

## ABOUT the REFRESHER COURSE

Since the turn of the 21st century, tall buildings with growing heights, increasingly complicated shapes and innovative structural systems have been built worldwide. The performance and sustainability of these buildings have been the focus of world attention. Various landmark skyscrapers such as Shanghai World Financial Centre and Burj- Al-Arab in Dubai have been completed, showcasing several ground-breaking concepts in planning, architectural and structural design as well as building services facilities. These also include the application of innovative construction techniques, new materials and novel analytical approaches.

India's rapid growth and urbanisation and escalating cost of land has led to a critical need for creating 'vertical cities' in the form of tall buildings. With more than 40% of India's population expected to live in urban areas by 2030, there is a growing demand for residential and commercial space. All stake holders including the real-estate industry is exploring the vertical space to overcome these challenges. In the coming years, India is set to be the next big centre for the tallest skyscrapers in the world.

The Indian Association of Structural Engineers has decided to organize Refresher Course on Tall Buildings.

The Refresher Course will witness presentations and case studies of tall buildings by some of the stalwarts of the industry. The event will focus on the latest new code of Tall buildings IS 16700 – 2017 trends, challenges and opportunities in the design, construction and operation of tall buildings in India. This course will give ample opportunity to all delegates to interact directly with the experts of the industry and gain knowledge through interaction.

## CONTINUING EDUCATION

Continuing Education of practicing as well as serving professional engineers is an integral part of their overall professional development. Professional Engineers undertake continuing education activities to extend or update their knowledge, skill or judgement in their areas of practice. This enables them to: \* Enhance their Productivity \* Understand and Apply Advances in Technology \* Face Changes in Career Direction \* Better Serve the Community and / or their Employing Organization. All progressive minded modern professional firms/ organizations encourage their professional staff to participate in continuing education because this enhances the professional credibility of the organization.

## ABOUT IAStructE

Indian Association of Structural Engineers (IAStructE) is 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 objective. IAStructE has signed an MoU with IStructE (Institution of Structural Engineers) of UK & JJSI (Japan Society of Seismic Isolation) for exchange of information and promotion of Structural Engineering profession

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 in India.

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.

The association provides opportunity for all the members to develop 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
- Refresher Courses for young engineers
- Student's orientation program
- Seminars/Workshops
- Technical Lectures & Technical Discussions

IAStructE is currently operating from four regional / state centres. These regional centres are located in the Eastern, Western, Northern and Southern parts of the country residing/practicing all over the country.



**Indian Association of  
Structural Engineers**

## Refresher Course on DESIGN OF TALL BUILDINGS



**Starting from 28<sup>th</sup> April 2018  
to be Concluded on 23<sup>rd</sup> June 2018**  
*(Classes will be held every Saturday)*

### Venue

**PHD Chamber of Commerce &  
Industry, PHD House, 4/2 Siri  
Institutional Area, August Kranti  
Marg, New Delhi 110016**

**SECRETARIAT CONTACT:**  
**K-69 A, Basement, Kalkaji New Delhi 110019**  
Tel. 011-45794829,  
E-mail [iastructe@gmail.com](mailto:iastructe@gmail.com)  
Website : <http://iastructe.co.in>

## Refresher Course on Design of Tall Buildings

**Lecture Dates:** Starting, 28<sup>th</sup> April 2018, Classes to be held every Saturday till 23<sup>rd</sup> June.  
(Lecture Plan attached)

**Time:** 4 hrs Lecture between 9:00 am - 1:15pm  
Tea Break (11:00 am – 11:15 am)

**Venue:** PHD Chamber of Commerce & Industry, PHD House, 4/2 Siri Institutional Area, August Kranti Marg, New Delhi 110016

**Course Fee:** Rs 7,500/- (IAStructE members)  
Rs 10,000/- (Others)  
(Three or more delegates from same organization can avail 10 % discount )

**Course Coordinator: Mr. S. C. Mehrotra**

## FACULTY

- **Prof Mahesh Tandon**, *Managing Director, Tandon Consultants Pvt Ltd*
- **Mr. Vinay Gupta**, *Director & CEO, Tandon Consultants Pvt Ltd*
- **Dr. Prem Krishna**, *Former Professor, I.I.T. Roorkee*
- **Dr. Abhay Gupta**, *Director, Skeleton Consultants Pvt. Ltd.*
- **Mr Girish Dravid**, *Director, Sterling Engineering Consultancy Services Pvt Ltd*
- **Mr Shekhar Ghate**, *MD, Optimal Consultancy Services Pvt. Ltd.*
- **Mr. Abhay Ghate**, *Chairman, Optimal Consultancy Services Pvt. Ltd.*
- **Ms. Alpa Sheth**, *MD, VMS Consultants Pvt Ltd*
- **Dr. Yogendra Singh**, *Professor & HOD, EQ Engineering Department, IIT Roorkee*
- **Dr. C.V.R. Murty**, *Director, IIT Jodhpur*
- **Dr. Vinod Jain**, *Managing Director, Vintech Consultants*
- **Mr. Vipul Ahuja**, *CEO & Director, Ahuja Consultants Pvt. Ltd.*
- **Ms Sangeeta Wij**, *Managing Partner, SD Engineering Consultants LLP*

## TOPICS TO BE COVERED

1. Introduction to Tall Buildings - Special characteristics; the past, future and inspiring tall buildings; Special services requirement including fire safety, sustainability, vertical transportation, facade of tall buildings.
2. Loading - Gravity Lateral (Static & Dynamic) and Secondary Effects
3. Structural Forms –
  - Braced Frame Structure
  - Rigid frame structure
  - In filled frame structures
  - Flat plate and flat slab structures
  - Shear wall structures
  - Wall frame structures
  - Framed tube structures
  - Single Tube, Tube-in-Tube
  - Outrigger based structures
  - Suspended structures
  - Core structures
  - Space structures
  - Hybrid structures
4. Foundations for Tall Buildings
5. Analysis of tall Buildings for Earthquake Forces
6. Analysis of tall Buildings for Wind Loads including Critical Issues and Wind Tunnel Tests
7. IS 16700 - 2017 Criteria for Structural Safety of Tall Concrete Buildings
8. Case Studies of Tall Buildings, base Isolation and Energy Releasing Devices

## WHO SHOULD ATTEND

- \* **Young Civil / Structural Engineers employed in Government / Public and Private Sector / Individual Consultancy Firms**
- \* **Civil/Structural Engineers planning to join Structural Engineering Profession**
- \* **Other interested professional Civil/Structural Engineers/ Architects**

## REGISTRATION FORM

Refresher Course ON  
“Design of Tall Buildings”  
Starting from 28<sup>th</sup> April 2018

**Name:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Firm/Organization:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Mob./ Tel.:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

Reserve your seat by sending this form to the [IAStructE Secretariat, K-69A, Basement Kalkaji, New Delhi 110019](mailto:iastructe@iastucte.org) along with the Cheque / DD or through email at [iastructe@gmail.com](mailto:iastructe@gmail.com) with NEFT transaction particulars.

*(Please use separate registration form in case of more than one participant)*

### Payment Details:

Through NEFT or A/c payee cheque / Bank Draft

No..... Dated: .....; Drawn on Bank:

..... for Rs .....

(in words) .....

favouring “Indian Association of Structural Engineers”,

payable at New Delhi, is enclosed.

### BANK PARTICULARS

Beneficiary Name: **Indian Association of Structural Engineers**

Account Number: **10151200388 ; IFSC:SBIN0007196**

MICR:**110002034 ; Bank Name: State Bank of India ;**

Branch Code: **07196 ; Branch Address: Flyover Market, Defence Colony, New Delhi 110024**



## Refresher Course on - "Design of Tall Buildings"

PHD Chamber of Commerce & Industry, PHD House, 4/2 Siri Institutional Area, August Kranti Marg, New Delhi 110016

**Time :** 09:00 AM to 01:15 PM; Tea Break (11:00 am to 11:15 am)  
**Duration :** Each lecture of 2 hours  
**Course Coordinator-** Mr. S. C. Mehrotra, GC member IAStructE  
**Registration Starts at :** 8:30 AM

LECTURE NO.	TOPICS	SUGGESTED FACULTY	DATE
Lecture 1 09 AM to 11:00 AM	Introduction to Tall Buildings	Prof Mahesh Tandon Managing Director, Tandon Consultants Pvt Ltd	28th April 2018
Lecture 2 11:15 AM to 01:15 PM	Loading - Gravity Lateral (Static & Dynamic) and Secondary Effects	Mr Vinay Gupta Director & CEO Tandon Consultants Pvt Ltd	
Lecture 3 09 AM to 11:00 AM	Analysis of tall Buildings for Wind Loads including Critical Issues and Wind Tunnel Tests	Dr. Prem Krishna Former Prof. I.I.T. Roorkee	5th May 2018
Lecture 4 11:15 AM to 01:15 PM		Dr. Abhay Gupta, Director Skeleton Consultants Pvt. Ltd.	
Lecture 5 09 AM to 11:00 AM	Structural Forms	to be identified	12th May 2018
Lecture 6 11:15 AM to 01:15 PM	Structural Forms	*Mr Girish Dravid Director, Sterling Engineering Consultancy Services Pvt Ltd	
Lecture 7 09 AM to 11:00 AM	Structural Forms	Mr. Shekhar Ghate Managing Director, Optimal Consultancy Services Pvt. Ltd. & Mr. Abhay Ghate Chairman, Optimal Consultancy Services Pvt. Ltd.	19th May 2018
Lecture 8 11:15 AM to 01:15 PM	Structural Forms	to be identified	26th May 2018
Lecture 9 09 AM to 11:00 PM	IS 16700 - 2017 Criteria for Structural Safety of Tall Concrete Buildings Part -I	Ms. AlpaSheth Managing Director, VMS Consultants Pvt Ltd	
Lecture 10 11:15AM to 01:15 PM	IS 16700 - 2017 Criteria for Structural Safety of Tall Concrete Buildings Part -II		
Lecture 11 09:00AM to 11:00 AM	Analysis of tall Buildings for Earthquake Forces Part -I	Dr. Yogendra Singh Professor & HOD, EQ Engg. Department, IIT Roorkee	2nd June 2018
Lecture 12 11:15 AM to 01:15 PM	Analysis of tall Buildings for Earthquake Forces Part -II		
Lecture 13 09 AM to 11:00 PM	Topic to be confirmed	Dr. C.V.R. Murty Director, IIT Jodhpur	9th June 2018
Lecture 14 11:15AM to 01:15 PM			
Lecture 15 09 AM to 11:00 PM	Case Studies of Tall Buildings	Dr. Vinod Jain, Managing Director, Vintech Consultants	16th June 2018
Lecture 16 11:15AM to 01:15 PM		Ms Sangeeta Wij, Managing Partner SD Engineering Consultants LLP	
Lecture 17 09 AM to 11:00 PM	Earthquake & Wind Load Resilience through Vibration Control & Base Isolation in Tall Buildings	Mr. Vipul Ahuja, CEO & Director, Ahuja Consultants Pvt. Ltd.	23rd June 2018

\* Subject to confirmation