

### **REGISTRATION FEE:**

**\*\* INR: 45,000 only (For Indian Nationals)**

**\*\* USD: 1,200 only (For Foreign Nationals)**

**\*\*Limited Seats: 25 (Twenty Five only)**

Registration fee can be paid in the form of DD drawn in favor of "CEP-STC, IIT Kharagpur" payable at "Syndicate Bank, IIT Kharagpur". Please contact coordinator for online transfer details and other payment related issues.

*This fee is inclusive of GST (18%).*

10% Discount shall be admissible on course fee when two or more participants from same company are enrolled for the course.

### **ACCOMODATION:**

The accommodation will be provided to participants in our guest house on payment basis.

*For more details, please contact us.*

### **ADDRESS FOR CORRESPONDENCE:**

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Associate Professor

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### **PROGRAM COORDINATORS:**

**Coordinator:** Prof. Neeraj Kumar Goyal

Associate Professor  
Subir Chowdhury School of  
Quality and Reliability,  
IIT Kharagpur

**Co-coordinator:** Dr. Ajeet Kumar Pandey

RAMS consultant  
L & T Technology Services  
Bangalore, Karnataka, India

### **FACULTY:**

The program is designed and delivered by experts with years of experience in System Assurance & RAMS immersed on railway industries with cross-functional domain knowledge of transportation sectors. Almost all faculty members are currently associated with the industry in a consulting role.

### **Participating Organizations in earlier Courses:**

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| <ul style="list-style-type: none"><li>• L &amp; T Metro Rail</li><li>• GG Tronix</li><li>• Bombardier</li><li>• Dedicated Freight Corridor Corporation</li><li>• Alstom Transportation</li><li>• Rail Vikas Nigam Limited</li><li>• Kochi Metro Rail Ltd,</li><li>• Keolis Hyderabad Metro Rail Transit System</li><li>• Atkins, Bangalore</li><li>• DB International GmbH (Kochi Metro Rail Project)</li><li>• Delhi Metro Rail Corporation Limited, Delhi</li><li>• Scmi Engineering Bhd. – Mumbai Monorail</li><li>• AECOM India Pvt Ltd.</li><li>• Bureau Veritas India Pvt LTD</li><li>• Thyssenkrupp Elevator Saudi Ltd., Riyadh</li><li>• Hyderabad Metro Rail Limited</li></ul> | <ul style="list-style-type: none"><li>• Indian Railways</li><li>• Central Electronics Limited</li><li>• Louis Berger</li><li>• Saudi Arabian Parsons Limited, Riyadh</li><li>• Systra MVA Consulting, India</li><li>• Siemens, Riyadh</li><li>• MEGA Company Ltd., Gandhinagar</li><li>• Dubai Metro</li><li>• Shimizu Corp., Singapore</li><li>• Maharashtra Metro Rail Corporation, Nagpur</li><li>• Metro One Operation Pvt. Ltd.</li><li>• Rapid Metro Gurgaon South Limited</li><li>• L&amp;T Construction - Transportation Infrastructure IC</li><li>• Geometric Global</li></ul> |
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## **A Short-term Course on RAMS for Railway Systems**

**July 9 - 13, 2018**



*Organised By :*  
**Subir Chowdhury School of  
Quality and Reliability,  
IIT Kharagpur, WB, INDIA**

## Brief of the Programme

### Earlier Courses:

The first, second, third and fourth short term programs on RAMS for Railway Systems were conducted during July 21-25, 2014; July 27 – 31, 2015; July 11-15, 2016; and July 10-14, 2017. The programs received good response from industries in terms of participation and on completion of the course the feedbacks were highly positive. Based on the feedbacks and multiple requests received, the program is proudly being offered again. We look forward to benefit Indian Railway in general through bringing awareness about RAMS concepts and provide basic training in these concepts.

### Who Should Attend?

Practicing Professionals, Engineers and Managers in the fields of design, development, consulting, manufacturing, audit, operations, maintenance, and QA/QC in the rail or metro rail industry

### Program Contents:

- Introduction to System Assurance & RAMS,
- RAMS Parameters & Reliability Prediction
- Accelerated Life Testing
- Failure Data Analysis
- Failure Mode Effects and Criticality Analysis
- System Reliability Modelling
- Apportionment of RAMS Parameters
- Basics of V&V and Software Reliability
- Safety: Hazard, Risk, Risk Matrix, Risk Acceptance, and Hazard Log
- THR & SIL Concept, Safety Case
- Railway RAMS Standards (CENELEC/IEC) - EN 50126 (IEC 62267), EN 50128 (IEC 62279) and EN 50129 (IEC 62425)
- RAMS Documentation- RAM & Safety Plan
- RAM and Safety Demonstration during O&M

## About Subir Chowdhury School of Quality and Reliability, IIT Kharagpur

IIT Kharagpur is the largest technical institution in India and gets ranked among best institutions in the country imparting technical education and research. The Subir Chowdhury School of Quality and Reliability was formerly known as Reliability Engineering Centre, which came into existence in 1983. The school offers M.Tech, MS and PhD degrees in Reliability Engineering. Besides, the centre is actively engaged in sponsored research and offers consultancy services to various public and private organizations.

### Industry Problem Discussions

If your organization or project is facing any challenge or problem related to RAMS, please feel free to write to us in the form below. This can be used during the program for discussion and resolution.

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Problem Statement:

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## A Short term course on RAMS for Railway Systems

July 9 – July 13, 2018

### REGISTRATION FORM

Last date of Registration: 04 July, 2018

Fee payment by : 07<sup>th</sup> July, 2018

Name :

Designation :

Department :

Organization :

Nationality :

### CONTACT INFORMATION

Address :

Telephone :

Mobile :

Email :

### PAYMENT INFORMATION

Registration payment particulars:

DD No.....Date.....

Amount.....Bank.....

*If payment is made online, then transaction details should be emailed to:*

[ngoyal@hijli.iitkgp.ernet.in](mailto:ngoyal@hijli.iitkgp.ernet.in)

*Signature of the Applicant with date*