



MESSAGE FROM THE PRESIDENT



Greetings to my dear readers and members of IAStructE,

November was a particularly eventful month for IAStructE. 112th Governing Council meeting of IAStructE was held on 8th November 2025. Several key decisions were taken during this meeting concerning the way forward for the association. It gives me immense pleasure to inform all members and readers that Prof. Prem Krishna was unanimously elected as an Honorary Fellow of IAStructE in recognition of his outstanding achievements and invaluable contributions to the field of structural engineering, besides his dedicated support towards the activities of the Indian Association of Structural Engineers (IAStructE).

On 15th November 2025, we organised a glittering in-person event in New Delhi celebrating Structural Engineers Day and the Annual Award Ceremony. The Structural Engineers Day is celebrated by IAStructE every year, since 2022 in the month of November to commemorate the birth anniversary of our founder Shri Mahendra Raj. We celebrate this day by organising a Mahendra Raj memorial lecture in his memory. This year, the 4th Mahendra Raj memorial lecture was delivered by a renowned engineer Ms Alpa Sheth. The topic of her lecture was “The Structural Engineer's Toolbox: Creativity, Curiosity, and Communications”.

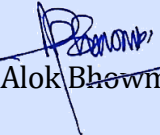
The annual awards ceremony was also held on 15th November 2025. This is an annual event where we recognize excellence in structural engineering by awarding peoples in Structural Engineering fraternity and the outstanding Projects that some of our colleagues have been involved with.

IAStructE also launched an e-book titled “Guidelines for Post Installed Rebars for Concrete-to-Concrete Connection” on Structural Engineers Day celebration held on 15th November. This e-book is the outcome of 6 months of hard work put forth by a team of experts. The initial draft of this e-book was prepared by a Young and Promising Engineer, Mr Shounak Mitra, which was subsequently reviewed and further enriched by a core review team of IAStructE.

This month we also organised two highly educative and enlightening webinars. One was on 20th November, where expert talk was organised on “Technological Advancements and Cutting-Edge Practices in Mechanically Stabilised Earth Structures”. Second was held on 28th November on the topic of “The Story of Longest Span Cantilever Bridge of India: Bagchhal Bridge”. Both the webinars were well attended and the feedback from the participants were very encouraging.

Last but not the least, as we have decided to shift our HQ to a new place on the ground floor, with larger carpet area, better location and with more parking space for the visitors, we are planning to sale our existing IAStructE property, which is located in Kalkaji, New Delhi. This Sale deal has been successfully concluded on 30.11.2025.

Happy Reading !


Alok Bhowmick

FROM THE EDITOR'S DESK



Respected Esteemed Members and Readers,

It is a pleasure to present the November 2025 edition of the IAStructE Newsletter, capturing yet another impactful month for our fraternity. This issue reflects the association's continued efforts to strengthen professional engagement, advance technical knowledge, and celebrate excellence across the structural engineering community.

The month was marked by inspiring milestones, including the celebration of Structural Engineers Day, the Mahendra Raj Memorial Lecture and the IAStructE National Awards Ceremony. These events not only honoured distinguished leaders and emerging talents but also reaffirmed our collective commitment to engineering innovation, public safety and professional integrity.

Our webinars this month showcased exemplary technical expertise from advancements in Mechanically Stabilised Earth Structures to the story behind India's longest cantilever bridge. Such initiatives continue to enrich our members with contemporary practices, real-world challenges, and sophisticated engineering solutions shaping modern infrastructure.

The activities of our student chapters further highlight the growing enthusiasm among young engineers, who are stepping forward to engage deeply with evolving codes, seismic design philosophies, and advanced structural systems. Their active participation reflects a promising future for our profession.

This edition also features a thought-provoking article by Ms. Alpa Sheth, offering valuable reflections on tall building codes and the evolving landscape of design standards. I am confident that the perspectives shared will prompt meaningful discussions and deeper professional introspection.

As always, I encourage members to stay actively involved whether through contributing articles, participating in technical programmes, exploring our publications or engaging with CROSFALL to promote a safer built environment. Your contributions help strengthen IAStructE's vision of elevating structural engineering practice across the nation.

Thank you for your continued support and engagement.

Happy Reading!

Warm regards,



Dr. Priyanka Singh



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Events Organized:

1. Structural Engineers Day, Mahendra Raj Memorial Lecture and Awards ceremony

IAStructE celebrated Structural Engineers Day with great enthusiasm by organizing the Mahendra Raj Memorial Lecture and the IAStructE Awards Ceremony on 15 November 2025 in PHD House, New Delhi.

The event began with a warm welcome by Prof. Shilpa Pal, Honorary Secretary, IAStructE, followed by an inspiring Inaugural Address by Mr. Alok Bhowmick, President, IAStructE. Prof. Prem Krishna, Honorary Fellow, IAStructE, highlighted the significance of Structural Engineers Day and emphasized that IAStructE observes this day every year on 11th November, the birth anniversary of Late Shri Mahendra Raj, Founder and Past President of IAStructE. He spoke about the continued efforts to promote the observance of Structural Engineers Day across India in honour of Shri Mahendra Raj's extraordinary legacy and the invaluable contributions of structural engineers to society.

The highlight of the evening was the 4th Mahendra Raj Memorial Lecture, delivered by Ms. Alpa Sheth, Managing Director, VMS Consultants Pvt. Ltd. Her lecture, titled "The Structural Engineer's Toolbox: Creativity, Curiosity, and Communication," offered profound insights into the essence of exceptional structural engineering. Drawing on captivating examples from legendary engineers such as Robert Maillart, Fazlur Rahman Khan, and Santiago Calatrava, she demonstrated how innovation, when grounded in simplicity and sound engineering principles, can lead to timeless and iconic structural achievements. The lecture also provided a critical reflection on contemporary trends, raising thought-provoking questions about the fine line between genuine innovation and indulgence in iconic structures. Ms. Sheth highlighted the growing reliance on advanced analysis tools, cautioning against blind dependence without sound engineering intuition. Case studies of several super-slender towers emphasized the importance of rigorous design checks, serviceability considerations, and ethical responsibility toward public safety. Drawing inspiration from eminent engineers like Mete Sozen and Bill Baker, she reminded the audience that great design is fundamentally simple, and that structural engineers must uphold both technical excellence and aesthetic integrity. The session was a fitting tribute to Mahendra Raj's legacy, inspiring engineers to embrace creativity while maintaining the highest professional standards.

As part of the celebrations, IAStructE also launched the e-document titled "Guidelines for Post-installed Rebars for Concrete-to-Concrete Connections," authored by Mr. Shounak Mitra, GC member IAStructE. The document is now available on the IAStructE website and can be accessed by members after login.

The lecture was followed by the IAStructE Awards Ceremony, conducted by Prof. Mahesh Tandon, Chairman, Awards Committee and Past President, IAStructE. During the ceremony, the winners of the IAStructE National Awards Competition 2025 were felicitated for their outstanding contributions and excellence in the field of structural engineering in the following categories:

- ★ *Outstanding Structure (Buildings) - **Larsen & Toubro Ltd** for the project "3D Concrete Printing of Villas at PLSH"*
- ★ *Other structures (other than buildings) - **Tech TANGENT Solutions Pvt Ltd** for the project Bagchhal Bridge*
- ★ *Outstanding Structural Engineer Award - **Mr. P. G. Venkatram**, Chief Technology Officer/Advisor Technical Services, ASSYSTEM India Ltd*
- ★ *Outstanding Woman Structural Engineer Award - **Dr. Naveet Kaur**, Principal Scientist at CSIR-Central Road Research Institute (CRR)*

- ★ Promising Young Structural Engineer Award - **Dr. J. Prawin**, Principal Scientist, CSIR-Structural Engineering Research Centre (SERC)
- ★ Promising Young Structural Engineer Award - **Mr. Amit Kumar Gorai**, Assistant Project Manager, B&S Engineering Consultants Pvt. Ltd.
- ★ Best Master's Thesis in Structural Engineering Award
 - First Prize - **Mr. Bhaskar Prakash**, IIT Bhubaneswar
 - Consolation Prize – **Mr. Subhajit Banerjee**, IIT Bhubaneswar
Mr. Sumit Kumar, IIT Mandi
- ★ Outstanding Student Chapter for the year 2023-2025 - **IIIT Hyderabad Student Chapter**
DTU Student Chapter

Glimpses of the event



Prof. Shilpa Pal welcoming the participants



Inaugural address by Mr. Alok Bhowmick



Prof. Prem Krishna speaking on the significance of Structural Engineers Day



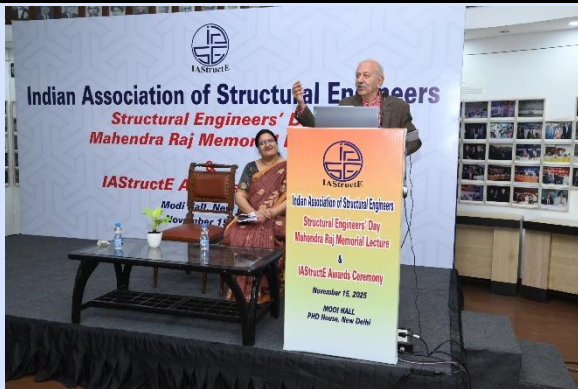
Delivery of the 4th Mahendra Raj Memorial Lecture by Ms. Alpa Sheth.



Guidelines for post-installed rebars being explained by Mr. Rajiv Ahuja.



Mr. Alok Bhowmick and Mr. Shonak Mitra (Author) launching the Guidelines for Post-Installed Rebars.



*Awards Ceremony conducted by
Prof. Mahesh Tandon*



*National Awards 2025 awardees captured together
in one frame*



Participants attending the event



Participants captured together in one frame



Governing Council members present at the event

2. Webinar on “Technological Advancements and Cutting-edge Practices in Mechanically Stabilised Earth Structures”

A webinar on “Technological Advancements and Cutting-edge Practices in Mechanically Stabilised Earth Structures” was organized on November 20, 2025, and was delivered by Mr. Subhajt Chatterjee, National Head, Techno Commercial Services, and Mr. Soumyadeep Majumdar, National Head, MSE Walls, Geoquest India Pvt Ltd. The session was ably moderated by Dr. Anil Joseph, Governing Council Member, IAStructE, and sponsored by Geoquest India Pvt Ltd. The webinar provided participants with valuable insights into sustainable, durable, and economical solutions for

civil engineering projects, covering the design and construction of reinforced soil walls for both dry and submerged conditions, the application of reinforced soil slopes in hilly terrains including landslide stabilization and mitigation, and the use of reinforced soil technology as an effective replacement for RCC bridge abutments. Additionally, attendees learned about sustainable protection against scouring in river bridge abutments and embankments using Fabric Form Concrete Mattresses. Overall, the session offered a deeper understanding of reinforced soil technology and its practical applications in modern infrastructure projects, promoting resilient and cost-effective engineering solutions. The recorded lecture can be seen from the following YouTube link: <https://youtu.be/Tw0br2Xbf1k>



Fig 2: Glimpses of the Lecture

3. Webinar on “The Story of the Longest Span Cantilever Bridge of India: Bagchhal Bridge

A webinar on “The Story of the Longest Span Cantilever Bridge of India: Bagchhal Bridge” was successfully held on November 28, 2025. The session was delivered by Mr. Sandeep Pattiwar, Co-Founder and Director, Tech TANGENT Solutions Pvt Ltd, and was ably moderated by Mr. V. N. Heggade, Vice President (West), IAStructE. The session was initiated by Dr. S. K. Dhawan, GC member IAStructE. During the webinar, Mr. Sandeep Pattiwar presented the story of the Bagchhal Bridge, spanning the Govind Sagar reservoir of the Bhakra Nangal Dam in Himachal Pradesh, highlighting it as a landmark of engineering innovation and perseverance. The bridge, with a continuous span configuration of 72.5 m + 185 m + 72.5 m and a 12-metre-wide deck constructed using the balanced cantilever technique, is recognized as India’s longest cantilever bridge. The project, initiated in 2004, faced severe geotechnical challenges when weak and fractured rock strata at Pier-2 halted construction in 2005. Through advanced engineering analysis and innovative design interventions—including pile foundations integrated with existing shafts, reinforced jacketing of tall piers, revision of the span arrangement to eliminate uplift, and optimization of the external prestressing system—the stalled framework was transformed into a resilient and elegant bridge, restoring vital connectivity across the reservoir. The webinar offered participants an in-depth understanding of the design challenges and innovative solutions adopted for the Bagchhal Bridge, showcasing exemplary problem-solving in complex structural engineering projects. The recorded lecture can be seen from the following YouTube link: <https://youtu.be/H3mdiZtUbPo>



Fig 3: Glimpses of the Webinar

IAStructE Student Chapter Activities

IAStructE – IIIT Hyderabad Student Chapter Event:

1. Lecture on “Design of Structural Steel Systems as per IS 18168:2023”

The IAStructE – IIIT Hyderabad Student Chapter organized an online expert lecture on “Design of Structural Steel Systems as per IS 18168:2023”, delivered by Dr. P. C. Ashwin Kumar, Assistant Professor, Department of Earthquake Engineering, IIT Roorkee, on 19th November 2025. The session provided valuable insights into the design philosophy, structural behaviour, and practical implications of the newly introduced IS 18168 code for the seismic design of steel structures. Dr. Ashwin explained how IS 18168 complements IS 800 by addressing seismic demands with enhanced clarity and precision, encouraging a transition from conventional strength-based design towards a more ductility-focused approach. He elaborated on the capacity design philosophy, clearly distinguishing between deformation-controlled and force-controlled elements, and emphasized the importance of establishing an appropriate hierarchy among structural components to ensure predictable, controlled, and repairable damage during seismic events. Further, the lecture highlighted the material requirements essential for achieving ductile seismic performance. Dr. Ashwin discussed the importance of parameters such as ultimate-to-yield strength ratio, elongation capacity, fracture toughness, and welding quality in influencing cyclic behaviour and ensuring reliable performance under earthquake loading. He stressed that high-quality welding is critical, as it directly affects the structural integrity and ability of the system to dissipate energy during cyclic deformation. The session also covered the influence of section selection and member geometry on seismic performance. Dr. Ashwin highlighted the advantages of using doubly symmetric parallel-flange sections, owing to their superior resistance to cyclic demands, reduced susceptibility to premature buckling, and ability to provide the rotational capacity necessary for effective energy dissipation. He also discussed challenges related to analysis and detailing, including modelling complexities, brace configuration issues, instability, and behaviour at plastic hinge regions. A comparative discussion of different structural systems, including Special Moment Resisting Frames (SMRF), Concentric Braced Frames (CBF), and Eccentric Braced Frames (EBF), provided clarity on their respective suitability in varying seismic zones. Dr. Ashwin also outlined a step-by-step workflow for implementing IS 18168 effectively in design practice, covering system selection, global analysis, identification of plastic mechanisms, capacity-based force calculations, and proper proportioning of both ductile and non-ductile elements. The lecture concluded with an interactive Q&A session, where participants engaged in discussions on system adaptability, Indian steel grades, connection behaviour, detailing challenges, and their practical applications in the field. Dr. Ashwin provided precise technical guidance and valuable real-world insights, making the session highly informative and engaging. Overall, the lecture significantly enhanced the participants’ understanding of modern seismic design practices for steel structures and provided a comprehensive perspective on the effective application of IS 18168 in structural engineering. YouTube Link: <https://www.youtube.com/watch?v=9yLdzGvZTEE>

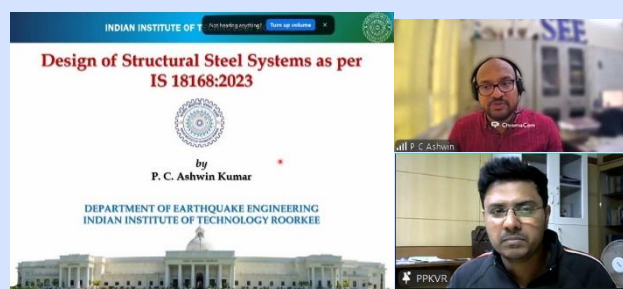


Fig 4: Glimpses of the Lecture

Article:

Reflections on the Tall Building Code and Other Codes

by

Ms. Alpa Sheth

Managing Director of VMS Consultants Pvt. Ltd, Mumbai

There has always been a long-running and inconclusive debate on whether special topics such as seismic design, prestress concrete design, precast construction and even tall building design should be kept in separate silos, to allow for a deep dive specifically into that topic or they should be mainstreamed into the general codes of design. Typically, codes of North America, Europe, Oceania do not have special codes and tend to integrate these topics in their general standards for loading and design, especially for design of buildings.

China was the first country that developed an exclusive code for tall buildings. The first version of the concrete tall (>100m) building code appeared in 1995, but achieved its current avatar of JGJ-3 in 2010. They have since developed a whole suite of codes for Tall buildings including for fire protection of tall buildings, energy efficiency design in tall buildings, performance based design of tall buildings, steel tall buildings, composite tall buildings and tall building foundations.

Since the late 1960s in the developed world, well-defined structural systems of shear walls, wall-frames, framed tubes, tube-in-tube, bundles tubes and a combination of these systems dominated the design of tall buildings. There were stipulations for maximum height permissibility for different types of structural systems in different seismic zones. Not a whole lot was known in the initial design of tall buildings in terms of seismic design. However, by observations of past earthquake damage, engineers had realised some key aspects of building behaviour in earthquakes. They had understood the role of geometry, stiffness and ductility (which allowed buildings to survive in earthquakes even after exceeding their linear elastic capacity) and codified their understanding into an equivalent elastic lateral load design approach.

In a post-modern world, the code restrictions of structural systems for heights and seismic zones appeared obstructive to the architectural and design aspirations of developers and architects alike. At the turn of the 21st century, the Los Angeles Tall Buildings Structural Design Guidelines (LATBSDG) was published in 2008, as a workaround to permit design and construction of tall buildings that did not meet the criteria for structural systems as laid out in the national building codes. "Performance-based" design (PBD) concept was introduced. PBD simply means Design of structures using Non-Linear Analysis and is primarily used for structures which do not conform to code-prescribed structural systems and/or their application constraints. Performance-based design for Tall Buildings was earlier restricted primarily to seismic load design. Performance based design requires a deep understanding of non-linear behaviour and in the hands of an ill-equipped engineer, it can be akin to giving a loaded gun to a child.

Meanwhile, buildings exceeding 50 m in height had begun mushrooming in Mumbai (much before it took off in NCR, Bangalore and Hyderabad) since the 1970s. Without any prescribed norms, clients and designers were at a loss for how to approach such buildings and either referred to international codes or just designed them as vertical extensions of 3 and four storey buildings they were comfortable designing and building, paying scant attention to lateral loads which typically govern design of tall buildings. It would take another forty plus years for Bureau of Indian Standards to develop a code for tall buildings in concrete.

“IS 16700 : 2017 Criteria for Structural Safety of Tall Concrete Buildings” was developed on the premise that an engineer or developer designing or building a Tall structure would have basic knowledge of the essentials. It is thus a Level II code, in that it speaks to the experienced practicing engineer and treats her as a mature professional. The code is meant to be both, the guide rail *and* the guard rail for designing and constructing tall buildings. The code aims to prescribe minimum stiffness, minimum strength, acceptable behaviour in a seismic event and a wind event, minimum robustness and minimum integrity requirements that a building over 50 m height should have. This code encourages the use of prescriptive design for tall buildings, and its scope is limited to building height of 250m. While it has an Annexure stipulating the approval methodology for tall buildings which do not conform to its prescriptive requirements, the infrastructure for the approval process needs to be created by the building authority having jurisdiction. This has not been developed in most cities of the country where tall buildings are being built.

Composite tall buildings now make up about 60 to 70% of total tall buildings (as defined by CTBUH) and CED 38 is in the process of producing a Composite Tall Building Code, with much of the work having been completed. India does not have adequate codes for composite construction and hence a code for composite tall buildings has to start from the fundamentals of composite structural systems. This has been one of the major stumbling blocks that had to be overcome.

To ensure good conformance of codes, codes should be able to make complex concepts simple and accessible (yet not lose anything significant in the process of simplification). Codes are not meant to replace text books and should not take the engineer down a rabbit hole of complex equations and cumbersome procedures for every aspect of design. Explanatory handbooks should ideally supplement codes for better understanding of the underpinning rationale of code clauses and this is still work in progress for most codes that have been developed in the past two decades. The Tall building code committee has worked on a tacit philosophy that if there is a complex equation whose upper and lower bound will differ by only 0.5%, the higher bound shall be given as a prescriptive requirement and the complex equation is done away with. When I read IS 456-2000 and other IS 456 codes prior to it I never cease to be delighted by the simplicity and elegance. I suspect that the same philosophy was at play when formulating the code.

Codes of a country need to be harmonised. They should be speaking to each other and not be at cross purposes. It is not just the underlying technical principles, but also the prioritisation of these principles that needs close alignment across codes. The challenge in achieving this objective is that Codes are written by a set of humans, each with their own background, biases and experience. Codes driven by academics are vastly different in their prioritization and rigour than codes driven by practicing engineers. They have better rigour but poorer triaging principles and can often result in a “missing the woods for the trees” affliction. Codes written by practitioners alone can sometimes be highly inadequate in defining non-negotiable principles. The human element cannot be wished away in the seemingly technical business of code writing.

Daren Acemoglu and James A. Robinson in their book “Why Nations Fail” make a compelling case that it is not disease, climate, geography or culture that explain why some nations are rich and some poor, but rather a matter of institutions (people) and politics. Countries rise when they have the right, pro-growth political institutions and people in place and fail—often spectacularly—when those institutions ossify or have inappropriate people helming them. This can be turned around to understand why some codes succeed to get excellent conformance and why some codes fail spectacularly.

Practicing engineers will typically roll their eyes while dealing with punishing seismic analysis and design requirements for towns and cities which have not experienced a significant earthquake in

the past 100 years. *Risk perception is not communicated by sharing hazard analysis data (which is not validated by empirical evidence.* If you want a buy-in of the structural engineering community for upgrading the seismic zones or seismic force levels of a city, there has to be a credible story accompanying this upgrade. A black-box type of computer model generated seismic hazard analysis is likely to be met by the community with much scepticism. As a result, the earlier code compliance with a lower seismic zone assignment or lower seismic force levels will be lost in the pursuit of a more “accurate” hazard analysis. *‘In seeking the best, we often lose the good.’* If the design of two and three storied schools and hospitals in Seismic Zone V becomes prohibitive in terms of code conformance and cost, it is possible that people will stop building hospitals and schools altogether in such regions or ignore seismic code requirements completely. Both are undesirable scenarios.

Much more is achieved through negotiations and appreciation of the needs and observations of local people, especially if they have experienced a seismic event. An approach by a practicing engineer would be to ensure qualitative attributes of good geometry, integrity, robustness, stability and adequate stiffness and strength to prevent collapse rather than be preoccupied with quantitative issues of an earthquake return period of 475 years or 975 years. I would tend to call such a system in Nassim Taleb’s words as “Anti-fragile”. *Antifragile describes things that benefit from and grow stronger due to stressors, shocks, and disorder, going beyond mere resilience or robustness. While a fragile system breaks under stress and a robust system withstands it, an antifragile system actually improves from it.*

You can, on the other hand, have a building with a lot of structural gymnastics which may pass all PBD requirements of performance in the selected suite of earthquake ground motions and yet fail in an actual earthquake whose ground motion (a black swan event) may be completely different from your selected set of 15 ground motions. Conversely, a building designed with above mentioned quantitative features of robustness, integrity and so on may have behaved extremely well despite not having been expressly designed for the code prescribed numbers. Seismic design is the convergence of the Art of seismic design with the Science of seismic design.

Codes are becoming more complex, more bulky worldwide. Computers and Structures Inc Founder Er Ashraf Habibullah pleaded in 2019 to “make a push to simplify and reorganize our design codes so that we spend less time deciphering the complexities of clauses that don’t even apply to our projects!! This way we will have more free time for fun and more time to promote the grandeur of our profession to claim the credit that is rightfully ours while making more money with less stress!”

I think it is time we as structural engineers reflect on the direction we intend to go.

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

QUIZ - Test Your Structural Concepts!

This quiz aims to generate interest in structural engineering among stakeholders and to encourage greater participation from young engineers in the field. Each issue of the newsletter features three conceptual questions covering different aspects of structural engineering. 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 **October 2025 Newsletter**. The correct answers are provided below for reference:

1. Minimum diameter of vertical reinforcement in column is specified as 12mm in various codes because of any one of the following reasons:

Answer: (c)

2. Precast elements are usually placed on a **three-point support system** during storage, stacking and transport. This is mainly because of any one of the following reasons:

Answer: (b)

3. For seismic prone areas (i.e. Seismic zone III to V), the actual 0.2% proof strength of rebar shall not exceed the characteristic 0.2% proof strength considered in design, by more than 20%. Why increase of strength in rebar beyond a limit is not allowed?

Answer: (a)

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

1. When designing a short column subjected to combined axial load (P_u) and uniaxial bending moment (M_u), the interaction curve is used. The partial safety factor for concrete (γ_{mc}) in this limit state is taken as **1.5**. However, when calculating the design compressive stress in concrete ($0.446 f_{ck}$), the factor 0.67 is introduced. This factor, 0.67 (for converting f_{ck} to mean cylinder strength), is specifically accounted for in column design to:
 - a) Account for the slenderness effects in the column.
 - b) Adjust the strength based on the different casting and quality control conditions of site work versus lab testing.
 - c) Account for the difference between the actual in-situ strength and the cube test strength.
 - d) Account for the long-term effects of creep and shrinkage.
2. If an RC member is required to have a 4 hour fire resistance rating, what is the minimum nominal cover that must be provided to the main reinforcement?
 - a) 20 mm.
 - b) 30 mm.
 - c) 40 mm.
 - d) 50 mm.
3. According to the IS 456:2000 code, tension splices in flexural members should NOT be provided at:
 - a) Supports.
 - b) A distance less than $2d$ from the point of maximum moment.
 - c) A section where the bending moment is less than 0.5 times the full moment capacity.
 - d) The point of contraflexure.

Accredited Structural Engineers (ASE – IAStructE):

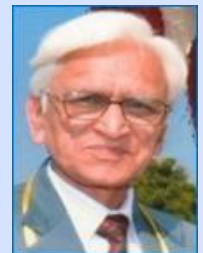
The IAStructE Accreditation Program for Accredited Structural Engineers (ASE – IAStructE) is designed for experienced structural engineers with a strong understanding of Indian design codes and standards. This accreditation sets a benchmark for professional and technical excellence, enhancing structural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

Honorary Fellow:

IAStructE takes immense pleasure in recognising the outstanding achievements and invaluable contributions of **Prof. Prem Krishna**, Former Professor, IIT Roorkee, who has been a Fellow Member of IAStructE, to the field of structural engineering. In appreciation of his exceptional professional accomplishments and his dedicated support to the activities of the Indian Association of Structural Engineers (IAStructE), the Governing Council, in its 112th meeting, has unanimously elected him as an Honorary Fellow of IAStructE.



Members Achievement:

1. Mr. V. N. Heggade, Vice President (West), IAStructE, and Founder & CEO of DECon Complete Solutions, has been honoured with the CEAI National Award 2025 for 'Excellence in Engineering Innovation and Sustainability Solutions' for the project Inspection & Recommendation of Tilted & Shifted Well Foundation at P12 Location of the Mokama Railway Bridge over the River Ganga. The award recognizes an extraordinary engineering achievement that successfully rescued the critically tilted P12 well foundation of the Mokama Bridge. The award was presented during the CEAI Annual Conference held on 26–27 November 2025 in New Delhi.



2. Dr. Vasudev V. Nori, Fellow IAStructE and Chairman of Shirish Patel & Associates Consultants Pvt. Ltd., has been honoured with the prestigious Shri Mahendra Raj Lifetime Achievement Award 2025 by the Consulting Engineers Association of India (CEAI). This distinguished recognition, conferred during the CEAI Annual Conference held on 26–27 November 2025 in New Delhi, celebrates his outstanding contributions, visionary leadership, and enduring impact in the field of structural engineering. His exemplary professional journey and notable work have significantly advanced the practice and understanding of structural engineering in India.





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. Role of Digital Technology in Structural Engineering**
- 2. Codes in Structural Engineering – Developments & Needs for Change.**
- 3. Dam and Hydropower Structure**

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. 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

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.

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;
- Rights to nominate candidates for fib awards.

Members of IAStructE will enjoy the following benefits:

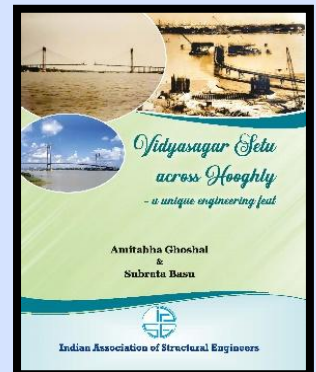
- Opportunity to become a part of fib technical committees and contribute to the fib Model Codes (published approximately every 10 years).
- Opportunity to become a part of the fib Task Groups and Commissions.
- Opportunity to be nominated for the fib awards thru IAStructE.
- Access to all the bulletins 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>

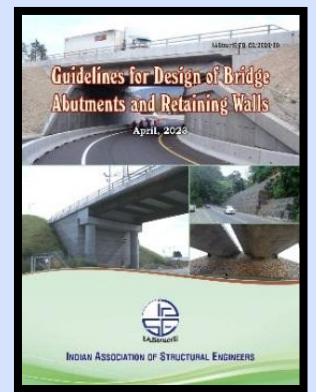
IAStructE Publications:

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.

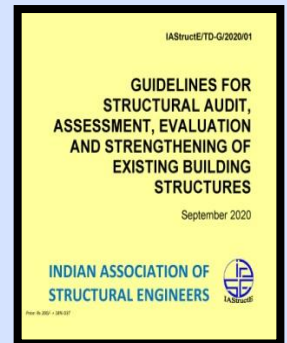


3. Commentary with Worked Examples for IRC: 6-2017: It is a document having commentary with worked example on IRC: 6-2017 (The code for Loads & Load Combinations for design of Highway Bridges). This commentary is in two separate volumes. Volume-1 pertains to the Commentary while Volume-2 pertains to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

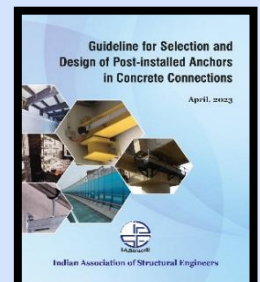
IAStructE/TD-CC/2020/02	IAStructE/TD-CC/2020/01
<p>COMMENTARY WITH WORKED EXAMPLES FOR IRC:6-2017</p> <p>STANDARD SPECIFICATIONS AND CODE OF PRACTICE FOR ROAD BRIDGES SECTION II : LOADS & LOAD COMBINATIONS (SEVENTH REVISION)</p> <p>NOVEMBER 2020</p> <p>VOLUME 2 OF 2 : ILLUSTRATIVE WORKED EXAMPLE</p>	<p>COMMENTARY WITH WORKED EXAMPLES FOR IRC:6-2017</p> <p>STANDARD SPECIFICATIONS AND CODE OF PRACTICE FOR ROAD BRIDGES SECTION II : LOADS & LOAD COMBINATIONS (SEVENTH REVISION)</p> <p>NOVEMBER 2020</p> <p>VOLUME 1 OF 2 : COMMENTARY</p>

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

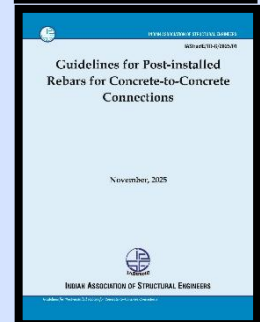
4. Guidelines for Structural Audit, Assessment, Evaluation and Strengthening of Existing buildings Structures: This document will guide structural engineers in proper assessment of building structures before issuing structural stability certificate. The Guideline emphasizes the urgent need to enhance 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

Indian Association of Structural Engineers
K-69A, Basement, Kalkaji, New Delhi 110019

Tel: (011) 45794829; Email: iastructe@gmail.com; Website: www.iastructe.co.in