

Newsletter of the Indian Association of Structural Engineers January 2021

# **Message from the President**



Dear Members,

The year 2020 was unprecedented and is past now. Following the COVID-19 pandemic, the world has suffered severe set-back. Business and public services were heavily affected worldwide. All modes of transportation were reduced to minimum. International travel by plane reduced to only a fraction of previous. Work at office often replaced by on-line work at home. Many businesses suffering and possibly disappearing. Interaction amongst businesses and social gatherings changed forever.

New year 2021 begins with lot many hopes. COVID-19 has provided the mankind an opportunity to pause and think. It is hoped that the global development will resume after the crisis, though the development curve is likely to change permanently in the future. It is hoped that the society will take lessons from the pandemic and mad rush for exponential growth will finally come to a stop. It is hoped that the disruption caused by the pandemic will help society in rethinking on development since continued exponential growth on a planet of a constant size and limited resources and growing population is not possible

As structural engineers, we have a responsibility to think about how we can respond to these unprecedented changes. The problem is that the changes are not known, so we have to imagine different scenarios and be prepared to act and react. This is also an opportunity in crisis for professional associations like IAStructE, to take the lead in relevant discussions amongst professionals and serve the society.

In this new year 2021, let us, as Structural Engineers, get back to responsible 'Engineering' in the real sense of the word, for the benefit of a sustainable and resilient world for humanity. Let us consider 'Climate Change' to form basis for brainstorming discussions in IAStructE. Let us identify specific actions, R&D needs, new concepts and use of new materials to reduce carbon footprint. Let us take the lead in this direction.

With best wishes & Warm Regards

ANTONAS

ALOK BHOWMICK

IAStructE Publication Committee	Newsletter Editorial Team	
Chairman : Er. Manoj Mittal Members : Er. Alok Bhowmick Er. (Dr) S Chatterjee Er. (Dr) Abhay Gupta Er. A K Sharma Prof. R Pradeep Kumar Er. Rajiv Ahuja Er. Amandeep Garg Er. (Ms) Anal Sheth	Chief Editor : Er. (Ms) Anal Sheth Members : Er. Manoj Mittal Er. Bhavin Shah Er. Rajiv Ahuja Er. Maulesh Shah	

#### **Newsletter Contents**

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#### Call for Papers for THEME based issues 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. A GUEST EDITOR is associated with each theme issue. Details are as under:

October – December 2020 issue; Guest Editor- Sh. Manoj Mittal

#### **Theme: Professional Issues confronting Structural Engineering**

This issue is under processing and shall be published soon.

#### January – March 2021 issue; Guest Editor- Mr. Rajiv Ahuja

#### **Theme: Bridge Foundations**

#### Sub themes: • Deep Well and Pile Foundations for river bridges

- Foundations for flyovers and underpasses
- Seismic Analysis and Design of foundations
- Open Foundations in Soft clays with ground improvement
- Liquefaction affecting foundation design
- Soil Foundation Interaction
- Load Testing of foundations
- Construction challenges in bridge foundations

The abstract along with the full paper may be sent by 31<sup>st</sup> January 2021.

#### April - June 2021 issue: Guest Editor-Dr K G Bhatia

#### **Theme: Machine Foundation**

The abstract along with your photograph and brief resume may be sent by 15<sup>th</sup> January 2021 and full paper by the end of February 2021.

Articles are invited from i) Members of IASE; ii) Specialists in the field even though they are not members of IASE.

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; iv) the dates for submission of the abstract and Full paper.

As per the laid down procedures all the papers (except invited 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.

#### **Webinars Conducted**

1. A Webinar on "Basics of Prestressing" by Mr. Vinay Gupta, Director & CEO, Tandon Consultants Pvt Ltd organized on 05 January 2021 through Zoom. Dr. Harshavardhan Subbarao, CMD, Construma Consultancy & GC member IAStructE was the Moderator.



 The third Webinar in the series in association with Windtech Consultants, Australia was organized on "Advanced Wind Tunnel Testing Techniques: Part 3 – Large Span Roof Structures" on 16<sup>th</sup> January 2021 by Dr Nicholas Truong, Director, Windtech Consultants, Australia. Dr. Prem Krisna, Former Professor, IIT Roorkee was the Moderator.



3. A Webinar "Structural Engineering For Sustainable Development" on 23rd January 2021. This was the unique webinar for IAStructE as all speakers were WOMEN. The speakers were Dr. Anal Sheth, Head - Research and Development at FUJI Silvertech Concrete Pvt. Ltd, Ahmedabad, Dr Shilpa Pal, Associate Professor, Department of Civil Engineering, Delhi Technological University, Delhi, Ms Anamika Kadam, DGM, Civil, Larsen & Toubro Construction Pvt. Ltd, Dr T Visalakshi. Honorary Secretary IAStructE and Professor & Head, Department of Civil Engineering, Bennett University, Greater Noida. The session was moderated by Prof Mahesh Tandon, Past President & GC member IAStructE.



Prof. Mahesh Tandon

Mr. Alok Bhowmick

3. A Webinar on "Design, Manufacture and Testing of Disk Bearings and Seismic Isolation Devices for Bridges, Buildings and Other Civil Engineering Structures" by Mr Ronald J. Watson, President, R. J. Watson, Inc. organized on 29th January 2021 through ZOOM. Prof Mahesh Tandon, Governing Council member IAStructE was the Moderator. Mr S K Puri, Convenor, B6 Committee of IRC and Mr Nilanjan Ray, Director METCO were the Panelists. The Webinar was sponsored by Metal Engineering & Treatment Co. Pvt. Ltd. & R J Watson, Inc.



#### **Obituary: Dr. Dilip Kumar Paul** (28.05.1947 – 27.12.2020)

Late Shri Dr. Dilip Kumar Paul, an eminent engineer, was born on 28.05.1947. Dr. Paul obtained his B.E. degree in Civil Engineering and ME in Earthquake Engineering from University of Roorkee in 1969 & 1971 respectively. He worked for his Doctorate at Univ. of Wales, UK under a Commonwealth Scholarship in 1981. He joined as a faculty in the Department of Earthquake Engineering, IITR in 1972 and after serving for 40 years retired as Professor. He continued to serve as Emeritus Fellow. He also served as President, Indian Society of Earthquake Technology.



Dr Paul was consulted on Seismic Safety of many structures in the country involving Earthquake Resistant Analysis and Design of Special Structures. He was a Fellow of Indian National Academy of Engineers, (FNAE); Fellow of Indian Institute of Engineers (FIE); and Fellow of Indian Society of Earthquake Technology (FISET).

He was the Life Fellow of IAStructE. He was the member of many professional bodies. He was the former Chairman of CED 39 of BIS. Dr. D. K. Paul was closely associated with the Indian Association of Structural Engineers and very actively participated in all the programs of the Association.

#### Article by Dr. N. Subramanian

#### **POPULAR AUTHOR PROF. S. RAMAMRUTHAM PASSES AWAY**

Prof. S. Ramamrutham, a renowned professor, civil and structural engineer and author of over 15 popular books on various topics of civil and structural engineering, passed away on 4<sup>th</sup> Jan 2021 at New Delhi. He is a renowned author of more than a dozen books in various subjects of Civil Engineering which is followed by thousands of students and practicing engineers all over the country.



#### EARLY LIFE

Prof. S. Ramamrutham(1931-2021)

Prof. Ramamrutham was born in 1931, at Edayathumangalam, Lalgudi Taluk, Tiruchirappalli, Tamil Nadu. He passed his Bachelor of Engineering (B.E Civil) from Mysore University in 1955 from the reputed National Institute of Engineering (N.I.E.), Mysore.

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*Prof.* Ramamrutham on 4<sup>th</sup> Nov 2010, on his 80<sup>th</sup> birthday, with his wife and Prof. S. Sekar, former Dean and Professor of College of Engineering Guindy, Anna University, Chennai

In recognition of his academic level during his period of study in the engineering college, after obtaining his Bachelor's Degree in civil engineering from the University of Mysore in 1955, he was appointed as a lecturer in Civil Engineering in N.I.E. He worked as

a popular lecturer in the college for five years, handling the final year B.E. classes, including advanced subjects like 'Strength of Materials', 'Theory of Structures,' 'Reinforced Concrete Structures,' 'Prestressed Concrete,' 'Steel Structures,' 'Fluid Mechanics,' and 'Geodetic and Astronomical Surveying.' He was also responsible for setting up the Hydraulics Laboratory of the College.

# **PROFESSIONAL PRACTICE**

After five years of working in the college, he settled in New Delhi in 1960 as a Structural Engineer. He also established an institution offering lectures and training engineering students, and young engineers pursuing the U.P.S.C Engineering services examination. He is a distinguished consulting structural engineer and has been consulted by various agencies like the Delhi Development Authority, Delhi Municipal Corporation, and New Delhi Municipal Committee, to name a few.

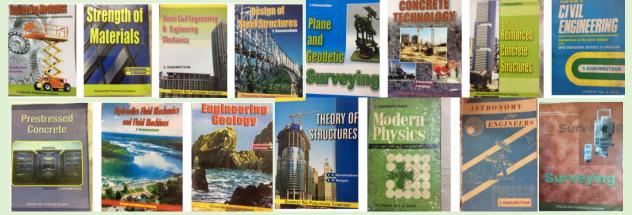
## **AUTHOR OF SEVERAL BOOKS**

The book 'Civil Engineering Manual', released by the President of India, Hon. R. Venkataraman

He wrote his first two books- *Design of steel structures* and *Astronomy for Engineers* while at NIE Mysore. In the year 1966, heI wrote the book *Design of Reinforced Concrete Structures*. Thanks to the suggestions he received from Professors from various colleges of India, this book grew in size to over 1000

pages and to many new editions. The seventeenth Edition of this book was released recently. His book 'Civil Engineering Manual' was released by the President of India, Hon. R. Venkataraman, in 1986. Prof. Ramamrutham has authored many other popular books

on civil and structural engineering, such as *Strength of Materials*, *Engineering Mechanics*, *Theory of structures*, *Fluid Mechanics*, *Prestressed concrete*, *Building construction*, *Construction Materials*, *Civil Engineering Hand Book*, *Basic Civil Engineering*, and *Geodetic and Astronomical Surveying*. These books are followed in all the engineering colleges of India. He had good interaction with engineering students all over the country. The innumerable solved examples in his books, clarify all doubts related to a variety of situations. Many of the comments, explanations and special notes we find in his books are just the answers to the questions his students had asked at various stages.







# Books published by Prof. Ramamrutham

It is interesting to note that Prof. S. Ramamrutham considered Prof. S.B. Junnarkar as his guru. He says "In the Mahabharata we have heard of Ekalavya who learnt from Dronacharya. Similarly I would like to say I learnt from the great Professor S.B. Junnarkar. Prof. Junnarkar created History by writing the two volumes of Mechanics of Structures. When I was a student of IIIrd year B.E. and when we were desperately feeling the need for good books, Prof Junnarkar's books appeared as a powerful streak of light in a dark sky".

# ACADEMIC SERVICE



*Prof. Ramamrutham delivering the 12th Dr. P. Purushothaman Memorial Lecture on "A fast Approach to Analysis of Structures", at Alumni Centre of Anna University, on 5th Oct. 2012* 

Prof. Ramamrutham formulated an original approach in structural analysis called 'The Ramamrutham Method.' It is a shortcut method of analysis of Statically Indeterminate Structural Beams and Portal Frames. The method developed by him leads to a fast and alternative method of analysis avoiding long and tedious processes involved in the prevailing practices. The method is being introduced in most of the engineering colleges in this country.

Prof. Ramamrutham teaching his shortcut method of analysis of Statically Indeterminate Structural Beams and Portal Frames



#### **LECTURES IN VARIOUS FORUMS**

He has given lectures, on invitation, at various engineering colleges, including College of Engineering Guindy, Chennai, Coimbatore Institute of Technology, Coimbatore, M.G.Institute of Technology, Hyderabad, College of Engineering Geetham University and Government College of Engineering in Visakhapatnam A.P., B.M.S. College of Engineering and Ramaiah College of Engineering in Bangalore; Sri Jayachamarajendra College of Engineering and National Institute of Engineering in Mysore, Engineering College Jadavpur, University of Kolkata, to name a few. He has said that he enjoy writing books in the same was as teaching in the classroom.



Honored by Vice Chancellor Gitam University, Vishakapatnam, 2009

He set up an institution in the Capital to give training to young Engineers in CPWD, CWPC, Delhi Municipal Corporation and the Delhi development Authority, not only in the practical Profession but also in the Academic field. He gave my 'Lecture Series' for young Engineers to prepare them for the IES Examinations. His old students became Professors at IIT Kanpur and many Engineering Colleges. He was happy that several of his students became chief Engineers and Directors. One of his students even retired as the Director of IIT Madras.

# **COMMUNITY SERVICES**

Besides his academic services, Prof. Ramamrutham has offered substantial community services holding responsible positions in the Governing Body of Delhi Tamil Sangam. He served as the president of the Delhi Tamil Sangam and was instrumental in the construction of the foyer and auditorium of the Sangam's building.



Lifetime Achievement Award Facilitation at Delhi Tamil Sangam, 2012

Prof. Ramamrutham has made a significant contribution in the education and educating children of New Delhi. At Delhi Tamil Education Association (D.T.E.A), he has volunteered over 20 years, serving in the Governing body of D.T.E.A, at various positions including Chairman of Academic Committee, Chairman of Building Committee, Chairman of Academic Selection Committee, and Vice President of the Governing body. He was responsible for the construction of the school buildings in Motibagh, R.K. Puram and Janakpuri. He was also responsible for the development of the school laboratories. At times of emergency when there was a shortage of senior postgraduate teachers, Prof. Ramamrutham volunteered his time, educating the children in Physics and Mathematics. He has also very close to the teachers and students in all the seven schools. The students often meet him for solution.

> Inauguration Science Block of D.T.E.A Sr. Sec. School, Pusa Road, New Delhi, 3<sup>rd</sup> Aug. 1988



Prof. Ramamrutham offered his services as an engineer, volunteering in the constructions of Temples and school buildings of DTEA, and foyer and auditorium constructions of the Delhi Tamil Sangam. He was the president of Delhi Tamil Sangam in the years of 1984 to 1988. He offered substantial community services by his continuous voluntary work in the development of the seven schools.

Prof. Ramamrutham is a member of the Institution of Engineers India and is a well-known professor, an outstanding structural engineer and author of many engineering books, which are followed in engineering colleges throughout India, and is a well known and loved senior citizen in the capital. All of us will this great teacher and author. May his soul rest in peace.

#### References

- 1. https://sites.google.com/ramamrutham.com/professor/home
- 2. https://cesnitsilchar.wordpress.com/2010/12/07/prof-s-ramamrutham/

#### **About the Author**



**Dr. N. Subramanian,** Ph.D, FNAE, an award winning author, consultant, and mentor, now living in Maryland, USA, is the former chief executive of Computer Design Consultants, India. Dr. Subramanian has authored 25 books and more than 265 technical papers, published in international/ Indian journals and conferences. He is a Member/Fellow of several professional bodies and a past vice president of the Indian Concrete Institute and Association of Consulting Civil Engineers (India).

#### **IAStructE New Publications**

As you are aware that IAStructE is undertaking the task of preparing the professional documents and the commentary of various BIS and IRC codes, so that the practicing structural engineers can understand the code better and comply with the requirements of the code with confidence. Under this activity the IAStructE has published the following documents:

**1. Commentary with Worked Examples for IRC:6-2017** : IAStructE is pleased to announce publication of Commentary with Worked Examples for IRC:6-2017, the IRC code for Loads & Load Combinations for design of Highway Bridges. The commentary and the Illustrative worked examples are printed in two separate volumes. Volume-1 of 2 pertains to the Commentary while Volume-2 of 2 pertains to Illustrative Worked Examples, which has 48 worked examples demonstrating application of various codal clauses.

The documents are now 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.

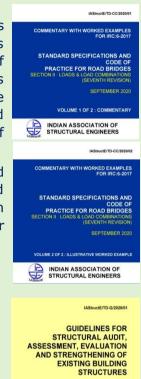
2. Guidelines for Structural Audit, Assessment, Evaluation and Strengthening of Existing buildings Structures : IAStructE has published this document to guide structural engineers in proper assessment of building structures before issuing structural stability certificate. This guideline may be used by IAStructE members, all other structural engineers, house owners, housing society welfare associations, clients and corporation engineers for 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. However one can read the document by following the link. http://www.iastructe.co.in/guidelines-for-structural-audit/

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. Clause wise Commentary on IS: 13920** : This document has been finalised after wide ranging consultations & debate amongst civil & structural engineering fraternity. A workshop was also organised to discuss and debate various comments received from engineers. The Commentary has already been sent to the Bureau of Indian Standards for further action. The commentary is available on **www.iastructe.co.in** under IAStructE Professional Documents. IAStructE member can access this document after login.

**4. Clause wise Commentary on IS: 1893 Part 1**: This document has been finalized with the contribution of many members of the association. The Commentary has already been sent to the Bureau of Indian Standards for further action. The commentary is available on **www.iastructe.co.in** under IAStructE Professional Documents. IAStructE member can access this document after login.



September 2020

INDIAN ASSOCIATION OF STRUCTURAL ENGINEERS



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#### **New IAStructE Members**

MEMBER" Grade Members

M/S No Name

M-296 Mr. Raniil P. Ramath

Designation, Organization Design Coordinator - Riyadh Metro, Webuild

City Kerala

#### **Forthcoming Event**

# **ONLINE REFRESHER COURSE ON** PRE-STRESSED CONCRETE FOR **BRIDGES & BUILDINGS**

20th March 2021 till 01 May 2021 Every Saturday from 14:30 Hours to 18:30 Hours (IST)



ABOUT THE COURSE

The main objective of this course is to provide young engineers with an insight in the design of prestressed concrete members and structures through advanced understanding of material and structural behavior. This course is offered to Young Engineers (Graduate / Post Graduates) having 0-5 years of experience in the design and who are not well conversant with the subject. The topic covered include fundamentals of prestressing, Prestressing systems and hard wares, Pre-tensioned and post tensioned members, provision of IRC/IRS/BIS code on prestressing, Analysis, Losses in prestresses in prestressing buildings and concrete, Analysis and design of statically determinate prestressed concrete buildings and bridge structures, post tensioned flat slab designs, case studies of few bridge designs.

The Faculty for this course are all eminent practicing engineers from the industry.

#### **REGISTRATION FEE** IAStructE Members : Rs 5,000/- + 18% GST Non Members : Rs 7,500/- + 18% GST Students : Rs 2,500/- + 18% GST Foreign Nationals : USD 130 or INR 10000/- (GST Include (Foreign nationals - 20% discount for members of MoU Associations) (E-certificate of participation will be provided)

#### SPONSORSHIP OPTION (GST payable on reverse charge)

ENTITLEMENTS	DIAMOND SPONSOR (INR 3,00,000)	SUPPORTER (INR 1,00,000)			
Presentation Slot	15 mins.	N.A			
Advertisement in SED (an official publication of IAStructE published as soft copy)	One Colour Page	One Colour Page			
Logo in Poster & all related correspondence					
Company Profile to all delegates					

#### HOW TO REGISTER

STEP 1 : Registration fee shall be paid through NEFT/RTGS/UPI as per bank details given below : Beneficiary: Indian Association of Structural Engineers; C. Account No.: 10151200388, IFSC:SBIN0007196 MICR: 110002034 ; Bank: State Bank of India(07196) Branch Address: Flyover Market, Defence Colony, ND 110024

STEP 2: The details of the participant (Name, Designation, Organization, Email id, Mobile) along with the proof of the payment shall be sent to iastructe@gmail.com for registration. Students must send their valid ID card (scanned) along with proof of payment. The registration link for webinar shall be sent prior to the every lecture to the confirmed participants.

For any clarification on the above steps, please contact the IAStructE Secretariat on Email iastructe@gmail.com, Tel 011-45794829

# PROGRAMME FOR COURSE ON PRE-STRESSED CONCRETE DESIGN

COURSE CO-ORDINATOR : Mr. V.N.HEGGADE, CEO, STUR Consultants Pvt Ltd.

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	(TIMINGS FOR THE COURSE : 14:30 HRS TO 18:30 HRS)						
S.No.	Title*	DAY	Duration	Proposed Faculty*			
1	INTRODUCTION – History and application of Prestressing in all fields (Buildings, Bridges, Aqueducts, Nuclear Plants, Hangarsetc.), Concepts of Pre-stressed and Post Tensioned Concrete - Materials, Methods & Systems.	20.03.21	1.5 Hrs.	Dr Harshavardhan Subbarao CMD, Construma Consultancy Pvt Ltd Mr. Vipul Ahuja VP (N) IAStructE & Director & CEO, Ahuja Consultants Pvt Ltd			
2	BASICS OF PRESTRESSING - A broad Overview of Prestressing System.	20.03.21	1.5 Hrs.	Mr Vinay Gupta Director & CEO, Tandon Consultants Pvt Ltd			
3	Presentation by Prestressing System Supplier with Video - On-Site Application with Focus on Cable Placement, Stressing, Grouting Operation	20.03.21	1 Hour.	To be identified			
4	Basic Concept of Flexure Strength, Shear, Torsion, Creep, Prestress Losses (short term & long term) and Deflections	27.03.21	1.5 Hrs.	Mr Umesh Rajeshirke VP(W), IAStructE & MD – Spectrum Techno Consultants Pvt Ltd			
5	Provisions in IRC, IRS and BIS codes on Prestressing. Discussion on Codes and Standards.	27.03.21	1.5 Hrs.	Mr Alok Bhowmick President IAStructE & MD - B&S Engineering Consultants Pvt Ltd			
6	Load Case Prestressing – primary effect 'e x P': type of tendons, profiling, force diagram, verification of force diagram during stressing including causes for non- compliances and possible remedies.	27.03.21	1 Hour.	Mr Max Mayer Independent Consultant, Singapore			
7	Mass Use of Precast-Prestressed elements in Metro Station Buildings - METRO CASE STUDY	03.04.21	1.0 Hr.	Prof Mahesh Tandon MD-Tandon Consultants Pvt Ltd			
8	Viaducts & Double Deckers	03.04.21	1.0 Hr.				
9	Durability of Prestressed Structures	03.04.21	1.0 Hr	Mr Max Mayer Independent Consultant, Singapore			
10	Presentation by Contracting Firm with Video - Highlighting The Technologies for Precast Full Span & Segmental Construction	03.04.21	1 Hour.	To be identified			
11	Design & Construction of precast prestressed sleepers A case study of design of PSC airport hangers	10.04.21	1.5 Hrs.	Mr Alok Bhowmick Prof Mahesh Tandon			
12	Design of Post Tensioned Flat Slab for Buildings - BUILDINGS CASE STUDY 2	10.04.21	1.5 Hrs.	Dr. Satish Jain MD, Satish Jain Consulting Engineers Pvt. Ltd.			
13	Presentation by Software Developers - Highlighting The Software Capability in Dealing with Prestressed Structures	10.04.21	1 Hour.	To be identified			
14	CASE STUDY - BRIDGES-1 : Design of Simply Supported Precast PSC Girder System for Bridges (Post Tensioned as well as Pre-Tensioned)	17.04.21	1.5 Hrs.	Mr Anirban Sengupta CTO, STUP Consultants Pvt Ltd			
15	CASE STUDY - BRIDGES-2 : Design of Continuous Precast PSC Girder System for Bridges	17.04.21	1.5 Hrs.				
16	Presentation by Contracting Firm with Video - Highlighting Use of Precast Units in Metro Structures	17.04.21	1 Hour.	To be identified			
17	Advanced concepts of Creep shrinkage and hypersthatic effects and creep redistribution effects	24.04.21	1.5 Hrs.	Mr Umesh Rajeshirke VP(W), IAStructE & MD – Spectrum Techno Consultants Pvt Ltd			
18	CASE STUDY - AQUEDUCT: Design of PSC Pretensioned Box Girder System for Long Aqueduct	24.04.21	1.5 Hrs.	Mr AJAY Kr GUPTA Principal Consultant & Founder Perceptive Ideas Consulting Engineers Pvt Ltd			
19	CASE STUDY – CHANDIGARH-KHARAR PROJECT : Design of Integral Elevated viaduct with precast pretensioned girders integrated with precast prestressed post tensioned pier cap	24.04.21	1.0 Hrs.	Mr Sanjay Kumar Jain CEO, B&S Engineering Consultants Pvt Ltd			
20	Design & Construction of Spine and Wing segmental construction, Strutted box segmental construction	01.05.21	1.5 Hrs.	Mr Harpreet Singh Sr. Project Manager, B&S Engineering Consultants Pvt Ltd			
21	Repair & Rehabilitation of prestressed concrete Bridges	01.05.21	1.5 Hrs.	Shri P Y Manjure Director, The Freyssinet Prestressed Concrete Co. Ltd			
22	CONCLUDING SESSION - WITH QUESTION & ANSWER	01.05.21	1 Hour.	ALL FACULTY AS PANELISTS			
	* The faculty / subject shown above is tentative subject to the confirmation						

# 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 it's 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, Technical Lectures by Experts, Technical Discussions on Contentious Seminars/Workshops, 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/membershipform.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

K-69A , Basement, Kalkaji, New Delhi 110019

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