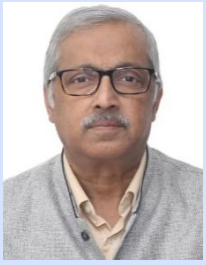
IAStructE news letter

Newsletter of the Indian Association of Structural Engineers

www.iastructe.co.in February 2026

MESSAGE FROM THE PRESIDENT



Dear Members,

Seasons Greetings to All

The month of February was a festive month for Indians. Nation celebrated Maha Shiva Ratri on 15th February (Chaturdashi Tithi). May the divine power of Lord Shiva bring happiness and prosperity to your home. This is a festival which symbolizes the victory of light over darkness, The awakening of higher consciousness and the union of the soul with the Divine.

Last month was a happening month for IAStructE members, as we organised national conference StructENatcon 2026 in Hyderabad between 5th to 7th February 2026, on the theme "Towards a Safe and Enduring Built Habitat". The conference received an excellent response from all stakeholders and was highly appreciated by participants, speakers, and invitees alike.

As you all are aware, IAStructE HQ recently shifted its office premise from Kalkaji to Okhla (DLF Prime Towers). We are in the process of bringing our new office to shape, so that we can start utilising the same for our capacity development programs.

Structural Engineering is the cornerstone of the construction industry, playing a critical role in the creation of safe, functional, and aesthetically pleasing buildings and infrastructure. We are seeing a transformational changes in this field in the recent past. Growing environmental concerns is slowly driving the sustainable construction practices. Emphasis on energy-efficient buildings using passive design strategies and green building materials is gradually becoming the norm rather than exception. Tools like Building Information Modelling (BIM) and artificial intelligence (AI) are transforming project planning, execution, and safety. Generative design innovations are likely to provide optimized structural solutions in the near future. While on the one hand the demand for increased skill level is high, we are witnessing series of structural failures, which seems to suggest that the gap between demand and capacity is widening and very little is being done by the industry to take necessary steps to close this gap. In the month of February 2026 itself, we have witnessed many structural failures around us. A notable one was the tragic ride collapse in Tsunami Swing at the 39th Suraj Kund International Crafts Mela in Faridabad, Haryana, on February 7, 2026, which resulted in one death and several injuries. This was clearly failure of the swing structural connection. Another notable tragic incident occurred on 14 February 2026 in Mulund West, Mumbai, where a precast parapet segment fell over running traffic, at the under-construction Mumbai Metro Line 4 site, killing one person and injuring 3. These incidences are grim reminders to all of us structural engineers to be cautious, and careful in our profession. We must deliver our services with the highest standards of quality, integrity, and ethical conduct, while also responding proactively to evolving societal needs. We need to reassure the society that the built habitat is in safe hands.

The month of February started with the presentation of Union Budget 2026–27 by the honble finance minister of India. The budget reinforces a push towards infrastructure driven economic growth, setting a constructive backdrop for India's real estate sector. With a 9% year-on-year increase in capital expenditure to ₹12.2 lakh crore, focusing on logistics, connectivity, and urban development, the engineering sector gets a major boost. This continued public investment by the Government

brings with it heightened expectations from structural engineering professionals, who are responsible for the safety of the built habitat.

I conclude this editorial writeup with a happy note that we Civil and Structural Engineers will continue to have sustainable relevance in the society for thousands of years. Our profession will not be driven out by disruptive technologies. The challenge before us is that we need to take a leadership position in the profession. This is one area where we need to work hard.

Happy Reading

Alok Bhowmick

FROM THE EDITOR'S DESK

Respected Esteemed Members and Readers,

It gives me great pleasure to present the February 2026 issue of the IAStructE Newsletter, which reflects the vibrant technical engagement and collaborative spirit of the structural engineering fraternity. This issue highlights several important initiatives and activities undertaken by IAStructE to promote knowledge sharing, professional excellence and continuous learning in the field of structural engineering.

A key highlight of this edition is the successful organization of StructE Natcon 2026, held from 5–7 February 2026 on the theme "Towards a Safe and Enduring Built Habitat." The conference served as a significant platform for dialogue and exchange of ideas among engineers, academicians, researchers and industry leaders committed to advancing safe and sustainable infrastructure. The event commenced with a warm welcome by Dr. S. P. Anchuri, Organizing Secretary, followed by the opening remarks of Prof. R. Pradeep Kumar, Chairman of the Organizing Committee, who outlined the vision and objectives of the conference. The inspiring welcome address by Mr. Alok Bhowmick, President of IAStructE, highlighted the evolving responsibilities of structural engineers in addressing contemporary challenges related to safety, resilience and sustainability in the built environment. The conference theme and technical programme were presented by Dr. Harshavardhan Subbarao, setting the context for three days of insightful technical deliberations and professional interactions.

I would also like to place on record my sincere appreciation and gratitude to all the organizing committee members, speakers, sponsors and delegates whose dedicated efforts and active participation contributed to the grand success of StructE Natcon 2026. Their commitment and teamwork played a vital role in making the conference a meaningful and enriching experience for the entire structural engineering community.

The month also witnessed several enriching professional development initiatives, including a technical lecture on Structural Engineering in Tall Buildings and the Online Refresher Course on Planning, Design and Construction of Elevated Metro Structures, which attracted enthusiastic participation from professionals across the country. These programmes reaffirm IAStructE's commitment to strengthening professional capacity and promoting continuous learning within the engineering community.

Equally encouraging is the growing momentum of IAStructE Student Chapters, whose activities continue to inspire and engage young engineers. Through lectures, webinars and technical discussions on contemporary topics such as seismic resilience, wind engineering, sustainable materials and infrastructure durability, these platforms are nurturing the next generation of structural engineering professionals.

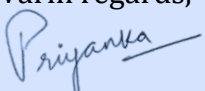
This issue also continues to promote professional engagement through initiatives such as the technical quiz, professional publications and calls for papers for the Structural Engineering Digest and CROSFALL. These initiatives play a vital role in fostering knowledge exchange, encouraging professional dialogue and advancing structural safety practices.

I extend my sincere appreciation to all contributors, speakers, organizing teams and members whose dedication and participation continue to strengthen the mission and activities of IAStructE. Your support plays a crucial role in advancing the profession and in contributing towards the creation of a safer and more resilient built environment.

I hope you find this issue both informative and inspiring.

Happy Reading!

Warm regards,



Dr. Priyanka Singh

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Events Organized:

1. StructE Natcon 2026 on the theme "Towards a Safe and Enduring Built Habitat"

The **StructE Natcon 2026**, organized by the Indian Association of Structural Engineers, was successfully held from 5–7 February 2026 at Visvesvaraya Bhavan on the theme *"Towards a Safe and Enduring Built Habitat."* The conference witnessed the participation of around 350 delegates comprising structural engineers, academicians, researchers, industry professionals, and policymakers from across the country.

The **Inaugural Session** set an inspiring tone for the conference. Dr. S. P. Anchuri, Organizing Secretary, welcomed all the dignitaries and delegates. Prof. R. Pradeep Kumar, Chairman of the Organizing Committee, delivered the opening remarks, outlining the vision and objectives of the conference. Mr. Alok Bhowmick, President of the Indian Association of Structural Engineers, delivered the Welcome Address, emphasizing the responsibility of the structural engineering fraternity in ensuring safety, durability, and sustainability in the built environment. Dr. Harshavardhan Subbarao presented a brief overview of the conference theme and technical programme. The gathering was further enriched by the Address of the Guest of Honour, Dr. Ramana Naik Banothu, Chairman, IEI-TS, who highlighted the importance of professional collaboration and adherence to standards. The Chief Guest, Prof. Dr. Mike Schlaich, delivered an inspiring address, sharing global perspectives and innovative approaches towards resilient and sustainable structural engineering practices.

The event received valued support from several industry partners, including Platinum Sponsor Priya Engineering Projects Pvt. Ltd.; Gold Sponsors Jindal Stainless Limited and ARS Steels & Alloy Intl Pvt. Ltd.; Silver Sponsors MIDAS Research and Development Centre India Private Limited and CECO Hirun India Pvt. Ltd.; Bronze Sponsors UHPC India Pvt. Ltd., CSI Engineering Software Pvt. Ltd., UltraTech Cement Ltd., CMAC India Pvt. Ltd., and SCON Infra Prestress LLP; and Kit Sponsor Sanrachna Structural Strengthening Pvt. Ltd. Their generous contributions significantly enhanced the quality and success of the conference.

The comprehensive three-day technical programme comprised five keynote lectures and seven invited lectures delivered by eminent experts, along with fourteen parallel technical sessions. On Day 1, sessions focused on Innovative and Resilient Construction, Emerging Technologies including BIM, Digital Twins and Asset Management, Disaster Resilience, Repair and Rehabilitation, and Innovations in Geotechnical Engineering, each featuring three technical papers. Day 2 expanded the deliberations to include Safe and Environmentally Conscious Built Forms—Policies, Codes and Best Practices—and Durability and Sustainability Issues in Building Materials and Systems, with each session presenting four papers. The concluding day continued discussions on Durability, Sustainability, and Disaster Resilience. Collectively, these sessions covered a wide spectrum of contemporary structural engineering themes, ensuring both academic depth and strong industry relevance.

The conference also featured two significant panel discussions—"Safe & Enduring Built Habitat – An Industry Perspective" and a discussion on the Draft Engineers Bill and the National Building Code (NBC). These sessions facilitated meaningful interaction among practitioners, academicians, and policymakers, enriching the deliberations and encouraging collaborative thought leadership on critical professional and regulatory issues.

There were also dedicated initiatives under the **Young Engineers Programme**, which showcased the talent and innovative spirit of emerging professionals. The programme featured **22 Poster Presentations** and a dynamic **Pecha Kucha Session**, providing an excellent platform for young engineers and researchers to present their ideas, research findings, and practical insights before an engaging and knowledgeable audience. This initiative was widely appreciated for encouraging active participation, fostering confidence among young professionals, and strengthening the future of the structural engineering fraternity.

The conference concluded with a **Valedictory Session**, during which key observations and recommendations emerging from the technical sessions and panel discussions were comprehensively summarized by Dr. Harshavardhan Subbarao. The valedictory function acknowledged and appreciated the valuable contributions of the speakers, sponsors, organizing committee members, and delegates, and reaffirmed the collective commitment of the structural engineering fraternity towards promoting safe, resilient, and sustainable construction practices in the nation.

Overall, StructE Natcon 2026 served as a vibrant platform for knowledge exchange, professional networking, and constructive dialogue, reinforcing the shared resolve to build a safer and more enduring built environment for the nation.

Some Glimpses of the Conference

5

StructE
NATCON 2026

StructE

StructE
NATCON 2026

DraftWin
India's First Detailing Software For Data
ZWCAD
ETABS
SAFE

StructE

StructE

2. Lecture on "Structural Engineering in Tall Buildings"

IAStructE organized a technical lecture on **"Structural Engineering in Tall Buildings"** on **26 February 2026.** The lecture was delivered by **Mr. Abhijeet Kulkarni, Director – Structures, Buro Happold**. The webinar was initiated by Dr. S. K. Dhawan, GC member, IAStructE

The lecture highlighted the global evolution of tall buildings, from their boom in the United States in the mid-20th century to their expansion in the Middle East, China, Hong Kong, and other parts of the world. The session also emphasized the rapid growth of tall buildings in India, particularly structures exceeding 200 metres in cities such as Mumbai, Hyderabad, and the NCR region. The speaker discussed key structural engineering aspects involved in tall buildings, including loads, structural systems, materials, construction techniques, foundations, and sustainability considerations. The recorded lecture can be seen from the following YouTube link: https://youtu.be/WVFE5l9yq1o

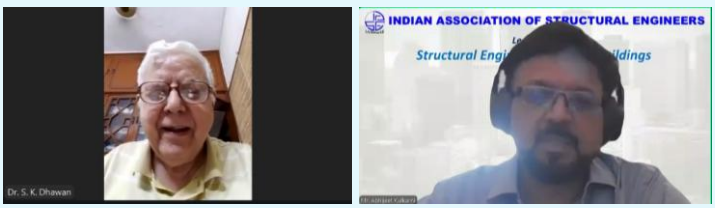


Fig 2: Glimpses of the Lecture

3. Online Refresher Course on Planning, Design & Construction of Elevated Metro Structures

launched an online Refresher Course on **"Planning, Design and Construction of Elevated Metro Structures"** on February 21, 2026. The course will continue until February 28, 2026, and is being conducted in webinar mode through Zoom, with sessions scheduled every Saturday from 3:00 PM to 6:00 PM (IST). The programme is being coordinated by Mr. Partha Pratim Banerjee, GC Member, IAStructE, who is serving as the Coordinator of the course. The inaugural session commenced with a Welcome Address by Mr. Alok Bhowmick, President, IAStructE. This was followed by an overview of the course delivered by Mr. Partha Pratim Banerjee. The inaugural address was delivered by the Chief Guest, Dr. Mangu Singh, Principal Chief Advisor, Delhi Metro Rail Corporation.

The course has received wide appreciation and enthusiastic participation, with around 150 delegates attending the sessions. IAStructE gratefully acknowledges the generous sponsorship extended by CEIGALL India Ltd., J.K. Prestressing Co., J. Kumar Infraprojects Ltd., Hilti India Pvt. Ltd., Dextra India Pvt. Ltd., and Spectrum Techno Consultants Pvt. Ltd., whose support has contributed significantly to the successful organization of this programme. So far, two sessions have been successfully conducted, featuring eminent speakers who delivered insightful lectures on diverse topics:

- *Overview of Planning, Design and Construction of Elevated Metro Structures – Prof. Mahesh Tandon, Chairman, Tandon Consultants Pvt Ltd*
- *Preparation of DPR of Elevated Metro including planning of Elevated Metro Station - Mrs. Ritu Agarwal, Dy. Chief Architect, DMRC*
- *Perspective of SOD, alignment and services requirement in planning and design of elevated metro – Mr. Partha Pratim Banerjee, Director (Technical), Ayesa*
- *Design of Elevated Metro Viaduct - Evolution and Overview - Mr. P.G. Venkatram, Chief Technology Officer, Assystem*
- *Conceptual and Design aspects of U-Girder Superstructure - Segmental and Full Span - Mr. Jitendra Rastogi, Vice President & Head of Structures, SYSTRA*
- *Importance of Concept Design in Achieving Optimized and Efficient Structural Systems for Tall Buildings – Mr. Majid Hashmi, Managing Director, KMH Engineering*
- *Analysis and Design of Special Span for Elevated Metro Viaduct – One Case Study - Mr. Jatinder Singh Pahuja, Managing Director, Paragon Consultants*

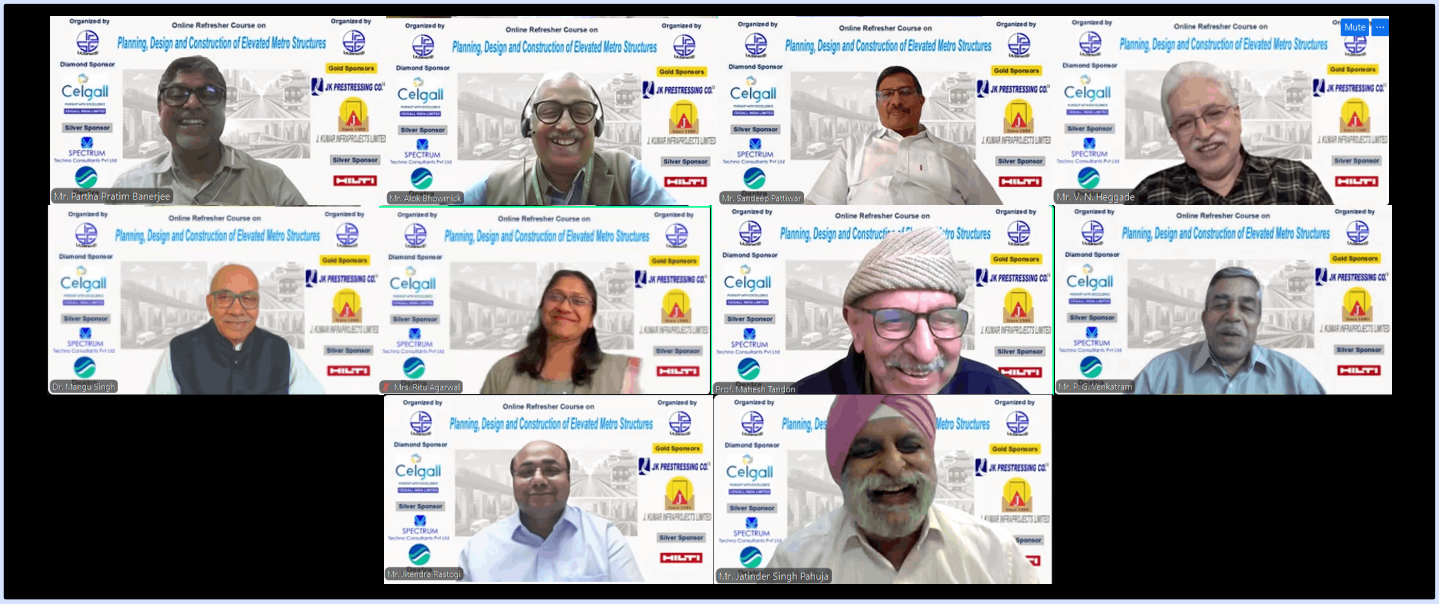


Fig 3 Glimpses of the Course

IAStructE Student Chapter Activities

IAStructE – IIIT Hyderabad Student Chapter Event:

1. Lecture on "Salient changes in IS 875 (Part-3):2015 compared to its 1987 version with recent research advances in across wind loading of tall structures"

The IAStructE – IIIT Hyderabad Student's Chapter of the Earthquake Engineering Research Centre organized an online guest lecture on "**Salient changes in IS 875 (Part-3):2015 compared to its 1987 version with recent research advances in across wind loading of tall structures**", delivered by **Dr. Sasankasekhar Mandal**, Professor, Department of Civil Engineering, **IIT (BHU), Varanasi**, on 20th February 2026. The lecture focused on the key revisions introduced in IS 875 (Part 3):2015 and their implications for wind load estimation and structural design practice in India, presenting a structured comparison with the 1987 version of the code. Dr. Mandal discussed the explicit inclusion of aerodynamic roughness heights for terrain categories, the revised treatment of turbulence intensity and mean wind speed profiles, and the renaming of the modification factor (k_2) as the terrain roughness and height factor. He explained the removal of earlier structural classifications, retention of relevant k_2 values, and the introduction of an importance factor for cyclonic regions. The lecture further covered provisions related to directionality, area averaging, correlation of pressures, and updates to the gust factor method, including the background factor, energy ratio, and turbulence length scale. The inclusion of across-wind response evaluation for tall buildings and lattice towers, in line with international practices, was highlighted as a significant advancement. The session also addressed wind-induced interference effects between adjacent buildings, explaining shielding behaviour at different spacings and its relevance in preliminary design. Dr. Mandal briefly outlined the three major approaches in wind engineering: (i) statistical methods based on field data, (ii) boundary layer wind tunnel testing, and (iii) computational modelling, emphasizing their complementary roles in advanced analysis. The lecture concluded with an interactive discussion, strengthening participants' understanding of the evolution and practical application of wind load provisions in IS 875 (Part 3): 2015. YouTube Link: https://www.youtube.com/watch?v=TXJWfVcRaQ0

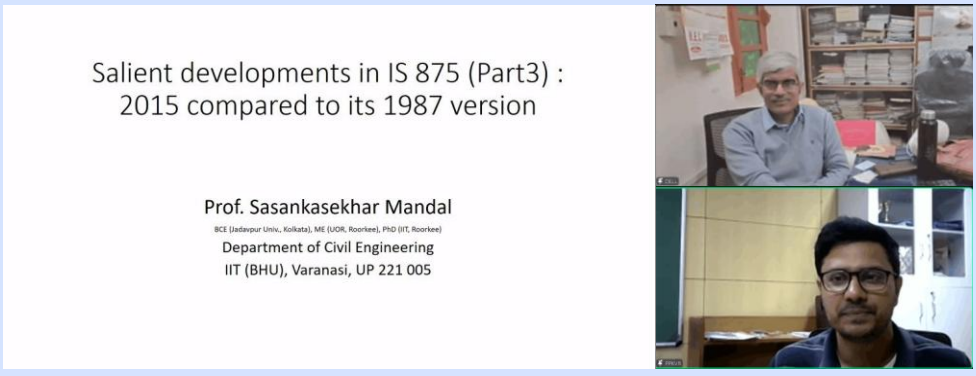


Fig 4: Glimpses of the Lecture

IAStructE – BITS Pilani Hyderabad Campus Student Chapter Event:

IAStructE – BITS Pilani Hyderabad Campus Student Chapter was established in January 2026. Since its inception, nine expert webinars, with over 1700 registrations, have been successfully conducted jointly with the ASCE (Establishment Stage) Student Chapter, bringing together distinguished academicians and industry experts in the field of structural engineering.

Webinar-1: "Role of Energy Dissipation Devices in Seismic Retrofitting and Rehabilitation"

Dr. Romanbabu Oinam, Assistant Professor, Department of Civil Engineering, IIT Guwahati, delivered a webinar on 10th January 2026. The talk focused on the role of energy dissipation devices in seismic retrofitting and rehabilitation of structures to enhance resilience and performance under earthquake loading. Dr. Oinam introduced the fundamental principles of energy dissipation under earthquake excitation. Various devices, including viscous dampers, friction dampers, and metallic yielding systems, were discussed with emphasis on their working mechanisms and performance objectives. He elaborated on retrofit strategies aimed at reducing seismic demand, controlling drift, and minimizing structural damage. Modeling considerations, placement strategies, and integration challenges in existing buildings were also highlighted. The session concluded with a technical discussion on implementation challenges and performance-based seismic rehabilitation approaches. Participants developed a clearer understanding of modern seismic strengthening techniques.

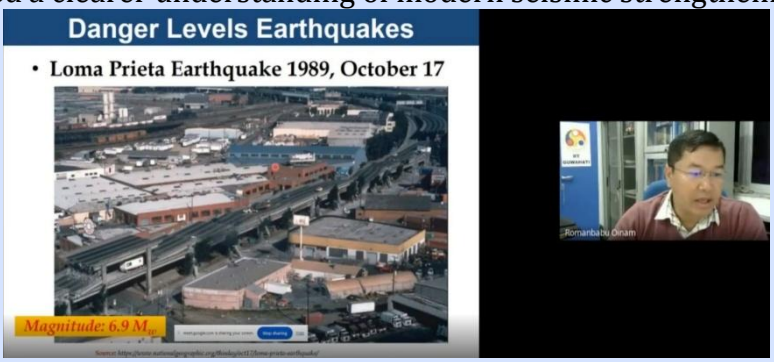


Fig 5: Glimpse of the Webinar

Webinar-2: "Seismic-Oriented Design and Construction of a Full-Scale Cold-Formed Steel–Concrete Composite Demo Building"

Dr. Senthilkumar Rajendran, Assistant Professor, Department of Civil Engineering, NIT Tiruchirappalli, delivered a webinar on 13th January 2026. The talk focused on seismic-oriented design principles and the construction of a full-scale cold-formed steel–concrete composite demonstration building. Dr. Rajendran explained the integration of cold-formed steel sections with concrete components to achieve ductility, strength, and construction efficiency. Key detailing practices and connection behavior under seismic loading were discussed in detail. The session provided insights into real-scale implementation, experimental validation, and constructability challenges encountered during execution. Emphasis was placed on translating research outcomes into practical construction methodologies. The webinar concluded with discussions on the applicability of composite systems in seismic regions. Participants gained a comprehensive perspective on innovative structural solutions for resilient construction.

Fig 6: Glimpse of the Webinar

Webinar-3: "Structural Engineering – Challenges, Contradictions and Reality"

Dr. Ashok Jain, Retired Professor, Department of Civil Engineering, IIT Roorkee, delivered a webinar on 24th January 2026. The talk focused on the practical challenges, contradictions, and real-world considerations encountered in structural engineering practice. Dr. Jain discussed the gap between analytical models, codal provisions, and field implementation constraints. He emphasized professional judgment, constructability considerations, and ethical responsibility in ensuring safe structural systems. Drawing from extensive academic and consultancy experience, he reflected on real-world scenarios that highlight contradictions between simplified assumptions and practical site conditions. The session concluded with a thought-provoking discussion encouraging holistic engineering thinking. Participants were motivated to balance technical rigor with responsibility and accountability in practice.

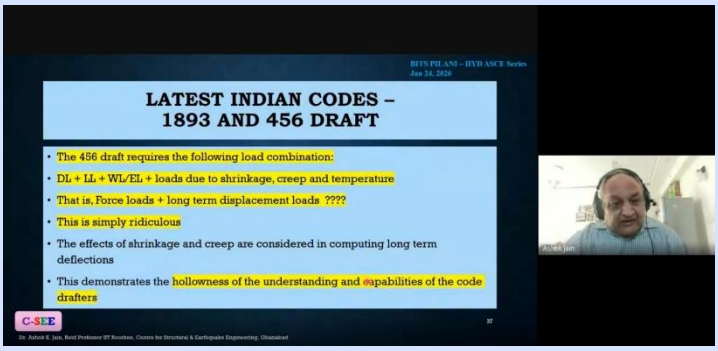


Fig 7: Glimpse of the Webinar

Webinar-4: "Engineering Materials for a Resource-Constrained World"

Dr. Athira Gopinath, Assistant Professor, Department of Civil Engineering, IIT Palakkad, delivered a webinar on 30th January 2026. The talk focused on engineering materials for a resource-constrained world, emphasizing sustainability and responsible material selection in construction. Dr. Gopinath discussed strategies to reduce embodied energy and environmental impact through optimized material design. The importance of recycled, renewable, and locally available materials was emphasized in addressing resource limitations. Life-cycle assessment principles and durability considerations were presented as essential components of sustainable engineering decision-making. The session also highlighted innovation in low-impact material technologies. The webinar concluded with discussions on responsible engineering practices and long-term sustainability goals. Participants gained insight into integrating environmental consciousness with structural performance.

Fig 8: Glimpse of the Webinar

Webinar-5: "Using Concrete as Carbon Sink: The To-Do's and Not To-Do's"

Dr. Anjaneya Dixit, Assistant Professor, Department of Civil Engineering, IIT Roorkee, delivered a webinar on 7th February 2026. The talk focused on the feasibility of using concrete as a carbon sink and the critical considerations involved in balancing sustainability with structural performance.

Dr. Dixit discussed the application of carbon-rich materials in concrete and evaluated their influence on strength, durability, and long-term performance. Both advantages and limitations of using concrete as a potential carbon sink were critically analyzed. The session highlighted potential risks and implementation challenges associated with large-scale adoption. Emphasis was placed on ensuring structural safety while pursuing sustainability objectives. The webinar concluded with technical discussions on balancing environmental considerations with engineering performance requirements. Participants gained clarity on responsible carbon-conscious concrete design.

Fig 9: Glimpse of the Webinar

Webinar-6: "Resilient Infrastructure – Revised IS 1893 (Part 1 & 5): 2025"

Dr. Deepak Yadav, Assistant Professor, Department of Civil Engineering, IIT Jammu, delivered a webinar on 14th February 2026. The talk focused on the key revisions in IS 1893 (Part 1 & 5): 2025 and their implications for resilient seismic design.

Dr. Yadav explained key updates introduced in IS 1893, including modifications in safety margins, ductility requirements, and performance objectives. The technical rationale behind these revisions was discussed in detail. Practical implications for structural analysis, load combinations, and design workflows were highlighted. Interpretation challenges and compliance considerations were also addressed. The session concluded with discussions on the evolving expectations for resilient infrastructure design. Participants enhanced their understanding of contemporary seismic code implementation.

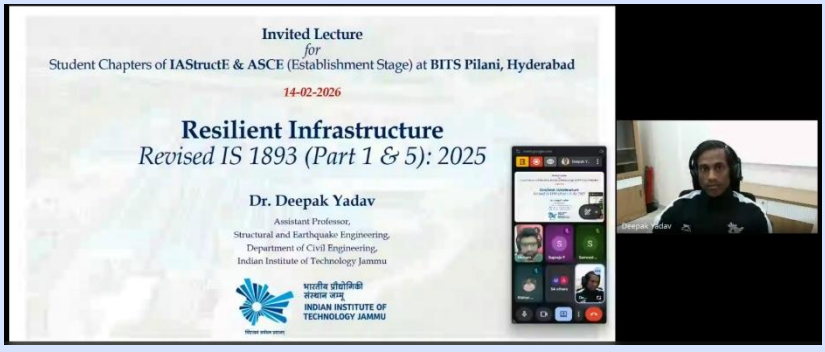


Fig 10: Glimpse of the Webinar

Webinar-7: "Structural Ageing of Critical Infrastructure – Challenges and Opportunities"

Dr. M. N. Shariff, Assistant Professor, Department of Civil Engineering, IIT Bombay, delivered a webinar on 21st February 2026. The talk focused on structural ageing of critical infrastructure, addressing deterioration mechanisms and service-life assessment strategies.

Dr. Shariff discussed cracking, corrosion, material degradation, and long-term structural performance issues in bridges and containment structures. Emphasis was placed on service-life prediction and durability assessment methodologies. Advanced analysis techniques, monitoring strategies, and predictive modeling approaches were presented as tools for evaluating residual capacity. The importance of proactive maintenance planning was highlighted. The webinar concluded with discussions on research opportunities in durability engineering and lifecycle performance assessment. Participants gained a comprehensive understanding of ageing infrastructure management.

Fig 11: Glimpse of the Webinar

Webinar-8: "Seismic Response Reduction Factor Assessment of Steel SMRFs Designed as per IS Standards"

Dr. Muhamed Safeer Pandikkadavath, Assistant Professor, Department of Civil Engineering, NIT Calicut, delivered a webinar on 27th February 2026. The talk focused on the assessment of seismic response reduction factors for steel special moment resisting frames designed as per Indian Standards. Dr. Pandikkadavath explained nonlinear static (pushover) and time-history analysis procedures used to estimate R-values and compare them with codal assumptions under Indian Standards. The implications for performance-based seismic design were discussed. He emphasized structural robustness, vulnerability assessment, and the importance of aligning analytical findings with codal provisions. Modeling strategies and interpretation of nonlinear response were elaborated. The session concluded with technical discussions on seismic reliability and advanced analysis methodologies. Participants gained exposure to research-oriented approaches in steel frame seismic assessment.

Fig 12: Glimpse of the Webinar

QUIZ - Test Your Structural Concepts!

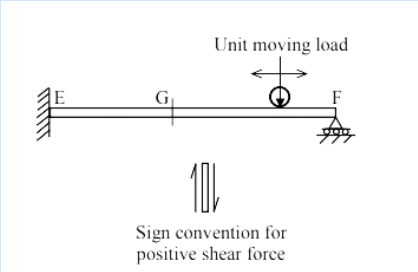
This quiz is designed to generate interest in structural engineering among stakeholders and to encourage greater participation from young engineers, with each issue of the newsletter featuring three conceptual questions covering diverse aspects of the discipline. The names of the first ten participants who submit all correct answers to **iastructe@gmail.com** within the first three days of the newsletter's release will be published in the subsequent issue.

No reader was able to provide all correct answers to the quiz published in the **January 2026 Newsletter**. The correct answers are provided below for reference:

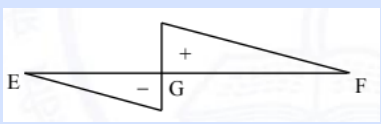
1. *The following statements are related to bending of beams: (I) the slope of the bending moment diagram is equal to shear force (II) the slope of the shear force diagram is equal to the load intensity (III) the slope of curvature is equal to flexural rotation (IV) the second derivative of the deflection is equal to the curvature. The only wrong statement is*
   Answer: *(c)*
2. *In propped cantilever beam of length L, with fixed end as A and hinged end as B carrying a uniformly distributed load over the entire length, the plastic hinge is formed at*
   Answer: *(c)*
3. *A reinforced concrete beam supported on columns at ends has a clear span of 5 m and 0.5 m effective depth. It carries a uniformly distributed load of 100kN/m. the design shear force for the beam is*
   Answer: *(a)*

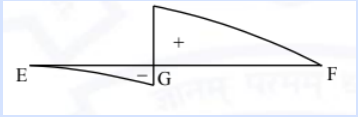
Questions for the February issue are given below: *Test your knowledge and stand a chance to be featured in the next issue!*

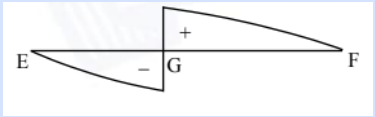
1. A propped cantilever beam EF is subjected to a unit moving load as shown in the figure (not to scale). The sign convention for positive shear force at the left and right sides of any section is also shown.

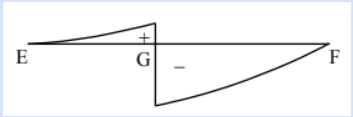


The CORRECT qualitative nature of the influence line diagram for **shear at G is**

(a)


(b)


(c)


(d)


2. The stiffness matrix for the given flexibility matrix is

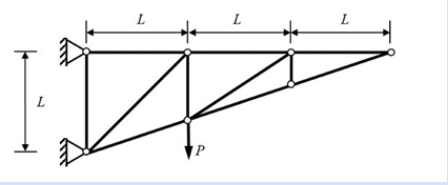
(a) $\mathrm{k} = \frac{EI}{63}\begin{bmatrix} 4 & -9 \\ -9 & 36 \end{bmatrix}$

(b) $\frac{1}{EI}\begin{bmatrix} 36 & 9 \\ 9 & 4 \end{bmatrix}$

(c) $\frac{63}{EI}\begin{bmatrix} -4 & 9 \\ 9 & -36 \end{bmatrix}$

(d) $\frac{1}{EI}\begin{bmatrix} 4 & 9 \\ 9 & 36 \end{bmatrix}$

3. Consider plane truss shown in figure, neglect self-weight, the number of non-zero members are:



(a) 6
(b) 9
(c) 7
(d) 8

IAStructE Social Media accounts

Let's get "***DIGITIZED***"
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 **IAStructE Webinar: -** Subscribe and press bell icon https://www.youtube.com/channel/UCvv7ojXO9Dxq1WtP_yHZTKw

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

SED Editorial Board invites article contributions for the forthcoming issues of the Structural Engineering Digest on the following themes, which shall be published in e-book format.

1. **Connections**
2. **Digital Technology in Structural Engineering**

Interested professionals may send their full paper on any of the above issues along with their photograph and brief resume 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. These thematic issues aim to provide valuable insights, highlight emerging trends, and promote knowledge sharing within the structural engineering community.

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. The objective is to help create a safer built environment, enhance industry knowledge, and mitigate future risks by sharing real-life failure case studies with expert analysis. We expect professionals reading these newsletters to use these informations in their design to make safer structures. 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.*
- *Unethical practices in the profession*

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

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. 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 Accreditation Program for Accredited Structural Engineers (ASE – IAStructE) is designed for experienced structural engineers with a strong understanding of Indian design codes and standards. This accreditation sets a benchmark for professional and technical excellence, enhancing 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. 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

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

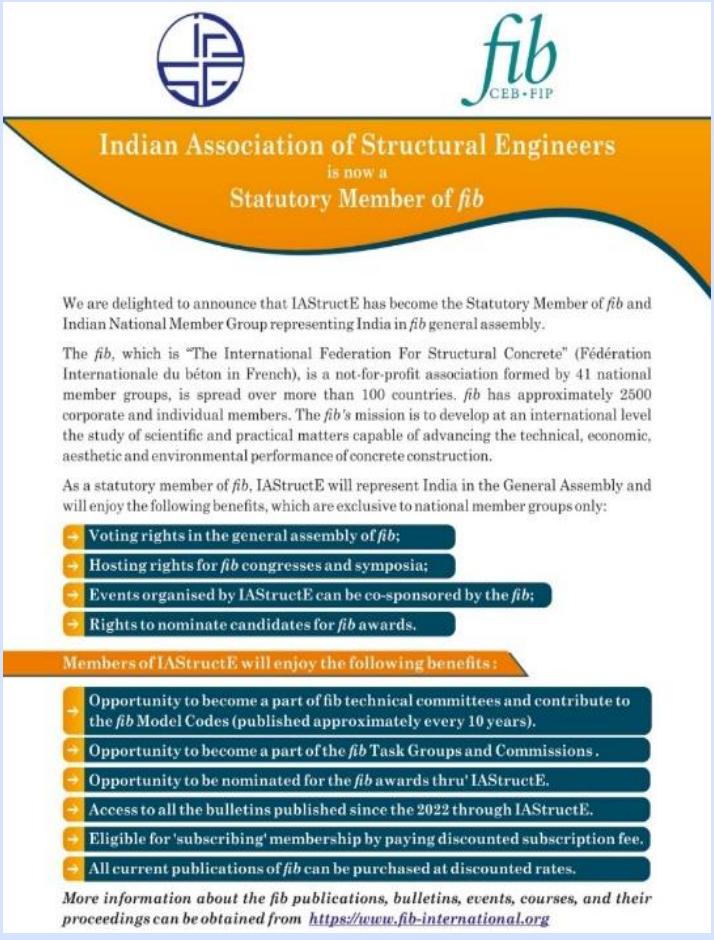
Subscribing membership of fib through IAStructE:

Fib has started inviting the membership subscription for 2026. There are many benefits available for IAStructE members and others who want to become subscribing members of fib through IAStructE. Fees for subscribing members through IAStructE: The discounted fees exclusively for the IAStructE members to become the "subscribing members" of fib shall be Rs 24,000.00 (CHF 250.0 approx.) as against CHF 465 for the Non-IAStructE members. The procedure to get the subscribing membership of fib for the year 2026 is as follows:

1. Interested members can remit the membership amount of Rs 24,000 (i.e. CHF 250) + 18% GST to IAStructE

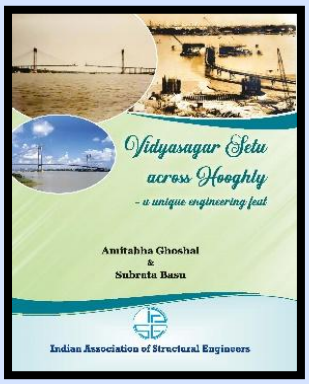
2. On the last day of every month, the contact details of those members who made the payment and want to be subscribing members will be sent to the fib.

3. The subscribing membership of fib will be valid for the calendar year up to December 31, 2026.

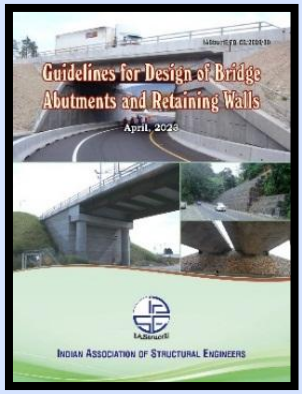


IAStructE Publications:

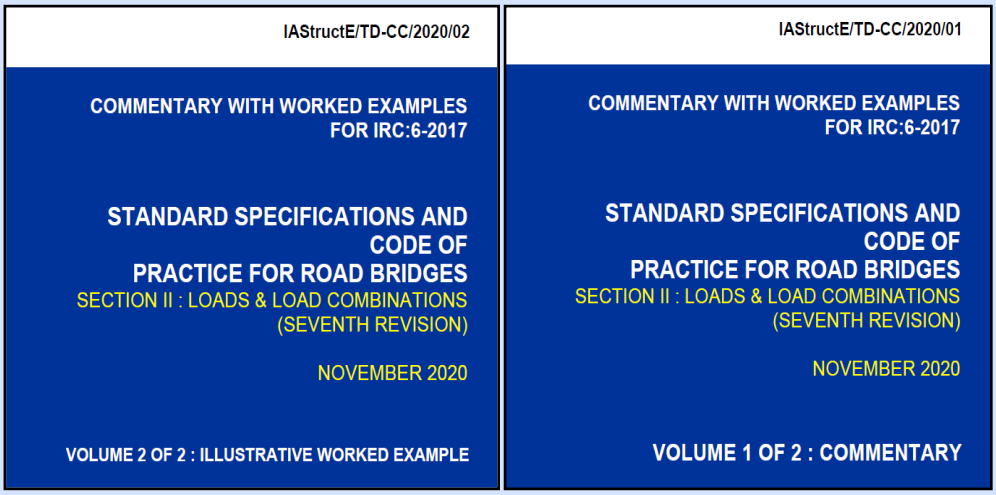
1. Book on Vidyasagar Setu across Hooghly – *A unique engineering feat*: The book is about the story of an iconic bridge structure - the Vidyasagar Setu, initially known as the Second Hooghly Bridge (or crossing). The authors Mr. Amitabha Ghoshal and Mr. Subrata Basu have created an engaging narrative that covers both the engineering as well as the other related issues in lucid detail. The book is available for Sale @ Rs 1200/- + Rs 150/- (postal charges). IAStructE Members are entitled to a discount of 10% on the book price. Interested professionals who wish to purchase the book may contact us at iastructe@gmail.com.



2. 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 at **iastructe@gmail.com.** Members of IAStructE will be entitled for a discount of 10% on the price.

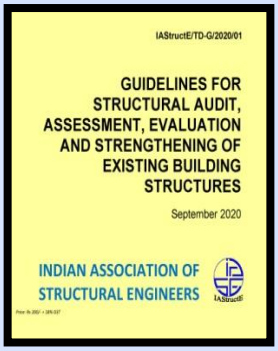


3. Commentary with Worked Examples for IRC: 6-2017: It is a document having commentary with worked example on IRC: 6-2017 (The code for Loads & Load Combinations for design of Highway Bridges). This commentary is in two separate volumes. Volume-1 pertains to the Commentary while Volume-2 pertains to Illustrative Worked Examples. It has 48 worked examples demonstrating application of various codal clauses. 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 the price. Interested professionals who wish to purchase the commentary may kindly register with the following link or contact IAStructE Secretariat at **iastructe@gmail.com**

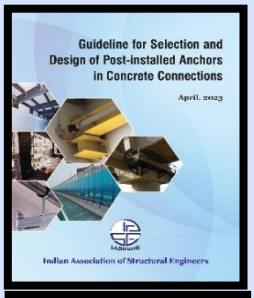


Registration link: **http://iastructe.co.in/new-iastructe-publication.php**

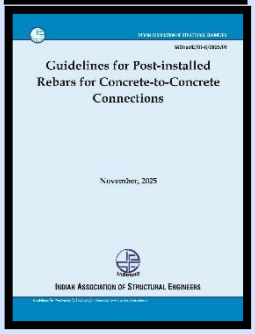
4. Guidelines for Structural Audit, Assessment, Evaluation and Strengthening of Existing buildings Structures: This document will guide structural engineers in proper assessment of building structures before issuing structural stability certificate. The Guideline emphasizes the urgent need to enhance building resilience against earthquakes and other hazards, ensuring structures nationwide remain safe from disaster risks. 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**



5. Guideline for Selection and Design of Post-installed Anchors in Concrete Connections: This document covers post-installed anchors, including their types, behavior, working principles, failure modes, and design steps for both non-seismic and seismic conditions. It also includes illustrative design examples. Available at www.iastructe.co.in under IAStructE Professional Documents, members can access it after logging in.



6. Guidelines for Post-installed Rebars for Concrete-to-Concrete Connections: In this document, design methods for non-seismic and seismic situations, specifications, guidelines on installation and inspections of post-installed bars are covered. A few illustrative design examples too are presented for better understanding of design methodology.. Available at www.iastructe.co.in under IAStructE Professional Documents, members can access it after logging in.



7. Commentary on IS: 13920 and 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.

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. Please be noted that we have recently received the documents, Design & Construction—Concrete Structures 2024, bulletins 111 and 112 from fib, which are available at the IAStructE library. Interested members may come to take the opportunity to read the publications.

View of IAStructE Library

About IAStructE:

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

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