). She received her B.Eng (Hons.) in Civil and Structure Engineering from Universiti Kebangsaan Malaysia, in 2001 and the Master degree in Highway and Transportation Engineering in 2006. She has completed her Ph.D degree in Transportation and Logistics and received the Excellent Research Award for her achievement to graduate on time in 2014. She was a lecturer in a private college and university, teaching various courses for civil engineering courses for more than 10 years. Her research work and publications focus on road safety, pedestrian safety, motorcycle safety, and public transport. She involved in various consultancy and collaboration projects with DBKL, Prasarana, UiTM, KUIN, SPAD, KTMB, KLIA, PPJ, Edgenta and Perodua. In additional, she also serves a committee in the Road Engineering Association of Malaysia (REAM).

Title 2: Modeling Pedestrian Crossing Risk at Signalised Intersections

SYNOPSIS

Risk of pedestrian while crossing a road section may influence by several factors, including their crossing behaviors which might be difficult to be measured. A model using Petri nets is introduced to consider the behavioral factors in measuring pedestrian risk. The crossing scenario of the pedestrian was observed at signalized intersections in Kuala Lumpur to identify the pedestrian accident event. Sequence of event in pedestrian accident was modeled into Petri Nets elements. The model is designed in the hierarchical structure to consider risk factors including illegal behavior, signal setting, traffic volume, road geometric layout and environment. The analysis of the model provides the numerical value of pedestrian potential risk as they crossed at a signalized intersection. The effect of each factor on the potential risk can be observed through sensitivity analysis. The use of Petri Nets is a novel approach in predicting pedestrian potential risk through the modeling of pedestrian accident process.

Saturday | 20 November 2021 | 9 AM – 1 PM

Registration Fee:

Student Member: Free | IEM Member: RM30 | Non-Member: RM140

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