



## Message from the President



Dear readers,

I am happy to convey my New Year Greetings to you all. May the New Year bring all the good things in life. New year is also a good time and opportunity to make new beginnings and fresh starts, a time of reflections of the events of the year just gone by and a time to plan for the next 12 months itinerary for the association.

We had an amazing year 2019 with many events. A zist of various flagship events organised by IAStructE are :

- 4 Refresher Courses at New Delhi:
- Two day International Seminar on "Performance Based Design of Buildings & Bridges for Enhanced Seismic Resilience" at New Delhi
- Signed MoU with Structural Engineers Association of Nepal (SEANeP)
- Held Workshop on IRC:6-2017 at New Delhi
- A Technical Presentation by BASF was supported by IAStructE at New Delhi
- 12 Monthly Technical Lectures at New Delhi

We hope to have another amazing year 2020. In this journey, I seek your support throughout in taking the association to greater peaks of vibrancy and success.

With best regards,

ALOK BHOWMICK

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## Governing Council Meeting

The 89<sup>th</sup> Governing Council meeting of the Association was held on 11<sup>th</sup> January 2020 at New Delhi. In which various decisions were made and the following events / themes for refresher courses were identified to organize in the coming months, details of which shall be announced time to time.

- Workshop cum Brainstorming Session on IS 13920:2016 on 15 February 2020 at PHD House New Delhi
- Application of New Seismic Code for Highway Bridges - IRC:SP:114-2018 in Mumbai starting from 07 March 2020
- Refresher Design of Steel Structures Based on IS 800 in New Delhi
- Prestressed Concrete Structures in New Delhi
- Chimneys & Transmission Towers in New Delhi
- High Rise and Vibration Control including composite design & BRB in New Delhi

## 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, which will be published in E-Book Format.

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

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The Editorial Board also invites the articles for the April – June 2020 SED issue, which will be dedicated to the **Theme "Structural Connection & Detailing"**. Sub themes are i) Concrete Structures; ii) Steel Structures; iii) Hybrid / Composite Structures; & iv) Post Installed Connections. Interested Professionals may submit the Abstract by 29<sup>th</sup> February 2020 and full paper by 15<sup>th</sup> March 2020.

Submission template and ethics statement can be availed by emailing [iastructe@gmail.com](mailto:iastructe@gmail.com)

Interested professionals may also send the articles for publishing in monthly Newsletter, which can be sent to [iastructe@gmail.com](mailto:iastructe@gmail.com)

## Technical Lecture

A Technical Lecture by Dr. K. G. Bhatia, CEO, D-Cad Technologies on the topic "Capacity Upgradation of Dynamic Machines on Existing Frame Foundations - a State of the Art" organized on 23<sup>rd</sup> January 2020 at New Delhi.



## Forthcoming Events

1. IAStructE is organizing a Workshop-cum-Brain Storming Session on draft explanatory commentary on IS 13920:2016 prepared by IAStructE on 15th February 2020 from 02 PM onwards 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.html>) and can send their confirmation of participation for the workshop to [iastructe@gmail.com](mailto:iastructe@gmail.com). This document may be downloaded by registering on this link.
2. IAStructE is organizing a Workshop on "Application of New Seismic Code for Highway Bridges – IRC:SP:114-2018" starting from 07 March 2020 in Mumbai, which will be concluded on 11th April 2020. It will be a 24 Hrs course . The lectures will be held on every Saturday morning from 9.00 AM to 01.15 PM (with 15 mins. break for tea) in the Auditorium of The Institution of Engineers(India), Belapur Local Centre, Plot No 106, Sector 15, CBD Belapur, Navi Mumbai. There will be an expert faculty for each lecture. Course participation fee shall be Rs. 8,000/- for IAStructE/IE(I) members; Rs 2000 for IAStructE Student members; Rs.10,000/- for non-members; and Rs 4,000/- for non member Students. The GST @ 18% will be applicable on the Registration fee. An early bird discount of 10% shall be available on registration on or before 15th February 2020. For any details please contact IAStructE Secretariat, Tel: 011-45794829, Email: [iastructe@gmail.com](mailto:iastructe@gmail.com). For downloading the Announcement, Flier & Lecture Plan please click on the following link <http://iastructe.co.in/Announcement-Workshop-on-IRCSP114-in-Mumbai.pdf>

## Article

### Burdwan Railway Station Building Collapse – A Report

Burdwan nearly 100 Km from Kolkata is a very busy station on the Howrah-Delhi line and occupies the junction between main line & chord lines to Howrah. The third most populous station after Howrah & Sealdah in Bengal had its record first passenger train run in Eastern India in 1854 and the tracks were extended up to Raniganj in 1855 thus covering the entire Burdwan town. Both local and long distance trains ply & this station has connection to the neighbouring states like Jharkhand as well. The affected building structure as shown in the picture below however was erected in 1905.



*Fig.1:4th January,2020 - Collapse of the Burdwan Railway Station Building (Source: Internet)*

A portion of the two-storied Burdwan Railway Station building collapsed on Saturday, January 4th at around 8:30 pm when the hanging Bengal-Roofed(kori-borga) ceilings of the portico(a structure consisting of a roof supported by columns at regular intervals, typically attached as a porch to a building) gave away followed by successive falling of the horizontal beam portions of the building front-side accommodating the Enquiry counter situated close to the Platform No.1.Of the two persons who were injured in the incident, one is reported to have died on the very next day at Burdwan Medical College & Hospital, while four others were given first-aid.

The 2-storied colonial station building was pale yellow in colour with its features highlighted in red. Eastern Railway authorities had initiated a repair cum renovation work of the station building and laborers engaged by the construction agency had used heavy hammers to remove the old 20mm thick pilastering from the Doric Greek pillars which may have caused 'unbearable' vibration damaging the brick foundations of the already weakened pillars. Due to the unseasonal rains and sudden drop in winter temperatures, the iron reinforcing nets holding the cement mixtures of the naked pillars got shrunk causing the collapsing mode of structural failure. It may be contextually mentioned that the Railway Vikas Nigam Limited (RVNL) has already been assigned to dismantle the vintage Road Over Bridge (RoB)(connecting the G.T. Road side of Burdwan Town with Kalna-Katwa Road)besides the station building built during the British era. This technically challenging project resulted in construction of an asymmetric cable stayed bridge of 188.429 m span with part RCC in back span, composite deck and steel pylon in 2019 which had sufficiently weakened the brick foundations of the station building situated close-by.



*Fig.2: Four Lane state-of-the-art RoB in construction besides the Railway Station Building (completed in October, 2019)*

It may be concluded that at the time of the accident, if the area was not cordoned off due to the 'ageing-related' structural defects occurring due to ongoing repair work of 'tiling', otherwise the casualty would have been much more dangerous.

With the railways recorded an operating ratio of 98.44% in 2017-18, worst in 10 years, Safety & Security still remains the foremost priorities of the Indian Railways. This type of security lapses need to be addressed more seriously.

#### References:

1. The Statesman News Service, Burdwan, 5th January.
2. <https://www.rvnl.org/en/Pages/bardhamaanproject.aspx>

Prof. Mainak Ghosal (Structural Engineering Consultant & Ex. Jt. Secy – Coal Ash Inst. of India)



## New IAStructE Members

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<i>M/S No</i>	<i>Name</i>	<i>Designation, Organization</i>	<i>City</i>
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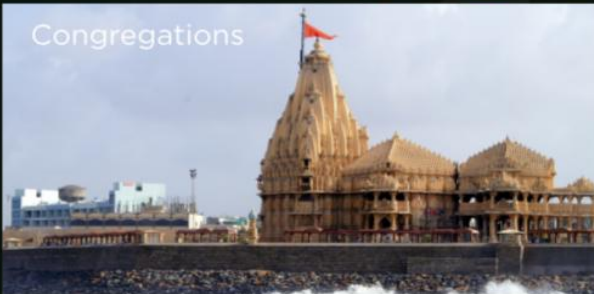
### "STUDENT MEMBER" Grade Members

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- 1 – Member from Sharda University, Greater Noida, UP
- 40 – Student Members from CEPT University, Ahmedabad
- 53 – Student Members from Delhi Technological University

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## 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.

## 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

## IAStructE 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

## Indian Association of Structural Engineers

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