



# IAStructE

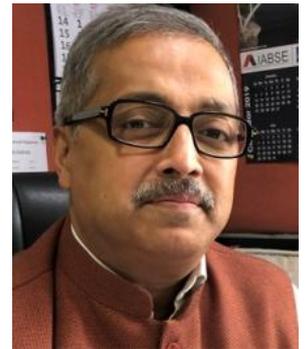
# news letter

Newsletter of the Indian Association of Structural Engineers  
October 2019

## Message from the President

Dear Members,

It is hard to get into normal life after facing the ultimate tragedy of my life in the form of loss of my only daughter, Antara, who has taken the eternal journey to heaven on 25th September 2019, when she met with a road accident in the streets of El-Cerrito (a city in Contra Costa County), California. Nothing could be more devastating in life than this mountain of tragedy. However, life demands and presumes that the tragedy will eventually be accepted with grace and we shall continue with our lives and duties suppressing the sufferings and personal loss. So I am, sitting in front of my laptop, and writing this piece for the Newsletter of IAStructE.



Month of October is a very exuberant time in India and I am sure you all have celebrated with your family and friends this year's festival season of Navaratri, Ramlila, Durga Puja, Dussehra, and Lakshmi Puja and countless many others, which must have brought to you and your family endless joy, peace and abundance.

Coming to the activities of the association, IAStructE governing council members, various committee members and volunteers has been quite active in this festive season with the activities of the association. We concluded two refresher courses over last one month. One on the "New seismic guideline, IRC:SP:114-2018" and the other on "Performance based design of buildings and bridges". Both the courses were very well received by the structural engineering fraternity. Preparations are going on in full swing now for the forthcoming international seminar on performance-based design, which is scheduled on 8th and 9th of November 2019 at New Delhi.

Meanwhile IAStructE publication committee is busy with the development of commentary for the various BIS / IRC codes. We are planning to hold a brain-storming session for one of the document titled "proposed modification and commentary of IRC:6-2017" which is scheduled for 23rd November 2019. The document is in the final stage of completion and will be circulated to members and experts for their input by 1st week of November 2019.

The next series of CPD courses will take place in the month of January 2020 at New Delhi. It will be on the topic of steel design.

Wishing all members and their families a very Happy and Joyful Diwali!

Alok Bhowmick  
President-IAStructE

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Er. Rajiv Ahuja  
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### Technical Lecture on Wind Engineering

Technical Lecture by Balla Venkumar, Country Head/Wind Engineering specialist, CPP Wind Engineering & Air Quality Consultants on the topic "Wind Engineering on High Rise Buildings and civil Structures: Wind Tunnel Studies, Comparison with IS875 code and Recommendations" was organized on 24th October 2019 at New Delhi.



### Refresher Course on "Performance Based Design for Buildings & Bridges"

The Refresher Course on "Performance Based Design for Buildings & Bridges" was organized from 14th September 2019 to 19th October 2019 at PHD House, New Delhi. This was a 22 hours course with a lecture held on every Saturdays. Mr Vipul Ahuja, Vice President (North) IAStructE was the Course Coordinator. The course was sponsored by Taylor Devices India and Mageba Bridge Products Pvt Ltd. It was attended by 55 delegates. The course was very well appreciated by all the participants. Lectures were delivered by the following eminent speakers:

- Mr. Vipul Ahuja, Vice President (North) IAStructE & CEO & Director, Ahuja Consultants P Ltd
- Dr. D. R. Sahoo, Associate Professor, Civil Engineering Department, IIT Delhi
- Dr. Yogendra Singh, Professor, Railway Bridge Chair, Department of Earthquake Engineering, IIT Roorkee
- Mr. Sandeep Donald Shah, Country Head & MD-Taylor Devices India
- Dr. Mitesh Surana, Assistant Professor, Civil Engineering Department, IIT Ropar
- Dr. Meera Raghunandan, Assistant Professor, Structural Engineering, IIT Bombay
- Prof Vasant Matsagar, Dogra Chair Professor (Structural Engg.), IIT Delhi



### Forthcoming event

IASTRUCTE is organizing a two day International Seminar on “Performance Based Design of Buildings & Bridges for Enhanced Seismic Resilience” during 08 - 09 November 2019 at PHD House, New Delhi. Registration fee shall be Rs. 10,000/- for IASTRUCTE/CEAI members, Rs.12,000/- for non-members and Rs 6,000/- for Students. The GST @ 18% will be applicable on the Registration fee. The registration will remain open till the seats are available. Please note that the registration shall be done on first come first serve basis. For any details please contact Mr. VikasVerma, Manager IASTRUCTE, Tel: 011-45794829, Email: [iastructe@gmail.com](mailto:iastructe@gmail.com). For downloading the Announcement & Brochure please visit [iastructe.co.in](http://www.iastructe.co.in) or click on the following link <http://www.iastructe.co.in/Announcement-International-Seminar.pdf>

IASTRUCTE is organizing a Workshop-cum-Brain Storming Session on draft explanatory handbook on IRC:6-2017 prepared by IASTRUCTE on 23rd November 2019 at PHD House, New Delhi to discuss/review this document. There is no registration fee. All interested colleagues / academicians / practicing structural engineers should register through the link (<http://iastructe.co.in/volumes>) to CONFIRM their participation for the workshop. This document may be downloaded by registering on this link.

### IASTRUCTE Student Chapter at CEPT University

The student chapter of IASTRUCTE at CEPT University, Gujarat is undergoing detailed planning of its activities that will include expert sessions and interactions, software learning sessions, short technical courses, visits and competitions. In addition they are in process of forming a platform where they can share the concerns of fresh engineers such as internship, knowhow and placement. The activities organized by the student chapter are open for structural engineering students of all institutes and engineers with 0 to 2 years of experience. On the launch of this platform, the various activities that are organized will be shared for outreach.

The following courses are planned for structural engineering students and early age professionals (less than 2 years' experience) from January 2020 who may want to venture into specific structural engineering domains as a specialization:

1. Design of tall buildings
2. Structural audit of heritage structures

Each of the courses is an 8 full-day module to be offered over weekends in the month. The details of the courses will be declared in the forthcoming newsletter of IASTRUCTE.

### Call for articles

The Chairman and other members of the SED Editorial Board invite article contributions for the quarterly journal of the Indian Association of Structural Engineers, the Structural Engineering Digest.

Write to [iastructe@gmail.com](mailto:iastructe@gmail.com) for

- Journal subscription
- Article Submission
- Sponsored Advertisement

Deadline for submission in next issue: 1<sup>st</sup> Jan 2020. Submission template and ethics statement can be availed by emailing [iastructe@gmail.com](mailto:iastructe@gmail.com).

## Short article

### *New thoughts for the old:*

### *Structural Engineering of heritage monuments and historical constructions*

Lately, the heritage structures of India have started attracting more attention from the local authorities in various cities and state and national government. The walled city of Ahmedabad has also been recognized internationally as the first city in India to get World Heritage City status and third in Asia after Bhaktapur (Nepal) and Galle (Sri Lanka). Similarly, the pink city of Jaipur got this recognition and many other cities may be rightfully underway to these recognitions through various national and international programs. Maybe late, but catching attention anyways not just by way of tourism but also from the architectural, structural and civil engineering fraternity who are seriously concerned about their conservation, preservation and safety.

Internationally, structural engineering programs with specialization in heritage monuments have been very popular. It seems this trend will or should make it into the Indian education system as well quite soon. Typically, these programs cover the history and cultural value, structural analysis techniques, seismic behavior, inspection and diagnosis, repairing and strengthening techniques and restoration and conservation of materials.

Based on interactions with the Ahmedabad municipal corporation officials and officers of the Ahmedabad heritage trust, it was revealed that many structures (buildings) in the old city of Ahmedabad are classified under various heritage categories. It would be a normal tendency for an owner to sell his house to another for better housing prospects. Efforts are done to control the sale and reuse of the building as well as the rehabilitation of these buildings especially if it falls under heritage category through approval by the corporation. The objective of intervening between direct sale and development is to ensure that appropriate rehabilitation techniques are followed both for preserving the heritage value as well as for the structural stability. A small investigation by our team revealed some past building cases where structural steel frame type system had been adopted internally to serve as a load carrying mechanism whereas the old timber elements were still kept for the look of the heritage. However, it is also important to note that old city buildings are located in close proximity to each other just like a pack of cards and therefore strengthening or weakening of even one building can affect the neighboring structures and make way for progressive collapse at the time of seismic conditions. It is also interesting to note that many of these buildings do not have a foundation. Also most of them have a basement water harvesting tank. It is also awe-inspiring to note that in event of major earthquakes in the city, no collapse or major damage was recorded in the old city. And also very impressive to see that many of the wooden carved elements centuries old show very slight signs of decay.

However, to be careful, the heritage officials feel that before transfer or building and carrying out rehabilitation by construction crew, a structural audit and stability assurance should be provided. The agencies have expressed interest in the training of structural engineers in this area so that they can be made capable to carry out needful assessments and analysis and have confidence in issuing a structural stability certificate.

It seems like ample numbers of future structural engineers will be required in this area looking to the heritage monument establishment in our country and looking to the address of heritage in city development plans including smart cities plans. Their technical grooming and sensitivity to the subject will be of utmost importance, given that in event of failure, heritage value will be lost and would be irreplaceable. But we have many cities mostly internationally to look up to in the manners in which these restorations have been carried out breathing a new life in the old.



The short article has been compiled by Er. Anal Sheth and is based on literature from authentic websites, interactions and site visits made by her and her team for the case of old heritage city of Ahmedabad. She expresses her heartfelt gratitude to Ar. Debashish Nayak, Mr. Ashish Trimbadiya and Mr. P V K Nair for sharing their thoughtful insights on the matter. The article is open for discussion and any specific guidance from experts in this sub discipline.

# FUJI

## Creating foundations of excellence in India

FUJI has embraced the culture of India positively and put their right foot down to bring in a revolution in the construction sector. FUJI provides comprehensive precast concrete solutions for assisting the rapid and efficient development of infrastructure projects all around India.



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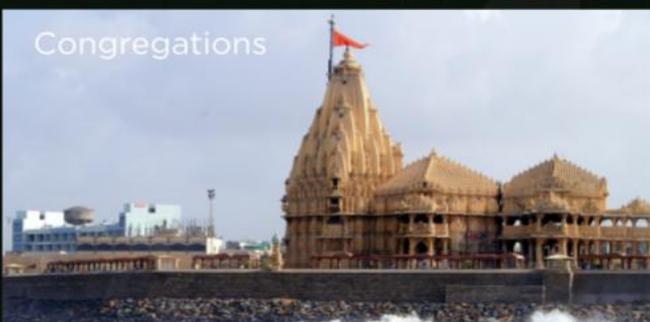
Public Infrastructure



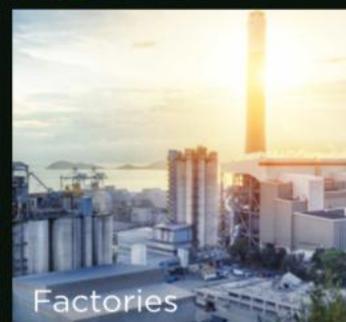
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## About IAStructE

The 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 centers 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.

## How to become a member?

Membership form and details are available at <http://www.iastructe.co.in/membership-form.html>  
For membership information and other details contact the Indian Association of Structural Engineers Secretariat.

## 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. [Released]
- 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

## IAStructE Secretariat

Indian Association of Structural Engineers

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