

Chairman,  
 Electrical Engineering Technical Division,  
 The Institution of Engineers Malaysia,  
 Lots 60 & 62, Jalan 52/4, P.O. Box 223 (Jalan Sultan),  
 46720 Petaling Jaya, Selangor Darul Ehsan  
 Tel: 03-7968 4001/2 Fax to 03-7957 7678 (Email : valli@iem.org.my)

**REGISTRATION FORM**  
**ONE DAY WORKSHOP ON RAILWAY ELECTRICAL SYSTEMS**  
 Date : 24<sup>th</sup> May 2017 (Wednesday)  
 (Closing Date: 17<sup>th</sup> May 2017)

No	Name(s)	M'ship No.	Grade	Fee (RM)*
<b>SUB TOTAL</b>				
<b>ADD GST @6%</b>				
<b>Total Payable</b>				

\*Fees **MUST** be fully paid **BEFORE** the **CLOSING DATE**. Seats could only be confirmed upon payment. Enclosed herewith a crossed cheque No: \_\_\_\_\_ for the sum of RM \_\_\_\_\_ issued in favour of "**The Institution of Engineers, Malaysia**" and crossed 'A/C payee only'. I/We understand that the fee is not refundable if I/We withdraw after my/our application is accepted by the Organising Committee as stated in the **cancellation term**. If I/We fail to attend the seminar, the paid registration fee will not be refunded.

Contact Person: \_\_\_\_\_ Designation: \_\_\_\_\_

Name of Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ (O) \_\_\_\_\_ (Fax)

\_\_\_\_\_ (H) \_\_\_\_\_ (HP)

Email: \_\_\_\_\_

\_\_\_\_\_  
 Signature & Stamp

\_\_\_\_\_  
 Date

**Photocopies are acceptable**

**CANCELLATION POLICY**

IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with prior notification and substitute will be charged according to membership status.



*The Institution of Engineers,  
 Malaysia*



**ONE DAY WORKSHOP ON RAILWAY  
 ELECTRICAL SYSTEM**



*Organised by*  
**Electrical Engineering Technical Division,  
 The Institution of Engineers, Malaysia**

*in cooperation, with*  
**Institution of Railway Signal Engineers (IRSE) – Malaysian Section**

**24<sup>th</sup> MAY 2017**

Venue: C&S Lecture Room, 2<sup>nd</sup> Floor, Wisma IEM, Petaling Jaya  
 Time: 8.30am – 5.00pm

**BEM Approved CPD/PDP hours = 6.5 Ref. No.: IEM17/HQ/186/W**

**REGISTRATION FEES (SUBJECT TO 6% GST)**

	<b>ONLINE</b>	<b>NORMAL (Offline)</b>
IEM Student Member	RM 150.00	RM 180.00
IEM Graduate Member / IRSE Affiliated Member	RM 250.00	RM 300.00
IEM / IRSE Corporate Member	RM 400.00	RM 450.00
Non-IEM / IRSE Member	RM 800.00	RM 900.00

## SYNOPSIS

The railway industry is growing rapidly in Malaysia. The continued investment by the government on the railway would mean that the industry must be prepared to transform itself in facing future challenges in terms of safety, development, train operations, maintenance and future planning. There is also a need to have a better control on the quality and types of products to be introduced in Malaysia. To transform the industry, we must also look into enhancing safety awareness and technical knowhow within the industry. Simultaneously, we must look into enhancing the capability of the local manufacturers to enable them to support the railway industry. Several new strategies and initiatives are being introduced for this purpose which includes human capital development.

To expose participants to fundamental of train propulsion system, AC and DC traction power system design, simulation and sizing of equipment. To expose participants to comprehensive introduction on the requirements of utility bulk power supply scheme for rail transportation system which will also include supply reliability, adequacy, and power quality phenomena and harmonic mitigation using harmonic filters. To expose participants to railway system reliability, availability, maintainability and safety (RAMS), electromagnetic compatibility and electromagnetic interference. We strongly encourage engineering students, engineers and industry players who are currently working in or planning to work in the railway industry or impacted by the evolving technology in the railway industry to attend this workshop.

## SPEAKERS' INFORMATION

### **Ir. Dr. Amir Basha Ismail, Institution of Engineers Malaysia, EETD: Railway Electrical Systems WG**

Ir. Dr Amir Basha Ismail served LLN/TNB for 33 years and was involved in the planning, design and operation of the 500kV/275kV/132kV National Power System Grid, and was entrusted to the university project and was made the Founding Dean of College of Engineering, University Tenaga Nasional (UNITEN). He joined Minconsult Sdn. Bhd, and was involved in power systems projects, such as power generating plants, electric traction railway projects, renewal energy projects, management and engineering audits of electricity supply industry and formulation of feasibility study reports / master plan study reports related to energy / electricity planning. He is currently the Senior Advisor Consultant at Minconsult providing expert inputs on electrical train traction power supply and distribution systems of the ongoing PRASARANA LRT 3 project

### **Prof. Ir. Dr. Au Mau Teng, Institute of Power Engineering UNITEN**

Professor Ir. Dr. Au Mau Teng P. Eng, MIEEE, MIEM between 1980 to 1998 has served in various positions in LLN/TNB as Technical Assistant (Protection and Power Line Carrier), District Manager, Customer Service Engineer, Planning and Construction Engineer, and Manager (Distribution Engineering). He then joined University Tenaga Nasional (UNITEN) as a senior lecturer. He is now a Professor in the Institute of Power Engineering, UNITEN and his research and consultancy areas are in the power system, power quality and energy efficiency. He has been a consultant for projects on power quality, distribution system planning, and energy efficiency for TNB, KTMB, and KeTTHA.

### **Dr. Ajeet Kumar, L & T Technology Services**

Dr. Ajeet Kumar is a system assurance manager with more than 16 years of experience on system assurance & RAMS (rails and infrastructure system). Dr Ajeet Kumar has hands on experience on both product and project RAMS, form planning to execution of Metro Rail Projects. Contributed many international and national metro and rail projects such as Delhi Metro (India), Sao Palo Metro (Brazil), Jakarta Metro (Indonesia), Network Rail (UK), Doha Metro (Qatar), Sydney Metro (Australia), Hyderabad Metro (India), and Invensys Rail (UK & USA). Contributed many research papers and articles on the subject and delivered many invited talk for Industries and academia such as Atkins Gurgaon, L&T Metro Hyderabad, HBL Hyderabad, IIT Kharagpur, IMRT Hyderabad, IIM Raipur, IIIT Hyderabad, NIT Patna, ESCI Hyderabad, GBU Gr. Noida, AKTU Lucknow and JNTU Hyderabad.

## **Tentative Programme**

<b>Tentative Programme</b>		
<b>8.30 – 9.00</b>	Registration	
<b>9:00 – 10:45</b>	<ul style="list-style-type: none"><li>• Systems view of Traction power system designs for AC and DC railways in Malaysia</li><li>• Fundamentals of train propulsion system</li><li>• Traction Power Simulation fundamentals</li><li>• Sizing of traction power equipment for traction power system</li></ul>	Ir. Dr. Amir Basha Ismail, Institution of Engineers Malaysia, EETD: Railway Electrical Systems WG
<b>10:45 – 11:00</b>	Coffee Break	
<b>11:00 – 13:00</b>	<ul style="list-style-type: none"><li>• Bulk supply scheme from utility perspective for Rail Transportation System</li><li>• Supply Reliability, Adequacy and Power Quality Considerations</li><li>• Harmonic mitigation</li></ul>	Prof. Ir. Dr. Au Mau Teng, Institute of Power Engineering UNITEN
<b>13:00 – 14:00</b>	Lunch	
<b>14:00 – 15:45</b>	<ul style="list-style-type: none"><li>• Reliability, Availability and Maintainability (RAM)</li><li>• Safety</li></ul>	Dr. Ajeet Kumar, L & T Technology Services
<b>15:45 – 16:00</b>	Coffee Break	
<b>16:00 – 17:00</b>	<ul style="list-style-type: none"><li>• Electromagnetic Compatibility / Electromagnetic Interference</li></ul>	Dr. Ajeet Kumar, L & T Technology Services
<b>17:00</b>	End of Workshop	

### **Terms & Conditions:**

- For **ONLINE REGISTRATIONS**, only **ONLINE PAYMENT** is applicable [via RHB and Maybank2u –Personal Saving & Personal Current; Credit Card - Visa/Master].
- Payment via **CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN** will be considered as **NORMAL REGISTRATION**.
- **FULL PAYMENT** must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participants fail to attend the course, the fee is to be settled in full.
- Fee paid is not refundable. Registration fee includes lecture notes, refreshment.
- The Organizing Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid disappointment.

### **PERSONAL DATA PROTECTION ACT**

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at <http://www.myiem.org.my> and I agree to IEM's use and processing of my personal data as set out in the said notice.