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Newsletter of the Indian Association of Structural

September 2023

www.iastructe.co.in

MESSAGE FROM THE PRESIDENT



Dear Friends,

Greetings!!

I am very happy to present to you the Newsletter of September 2023. You shall be happy to know that IAStructE has increased its technical events such as 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.

A seminar on "Structural Design and Proof Checking Consultancy Services for Structures - Requirements" in hybrid mode was organised by the Bureau of Indian Standards (BIS) and IAStructE on September 27, 2023. An online lecture on "Successful C & D Waste Management Initiatives in Delhi" was organized on 28 September 2023. An online Panel discussion on "Confidential Reporting of Structural failures" was organized on 30 September 2023. In addition to the above, there were some active student chapter activities. DTU Student Chapter has organized CAD Craftsmanship Challenge on 17 September 2023. IIIT, Hyderabad Student Chapter organized a lecture on "Seismic Safety of Building Construction in India under Severe Earthquakes by Using Passive Energy Dissipating Devices (PEDD)" by Prof. Pankaj Agarwal, IIT Roorkee.

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

Best Regards,

Ramancharl

Prof. R. Pradeep Kumar President-IAStructE

FROM THE EDITOR'S DESK



Dear Readers,

Welcome to our most recent newsletter! In this edition, we present a comprehensive overview of the organization's knowledge dissemination initiatives, including

a seminar aimed at raising awareness about the Confidential Reporting of Structural Failures. Do follow us on all social media platforms.

Thanks and regards,

Prof. Visalakshi Talakokula

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Online Event:

Seminar on Structural Design and Proof Checking Consultancy Services

A seminar on "Structural Design and Proof Checking Consultancy Services for Structures -Requirements" in hybrid mode was organised by the Bureau of Indian Standards (BIS) and IAStructE on September 27, 2023. The goal was to inform the stakeholders about the newly published Indian standard, IS 18299: 2023. The distinguished speakers and subject matter experts shared their best practises and experiences with the attendees, enriching their learning. Additionally, Mr. Manoj Mittal, the immediate past president, and Mr. Alok Bhowmick, the past president of IAStructE, gave presentations.

Lecture on Successful C & D Waste Management Initiatives in Delhi

An online lecture on "Successful C & D Waste Management Initiatives in Delhi" was organized on 28 September 2023. It was delivered by the Mr. Pradeep Khandelwal, Retired Chief Engineer, EDMC. Participants in the lecture learnt how to successfully dispose of construction trash, which is one of the causes of environmental contamination.

You tube link: https://www.youtube.com/live/Mwjr6kjf0Eg?si=d7Wd4hOonQ7CTDJs



Fig.1 Glimpses from the online lecture

Panel Discussion on "Confidential Reporting of Structural failures"

An online Panel discussion on "Confidential Reporting of Structural failures" was organized on 30 September 2023. In this discussion, renowned structural engineering professionals from both the industry and academia were present. The discussion was moderated by Mr. Manoj Mittal, Imm. Past President, IAStructE

The following were the Panelists:

Mr. Alok Bhowmick, Chief-Editor, CROSFALL

Prof. Mahesh Tandon, Past President, IAStructE

Mr. Rajiv Ahuja, GC Member, IAStructE

Mr. V. N. Heggade, Vice-President, IAStructE (W)

You tube link: https://www.youtube.com/live/EtkU5dRjXHA?si=T4Qx9JPf6B7DPx31



Fig. 2 Glimpses from the Panel Discussion



IAStructE Student Chapters Activities:

IAStructE DTU Student Chapter events:

1. Tittle of the event: CAD Craftsmanship Challenge

Date & Venue: 17 September 2023 through online

Proceedings of the event: IAStructE DTU Student Chapter, Department of Civil Engineering, and DUCAT, the IT training school, organised the "CAD Craftsmanship Challenge" contests for students to display their design abilities using AutoCAD Software. The assignment was to utilize AutoCAD to design a residential home with a footprint of 30' by 60', including all necessary components to satisfy the minimum needs for a home while guaranteeing optimum space utilization, functionality, and a harmonious integration of indoor and outdoor spaces.



Fig. 3 Glimpses of online event

IAStructE – IIIT, Hyderabad Student Chapter event:

2. Tittle of the event: Lecture on "Seismic Safety of Building Construction in India under Severe Earthquakes by Using Passive Energy Dissipating Devices (PEDD)"

Speaker: Dr. Pankaj Agarwal, Professor at the Department of Earthquake Engineering, IIT Roorkee

Date & Venue: 13 September 2023 through online

Proceedings of the event: The lecture covers the fundamental aspects of structural response to earthquakes, the magnitude of forces in severe earthquake scenarios, the elastic and elasto-plastic responses of structures, and an in-depth exploration of structural ductility. The discussion encompassed a detailed examination and characteristics of plastic hinges, failure mechanisms in framed structures, and the principle of "strong columns and weak beams" in structural design. The speaker delved into damping-based earthquake-resistant structural design, transmissibility of forces, and the use of response spectra in this design approach. He elucidated various methods to enhance damping in structures, with a particular focus on passive energy dissipation devices (PEDD) and energy-dissipating mechanisms. The lecture also highlighted four case/experimental studies including various damping devices for reinforced concrete and masonry structures. He highlighted their key features and results to provide attendees with a clearer understanding of the topic and its practical applications. To conclude the presentation, Dr. Pankaj shared a video demonstrating ongoing experiments at IIT Roorkee related to the discussed topics and concepts, and offering valuable insights for a more comprehensive grasp of the subject matter. The webinar was completed with an engaging and insightful discussion, with active participation from the attendees. This discussion enriched the overall exploration of the topic and its significance in seismic safety for building construction in India under severe earthquake conditions. YouTube link: https://www.youtube.com/watch?v=L2MIXt79Q0s





Forthcoming Events:

Event	Topic	Speakers	Date & Timing
Lecture-cum- Panel Discussion	Safe Demolition of SuperTech Twin Towers in Noida Session 1 Registration link:	Eminent personalitie s both from	07.10.2023 from
	https://us02web.zoom.us/webinar/register/WN_YuNzft djRNW490KAuAmNew	Industry and Academia	11:00 AM to 01 PM &
	Session 2 Registration link: https://us02web.zoom.us/webinar/register/WN_t- 4gCc_tQKCk-2juw5HemQ		03:30 PM to 05:00 PM

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 Newsletter*September 2023*



New Members:

"Member" Grade

M/S No	Name	Designation, Organization	State
M-367	Mr. Kanagamanigandan P.	Design Expert at Louis Berger Consulting	Tamil Nadu
	Mr. Surojit Mondal	Senior Design Engineer at Breslau	West
M-368	MI. Surojit Monual	Infrastructure & Technology Pvt. Ltd.	Bengal

"Associate Member" Grade

M/S No	Name	Designation, Organization	State	
AM-435	Mr. Mohd. Farhan	Structural Engineer BMSF design consultants Pvt. Ltd.		
AM-436	Mr. Sunil Singh	Structural Design Engineer at Manish Consultants	nish Madhya Pradesh	
AM-437	Mr. Deeplav Kumar	Bridge Design Engineer at Transys Consulting Pvt. Ltd. Junior Design Engineer at Kirby Building Systems India Pvt. Ltd.		
AM-438	Mr. Praveen Kumar K.			
AM-439	Mr. Sathwik Chiluka	Owner at Motive Stone Constructions Telanga		
AM-440	Mr. Sayeedul Haque	e Junior Structural Designer at Breslau Infrastructure and Technology Pvt. Ltd.		

"Student Member" Grade

14 students: IIIT, Hyderabad**1 student**: NITTTR, Chandigarh**1 student**: MVSR Engineering College, Hyderabad

Members Achievement:

Skeleton Consultants Pvt. Ltd. Noida, headed by Er. Dr. Abhay Gupta, Fellow member of IAStructE has been awarded "Outstanding Concrete Structure" of Western UP in the building category for the project "Healthy Planet School, Noida" by Indian Concrete Institute, Ghaziabad Centre and Ultratech cements.

Healthy planet school, NOIDA is one of the state of the art facilities in school education, built over an area of 3250sqm. It is a unique design by Architect Studio Vir Muller and structural designed by Skeleton Consultants Noida, using exposed concrete and brickwork concept. Internal areas been illuminated by skylights, attracting the young minds. Exposed concrete & bricks with coloured terrazzo are primary materials used in construction. HPS is a 3 storey building having Basement, Ground & first floor. This building has adopted the green building concepts like use of fly ash in concrete mix design, efficient use of energy like installing solar panels on roof etc.

Dynamic analysis is adopted according to IS 1893:2016. For analysis and design, a 3-D model was prepared and analysed using ETABS software. The foundation was designed, using support reactions extracted from ETABS model to SAFE and Excel.

Self-compacting concrete was used in vertical members. The workability of concrete was maintained according to the variation in temperature to avoid segregation and honey combing. Major difficulty was to achieve the required level of workability, maintaining the water cement ratio and design mix proportion, along with material procurement, keeping in mind a smooth finish.

The project consists of large corbel type curved backbone walls supporting large cantilevers. Walls in floors are provided with large cut-outs. Flat slab construction is used due to limited thickness and stiffener beams were inserted with steel sections to control the shear and deflection. Special shuttering was manufactured due to complex geometry. Quality control for concrete and curing was given special attention.



Fig. 6 Glimpses of the award ceremony



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



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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/UCvv7ojX09Dxq1WtP_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 sent the reports about structural safety issues related to all types of structures (i.e. buildings, bridges, tunnels, industrial structures etc.) in the built environment. The reporting can be related to:

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

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

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

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

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

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 October 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.	y, 20% rebate for half yearly and 30% rebate for yearly booking. 4.75 inch x 7 inch 2.2,000/- + 18% GST per issue, 10% rebate for y, 20% rebate for half-yearly, and 30% rebate for Card	
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)		

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

IAStructE Newsletter*September 2023*



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