

ONLINE INTERNATIONAL ORIENTATION COURSE ON *Forensic Structural Engineering*

30th March, 2024 till 27th April, 2024

Every Saturday from 15:00 Hours to 17:30 Hours (IST) (through zoom platform)



ABOUT THE COURSE

In view of the recent failures of structures during construction, there is an urgent need of carrying out forensic investigation in a structured and scientific manner and establish the causes particularly for mitigating the failures by lessons learnt. During structural engineering forensic investigation, engineers analyse the evidence at hand such as photographs, drawings or physical specimens to determine what happened. Engineers may also use simulations to recreate the events leading to the failure. Structural engineering forensic investigations provide essential information determining the cause of structural failures. By conducting detailed examination of structural components, computer models and physical evidence, structural engineers can accurately determine the root cause of a failure and suggest the best way to prevent future failures from occurring. These investigations are essential for improving the safety and reliability of our built environment.

This Course is aimed to share knowledge on forensic investigation with practicing structural engineers, professionals, academics and students. The course will cover the subject comprehensively, which will include a review of classical and advanced concepts of the methods, interactive sessions where real practical cases are solved by experts, using latest approaches.

Participants of this high-end course will be immensely benefited with the rich course content and with the opportunity to directly interact with the domain expert speakers, live at the end of each lecture session. The course will help structural engineers to re-orient their professional career to cope with the latest state of the art forensic structural engineering.

Jointly organized by



**Indian Association
of Structural Engineers**



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HOW TO REGISTER

Register from the link: <http://iastructe.co.in/online-refresher-course.php>
and send the delegate details and payment details as shown in the step 1 & 2 given below

STEP 1: Registration fee shall be paid through NEFT/RTGS/UPI as per bank details given below :

Beneficiary: Indian Association of Structural Engineers

C. Account No.: 10151200388

State Bank of India(07196)

Branch Address: Flyover Market,

Defence Colony, ND 110024

IFSC: SBIN0007196

MICR: 110002034

SWIFT CODE: SBININBB382

GST NO.: 07AAATI3885P1ZZ

UPI ID : 10151200388@sbi



STEP 2: The details of the participant (Name, Designation, Organization, Email id, Mobile no.) along with the proof of payment shall be sent to iastructe@gmail.com to complete the registration. Students must send their valid student ID card (scanned) along with proof of payment. The registration link for each day's session shall be sent one day prior to the each session to the confirmed participants only. The members who will apply in the category of young engineers for an additional discount of 10% should send their DoB proof.

REGISTRATION FEE

IAStructE/ <i>fib</i> Members	: Rs 5,000/-* + 18% GST
Non Members	: Rs 7,500/-* + 18% GST
IAStructE/ <i>fib</i> Student members	: Rs 1,000/- + 18% GST
Students	: Rs 2,000/- + 18% GST
Foreign Nationals	: INR 10,620/- (USD 130)*
<i>(Foreign nationals - 20% discount for members of MoU Associations, JSSI, IStructE UK, SEANeP)</i>	

* Additional 10% discount for Young engineer age upto 35 yrs
(Not applicable for student category)

Every five registration from one organization will entail one free registration from the same organization

(E-certificate of participation will be provided to those who will have 80% attendance during the entire course)

Proficiency certificate will be provided to those who will qualify the assessment test, which shall be conducted after concluding session

SPONSORSHIP OPTION

ENTITLEMENTS	DIAMOND Sponsor INR 3,00,000 + 18% GST*	GOLD Sponsor INR 2,00,000 + 18% GST*	SILVER Sponsor INR 1,00,000 + 18% GST*
Presentation Slot	20 mins.	10 mins.	NA
Advertisement in SED (Quarterly journal of IAStructE published as soft copy)	One Colour Page (for four issues)	One Colour Page (for two issues)	One Colour Page (for one issue)
Advertisement in monthly Newsletter	One Colour Page (for six issues)	One Colour Page (for four issues)	One Colour Page (for two issues)
Complimentary Delegates	Seven	Five	Three
	Logo in Flier, Banner Company Profile to all delegates		

For any clarification, please contact the IAStructE Secretariat on

Email iastructe@gmail.com, Tel: 011-45794829, +919968299155



PROGRAMME - Online International Orientation Course on *Forensic Structural Engineering*



TIMINGS: 15:00 HRS TO 17:30 HRS (IST) (Every Saturday from 30th March to 27th April 2024)

Course Coordinator & Moderator : Mr. V. N. Heggade, Vice-President, IAStructE (Western Region) & Founder & CEO, DECon Complete Solutions

S. No.	Title	Duration	Proposed Faculty *
DAY 1 (30th March 2024) : INTRODUCTION			
	Welcome & Inaugural	30 mins.	Prof. R. Pradeep Kumar , <i>President, IAStructE</i> Prof. Stephen Foster , <i>President, fib</i> Prof. Daniele Zonta , <i>Convener TG 3.5</i> Dr David Fernández-Ordóñez , <i>Secretary General, fib</i>
1	An Introduction to Forensic Structural Engineering: What It Is and What It Covers? Why it is the emerging career option in construction industry?	30 mins	Dr. Harshavardhan Subbarao <i>Chairman & Managing Director, Construma Consultancy Pvt Ltd, India</i>
2	The Process of Forensic Investigation: What are the basic steps in a forensic investigation? Presentation of "Life-cycle" and "Pathology Base" Approaches as investigation techniques.	30 mins	Mr. Laurent Rus Jenni , <i>Ing PE ICCP Dipl.EPFL MSc MBE Besp. Foundeur and CEO Singular Structures Engineering</i>
	Sponsor presentation	20 mins	S. P. Singla Constructions Pvt Ltd
	Q&A	30 mins	
DAY 2 (06 April 2024)			
3	Standards and Codes & Practices in FSE Understanding various codes, standards and applicable practices in various parts of the globe on Forensic Structural Engineering	30 mins	Mr. V. N. Heggade, FNAE <i>Founder & CEO, DECon Complete Solutions, India</i>
4	Structural Failures – Root Causes – Failure mechanisms of concrete structures	30 mins	Mr. Alok Bhowmick, FNAE <i>Managing Director, B & S Engineering Consultants Pvt Ltd, India</i>
5	SHM & NDT in Bridges Situational awareness with real-world applications of SHM & NDT in bridges.	30 mins	Dr. Yves Reuland <i>Lecturer at the Dept of Civil, Environmental and Geometric Engineering</i>
	Sponsor presentation	10 mins	Mageba Bridge Products Pvt Ltd
	Q&A	45 mins	



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DAY 3 (13 April 2024)

6	The Logic of forensic investigation <ul style="list-style-type: none"> Definitions and Methods Failure hypothesis development Propositional hypothesis testing Probabilistic hypothesis testing Use of Structural Modelling 	30 mins	Dr. Kamyab Zandi <i>Founding Director & CEO, Timezyx Inc., Canada</i>
7	Investigation Case Studies for Failure of Bridges	30 mins	Mr. A. K. Srivastava <i>Former Director General (Road Development) MoRTH, India</i>
8	Forensic Investigation of Fire Damaged Structures	30 mins	Dr. Venkatesh Kodur <i>University Distinguished Professor, Civil and Environmental Engineering (CEE), Michigan State University, USA</i>
	Sponsor presentation	10 mins	J. K. Prestressing Co.
	Q&A	45 mins	

DAY 4 (20 April 2024)

9	Investigation Case Studies for Failure of Building structures	30 mins	Prof. R. Pradeep Kumar <i>President IAStructE & Director CSIR-CBRI, India</i>
10	Investigation Case Studies for Failure of precast segmental construction	30 mins	Dr. Max Meyer <i>Principal, RUI-FENG International Pte Ltd, Singapore</i>
11	Investigation Case Studies of Geotechnical Failures	30 mins	Dr. Martin Hohberg <i>Senior Consultant, IUB Engineering AG, Switzerland</i>
	Sponsor presentation	15 mins	TBN**
	Q&A	45 mins	

DAY 5 (27 April 2024)

12	Investigation Case Studies of tunnel collapses	30 mins	Dr. Martin Hohberg <i>Senior Consultant, IUB Engineering AG, Switzerland</i>
13	Techno legal aspects in Forensic Engineering	30 mins	Mr. Manoj Mittal <i>Immediate Past President, IAStructE, India</i>
14	Panel Discussion on How to Learn From Failures	60 mins	All available speakers
	Closing Remarks & Vote of thanks	15 mins	

*The faculty / subject shown above is tentative subject to the confirmation

**To be notified