



MESSAGE FROM THE PRESIDENT



Dear Friends,

Greetings!!

I am very happy to present to you the Newsletter of August 2023. You shall be happy to know that IAStructE is very actively engaged in conducting technical lectures, webinars, and publication of newsletters, CROSFALL & Structural Engineering Digest. All these activities have rich technical content and are appreciated by the fraternity. You may find details of such activities and publications in this newsletter and on our website.

Structural Engineering Digest (SED) July-September 2023 issue is dedicated to the "Structural Safety Audit" theme, which will be released soon. The fourth issue of CROSFALL is getting ready and will be released soon. You may contribute any case study on structural failure or description of a near-miss case for publication in future issues. As you know, the identity of the reporter and the project will be kept confidential. It is purely for learning purposes. Our various technical committees are working hard to bring technical documents relevant to the structural engineering fraternity.

An online Expert Session on "Pervious Concrete – Can it Mitigate Some Effects of Climate Change? By Dr. N Subramanian was held on 4th August 2023, an Expert Session on "2023 Turkey Earthquake – Performance of Structures and Causes of Failures" by Mr Bhairav Patel, StrucArt Design Consultants, Ahmedabad and a Guest Lecture on "Probabilistic Framework for Seismic Vulnerability Assessment of Aging Infrastructure Systems" by Dr Shivang Shekhar, Assistant Professor, IIT, Mandi on 25 August 2023 was organised. An interaction session with potential applicants related to the newly launched scheme, 'Accredited Structural Engineer IAStructE' was organised on 31st August. I urge you to spread the word about it and encourage engineers to apply for accreditation.

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

Best Regards,

Ramanchark

Prof. R. Pradeep Kumar
President-IAStructE

FROM THE EDITOR'S DESK



Dear Reader,

Welcome to our latest newsletter! We're excited to bring you the latest student chapter updates and call for nominations for the IAStructE National Award Competition 2023.

Stay tuned for informative and engaging content.

Thanks and regards,

Visalakshi

Prof. Visalakshi Talakokula

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Online Event:

Guidance meeting on August 31, 2023 at 05:30 PM to facilitate the prospective candidates of ASE-IAStructE program

An online guidance meeting was organized on 31st August 2023 to facilitate the prospective candidates, in which the difficulties they could be facing in filling out the application and IPD forms was discussed. The meeting was attended by the 25 engineers.

IAStructE Student Chapters Activities:

IAStructE CEPT Student Chapter events:

1. Tittle of the event: Expert Session on Pervious Concrete – Can it Mitigate Some Effects of Climate Change?

Speaker: Dr. N Subramanian - Award winning author, Researcher, PhD. FNAE, Consulting Engineer, Maryland, USA

Date & Venue: 04 August 2023, CEPT University

Proceedings of the event: Pervious concrete is well-thought-out to be an advanced pavement material in terms of the environmental benefits arising from its basic feature i.e. high water-permeability. Because of its sole design mix, it permits rain and storm water runoffs to percolate through it and regenerate the water table. Due to storm water infiltration through the concrete layer, pervious concrete parking lots can serve as quality recharge basins. Similarly, we achieve better road safety since skid resistance increases, road sound dampening, and a reduction of the “heat island” effect. The proposed talk presented the framework for sustainable environment through pervious concrete.



Fig.1 Glimpses from online lecture

2. Tittle of the event: Expert Session on “2023 Turkey Earthquake – Performance of Structures and Causes of failures”

Speaker: Mr. Bhairav Patel, Owner - StrucArt Design Consultants, Ahmedabad

Date & Venue: 25 August 2023, CEPT University

Proceedings of the event: The two major recent earthquakes (M7.8 and M7.7), on 6th February 2023 at the EAF (Eastern Anatolian Fault) in Turkey, have caused widespread concern over the safety of structures and human life across the world; particularly in areas with high seismicity like India, where the majority of the land mass (about 60%) falls in zones with moderate to high seismicity. The 2023 Turkey earthquakes have resulted in significant loss of life, considerable damage to several multi-storeyed buildings and a huge economic loss. In this context, it might be prudent to ask questions like “What was the building typology in the affected areas?” and “How did the major buildings in these areas perform during the earthquake?” Also being located at the junction of active faults, one may ask “What were the critical seismological features of this earthquake?” and “Were the code specified design forces adequate for an event of this magnitude?” Since more than 1,20,000 buildings have reportedly collapsed or are heavily damaged, it becomes important to ask “What were some of the common causes of failures and how can these failures be avoided in future?” and “Can we learn something from these failures? This talk attempted to answer the above-mentioned questions based on a brief reconnaissance of the affected area done by the speaker in May 2023 and the study of available literature on the 2023

Turkey earthquake.



Fig.2 Glimpses from online lecture

IAStructE – DTU, Delhi Student Chapter event:

Title of the event: Expert talk on “Standardization of Building Materials”

Speakers: Mr. Arun Kumar S., Senior Engineer & Head (BIS) and Mr. Dheeraj Damachya, Scientist B (BIS) Assistant Professor, IIT, Mandi

Date & Venue: 23 August 2023 at Delhi Technological University

Proceedings of the event: An expert talk on Standardization of Building Materials was organized on 23 August 2023 by IAStructE DTU Student chapter and Department of Civil Engg. Jointly with Bureau of Indian Standards. The session was appreciated by the students. It was attended by more than 75 students.



Fig. 3 Glimpses from expert talk

IAStructE - IIIT, Hyderabad Student Chapter event:

Title of the event: Guest Lecture on “Probabilistic Framework for Seismic Vulnerability Assessment of Aging Infrastructure Systems”

Speaker: Dr. Shivang Shekhar, Assistant Professor, IIT, Mandi

Date & Venue: 25 August 2023

Proceedings of the event: IAStructE – IIIT Hyderabad student chapter of Earthquake Engineering Research Centre, conducted an online Keynote Lecture on the topic “Probabilistic Framework for Seismic Vulnerability Assessment of Aging Infrastructure Systems” on 25th August 2023 for all the post-graduate students, structural engineers, faculty, academic and research fraternity. The lecture was delivered by Dr. Shivang Shekhar, Assistant Professor, School of Civil and Environment Engineering, IIT Mandi. He provided valuable insights into the modelling of deterioration in Reinforced Concrete (RC) structures, explaining the various stages of corrosion and their underlying mechanisms. The presentation encompassed a comprehensive exploration of both primary and secondary effects associated with corrosion across different stages. The speaker delved into the topic of bridge

deterioration with an emphasis on modelling bearing deterioration and conducting seismic fragility analyses. These assessments aimed to predict potential bridge failures while accounting for uncertainties stemming from material properties, structural modelling, and the progression of deterioration. The talk also incorporated an in-depth exploration of time-dependent seismic fragility assessment, with a step-by-step walkthrough of each assessment phase. During the session, a case study involving the evaluation of a double-deck bridge model was showcased, followed by a thorough review of the assessment & findings and conclusions. The discussion extended to the utilization of parameterized fragility models for the presented case study, with a detailed breakdown of each procedural step to understand the vulnerability assessment of aging bridges. The webinar concluded with a highly insightful discussion involving active participation from the attendees, contributing to the overall depth and breadth of the topic's exploration.

YouTube Link: https://www.youtube.com/watch?v=VISIKi7u99Q&ab_channel=IIITHyderabad

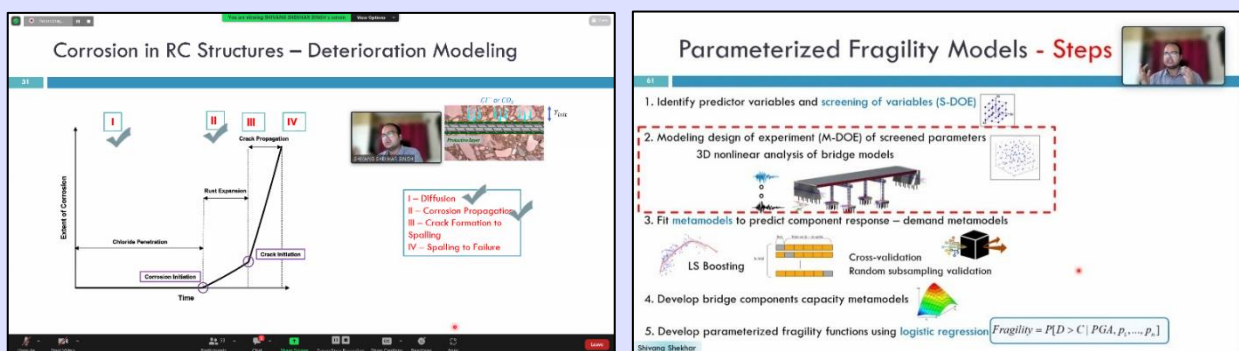


Fig. 4 Glimpses from online guest lecture

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.



IAStructE Library

Call for IAStructE National Award Competition 2023:

Call for Nominations: IAStructE is calling for nominations for the 2023-National Awards Competition. The nominations forms for various categories can be downloaded from the links given below. The last date for receipt of nominations is 31st October 2023.

Registration Link: <https://www.iastructe.co.in/iastructe-national-awards-2023.php>



Indian Association of Structural Engineers

IAStructE National Awards Competition 2023

Call for Nomination

The Indian Association of Structural Engineers (IAStructE) is a prominent national professional body of structural engineers in India dedicated to the overall development of structural engineering in India. Its activities & publications are known for rich & relevant technical contents. It represents the profession on policy matters. The National Awards Competition by IAStructE is held every year to recognize the contribution of structural engineers and to promote structural engineering excellence.

Nominations are invited for IAStructE National Awards Competition 2023 in the following Categories:

(Instructions & Terms are given in the nomination forms of each category)

1. OUTSTANDING STRUCTURE OF THE YEAR (Two Awards)
 - i) Buildings: Residential, Commercial, Industrial, Hospitals, Schools etc.,
 - ii) Structures other than buildings: Bridges, Large span space structures for sports, exhibitions etc, Industrial structures, Hydraulic Structures, Monuments, Tall towers etc.
2. OUTSTANDING STRUCTURAL ENGINEER AWARD (One Award)
3. OUTSTANDING WOMAN STRUCTURAL ENGINEER AWARD (One Award)
4. PROMISING YOUNG STRUCTURAL ENGINEER AWARD (One Award)
5. BEST MASTER'S THESIS IN STRUCTURAL ENGINEERING (One Award)

(Download nomination forms from the link given below - Kindly read instructions carefully before submission)

<http://iastructe.co.in/iastructe-national-awards-2023.php>

The Awards

- All Awards shall consist of a Plaque along with a Certificate & Citation. The Best Master's Thesis Awardee will also get a cash prize of Rs. 20,000/-.
- The Award Winners can use the IAStructE logo on their print and promotion material by mentioning the year of the award and the name of the Indian Association of Structural Engineers.
- The Jury can cancel or alter the number of awards as stipulated above.

**Last date of receipt
of nominations
31st October 2023**



INDIAN ASSOCIATION OF STRUCTURAL ENGINEERS
K-69 A, Basement, Kalkaji, New Delhi - 110019
Tel : (011) 45794829 • E-mail: iastructe@gmail.com • Web : www.iastructe.co.in

Appreciation Letter:

A letter received from Bureau of Indian Standards (BIS) recognizing the contribution of our Past President, Mr. Manoj Mittal and IAStructE in the formulation of the Indian Standard 18299:2023 "Structural Design and Proof Checking Consultancy Services for Structures - Requirements"- Published by BIS.



भारतीय मानक ब्यूरो
उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय
भारत सरकार
BUREAU OF INDIAN STANDARDS
Ministry of Consumer Affairs, Food & Public Distribution
Government of India

Our Ref: SSD/SSD 06/IS 18299

Date: 29 August 2023

Shri Manoj K. Mittal,
President,
Indian Association of Structural Engineers,
New Delhi.

Subject: Contribution in the formulation of the Indian Standard, IS 18299:2023 - Structural Design and Proof Checking Consultancy Services for Structures — Requirements.

Sir,

I am writing this letter to place on record the appreciation of the Bureau of Indian Standards for the commendable contribution made by Shri Manoj K. Mittal, representing the Indian Association of Structural Engineers, New Delhi. His expertise, passion and dedication to the cause of standardization undoubtedly helped in formulating an Indian standard, IS 18299:2023 on 'Structural Design and Proof Checking Consultancy Services for Structures — Requirements'.

I would like to extend our sincere appreciation to Shri Manoj K. Mittal for his outstanding work and express our gratitude for his ongoing support. I have no doubt that the Bureau through its technical committee will continue to receive the cooperation and active support of Shri Manoj K. Mittal in the future.

Thanking you,

Yours faithfully,



S. K. Kanojia
Scientist-F &
Head (Services Sector Department)

मानक भवन, 9, बहादुरशाह ज़फ़र मार्ग, नई दिल्ली 110002
दूरभाष : 23230131, 23233375, 23239402
ई-मेल : info@bis.gov.in वेबसाइट : www.bis.gov.in

Manak Bhavan, 9, Bahadur Shah Zafar Marg, New Delhi-110002
Tel : 23230131, 23233375, 23239402
e-mail : info@bis.gov.in Website : www.bis.gov.in

"For detailed information on BIS, consult the e-BIS Portal (www.manakonline.in) / Please use BIS CARE APP for verification of ISI-marked goods and hallmarked gold jewellery"

Message from IAStructE Social Media & Digitization Committee

Let's get "***DIGITIZED***"

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

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

Call for papers for CROSFALL:

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

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

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

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

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

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

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

July-September 2023 issue: Theme: Structural Safety Audits
Guest Editor: Mr. Manoj Mittal

Sub-theme:

- Aim/objectives/types of structural safety audits
- Regulatory/policy & byelaws-related issues
- Methodology & reporting including code compliance.
- Professional liability issues in structural audits & certification
- Challenges & Pitfalls in Conducting Structural Safety Audits
- Modern diagnostic & computation tools for structural safety audits
- Standard structural audit templates for diverse types of structures
- Current practices in structural safety audits in India & other countries
- Structural Safety Audits of important & complex structures

October-December 2023 issue: Theme: Tunnel/Underground Structures

Guest Editor: Mr. Partha Banerjee

Sub-theme:

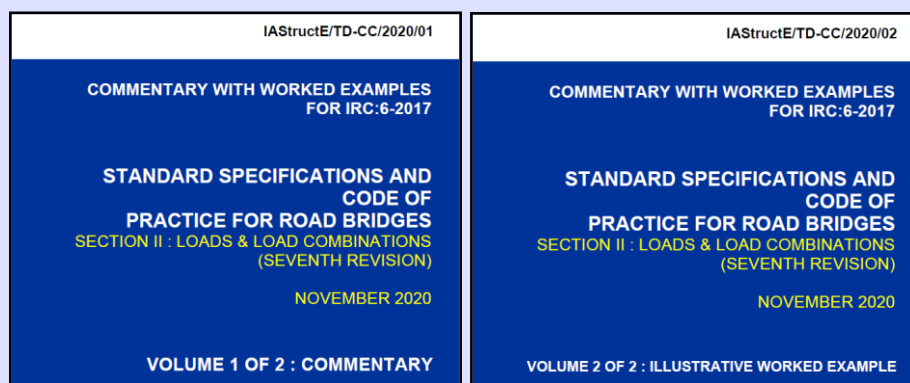
- Tunnel Design: TBM, NATM, Cut & Cover and Cross Passage
- Tunnel Construction: TBM, NATM, Cut & Cover and Cross passage
- Underground Station Design
- Underground Station Constructions
- Instrumentation & Monitoring and Damage Assessments
- Geophysical Investigation in Urban Area

Interested professionals may send their abstract along with the full paper on any of the above issues along with their photograph and brief resume latest by 15 September 2023 or at the earliest convenience. Articles are invited from i) Members of IAStructE; ii) Specialists in the field even though they are not members of IAStructE.

Interested authors/contributors may kindly mail to iastructe@gmail.com regarding i) Broad guidelines on areas of coverage; ii) size of the article; iii) format of paper submission. As per the laid down procedures all the papers shall be sent to the referee for review and the comments will be informed to the authors for incorporating the same. Papers shall be published after peer review & approval of SED editorial board.

IAStructE Publications:

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

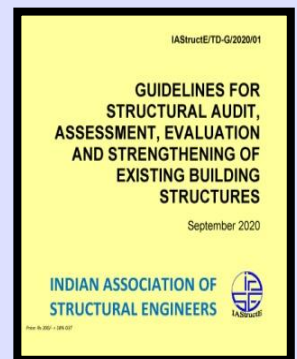


It's a priced document and hence not freely downloadable.

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

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

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



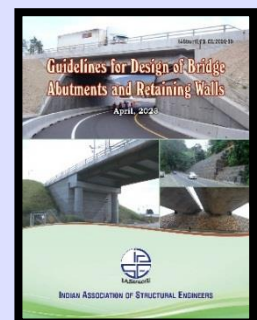
It's a priced document and hence not freely downloadable.

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

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

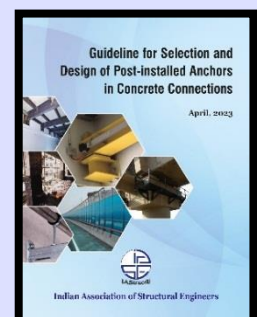
4. Commentary on IS: 1893 Part 1: The commentary is available on www.iastructe.co.in under IAStructE Professional Documents. IAStructE member can access this document after login.

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



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

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



Advertisement Tariffs:

Structural Engineering Digest (being published in PDF format)

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

IAStructE Monthly Newsletter (being published in PDF format)

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

Accredited Structural Engineers (ASE – IAStructE):

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

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

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

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

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

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

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

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



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