

news letter

Newsletter of the Indian Association of Structural

www.iastructe.co.in

February 2024

MESSAGE FROM THE PRESIDENT



Dear Friends,

Warm greetings from IAStructE.

I am very happy to present to you the second newsletter for the year 2024. The association is regularly organising relevant technical activities. You may find details of such activities and publications in this newsletter and on our website. If you are not yet a member of IAStructE, kindly become a member to avail yourself of the many benefits

of the association.

This newsletter includes information related to the 1) Online refresher course on "Analysis, Design & Construction Aspects of Precast Structures", which was held during 13 January 2024 up to 24 February 2024, 2) Lecture-cum-panel discussion on "Engineering Aspects of Shri Ram Mandir at Ayodhya" held on 10 Feb 2024 and 3) Lecture on "Multi-wave Imaging for the assessment of civil structures by Dr.Debdutta Ghosh, held on 29 Feb 2024. CEPT Ahmedabad student chapter has organized an expert lection by Prof. V. R. Shah on "The structural narrative of Indian modernity: Works of Er Mahendra Raj, Technical event on Infrahack Quiz – Civil Connect 2024 at DTU on 10 Feb 2024 are also included.

Please send your feedback on our activities and suggestions for further improvements.

Best Regards,

Ramancharla Prof. R. Pradeep Kumar President-IAStructE

FROM THE EDITOR'S DESK



Dear Readers,

This edition provides insights into our regular knowledge-sharing initiatives organized by the Headquarters and student chapters. It also highlights a significant milestone – our organization's recognition as a

statutory member of *fib*, with the privilege of representing India in the *fib* general assembly. Explore the new section featuring members' achievements, showcasing noteworthy contributions that bring honor to the association. Your engagement on social media platforms to follow and share our organization's activities is highly encouraged.

Thanks and regards,

Prof. Visalakshi Talakokula

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Events Organized:

Online Refresher Course on "Analysis, Design & Construction Aspects of Precast Structures"

The Online course on "Analysis, Design & Construction Aspects of Precast Structures" was held successfully from January 13, 2024, to February 24, 2024. The lectures, conducted every Saturday, attracted a total of 176 delegates. The inaugural session featured a welcome address by Prof. R. Pradeep Kumar, President of IAStructE. Dr. S. P. Anchuri, a GC member of IAStructE, served as the Course Coordinator, while Prof. S. Suriya Prakash, a Professor at IIT Hyderabad, acted as the Course Co-Coordinator. The course received sponsorship from Shree TMT, Magicrete Building Solutions Private Limited and PSP Projects Limited. Participants widely praised the course for its comprehensive coverage of precast structure analysis, design, and construction aspects.

Following eminent speakers delivered their lectures during the sessions:

- ❖ Prof. Manu Santhanam, Professor, IIT Madras
- Mr. Amit Barde, Head, Precast Initiative, Larsen & Toubro
- ❖ Mr. Saurabh Purandare, Director, Innovela Building Solutions
- Mr. C. A. Prasad, Director, Metey Engineering & Consultancy Pvt. Ltd.
- Mr. Sanjeev Sharma, Melior Construction
- ❖ Mr. Shridhara C. N., Associate Director, PRECA Solutions India Pvt. Ltd.
- Dr. Ajay Chourasia, Chief Scientist & Prof. (AcSIR), Group Leader, Structural Engineering & 3D Concrete Printing Division, CSIR-CBRI
- ❖ Mr. Sathiyaseelan, Principal Structural Manager, Teemage
- Prof. Amlan Kumar Sengupta, Professor, IIT Madras
- Dr. Meher Prasad A., Professor, IIT Madras
- Mr. Shridhar Rao, Elematic India Pvt Ltd
- Dr. S. Suriya Prakash, Professor, IIT Hyderabad
- Mr. Raj Pillai, Chief Technology Officer, IMC Projects (A Kalpataru Group Enterprise)
- Prof. R. Pradeep Kumar, President, IAStructE & Director, CSIR-CBRI, Roorkee

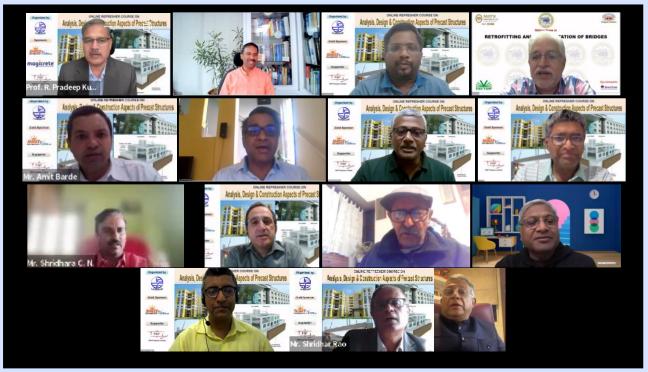


Fig1 Glimpses of Eminent speakers from 3 sessions of Refresher Course

Lecture - cum - Panel Discussion on "Engineering Aspects of Shri Ram Mandir at Ayodhya"

On February 10, 2024, IAStructE in collaboration with CSIR-CBRI, Roorkee, orchestrated an illuminating online Lecture-cum-Panel Discussion on the "Engineering Aspects of Shri Ram Mandir at Ayodhya." Esteemed speakers and panelists were convened to expound upon the comprehensive scientific analysis of Shri Ram Mandir, encompassing facets such as geophysical characterization of the site, geotechnical scrutiny, foundation design vetting, 3D structural analysis, and the intricate optomechanical design for the Surya Tilak of Shri Ram Lala on Shri Ram Navami, meticulously conducted by CSIR-CBRI. Dr. R Pradeep Kumar, President of IAStructE, adeptly moderated the session. Following the presentation, a dynamic panel discussion ensued, where participants' queries were thoughtfully addressed by the panelists, fostering a deeper understanding of the engineering marvel that is Shri Ram Mandir.

Following were the eminent panelists:

- Mr. Manoj Mittal, Immediate Past President, IAStructE
- Dr. N. Gopalakrisnan, Ex Director, CSIR-CBRI
- Ar. Ashish Sompura, Temple Architect, M/s CB Sompura
- Dr. Manojit Samanta, Principal Scientist, CSIR-CBRI
- Dr. Debdutta Ghosh, Senior Scientist, CSIR-CBRI
- Ms. Hina Gupta, Senior Scientist, CSIR-CBRI
- Dr. S. K. Panigrahi, Chief Scientist, CSIR-CBRI



Lecture on "Multi-wave Imaging for the Assessment of Civil Structures"

An online lecture on "Multi-wave Imaging for the Assessment of Civil Structures" was organized on February 29, 2024. It was delivered Dr. Debdutta Ghosh, Senior Scientist, CSIR-CBRI. During the lecture, attendees gained valuable insights.

You tube Link: https://www.youtube.com/live/Pj2_r6UE7L0?si=pLiLnv1Ci4nTSeH3



Fig.3 Glimpses from the online lecture by Dr. Debdutta Ghosh



IAStructE Student Chapters Activities:

IAStructE - CEPT, Ahmedabad Student Chapter Event:

Title of the event: Expert Session on "The structural narrative of Indian modernity: works of Er. Mahendra Raj"

Speaker: Prof. V. R. Shah, Founder & Principal Structural Consultant, Vinod Shah Consulting Engineer Private limited, Ahmedabad

Date & Venue: 16th February 2024 at CEPT University

Proceedings of the event: "The structural narrative of Indian modernity: works of Er. Mahendra Raj" by Prof. V R Shah was scheduled on 16 February 2024 at 6:30 pm at Faculty of Technology, CEPT University. The session was attended by many professionals and participants through online mode as well as in person.

The session started with a brief biography of Er. Mahendra Raj, highlighting his background, education and career trajectory. Few of his iconic projects and collaborations were showcased such as Hall of Nations -New Delhi, IIT Kanpur campus and so on.

The session served as an enriching exploration of the intersection of architecture and engineering, highlighting the profound influence of his innovative structural designs on the built environment. The session also cherished sweet memories when Shri Mahendra Raj visited CEPT University.



Fig 4. Glimpses of Expert Session by Prof. V. R. Shah

IAStructE - DTU, Delhi Student Chapter Event:

Title of the event: Infrahack Quiz - Civil Connect 2024

Speaker: Dr. Ajay Kumar, Associate Professor & HOD, NIT, Delhi, Dr. Naskar Shamal, VP, BG Shirke, Mr. Sanjay Pujari, Senior GM, BG Shirke, Mr. Vikram Thakur, Manager Tech, NHAI

Date & Venue: 10th February 2024 at DTU

Proceedings of the event: The IAStructE DTU Student Chapter, nestled within the Department of Civil Engineering, recently curated an engaging Infrahack Quiz as a highlight of Civil Connect 2024. This event not only showcased the students' prowess in civil engineering but also fostered a platform for collaboration and intellectual exchange. With a focus on nurturing creativity and problem-solving skills, participants were challenged to contemplate the intricacies of infrastructure design and its profound impact on society. Beyond being a mere quiz, this event doubled as a career counseling session, with experts elucidating the significance of civil engineering in the broader societal context, thereby motivating and inspiring the participating students.



Fig 5. Glimpses of Infrahack Quiz at DTU



Forthcoming Events:

Event	Speakers	Date &Timing	Place
Webinar "Optimizing Deep Foundation Designs in Ephemeral Streams to Significantly Reduce Costs" Registration link: https://us02web.zoom.us/webinar/register /WN_S3znw7qkQ2yyGhD5Cx17zQ	Dr. Naresh C. Samtani, President & Owner of NCS GeoResources, LLC, USA	02.03.2024 at 10:00 AM (IST)	Online through Zoom
Webinar on "Role of Structural Engineers in Climate Crisis" Registration link: https://us02web.zoom.us/webinar/register /WN_yzcitayOSGOxDReTrGzVLw	Dr. Natasha Watson, Embodied Carbon Lead, UK Structures, Buro Happold	05.04.2024 at 03:00 PM (IST)	Online through Zoom
Online International Orientation Course on "Forensic Structural Engineering" Registration Link: http://iastructe.co.in/online-refresher-course.php	Experts from fib, IAStructE and Industries	30.03.2024 from 03:00 PM to 05:30 PM (IST)	Online through Zoom

IAStructE Library:

IAStructE has set up a library at K-69 A, Basement Kalkaji, New Delhi. It has a collection of good technical books and journals related to civil & structural engineering. Members staying in the vicinity are encouraged to utilize this facility, and if you want to contribute your books and journal to the library you are always welcomed.





Fig 6 IAStructE Library

Message from IAStructE social media & Digitization Committee

Let's get "DIGITIZED"

With all new look of our website and media handles, please follow us on all major media platforms. For joining us, below mentioned links to be pasted in browser. Let's join hands together to promote the profession of Civil Engineering.

- 1. **on TWITTER** as **IAStructE:** -https://twitter.com/iastructe
- 2. on Facebook as IAStructE: -https://www.facebook.com/IAStructE-100114022302316
- 3. **on LinkedIn: -**The group is defined as Indian Association of Structural Engineers-IAStructE https://www.linkedin.com/groups/6646248/
- 4. **on YouTube** as **IAStructEWebinar:** Subscribe and press bell icon https://www.youtube.com/channel/UCvv7ojXO9Dxq1WtP_yHZTKw

Member's Published Articles/Publications:

Dr. Abhay Gupta (LF-IAStructE):

A research paper on Project "Bamboo Research and Training Centre (BRTC), at Chandrapur, Maharashtra, A Sustainable Design using bamboo", Designed by Skeleton Consultants Pvt Ltd, NOIDA was accepted and presented at 38th INDIAN ENGINEERING CONGRESS. Held at Jabalpur during 28-29 December 2023. The Presentation was done by Er. Mohd Mueez khan and jointly authored with Er. Tobin Nainan and Er.(Dr.) Abhay Gupta from Skeleton consultant Pvt Ltd.



Fig 7 Image of Bamboo Research and Training Centre (BRTC), at Chandrapur, Maharashtra

Prof. Visalakshi Talakokula (LM-IAStructE):

<u>Patent:</u> Yeturi Pramod Kumar Reddy., Sri Kalyana Rama, J., Talakokula, V., Sagi. V. Simhadri Raju., "High Performance Plaster Coated Light Weight Composite Wall Panels", patent Number 495454, THE PATENTS ACT 1970, India 202241057712.

Journal Publication: Tarun Morwal, Tushar Bansal, Ammar Azam, Visalakshi Talakokula and T Jothi Saravanan (2024), "Exploring chloride-induced corrosion in reinforced concrete structures through embedded piezo sensor technology: an experimental and numerical study", Smart Mater. Struct. 33 (2024) 035039 (17pp). https://doi.org/10.1088/1361-665X/ad287a, Impact Factor: 4.1



Call for papers for CROSFALL:

CROSFALL is a newsletter created by Indian Association of Structural Engineers (IAStructE). Its purpose is to share lessons learnt from structural failures, near-misses and safety concerns. CROSFALL is greatly encouraged and inspired by CROSS (Confidential Reporting on Structural Safety), UK, which is a collaborative effort of three institutions (IStructE, ICE and IFE). **There is however no connection between CROSFALL-IAStructE and CROSS-UK**

CROSFALL Editorial Board invites reports for the forthcoming issues. Interested candidates can sent the reports about structural safety issues related to all types of structures (i.e. buildings, bridges, tunnels, industrial structures etc.) in the built environment. The reporting can be related to:

- Structural failures,
- Poor Design and Detailing, Lack of Seismic Safety in planning
- Safety concerns about high risk erection schemes at Site
- Safety concerns on Temporary Works
- Near misses, or observations relating to procedures followed at site, which may lead to failures or collapses.

Reports do not have to be about current activities so long as they are relevant. Small scale events are equally important - they can be the precursors to more major failures. Report might relate to a specific experience or it could be based on a series of experiences indicating a trend. No concern is too small to be reported and conversely nothing is too large. Reports should aim to include information that will help others to learn from the safety issue identified.

To submit the report please go through the following link: www.iastructe.co.in/crosfall.php

Call for papers for the theme-based issue of SED journal:

SED Editorial Board invites article contributions for the forthcoming issue of the Structural Engineering Digest on the following themes, which shall be published in e-book format. Details are as under:

January-March 2024 issue: Theme: Tunnel/Underground Structures

Guest Editor: Mr. Partha Banerjee

Sub-theme:

- Tunnel Design: TBM, NATM, Cut & Cover and Cross Passage
- Tunnel Construction: TBM, NATM, Cut & Cover and Cross passage
- Underground Station Design
- Underground Station Constructions
- Instrumentation & Monitoring and Damage Assessments
- Geophysical Investigation in Urban Area

April-June 2024 issue: Theme: Industrial Structures

Guest Editor: Mr. V. N. Heggade

Sub-theme:

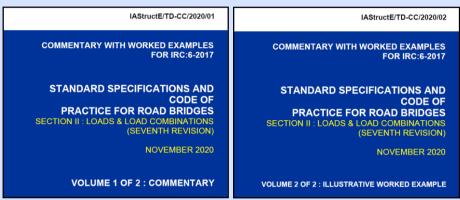
- Industrial Cooling towers and chimneys
- Factory Buildings
- Balance of plant structures in nuclear power plants, Thermal power plants, and hydel power plants
- Structures in steel and cement plants

Interested professionals may send their full paper on any of the above issues along with their photograph and brief resume latest by 15 March 2024 or at the earliest convenience. Articles are invited from i) Members of IAStructE; ii) Specialists in the field even though they are not members of IAStructE.



IAStructE Publications:

1. Commentary with Worked Examples for IRC: 6-2017: It is a document having commentary with worked example on IRC: 6-2017 (The code for Loads & Load Combinations for design of Highway Bridges). This commentary is in two separate volumes. Volume-1 pertains to the Commentary while Volume-2 pertains to Illustrative Worked Examples. It has 48 worked examples demonstrating application of various codal clauses.

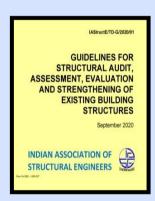


It's a priced document and hence not freely downloadable.

The documents are available for sale @ Rs. 1200/- for Volume 1, and @ Rs. 800/- for Volume II. Members of IAStructE and IRC will be entitled for a discount of 10% on this amount. Interested professionals who wish to purchase the commentary may kindly register with the following link or contact IAStructE Secretariat atiastructe@gmail.com

Registration link: http://iastructe.co.in/new-iastructe-publication.php.

2. Guidelines for Structural Audit, Assessment, Evaluation and Strengthening of Existing buildings Structures: This document will guide structural engineers in proper assessment of building structures before issuing structural stability certificate. These guidelines may be used by IAStructE members, all other structural engineers, house owners, housing society welfareassociations, clients and corporation engineers for understanding structural audit of the private and public building structures. The Guideline focuses on the urgent need to strengthen risk resilience of buildings from any kind of risks due to earthquake and other hazards. It is hoped that this document will be useful to ensure that all structures across the country remain safe from any kind of disaster risk.



It's a priced document and hence not freely downloadable.

The price of this e-document is Rs 200/-. Interested professionals, who wish to obtain the soft version of the Guideline in pdf format, may register with the following link. Registration Link: http://iastructe.co.in/guidelines-for-structural-audit.php

- **3. Commentary on IS: 13920:**The commentary is available on www.iastructe.co.in under IAStructE Professional Documents. IAStructE member can access this document after login.
- **4. Commentary on IS: 1893 Part 1:** The commentary is available on www.iastructe.co.in under IAStructE Professional Documents. IAStructE member can access this document after login.



5. Guidelines for Design of Bridge Abutments and Retaining Walls: This document will assist practicing bridge and structural engineers in building confidence in the design of these structures, which offers tools for the design of economic and innovative retaining structures. The document is rich in theoretical explanations and draws on much experience of the authors. Worked examples further illustrate the application of the applicable codes and should promote better understanding.



The document is available for sale @ Rs. 1500/-. Interested professionals who wish to purchase this document may kindly contact IAStructE Secretariat atiastructe@gmail.com

6. Guideline for Selection and Design of Post-installed Anchors in Concrete Connections: In this document, only post-installed anchors are covered including their types, behaviour and working principles, failure modes, and basic design steps for non-seismic and seismic situations. A few illustrative design examples too are presented for better understanding of design methodology. This document is now available on www.iastructe.co.in under IAStructE Professional Documents. IAStructE member can access this document after login.



IAStructE is now a Statutory Member of fib:





Indian Association of Structural Engineers is now a Statutory Member of fib

We are delighted to announce that IAStructE has become the Statutory Member of fib and Indian National Member Group representing India in fib general assembly.

The *fib*, which is "The International Federation For Structural Concrete" (Fédération Internationale du béton in French), is a not-for-profit association formed by 41 national member groups, is spread over more than 100 countries. *fib* has approximately 2500 corporate and individual members. The *fib's* mission is to develop at an international level the study of scientific and practical matters capable of advancing the technical, economic, aesthetic and environmental performance of concrete construction.

As a statutory member of fib, IAStructE will represent India in the General Assembly and will enjoy the following benefits, which are exclusive to national member groups only:

- Voting rights in the general assembly of fib;
- → Hosting rights for fib congresses and symposia;
- Events organised by IAStructE can be co-sponsored by the fib;
- \rightarrow Rights to nominate candidates for *fib* awards.

Members of IAStructE will enjoy the following benefits:

- Opportunity to become a part of fib technical committees and contribute to the fib Model Codes (published approximately every 10 years).
- Opportunity to become a part of the fib Task Groups and Commissions.
- Opportunity to be nominated for the fib awards thru' IAStructE.
- Access to all the bulletins published since the 2022 through IAStructE.
- 🔁 Eligible for 'subscribing' membership by paying discounted subscription fee.
- All current publications of *fib* can be purchased at discounted rates.

More information about the fib publications, bulletins, events, courses, and their proceedings can be obtained from https://www.fib-international.org

INDIAN ASSOCIATION OF STRUCTURAL ENGINEERS

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Advertisement Tariffs:

Structural Engineering Digest (being published in PDF format)

	Rates Per issue	Discounted rate at 20% for 4 consecutive issues	Advertisement Size
Full Page	Rs. 20,000/-+ 18% GST	Rs 64,000/- + 18% GST	9.5-inch x 7 inch

IAStructE Monthly Newsletter (being published in PDF format)

	Rates for advertisement	Advertisement Size
Full Page	Rs. 10,000 per issue, 10% rebate for quarterly, 20% rebate for half yearly and 30% rebate for yearly booking	9.5-inch x 7 inch
Half Page	Rs. 7,000/- + 18% GST per issue, 10% rebate for quarterly, 20% rebate for half yearly and 30% rebate for yearly booking.	4.75-inch x 7 inch
1/8th of a Page	Rs. Rs. 2,000/- + 18% GST per issue, 10% rebate for quarterly, 20% rebate for half-yearly, and 30% rebate for yearly bookings. (Only for IAStructE Members)	Standard size of Business Card

Accredited Structural Engineers (ASE - IAStructE):

The IAStructE program for Accreditation as Accredited Structural Engineers (ASE – IAStructE) is suitable for practicing structural engineers who have experience in the structural design field and have a good understanding of applicable design codes/standards in India.

This accreditation will help Structural Engineers in India to set a benchmark of proven professional & technical excellence and raise the levels of structural engineering practice in the Country. The entire program would be on the basis of a two-stage process consisting of an interview for the assessment of Initial Professional Development (IPD) followed by a written examination based on actual problem-solving. Applicants have to demonstrate their competence in the designated 12 key attributes on which they will be assessed during the interview. The applicant would then require to clear the examination by answering any single chosen question from the options given in the question paper with a minimum level of marks stipulated. Both stages are mandatory to clear the assessment process and thus to get recognition.

An Accredited Structural Engineer – IAStructE is someone who wishes to:

- validate their comprehensive experience and understanding of all types of structural engineering work and managerial capabilities
- demonstrate their competence on the basis of IPD and Continuous Professional Development activities in the field

Details of the application and assessment requirements, fees, and available dates can be consulted in the relevant fields given in the tabs below. They summarize the general application process, the assessment requirements, and the steps needed to qualify for the ASE-IAStructE accreditation.

The complete information about the entire process along with the application form and annexures can also be obtained from a booklet, which can be downloaded from the following link: https://www.iastructe.co.in/ase-iastructe-accreditation.php

This assessment process will be held bi-annually, being initiated in January & July respectively.



AboutIAStructE:

Indian Association of Structural Engineers (IAStructE) is the national apex body of structural engineers in India established with the objective to cater to the overall professional needs of structural engineers. The association has become the source of expertise and information concerning all issues that involve structural engineering and public safety within the built environment. It has no commercial aim or objective. IAStructE is purely a professional learned society with the prime objective of supporting and protecting the profession of structural engineering by upholding professional standards and acting as a mouthpiece for structural engineers. IAStructE endeavors to ensure that its members develop the necessary skill in structural engineering and work to the highest standards by maintaining a commitment to professional ethics and standards within structural engineering. IAStructE strives for continued technical excellence; advancing safety and innovation across the built environment. It also strives to make available to the Government, Public Sector and Private Sector - a credible source of well qualified and experienced Structural Engineers. A nationwide database of Structural Engineers has been compiled and is being constantly updated. IAStructE undertakes a broad range of technical activities which are aimed at information sharing and capacity building. The association provides opportunity for all the members to develop various skills in structural engineering and helps members to be at the forefront of structural engineering practice. Towards achievement of its aims and objectives, IAStructE is engaged in organizing the following: CPD Courses for Professionals at all levels Refresher Courses for Fresh Graduate Engineers, Student's orientation program, Seminars/Workshops, Technical Lectures by Experts, Technical Discussions on Contentious Issues. IAStructE is currently operating from four regional centers. These regional centres located in the Eastern, Western, Northern and Southern parts of the country effectively cater to the professional needs of members residing/practicing all over the country.

Membership Benefits:

Membership of IAStructE is a sought-after professional accreditation. Your membership of IAStructE can help you enhance your intellectual, academic, technical and professional status. It provides inter connectivity to the fellow professionals and the fraternity. Some of the benefits of membership is provided below:

- ★ Complimentary magazine subscription: All members (except Student Members) receive a complimentary subscription to the Institution's flagship publication 'Structural Engineering Digest' (SED). Published quarterly, each issue allows members to remain connected to the association through the provision of technical papers, Industry and Institution News, featured articles, Professional Guidance on everyday matters affecting the practicing structural engineers.
- ★ Access to the professional documents
- ★ Access to all Technical Lectures, organized every month, at no charge
- ★ Access to Technical Discussions held regularly
- ★ Access to the association's library (Including e-library)
- **★** Discounts in attending Seminars and Workshops organized by the association
- ★ Full on-line access to the current volume and entire e-archive of journal "Structural Engineering Digest (SED)", Refresher Course Materials, Technical Lectures, E-Newsletters and other Technical Resources of the Association.
- ★ Opportunity to network with professional structural engineers of eminence and to meet potential employers in the association.
- **★** Opportunities for professional development

How to become a member?

Membership form and details are available at https://www.iastructe.co.in/membership-grades.php; for more information and other details contact the Indian Association of Structural Engineers Secretariat

Indian Association of Structural Engineers K-69A, Basement, Kalkaji, New Delhi 110019 Tel: (011) 45794829; Email:iastructe@gmail.com; Website: www.iastructe.co.in

