A Short Term Course on

RAMS for Railway Systems

(27 - 31 July, 2015)
@ Reliability Engineering Centre, IIT Kharagpur
Who Should Attend?
This Practicing professionals, Engineers, Managers in the fields of design, development, consulting, manufacturing, audit, operations, maintenance, and QA/QC in the rail or metro rail industry.

Program Contents
Participant will be exposed to various RAMS concepts including:

- Introduction to RAMS Parameters
- Basic Probability & Statistics
- Failure Data Analysis
- Failure Mode Effects and Criticality Analysis
- System Reliability Modeling
  - Reliability Block Diagram
  - Fault & Event Tree Analysis
- Design for Reliability
  - Apportionment of RAMS Parameters
- Basics of V&V and Software Reliability
- Hazard Analysis Risk Metrics and SIL Allocation
- Hazard Analysis and CENELEC Standards

Program Details
Date: July 27 - 31, 2015
Venue: Reliability Engineering Centre, IIT Kharagpur
Fee: INR 40,000 only
Seats: 30 (Thirty only)

The Program Fee is to be paid as a Demand Draft drawn in favour of CEP-STC, IIT Kharagpur payable at Syndicate Bank, IIT Kharagpur.

The principal coordinator may be contacted for any clarification or information required. Electronic transfer details will be sent through email on request.

Please note that fee does not include travel and local hospitality. The accommodation will be provided to participants in our guest house on payment and request basis. For more details, please contact us.

Important Dates
Registration By: July 20, 2015
Fee Payment By: July 22, 2015
Program Duration: July 27-31, 2015

Program Coordinators

Coordinator
Prof. Neeraj Kumar Goyal
Associate Professor
Reliability Engineering Centre
IIT Kharagpur, West Bengal
PIN – 721302
Tel: +91 3222 28 3990
Fax: +91 3222 28 2290
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Co-coordinator
Dr. P. Raja Goundan
Director (Academic)
Institute of Metro Rail Technology
First Floor, 160, Patny Square
Hyderabad, Andhra Pradesh
PIN- 500 003

Contact Information
All correspondence about the course can be sent to the Coordinator or to:

Mr. Binoy Aravindakshan
Head Operations
Institute of Metro Rail Technology
First Floor, 160, Patny Square
Hyderabad, Andhra Pradesh
PIN- 500 003
Tel: +91 40 27903311
Mobile: +91 80088 01147
Email: binoy.a@imrtindia.edu.in
Faculty
The program is designed and delivered by experts with years of experience in metro and rail technologies. Almost all faculty members are currently associated with the industry in a consulting role.

Prof. N. K. Goyal
Associate Professor
Reliability Engineering Centre, IIT Kharagpur

Dr. P. R. Goundan,
IRSSE - Program Co-ordinator
Former General Manager, Indian Railways
Former CEO, Integral Coach Factory, Perambur
Chennai Joint Director, Centre for Wireless Technology, IIT Chennai

Prof. V. N. A. Naikan
Professor and Head
Reliability Engineering Centre, IIT Kharagpur

Prof. S. K. Chaturvedi
Associate Professor
Reliability Engineering Centre, IIT Kharagpur

Dr. Mukul Verma
President
Himachal Futuristics Communication Ltd.
Former Head
Signals & Train Control, L&T HMRL

Dr. Ajeet Kumar Pandey
Head of RAMS Analysis
Alstom Transportation
Former Senior Project Engineer
AECOM, L&T HMRL.

Mr. Sudhir Kumar
Advisor Safety, L&T HMRL
Former Chief Commissioner of Railway Safety
Indian Railways

Mr. S. N. Pal
Faculty,
IMRT Hyderabad
Former Faculty
Indian Railway Institute of Signal Engineering and Telecommunication, Secunderabad

Mr. Irfan Khan
Former Director engineering
King Fahd International Airport, Saudi Arabia.
Former Chief Engineer
Department of Atomic Energy, Mumbai

Application Form
A Short Term Course on
RAMS FOR RAILWAY SYSTEMS
(July 27-31, 2015)

Personal Information

Name:
Designation:
Organization:

Contact Information

Address:
Tel:
Mobile:
Email:

Payment Information

DD Number:
Bank:
Amount:
Date:

If payment is made online, then transaction details should be emailed to:
ngoyal@hijli.iitkgp.ernet.in
IIT Kharagpur is the largest technical institution in India and ranked as the best institution in the country imparting technical education and research. The Reliability Engineering Centre came into existence in 1983. The centre 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.

**Institute of Metro & Rail Technology (IMRT)**

IMRT is a first-of-its-kind institution that aims to become a knowledge leader in metro and rail technology. Apart from the flagship Post Graduate Program on Metro and Rail Technology (PGPMRT), IMRT provides modular short-duration programs for on-field engineers and custom programs for railway firms involved in manufacturing, construction, operations, and management.

**The RAMS for Railway Systems, 2014 Course**

The first short term course on RAMS for Railway Systems was conducted last year during July 21-25, 2014. The course 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 course 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.

**Participating Organizations in 2004 Course**

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<th>Organization</th>
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<tr>
<td>L&amp;T Metro Rail</td>
<td>Bombardier</td>
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<tr>
<td>Hyderabad Metro Rail</td>
<td>Dedicated Freight Corridor Corporation</td>
</tr>
<tr>
<td>Larsen &amp; Tubro Limited</td>
<td>Alstom Transportation</td>
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