



20-22 September 2023

New Delhi, India



Organised by



The Indian National Group of the IABSE

**Engineering for
Sustainable Development**

Final Programme

Supported by



सत्यमेव जयते

MINISTRY OF
ROAD TRANSPORT
AND HIGHWAYS
Government of India



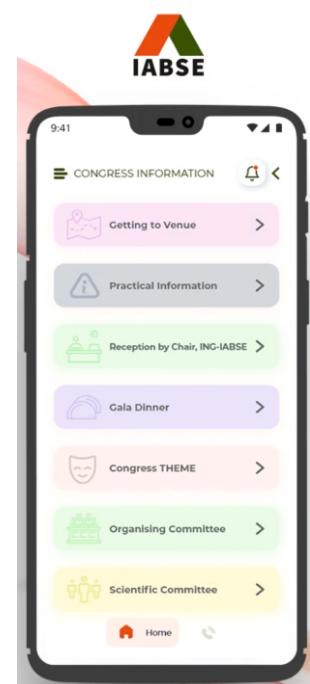
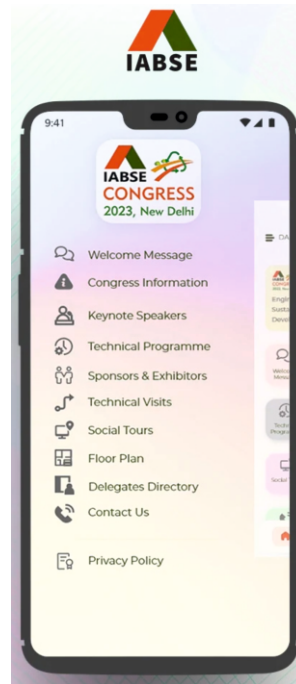
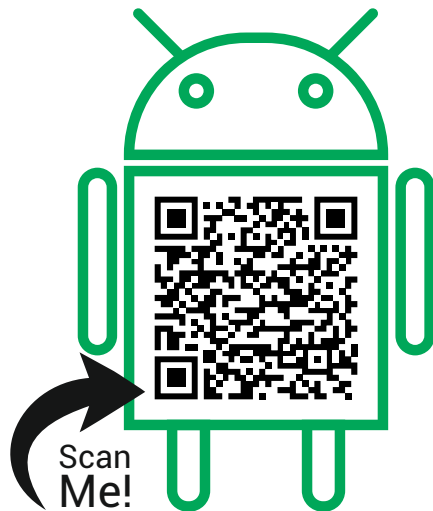
National Highways
Authority of India (NHAI)

Contents

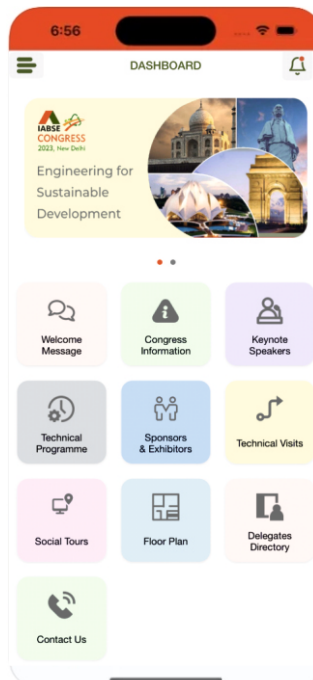
Messages	5-7
Congress Theme	8
Committees	9-10
General Information and Onsite Registration	11
Onsite Registration Information	12
The Young Engineers Programme	14
Venue Map	15
Exhibition Layout	16
New Delhi City Map	17
New Delhi Metro Route	18
Technical Visits	19
Keynote Speakers Overview	20-23
Technical Programme	24-40
Accompanying Person Programme	41
Delhi Sight-seeing Tour	42
Same Day Agra Tour	43
Local Delhi / Accompanying Person Tours	44
IABSE 2023 Congress Sponsors	45
Exhibitors	46
Advertisement	

Install the IABSE Congress 2023, New Delhi Mobile **APP**

Android



iOS





Tina Vejrur
President
IABSE

Message From The President, IABSE

The International Association for Bridge and Structural Engineering is delighted to be invited to India again by the Indian Group for the IABSE Congress in New Delhi in September 2023. This will mark the 10th anniversary since the last time an international IABSE event was hosted in India, which was the very successful Kolkata Symposium on 'Long Span Bridges and Roofs' in 2013. Before that, the Indian Group of IABSE had already organised and hosted three important IABSE events - all in New Delhi: The 14th Congress on 'Civilisation through Civil Engineering' (1992), the IABSE Colloquium 'Foundation for Major Bridges: Design and Construction' (1999) and the IABSE Conference 'Role of Structural Engineers towards Reduction of Poverty' (2005).

The theme of the coming IABSE Congress in New Delhi is 'Engineering for Sustainable Development', and it follows the tradition outlined by the previous events, while at the same time marking an increased focus on sustainability in every aspect and in every phase of a project's life cycle.

The Organising Committee, chaired by Mr. PVVSS Ravi Prasad, and the Scientific Committee, chaired by Dr. H. Subbarao, are preparing a very engaging programme with important topics ranging from engineering education, development of design codes and standards for sustainability, the life cycle of structures, climate change impact on structural safety, materials, and technology, conventional and special structures. Transportation structures, heritage structures, urban habitats, and smart cities are also in the scope.

This will be an excellent opportunity for civil and structural engineers, architects, representatives of public agencies, academia, contractors, suppliers, and associated professionals interested in the proposed topics to share knowledge, build international relationships, and to promote cooperation to provide solutions supporting the global sustainable development agenda.

The slogan 'Incredible India!' is being promoted by the Ministry of Tourism and it captures the country's heritage, culture, and hospitality, as well as its natural scenery and unique ecosystems. The social events planned during the Congress are designed to showcase what Incredible India has to offer visitors.

On behalf of the Association, I would like to thank the Indian Group for organising the Congress in New Delhi in 2023. I look forward to reconnecting with our members and to welcoming new participants in New Delhi. A special invitation goes to young engineers born in or after 1989 to sign up and enjoy the Young Engineers Programme, as well as the networking opportunities with experienced members of the profession. Please join us!



Mr. P.V.V.S.S. Ravi Prasad
Chair
Organising Committee

Message From Chair, Organising Committee

The Indian National Group of the IABSE and the Organising Committee take great pleasure in extending your warm invitation to the IABSE Congress New Delhi 2023 with the theme "Engineering for Sustainable Development" from 20th September (Wednesday) to 22nd September (Friday), 2023. India is a vast country with rich heritage structures as well as modern structures. While planning and designing structures, their sustainability and coexistence with the environment fulfilling the needs of the society are the prime considerations.

The main goal of the Congress is to provide a platform for the debate on why sustainability is important. The role of engineers is vital in addressing not only the bridge and structural engineering issues, but also basic human needs such as alleviating poverty, supplying clean water and energy, responding to natural disasters, constructing resilient infrastructure, and bridging the development divide among people leaving no one behind.

The Congress shall focus on the most significant of the issues of our time, that is sustainability and the role of the engineer in accomplishing this goal. It is hoped that the Congress will provide an opportunity for Governments, Engineering Organisations, academia, and educational institutions, and industry to forge global partnerships and strengthen collaborations so as to deliver on the global sustainable development agenda.

Besides the deep intellectual discussions at the Congress, you will be treated with a socio-cultural feast, be it museums, historical and religious places, arts and crafts, marketing and shopping, street food, etc. New Delhi, the capital city of India has a history dating back to 3000 years with a wonderful blend of historical monuments, temples, gardens and modern civil engineering structures. Modern Delhi boasts of a 350 km long metro rail network, ever expanding, with 3 million daily ridership, an extensive road network, exclusive green areas, modern luxury hotels as well as business centres. Monsoon in New Delhi recedes in late September, and the post-monsoon season continues with pleasant weather.

Going further, if you choose to, you can take tours to some of the best tourist attractions near Delhi like - Taj Mahal and Fort at Agra, rich heritage of Rajasthan, Himalayan foothills in the North. These are on offer as comfortable post-Congress Tours at reasonable price. For those accompanying the delegates, there will be a number of special tours planned to keep them engaged giving them glimpse of the rich heritage and culture of Delhi.

The Organising committee is making all efforts to ensure that the best available arrangements are made for the Congress. A number of cultural evenings showcasing rich Indian traditions of dance and music are also planned to entertain you.

We are confident that this Indian experience will be memorable for you. I look forward to welcoming you in New Delhi in September 2023.



**Dr. Harshavardhan
Subbarao**
Chair
Scientific Committee

Message From Chair, Scientific Committee

On behalf of the Scientific Committee, I am very pleased to invite you to the IABSE Congress in New Delhi, India from 20th September (Wednesday) to 22nd September (Friday), 2023 **on Engineering for Sustainable Development**. The Congress is being organised by the Indian National Group of the IABSE.

The main theme is **"Engineering for Sustainable Development"**, a theme most pertinent and relevant to our times. While the various sub-themes will have an emphasis on sustainability issues, in keeping with the UN's declared Sustainable Development Goals; there is also the possibility of traditional topics and sub-themes.

The Technical Programme will include 8 renowned Keynote Speakers, Plenary and 6 Parallel Sessions, and technical visits will be organised. All written papers submitted are peer-reviewed by the Scientific Committee. Session formats will be paper presentations, panel discussions, special forums, Young Engineers Programme, and workshops. The large majority of the presentations will be delivered orally in normal sessions, nevertheless, special sessions will take place as well.

Keynote Speakers will introduce relevant topics to the theme and give state-of-the-art lectures. We have also organised technical exhibition showcasing the latest developments, which will offer tremendous opportunities for networking, collaboration, and furthering your business prospects.

We look forward to your contribution and participation in the IABSE Congress 2023 and to meeting you in New Delhi. We are eager to welcome you!

Objective & Scope

Sustainable Development Goals (SDG) adopted by United Nations in 2015 called for action by 2030 to end poverty, balance economic growth with social empowerment, and take Climate action to save the Planet. In the same year, the Paris Agreement on Climate Change required the nations to set their Nationally Determined Contribution to reduce Global warming. Against this backdrop and as part of its national action in pursuit of these goals, India is hosting an International Congress of the IABSE on the theme "Engineering for Sustainable Development" to promote the exchange of ideas and experiences as well as to build partnerships at international level on innovation, climate action, and environment protection.

Congress Format

The scientific programme will include Keynote, Plenary, and Parallel Sessions over three days. The official language of the Congress is English. Keynote Speakers will introduce relevant topics to the theme and give state-of-the-art lectures, followed by presentations in Plenary and Parallel Sessions. The large majority of the presentations will be delivered orally in normal sessions, nevertheless, special sessions will take place as well.

Special Sessions will grant the opportunity to present developments related to a specific topic proposed by highly respected individuals in that field of research or technical practice. Each contribution to these sessions consists of a paper of six to eight pages and an oral presentation followed by an open floor discussion for the audience to participate in.

Congress Theme

**Engineering for Sustainable
Development**

Congress Sub-Themes and Topics

- Initiatives of Professional Bodies for Sustainable Built Environment
- Sustainability through the Life Cycle of the Project
- Service-life of Sustainable Structures
- Disaster Mitigation for Sustainability
- Sustainability in Transportation Structures
- Sustainable Urban Habitat and Smart Cities
- Evolving Design Standards & Codes for Sustainability
- Preserving Heritage Structures
- Poverty Alleviation Centric Materials and Technology for Built Environment
- Climate Change Adaptation and Disaster Resilience
- Case Studies in Sustainable Materials, Technology & Practices
- Climate Change Impact on Structural Safety
- Sustainability Road Map for India
- Engineering Education Focused on Sustainability
- Conventional and Special Structures
- Special Sessions



Organising Committee

- PVVSS Ravi Prasad (Chair)
- Vinay Kumar Rajawat (Co-Vice-Chair)
- Rahul Gupta (Co-Vice-Chair)
- Sanjay Kumar Nirmal
- Ajay Prakash Pathak
- Alok Bhowmick
- Anant Kumar
- Asis Kumar Banerjee
- Balbir Kumar Arora
- Bhesha Nand Singh
- Binay Kumar Sinha
- Bidhan Chandra Roy
- Dinesh Kumar
- Gajendra Kumar
- Harshavardhan Subbarao
- Jatin Singla
- Manoj Kumar
- Manoranjan Parida
- Ravi Sinha
- Rajesh Kumar Pandey
- Rakesh Kumar Choubey
- Ram Shankar Mahalaha
- Rishi K Bansal
- Prof. Santosh Kumar Singh
- Sat Pal Singla
- Prof. Vasant Matsagar
- Vijay Pratap Singh

Scientific Committee

Core Group

- Harshavardhan Subbarao, Chair, SC, *India*
- Bidhan Chandra Roy, Vice-Chair, SC, *India*
- Alok Bhowmick, Secretary, SC, *India*
- Umesh Rajeshirke, *India*
- Venkataramana Heggade, *India*
- Varsha Agarwal, *India*

Other Scientific Committee Members

- Aditya Sharma, *India*
- AFM Saiful Amin, *Bangladesh*
- Akio Kasuga, *Japan*
- Alastair Soane, *United Kingdom*
- Alfred Strauss, *Austria*
- Amitabha Ghoshal, *India*
- Ana Mandić Ivanković, *Croatia*
- Ananth Ramaswamy, *India*
- Andre Orcesi, *France*
- Andreas Lampropoulos, *United Kingdom*
- Andreas Taras, *Switzerland*
- Ane de Boer, *The Netherlands*
- Ann Schumacher, *Switzerland*
- Anton Syrkov, *Russia*
- Arndt Goldack, *Germany*
- Atul Bhohe, *India*
- Bert Hesslink, *The Netherlands*
- Bruno Briseghella, *Italy*
- Carlos Mendez-Galindo, *Mexico*
- Christian Cremona, *France*
- Colin Caprani, *Australia*
- Dan Frangopol, *USA*
- Daniel Ureña Muñoz, *Costa Rica*
- Debra Lafer, *USA*
- Eftychia Apostolidi, *Austria*
- Eugen Brühwiler, *Switzerland*
- Fabrizio Palmisano, *Italy*
- Fathy Saad, *Egypt*
- Fernando Madrazo-Aguirre, *United Kingdom*
- Guy Larose, *Canada*
- H.H. (Bert) Snijder, *The Netherlands*
- Haiying Ma, *China*

- Hélder Sousa, *Portugal*
- Helena Gervásio, *Portugal*
- Hyun-Moo Koh, *Rep of S. Korea*
- Ian Peter T. Firth, *United Kingdom*
- Ignacio Paya Zaforteza, *Spain*
- Igor Kavrakov, *Germany*
- Indresh Kumar Pandey, *India*
- Jan Bien, *Poland*
- Jan Biliszczuk, *Poland*
- Jan Wium, *South Africa*
- Joan Ramon Casas, *Spain*
- Jonathan McGormley, *USA*
- Jorge de Brito, *Portugal*
- José Matos, *Portugal*
- Katrin Habel, *Canada*
- Luigi Fenu, *Italy*
- Luís Oliveira-Santos, *Portugal*
- Mahesh Tandon, *India*
- Maria Pina Limongelli, *Italy*
- Marion Rauch, *Germany*
- Mike Schlaich, *Germany*
- Mitsuyoshi Akiyama, *Japan*
- Mohan Jatkar, *India*
- Mourad Bakhoun, *Egypt*
- Narayan Pal, *India*
- Padmakar Manjure, *India*
- Paul Mullins, *Malaysia*
- Paweł Hawryszków, *Poland*
- Peter Seitz, *Germany*
- Petr Hájek, *Czech Republic*
- Raad Abdul-aziz, *Switzerland*
- Rade Hajdin, *Switzerland*
- Rajiv Ahuja, *India*
- Ravindra Gettu, *India*
- Redla Chakrapani, *India*
- Richard Stroetmann, *Germany*
- Rob Vergoossen, *The Netherlands*
- Ronur Jaigopal, *India*
- Sakai Koji, *Japan*
- Sanjay Kumar Nirmal, *India*
- Sébastien Maheux, *Canada*
- Shunichi Nakamura, *Japan*
- Sorin Dan, *Romania*
- Sougata Roy, *USA*
- Stefan Zmigrodzki, *Canada*
- Stephanos Dritsos, *Greece*
- Steve Kite, *Hong Kong, SAR China*
- Svein Erik Jakobsen, *Norway*
- Tamon Ueda, *Japan*
- Thomas Vogel, *Switzerland*
- Tina Vejrum, *Denmark*
- Tobia Zordan, *Italy*
- Venkatram. P. G., *India*
- Vijay Kulkarni, *India*
- Vikram Pakrashi, *Ireland*
- Vinay Gupta, *India*
- Xin Ruan, *China*
- Yaojun Ge, *China*
- Ye Xia, *China*



General Information and Onsite Registration

Congress Venue



Address:

Hotel Vivanta Dwarka,
Service Rd, Sector 21,
Dwarka, Delhi, 110075

Getting to Venue

By Taxi : There are various kinds of taxi services available in Delhi. You can also book an Uber or Ola cab which are available 24 hours and can be booked over the google or apple app. These cabs are clean and come fitted with functional meters and GPS.

You can also write to the Conference Manager at congress@ingiabse.org if you need any assistance to book your airport transfers or local travel requirements.

By Metro : The Delhi Metro remains one of the fastest, most economic and best ways to travel around Delhi in air conditioned comfort. This expansive intra city rail network connects Old Delhi to Central Delhi to NCR. The metro has been divided into six lines, namely the red line, yellow line, blue line, green line, violet line and the airport line. Congress Venue is on walkable distance from the Metro station "Dwarka Sector 21" Blue Line.

Google Live Map:

<https://g.co/kgs/J2sbbo>

Time Zone

India is 5 hours 30 minutes ahead of Greenwich Mean Time (GMT) and 3 hours 30 minutes ahead of Central European Time (CET)

Medical Facility

During the congress, there will be medical support readily available to all attendees. A qualified doctor will be on-site throughout the event to address any health-related concerns or emergencies that may arise.

Onsite Doctor Details

Dr. Chaman Prakash
+91 90133 41169



Climate/Temperature

Due to its vast size, India has a varied climate, and it is possible to travel at almost all times of year and find certain areas of the Subcontinent that are at their best. The country has a three-season year - summer, monsoon and winter. The rainy season is from June to September.

Recommended Clothing: It can be wet, hot, and humid season during the conference days, so light cotton clothing is advised. Umbrella is advisable

Monsoon - Max 35°C, Min 25°C

Currency Exchange

India uses the official currency known as the Indian Rupee (INR) throughout the country. The currency symbol is '₹' and it is commonly referred to as INR or rupee. Denominations of ₹5, ₹10, ₹20, ₹50, ₹100, and ₹500 are widely circulated. When traveling to India, you can conveniently obtain rupees at market exchange rates. Airports, 5-star hotels, and reputable travel companies are suitable places for currency exchange. Additionally, ATMs can be found at airports and prominent urban areas, with Indian State ATMs typically accepting Visa and MasterCard.

Electricity

In India electricity supply is at 220 V, 50 Hz. Round pins (2 or 3) can fit in the power sockets. Adapters are generally available at all hotels.

Onsite Registration Information

Onsite Registration Desk

Registration desk is located on the Ground Floor in Pre-Function Area of the Main Hall.

Opening Hours

Wednesday, 20 September	08:00 - 17:00
Thursday, 21 September	08:00 - 17:00
Friday, 22 September	08:00 - 15:00

Exhibition

Exhibition will take place in AC hangar located outside of the main Tango Hall (See map on page 15-16).

Opening Hours

Wednesday: 20 September	09:00 - 18:00
Thursday, 21 September	09:00 - 17:30
Friday, 22 September	09:00 - 16:00

Speakers Ready Room

Board Room (UG Floor)

Opening Hours

Wednesday: 20 September	08:30 - 18:00
Thursday, 21 September	08:30 - 17:30
Friday, 22 September	08:30 - 16:00

Badges

Admission to IABSE Congress 2023, New Delhi is strictly for registered delegates only. Congress Delegates are required to wear their badges at all time during the Congress.

Registration Process for Badge Collection

Registered participants will receive a QR code via email, to be scanned at Self Check-in Kiosk to collect their Congress Name Badge.

Congress Kit

Congress kit can be collected from Kit Counter at Registration area after scanning your badge.

Certificate of Attendances

Certificate of Attendance will be issued after scanning of your badge on 22 September 2023

Help & Travel Desk

There will be Help Desk & Travel Desk at registrations area for any further assistance. Participants can book their Technical Tours from Travel Desk.

WiFi

The Wi-Fi credentials are available at the Help Desk on request.

Congress App

Official IABSE Congress 2023, New Delhi Mobile App is available on Google Play and Apple Store.

Android



iOS



Congress Proceeding

IABSE Congress 2023, New Delhi proceedings will be available to all participants in the congress kit.

Lunches, Welcome Reception and Tea/Coffee Breaks and

The Lunches & Welcome Reception Dinner will be served at Pre-Function Area of Hall 1, 2 & 3. Tea/Coffee will be served in the Exhibition Area.

Hall Names

Opening/Closing Ceremony and Plenary

Sessions (Tango Hall) Ground Floor

Parallel Sessions

Hall 1 - (Tango Hall 1) Ground Floor

Hall 2 - (Tango Hall 2) Ground Floor

Hall 3 - (Tango Hall 3) Ground Floor

Hall 4 - (Debate Hall) UG Floor

Hall 5 - (Strategy Hall) UG Floor

Hall 6 - (Nucleus Hall) UG Floor

Speaker Ready

Room (Agenda Board Room) UG Floor

IABSE & ING-IABSE

Secretariat (Analysis Room) UG Floor

Exhibition Area (Hangar 1) Ground Floor

Welcome Reception & Cultural Evening

Date: Wednesday, 20th September 2023

Time: 19:00 Hrs Onwards

Place: Conference Venue (Tango Hall)

All Participants are invited to join the official Inaugural Dinner-cum-Welcome Reception followed by Cultural Programme

Gala Dinner

Date: Thursday, 21st September 2023

Time: 19:00 Hrs Onwards

Place: (AAI Officers' Institute - Safdarjung Airport, New Dehi)

Price: Euro 100 or INR 8,000

Buses will depart from Venue Hotel, Vivanta Dwarka, Hotel Porch at 18.00 hrs to AAI, Safdarjung

Reserved Bar for Young Engineers

Date: Thursday, 21st September 2023

Time: 18:30 Hrs Onwards

Place: (Yes Minister Bowling & Bar

Essex Farms Banquets, 4, Sri Aurobindo Marg, Kalu Sarai, New Delhi 110016)

"Complimentary for Young Engineers, Chargeable for Other Delegates"

Structure/Bridge Modelling Competition for Young Engineers

Date: Wednesday, 20th September 2023

Time: 18:00 hrs Onwards

Place: (to be announced at the congress venue and Mobile App Alert)

All Young Engineers & Senior IABSE Members are invited to participate in this activity

Yoga Session

Date: 18th-22nd September 2023

Time: 06:30-07:30

Place: (Vivanta Dwarka Lawn)

Optional for all IABSE Congress attendees

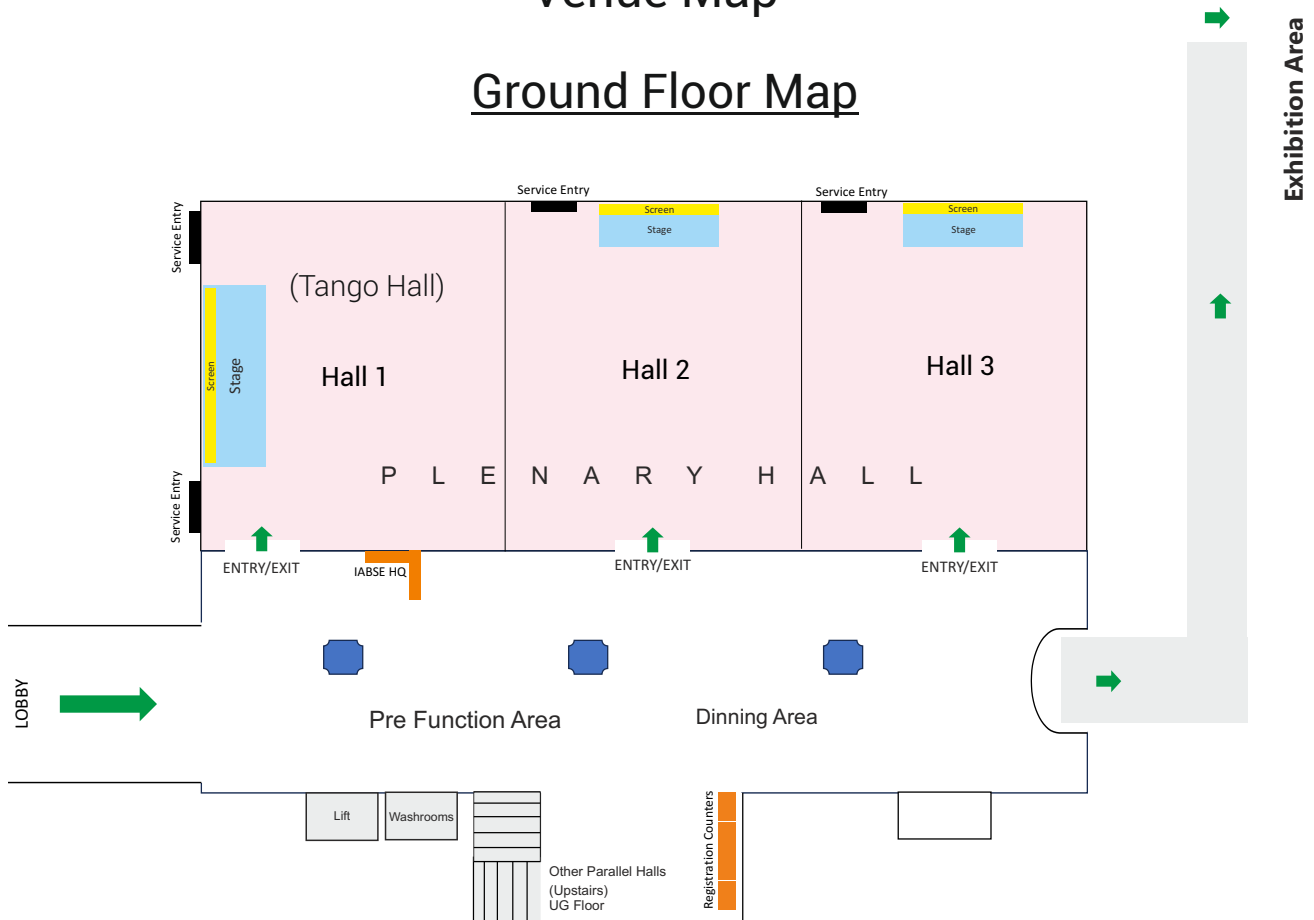
The Young Engineers Programme

Delegates born in 1989 or later will enjoy reduced registration fees. In addition, a jury will present the Young Engineers' Contribution Award to two young authors, who have personally presented their paper during the Congress. This prize is sponsored by the IABSE Fellows and the Organising Committee. This will be presented at the Closing Ceremony of the Congress.

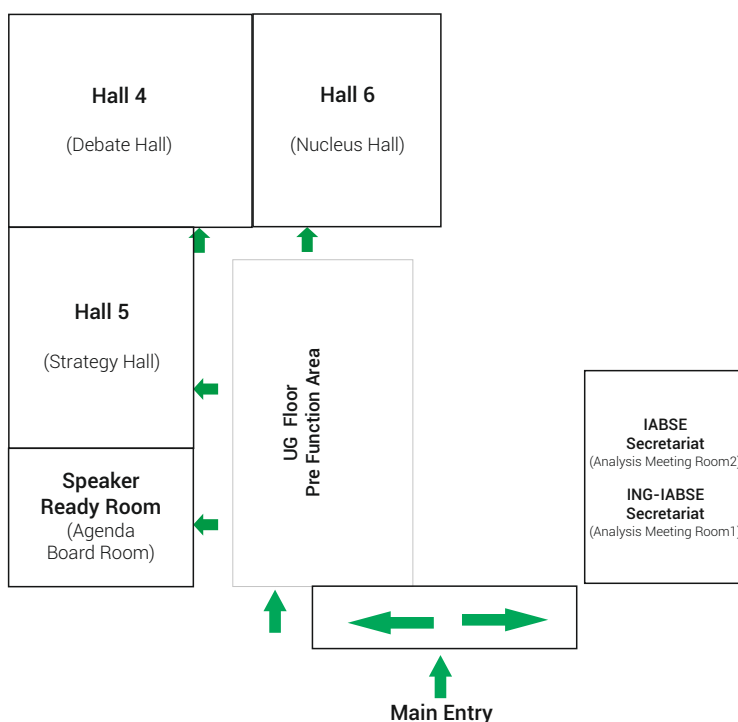
- **Speed Networking:** Young Engineers will be given exclusive opportunity to interact with Senior IABSE Members for Career Advice & widen their network.
- **Pecha Kucha Session:** A fun filled fast track creative presentation by young Engineers on any topic with 10 striking images without text or graphs in just 200 seconds.
- **Reserved Bar:** A specially reserved bar for the Young Engineers to break the ice with fun events.
- **Structure/Bridge Model Competition:** This Ice Breaker Activity will promote interaction and collaboration between young engineers and esteemed IABSE fellows. The participants will work together in teams to build structure models.

Venue Map

Ground Floor Map



UG Floor Map



Hall Names

Opening/Closing Ceremony and Plenary Sessions (Tango Hall)

Ground Floor

Parallel Sessions

Hall 1 - (Tango Hall 1)

Ground Floor

Hall 2 - (Tango Hall 2)

Ground Floor

Hall 3 - (Tango Hall 3)

Ground Floor

Hall 4 - (Debate Hall)

UG Floor

Hall 5 - (Strategy Hall)

UG Floor

Hall 6 - (Nucleus Hall)

UG Floor

Speaker Ready Room

(Agenda Board Room) UG Floor

IABSE & ING-IABSE Secretariat

(Analysis Room) UG Floor

Exhibition Area (Hangar 1)

Ground Floor

11X4 Mtr
TEA/COFFEE & LOUNGE AREA

MAIN ENTRANCE

FIRE EXIT

FIRE EXIT

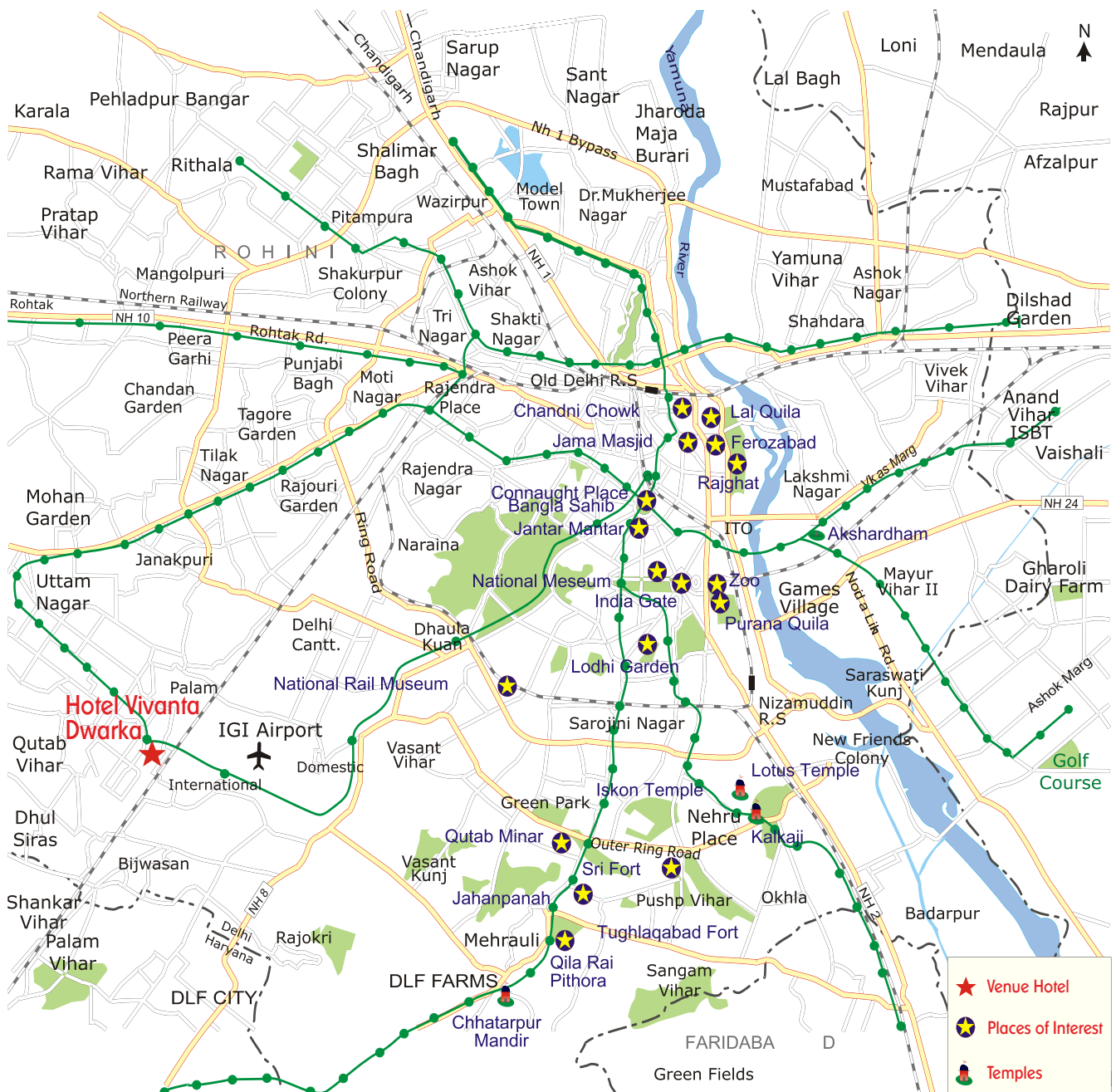
FIRE EXIT

FIRE EXIT

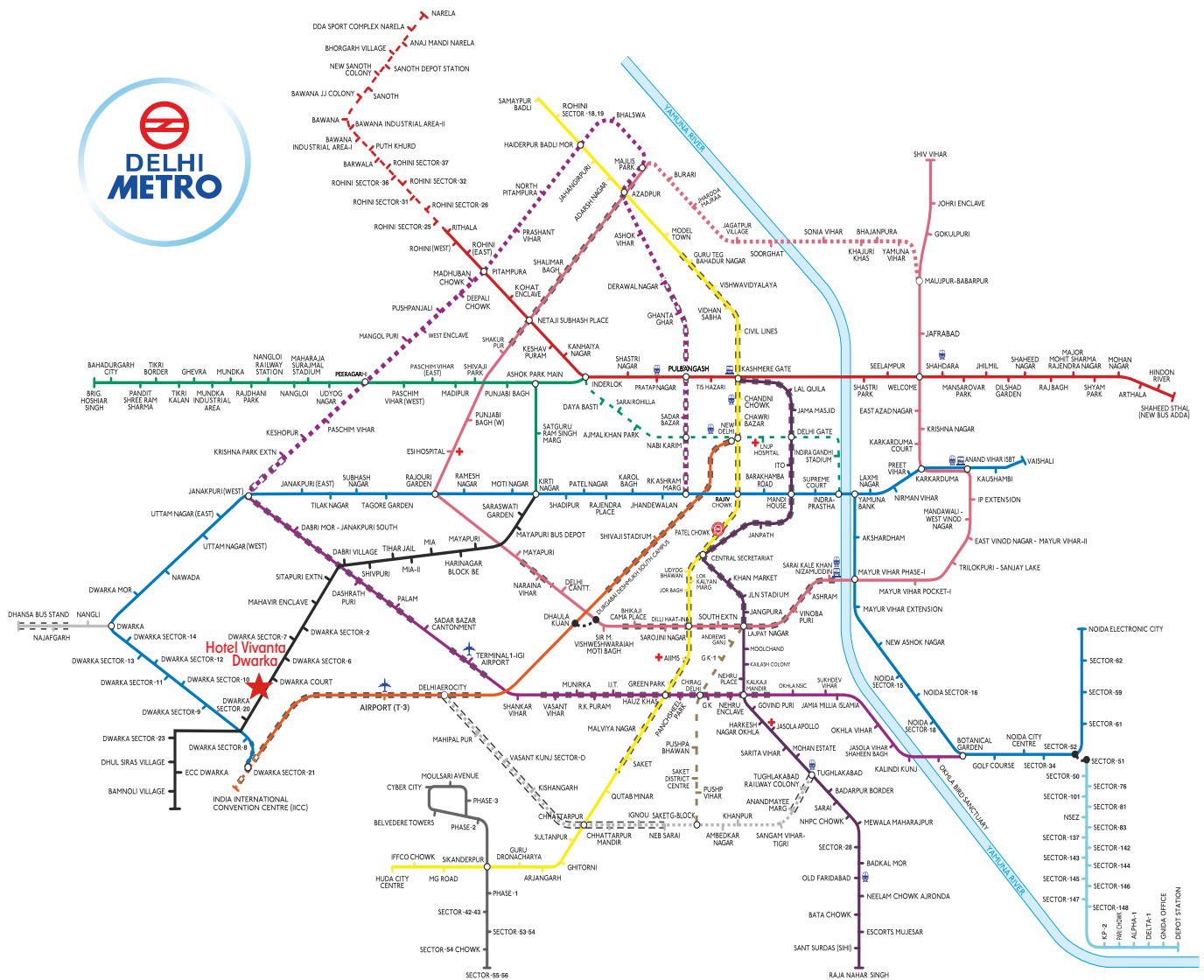
Size : 4X3 Sq Mtr
Total No. of Stall : 18 Nos

Size : 3X3 Sq Mtr
Total No. of Stall : 28 Nos

New Delhi City Map



New Delhi Metro Route



Technical Visits

Three Optional technical visit to interesting structures near Delhi during the Congress are planned. Please note that the confirmation of these tours will be offered to first 25 participants booked for each tour. Detailed information will be available on the Congress website.



Delhi Metro Viaduct

Date: Wednesday, 20th September 2023
Time: 14:30 - 18:30 Hrs

A fascinating Technical Tour of the Delhi Metro, where you will discover the inner workings of one of India's most impressive urban transportation systems. This tour provides an exclusive opportunity to explore the elevated viaduct and stations of a stretch of under construction part of the Delhi Metro network.

Led by experienced professionals, you will delve into the intricacies of the metro's planning, design, construction, and operation. Witness the cutting-edge technology, state-of-the-art infrastructure, and innovative features that have made the Delhi Metro a shining example of efficient urban transportation.



Extradosed of Barapullah Phase III Bridge

Date: Thursday, 21st September 2023
Time: 14:30 - 18:30 Hrs

An enlightening Technical Tour of the multi-span extradosed bridge over the river Yamuna in New Delhi. This tour offers a unique opportunity to explore and learn about the innovative engineering behind this remarkable structure.

Led by knowledgeable guides, you will delve into the design, construction, and unique features of this bridge.



Signature Bridge

Date: Friday, 22nd September 2023
Time: 09:30 - 14:00 Hrs

Embark on a captivating Technical Tour of the iconic Signature Bridge in Delhi. This tour offers a unique opportunity to explore and learn about the engineering marvel that has become a symbol of modern architecture.

Led by knowledgeable guides, you will delve into the intricacies of the design, construction, and structural elements of one of India's most technologically advanced Bridges with an impressive asymmetric span, innovative features, and aesthetic beauty of this landmark structure.

Keynote Speakers Overview

Sustainable Development Pathways to Address Climate Change

Wednesday, 20 September 2023, 11.30 - 12.00 Hrs, Plenary Session - Keynote 1 (Hall 1+ Hall 2+ Hall 3)



Ms. Leena Nandan

Secretary Ministry of
Environment, Forest and
Climate Change, Govt. of India

Mrs. Leena Nandan is an IAS officer of 1987 Batch, UP Cadre. Mrs. Nandan is a graduate in English (Hons.) from Patna Women's College, Patna University and has done her Master's in Development Management from the Asian Institute of Management, Manila.

Mrs. Nandan has served in various capacities in the State and Central Government as District Magistrate in 4 districts, Managing Director, UP Tourism Corporation, Joint Secretary, Ministry of Tourism etc. She was posted in the Ministry of Road Transport and Highways as Joint Secretary in 2016 and continued there as Additional Secretary and then Special Secretary upto 2020. Mrs. Nandan assumed charge as Secretary in the Department of Consumer Affairs on 1st May 2020, before taking over as Secretary, Ministry of Environment, Forest and Climate Change on 1st January 2022.

Engineering Solutions for Sustainable Development

Wednesday, 20 September 2023, 12.00 - 12.30 Hrs, Plenary Session - Keynote 2 (Hall 1+ Hall 2+ Hall 3)



Prof. S S Chakraborty

Hon. Fellow, IABSE FNAE,
F.I.C.E. (UK), F.I.E., F.I. STRUCT E.
(UK), F.I.E., India

Prof. Sudhangsu Chakraborty, formerly Vice-President, IABSE, is currently the Chairman, Second Vivekananda Bridge Tollway Company Pvt. Ltd (SVBTC), the Chairman of Bengal Faith Healthcare, and also the Founder and Chairman-Emeritus Consulting Engineering Services (India) Private Limited–CES.

He has been the recipient of "Legion of Honour" from The Sultanate of Oman in 1986; Institution of Civil Engineers – ICE (UK), The Gold Medal in 2007 for his "sustained contribution to civil engineering over five decades"; "Life Time Contribution Award in Engineering 2011" by the Indian National Academy of Engineering – INAE, for his "Outstanding contributions in the planning, designing and execution of monumental civil engineering projects for national infrastructure development". Prof. Chakraborty, Honoured Alumnus of BESU, delivered invited lectures to various international fora, such as ITC - Geneva, and UNIDO – Vienna, to champion the engineering services from developing countries and also to IEST and various IIT's as distinguished Professor.

Over five decades Prof. Chakraborty directed his efforts towards achieving developmental goals in an inclusive and sustainable manner.

Changing Climate and Sustainability of Built Environment

Thursday, 21 September 2023, 09.00 - 09.30 Hrs, Plenary Session - Keynote 3 (Hall 1+ Hall 2+ Hall 3)



Prof. Petr Hájek

Czech Technical University
Prague, Faculty of Civil Engineering,
Czech Republic, F.I.C.E. (UK), F.I.E.,
F.I. STRUCT E. (UK), F.I.E., India

Petr Hajek is Professor of Civil Engineering at the Czech Technical University in Prague, Head of Department of Architectural Engineering at Faculty of Civil Engineering and former Head of Composite Structures Laboratory at University Centre for Energy Efficient Buildings. He is an expert in sustainable construction of buildings, complex assessment and rating of building performance quality, LCA, optimization of concrete structures and use of recycled materials. P. Hajek is a member of General Assembly of fib (International Federation for Structural Concrete), former chairman of fib Commission 7 – Sustainable Concrete and convener of TG 7.1. Sustainable Concrete – general framework.

He is a board member of iisBE, board member of Czech Concrete Society and chairman of Editorial board of journal Concrete. He is author of more than 200 research-based publications, 3 patents, 12 design and utility models, 5 books and 5 text books.

Sustainable Development Goals and the Debate of Demolition versus Conservation in a Developing Economy

Thursday, 21 September 2023, 09.30 - 10.00 Hrs, Plenary Session - Keynote 4 (Hall 1+ Hall 2+ Hall 3)



Prof. Arun Menon

Prof. of Structural Engineering
Coordinator, National Centre for
Safety of Heritage Structures
(NCSHS), IIT Madras, Chennai, India

Arun Menon holds a first degree in architecture, and PhD in earthquake engineering from University of Pavia, Italy. His research interests are in structural aspects of historical constructions, earthquake behaviour of historical masonry structures, earthquake-resistant structural masonry, and earthquake risk assessment. He currently coordinates the activities of National Centre for Safety of Heritage Structures (NCSHS), a Ministry of Education (Govt. of India) -supported research centre at IIT Madras.

He is an Expert Member of International Scientific Committee on the Analysis and Restoration of Structures of Architectural Heritage (ISCARSAH) of ICOMOS (International Council on Monuments and Sites), and currently National Scientific Counsellor of ICOMOS India. He was an international expert member on the Technical Coordination Forum and Bagan International Coordinating Committee (BICC), Dept. of Archaeology, Ministry of Religious and Cultural Affairs, Govt. of Myanmar, and currently a Member, Expert Advisory Group (EAG) to the International Conservation Committee (ICC) for the Vat Phou UNESCO World Heritage Site in Laos PDR. Arun Menon is member of the Bureau of Indian Standards Panel for Masonry, CED 46:P7, (alternate member 2); Convener, Working Groups on revision of seismic standards for masonry (IS: 1893, IS: 13920 and IS: 13935) in the Earthquake Engineering Sectional Committee CED 39.

Upgrade & Retrofit of Existing Infrastructure & How it Contributes to Sustainability to Extend the Service Life of Structures

Thursday, 21 September 2023, 10.00 - 10.30 Hrs, Plenary Session - Keynote 5 (Hall 1+ Hall 2+ Hall 3)



Mr. David MacKenzie

Senior Technical Director
COWI UK Limited, United Kingdom

David is a Senior Director of COWI UK and is responsible for the technical leadership of the UK group. As part of this role, he is responsible for developing technical communities and the dissemination of knowledge within the business. He is responsible for directing many of the company's projects as leads as the Design Joint Venture Board for a number of major infrastructure projects including High Speed 2 in the UK.

David is heavily involved in the engineering of cable supported bridges worldwide. This includes both the design of new bridges and the maintenance, repair and strengthening of existing bridges. These projects include the deck replacement of the Hammersmith Bridge in the UK and the repair and strengthening the Yi Sun Shi Bridge in Korea.

He has been an auditor for Transport Scotland on Forth Road Bridge and other key long span structures. David is also a member of CROSS (Confidential Reporting of Structural Safety) and a Fellow of the Wind Engineering Society. He is actively involved in the Royal Academy of Engineering and on the Examinations Panel for the Institution of Structural Engineers.

Code of Practice for Sustainable Structures

Friday, 22 September 2023, 09.00 - 09.30 Hrs, Plenary Session - Keynote 6 (Hall 1+ Hall 2+ Hall 3)



Prof. Helena Gervasio

ISISE, Dep. of Civil Engineering,
University of Coimbra, Portugal
F.I.C.E. (UK), F.I.E., F.I. STRUCT E.
(UK), F.I.E., India

Helena Gervasio has a MS and PhD in Civil Engineering from the University of Coimbra and is an integrated member of the Institute for Sustainability and Innovation in Structural Engineering (ISISE). She is Associate Professor at the Department of Civil Engineering of the University of Coimbra.

Over the last 15 years her research activities have been focussing on the sustainability of construction works and on the development of methods and tools striving for a more sustainable society. Her research interests include, among others: Life Cycle Analysis of structures, Efficiency of natural resources in construction, Climate change mitigation and adaptation strategies, and Decarbonization of the built environment.

She is member of different national and international associations and technical committees focusing on the sustainability of structures. She is responsible for several international and national research projects, and author of about 150 publications in peer-reviewed journals, international and national conferences.

Role of Indian Standards & Special Publications Orienting Towards Sustainability Causes

Friday, 22 September 2023, 09.30 - 10.00 Hrs, Plenary Session - Keynote 7 (Hall 1+ Hall 2+ Hall 3)



Mr. Sanjay Pant

Dy Director General
(Standardization),
Bureau of Indian Standards, India

Shri Sanjay Pant, Dy Director General (Standardization), BIS is an eminent Civil Engineer with over 34 years of experience in Standardization and Conformity Assessment. He has to his credit formulation of a series of Indian Standards and Special Publications in the field of building materials & technologies, design and construction practices and management. He is well known for bringing one two landmark versions of the National Building Code of India, i.e. NBC 2005 and NBC 2016. Shri Pant is a recipient of many awards and recognition and represented India in many international bodies.

New Initiatives to Sustainable Infrastructure Growth in India

Friday, 22 September 2023, 15.30 - 16.00 Hrs , Plenary Session - Keynote 8 (Hall 1+ Hall 2+ Hall 3)



Mr. Anurag Jain

Secretary
Ministry of Road Transport &
Highways, Govt of India

Shri Anurag Jain is an Indian Administrative Service (IAS) Officer of 1989 Batch of Madhya Pradesh Cadre. He assumed the charge of Secretary, Ministry of Road Transport & Highways (MoRTH) on 26.04.2023. Before this, he was Secretary, Department for Promotion of Industry and Internal Trade (DPIIT) and during that assignment, he led the transformational PM Gati Shakti- National Master Plan, the initiative which received Prime Minister's Award for Excellence in Public Administration in April 2023.

He also has vast experience of Finance, Information Technology, District Administration and Rural Development. Important assignments handled by him include Secretary to Chief Minister, Madhya Pradesh (5½ years); Joint Secretary to Prime Minister (3½ years); Head of Finance Department of Govt. of MP as Additional Chief Secretary/Principal Secretary (Finance) (two years) and Vice-Chairman, Delhi Development Authority.

As Joint Secretary in the Ministry of Finance, Government of India, he is credited with conceptualizing and implementing one of the most successful initiatives 'Pradhan Mantri Jan Dhan Yojana', the largest financial inclusion programme in the World. As Secretary to the Chief Minister, Madhya Pradesh, he was the prime mover of enactment of Public Service Delivery Management Act, an innovative concept adopted by more than a dozen States in the country. As Secretary, Information Technology, Govt. of Madhya Pradesh, he was instrumental in taking the State to top rungs in e-Readiness Assessment of States and Union Report.

Technical Programme | Day 1 - 20th September, Wednesday

08:00 - 09:00 Hrs | Registration (Pre-Functions Area)

Inaugural Session Hall 1 + Hall 2 + Hall 3 Time: 09:00-11:10		
Coffee / Tea Break (Exhibition Area) Time: 11:10-11:30		
Plenary Session - Keynote 1: Ms. Leena Nandan (Hall 1+ Hall 2+ Hall 3) Co-Chairs: Ravi Prasad, Tina Vejrum Time:11:30-12:00		
Plenary Session - Keynote 2: Prof. S S Chakraborty (Hall 1+ Hall 2+ Hall 3) Co-Chairs: Ravi Prasad, Tina Vejrum Time: 12:00-12:30		
Lunch (Pre-Function Area) YE Speed Networking (Indus Express) Time: 12:30-14:00		
Session 1 (Hall-1)		
Sustainability in Transportation Structures Chair: R. K Pandey		
Time	Title	Presenter
14:00-14:15	New modular construction method for multi-span concrete bridges with reduced material consumption	Franz Untermarzoner*, Michael Rath, Johann Kollegger
14:15-14:30	The Practice of Forensic Structural Engineering in IABSE Member Countries: preliminary review of Survey 2022	Laurent Rus, Fabrizio Palmisano, Karel Terwel
14:30-14:45	Lessons in Remote Infrastructure: Connecting People and Landscape to Promote Economic Vitality & Create Social Value	Catherine Merlo
14:45-15:00	Towards Attaining SDG in Design and Construction of Highway Bridges - A Critical Review	Naresh Kumar Sinha
15:00-15:15	Designing on existing bridges:A paradigm of sustainability applied to civil engineering	Javier Torrico Liz, José Romo
15:15-15:30	Long-Term Sustenance Issues with Cables for Cable-Supported Bridges	Partha Roy, Amitabha Ghoshal
15:30:16:00	Tea / Coffee Break (Exhibition Area)	
Session 2 (Hall-2)		
Case Studies in Sustainable Materials, Technology and Practices Chair: R. P Indoria		
Time	Title	Presenter
14:00-14:15	Innovative bridge structures recently built in Poland	Jan Biliszczyk, Wojciech Lorenc, Maciej Kożuch, Marco Teichgraeber
14:15-14:30	Design of Multi-span Cable Stayed Bridge at Ambhora, near Nagpur, Maharashtra	Nirav Mody, Harshavardhan Subbarao, HKS Durga Jithendra Bhattiprolu
14:30-14:45	Seismic demand assessment for 20km long Elevated Expressway in Chattogram, Bangladesh	Faria Sharmin, Sabbir Siddique
14:45-15:00	Independent Design Checking of Brahmaputra Bridge, Guwahati - Sharing Experience Lessons Learnt	Gurpreet Singh Raja, Alok Bhowmick

15:00-15:15	Structure of the new movable railway bridge on Pamban Island	Alberto Curbelo Diaz, Ginés Ladrón de Guevara, José Luis Sánchez, Ángel Cabria, Andrés González
15:15-15:30	Case study using Non-Linear Finite Element Analysis for Assessment of Slutchers Lane bridge.	Sreejith Parayil, Jithu G Francis, Abani Kumar Satapathy
15:30:16:00	Tea / Coffee Break (Exhibition Area)	

Session 3 (Hall-3)		
<i>Analysis, Research and Standardisation</i>		
<i>Chair: Bruno Briseghella</i>		
Time	Title	Presenter
14:00-14:15	Experimental study on dynamic characteristics of rubber sand mixtures	Bruno Briseghella, Zhen Li, Junqing Xue, ZhengxianYang, Fuyun Huang, Alessandro Contento
14:15-14:30	Gap filler to eliminate the hole play between base plate and channel bolts installed in anchor channels to sustain higher seismic loads	Kusum Saini, Christoph Mahrenholtz, Sven Giesenbauer, Akanshu Sharma, Gopal Vutha
14:30-14:45	Sandwich panels with bio-based core of wood fibre insulation	Eric Man Pradhan, Jörg Lange, David Izabel, Thibault Renaux, Valérie Huet
14:45-15:00	Experimental and analytical investigations on the shear capacity of prestressed concrete bridges	Christian Dommes*, Josef Hegger
15:00-15:15	The Evolution of the Indian Standard IS 1893 Focusing on Base Shear Values of Seismic Forces for a Forty-Three-Storey Reinforced Concrete High- Rise Building Using the Response Spectrum Method	Samard Buddee
15:15-15:30	Influence of train composition on crack propagation at structural components of welded railway bridges	Dorina Siebert*, Christina Radlbeck, Martin Mensinger
15:30:16:00	Tea / Coffee Break (Exhibition Area)	

Session 4 (Hall-4)		
Climate Change Adaptation and Disaster Resilience		
Chair: Helena Maria Gervasio		
Time	Title	Presenter
14:00-14:15	Addressing Climate Resiliency in Long Span Bridges through Early Stage Aerodynamic and Climate Engineering Consulting	Guy Larose , Pierre-Olivier Dallaire, Rahul Rajendran, Vishnu Raveendranathan
14:15-14:30	Climate Change: Latest on the Wind Speed at the Coastal Regions of India	Rahul P S
14:30-14:45	Functional Seismic Resilience of Reinforced Concrete Building Conforming to Indian Standards	Ravi Sinha , Mohammad Rafiq Joo
14:45-15:00	Influence of Design Practices and Climate Change Effects on the Seismic Fragility and Life-Cycle Cost of Highway Bridges	Jayadipta Ghosh , Mohamed Mortagi
15:00-15:15	Understanding Social Engineering and Disaster Resilience for Rural Roads	Shailly Gupta* , Mukesh Chander Gupta
15:15-15:30	Better Modular Steel Panel Bridges for Emergency Response on NHs in India	S Ravi Shankar
15:30:16:00	Tea / Coffee Break (Exhibition Area)	

Session 5 (Hall-5)		
Sustainability in Built Environment		
Chair: A.K Shrivastava		
Time	Title	Presenter
14:00-14:15	Construction Materials and Green House Gas Emissions in India	Balaji V Chandrasekaran
14:15-14:30	Material Selection for Minimum Carbon Footprint in Structural Design	Martin Rettinger* , Melissa Meyer
14:30-14:45	Experimental Analysis On The Sustainable Effects Of Magnetic Water In Selfcompacting Concrete With Partial Replacement Of Constituent Materials	Mallikarjun Kaspas* , VLD Prasad Reddy
14:45-15:00	Water transport properties and Life Cycle Assessment of low-grade fly ash based cementitious materials	Manoj Kumar , K V Harish
15:00-15:15	Different strategies for setting requirements to sustainability	Randi Muff Christensen
15:15-15:30	Steel Fibre Reinforced Concrete for Sustainable Construction	Summer Shahzad , Kasper Pirttikoski, Sébastien Wolf
15:30:16:00	Tea / Coffee Break (Exhibition Area)	

Session 6 (Hall-6)		
Heritage Structures		
Chair: N C Pal		
Time	Title	Presenter
14:00-14:15	Methods for ensuring the sustainability of steel heritage bridges	Pavel Ryjacek , Vojtěch Stančík, Jakub Vůjtech, Jiří Litoš, Martin Pospíšil, Jan Kudláček, Miroslav Sýkora
14:15-14:30	Revitalization of the historical bridge over the Mala Panew river in Ozimek - the oldest chain suspension grey cast iron river-crossing on the European continent	Mariusz Maslak , Marek Pańtak, Michał Pazdanowski
14:30-14:45	Femtosecond pulse laser cleaning for the preservation of the Sydney Harbour Bridge	Ludovic Rapp , Julia Brand*, Andrei V. Rode, Steve Madden, Alison Wain, Penelope L. King, Meera Mohan, Waruna Kaluarachchid, Julia Ratnayaked
14:45-15:00	Conservation of caves cut in volcanic breccia, Jogeshwari, Mumbai	Vikram Pawar , Kimaya Keluskar, Malini Rajlakshmi
15:00-15:15	How an Architectural Gem from 1900 Became Building of the Year 2020 Alter Wall 2-32 at the Heart of Hamburg-Germany	Oskar H. Pekoll
15:15-15:30	Femtosecond pulse laser cleaning of Makrana marble and semi-precious stones for the preservation of the Holy Samadh	Julia Brand*
15:30-16:00	Tea / Coffee Break	

Session 7 (Hall-1)		
Sustainability in Transportation Structures		
Chair: Ravi Shankar		
Time	Title	Presenter
16:00-16:15	Bridge management analytics focused on sustainability and economic growth	Sachidanand Joshi , Atharvi Thorat, Harshali Dehadray, Mayuri Tundalwar
16:15-16:30	Sustainability and innovation in design of major bridge substructures	Kahini Kundu , Thomas Löhning, Flemming Pedersen, Uffe Graaskov Ravn
16:30-16:45	Halsafjorden Suspension bridge on floating foundation. Design and CO2 emission	Ketil Aas - Jakobsen , Assad Jamal, Joar Tistel
16:45-17:00	A comparison of the resource efficiency of different reinforcement concepts motivated by tunnel segments	Marion Decker , Clemens Proksch-Weilguni, Johann Kollegger
17:00-17:15	Environmental assessment of road construction projects in India: A novel approach	Abhiram Shukla , Harshal Tikam
17:15-17:30	Innovative box girder having footpath at bottom of box girder by cantilevering soffit slab	Arun K V , Beena K P

Session 8 (Hall-2)		
Case Studies in Sustainable Materials, Technology and Practices		
Chair: Ravi Sinha		
Time	Title	Presenter
16:00-16:15	Innovative solution for an Extradosed bridge over river Beas in Hilly Terrain of Himalayas	Nirav Mody
16:15-16:30	Development of extraordinary suspension bridge solutions for Sulafjord in Norway	Svein Erik Jakobsen , Kristin Nessa, Inger Kroon, Assad Jamal, Ketil Aas-Jakobsen, Joar Tistel, Per Norum Larsen, Gunnar Egset
16:30-16:45	Innovation in the design and construction of Temburong Bridge, Brunei	Sammy Yip

16:45-17:00	Mechanisms For New Lifting Railway Bridge on Pamban Island In Tamil Nadu, India	Jose Luis Sanchez Jimenez , Angel Luis Cabria Calleja, Andres Gonzalez Guerrero, Gines Ladron De Guevara Mendez, Alberto Curbelo Diaz
17:00-17:15	Wind Tunnel Testing and Aerodynamic Consulting for Indian Bridges Today	Guy Larose , Pierre-Olivier Dallaire, Rahul Rajendran and Vishnu Raveendranathan
17:15-17:30	Case Study of Rochdale Canal Bridge Assessment using Non-Linear Finite Element analysis	Sai Anoop Aditya Voleti* , Sreejith Parayil, Abani Kumar Satapathy

Session 9 (Hall-3)		
Analysis, Research and Standardisation		
Chair: Rasmus Rempling		
Time	Title	Presenter
16:00-16:15	Proposed Seismic Design Methodology for Steel Pier-Pile Integrated Structure Considering Dynamic Soil-Pile Interaction and Ductility Performance of Elongated Members	Shreya Thusoo* , Takayuki Omori, Fukutaro Umebayashi
16:15-16:30	A longitudinal isolation system with elastoplastic cables for single-tower cable-stayed bridges	Shichun Zhang , Guan Zhongguo
16:30-16:45	Seismic Analysis of Integral Abutment Bridge - Comparison of Framed Abutment with Fixed Base And Hinged Base	Biswa Kumar Balla , Sudip Shrestha*, Shreenij Maharjan
16:45-17:00	Effect of bridge foundation stiffness on the dynamic behavior of bridge structure	José António Silva Carvalho Campos Matos , Minh Tran Quang, Hélder S. Sousa, Binh Nguyen Duc, José C. Matos, Ana Margarida Bento, Tiago Ferradosa
17:00-17:15	Study on Mechanical Properties of a Negative Poisson's Ratio Structural Bridge Block	Xun Wu , Xuhui Zhang
17:15-17:30	Thermal Performance of Sandwich Wall Panels With Core Insulating Material	Sooriyalak Shmi N , Xuhui Zhang, Sherila. B

Session 10 (Hall-4)		
Digital Initiatives (BIM, Artificial Intelligence, 3D Printing)		
Chair: Debra Laefer		
Time	Title	Presenter
16:00-16:15	Humanism through artificial intelligence?	Baris Wenzel , Eberhard Moeller
16:15-16:30	MINIMASS: a new approach for low-carbon, lowcost 3D printed concrete beams	Andrew Coward
16:30-16:45	Material efficient 3D printed Steel Construction Details	Maren Erven , Jörg Lange
16:45-17:00	A Holistic Digital Design Approach for a Metro Project in Portugal	Zeljka Devedzic , Jose R. Duarte, Filipa Duarte, Bruno Fernandes, Johann Stampfer, Blaz Mulavec
17:00-17:15	3D Printed Sandwich Structural Decks of Dual Corrugate Sheet with Mid Shear Layer (DCMSL) as Core Profile	K Kamal
17:15-17:30	Machine Learning Based Optimization Techniques for Predictive Strength of High Performance Concrete: Enhancing Sustainable Development	Lukesh Parida

Session 11 (Hall-5)
Sustainability in Built Environment
Chair: Jose Matos

Time	Title	Presenter
16:00-16:15	Effect of Slenderness on the Design of FRP reinforced Concrete Columns	Ahmed Usama Syed* , Arndt Goldack
16:15-16:30	Disruptive change in mineral building materials - high-performance prefabricated elements made of UHPC for circular buildings	Michael Olipitz
16:30-16:45	Mapping structural engineering strategies for sustainable development	Karel Terwel , Roy Crielaard
16:45-17:00	Mechanical behavior and load-bearing capacity of components made from sustainable lime-paper material	Stefan Reich , Christian Pfütze
17:00-17:15	Replacement of gypsum plasterboard with sustainable secondary raw material composition	Sagar Vanapalli , Christian Pfütze, Stefan Reich
17:15-17:30	Sustainability by Integration of Existing Structures into new Infrastructures	Grischa Dette , Jörg Munack

Session 12 (Hall-6)
Heritage Structures
Chair: Amitabha Ghoshal

Time	Title	Presenter
16:00-16:15	Bridges as Built Heritage: Preservation, Reimagination, Transformation	Catherine Merlo , Poul Ove Jensen, Jesper Henriksen, Tine Holmboe
16:15-16:30	Conservation discourses in technical education, India	Vikram Pawar , Bidhan Chandra Roy
16:30-16:45	Influence of residual stresses on mechanical properties of structural steels subjected to laser ablation treatment	Jiawe Jiawei Tu , Anna Paradowska, Andrei Rode, Ludovic Rapp, Steve Madden, Meera Mohan, Gwénaëlle Prousti Tu
16:45-17:00	Improving of (energy) performance of existing (heritage) buildings	Geralt Dr. Siebert
17:00-17:15	Preservation of heritage masonry structures: Assessing compatibility of consolidative treatments on Fired Clay Bricks	Swathy Manohar , Tejyas D. Singh
17:15-17:30	Lime-red mud binders for repair of heritage structures and for CO sequestration	Athira V S , Tejyas D. Singh

19:30 Onwards | Welcome Reception & Cultural Evening (Hall 1 + Hall 2 + Hall 3 and Pre-function Area) | YEP Activity Bridge Modelling competition

Technical Programme | Day 2 - 21st September, Thursday

08:00 - 09:00 Hrs | Registration (Pre-Functions Area)

Plenary Session - Keynote 3: Prof. Petr Hajek (Hall 1+ Hall 2+ Hall 3)

Co-Chairs: S. S Chakraborty, Alok Bhowmick

Time: 09:00-09:30

Plenary Session - Keynote 4: Prof. Arun Menon (Hall 1+ Hall 2+ Hall 3)

Co-Chairs: S. S Chakraborty, Alok Bhowmick

Time: 09:30-10:00

Plenary Session - Keynote 5: Mr. David MacKenzie (Hall 1+ Hall 2+ Hall 3)

Co-Chairs: S. S Chakraborty, Alok Bhowmick

Time: 10:00-10:30

Coffee / Tea Break (Exhibition Area)

Session 13 (Hall-1)

Sustainability in Transportation Structures

Chair: Dhanraj Tawade

Time	Title	Presenter
11:00-11:15	Sustainable development requires risky decisions - problematic 300ton overweight transport passing a bridge	Mikołaj Miśkiewicz , Andrzej Kozakiewicz, Lukasz Pyrzowski, Bartosz Sobczyk
11:15-11:30	Sustainable Design and Construction of Bridge Case Study of Design of Arch Bridge in Nepal using Multi-Criteria Decision Analysis	Shreenij Maharjan* , Biswa Kumar Balla, Sudip Shrestha
11:30-11:45	Sustainable Bridges Past and Future Reflections on a European Project 2003 - 2007	Lennart G Elfgren , Brian Bell, Jan Bien, Christian Cremona, Glauco Feltrin, Jens S Jensen, Risto Kiviluoma, Ernst Niederleithinger, Jan Olofsson, Björn Paulsson, Björn Täljsten, Gabriel Sas
11:45-12:00	Research on Concrete Box Girder Bridge Widening Based on Spatial Grid Model	Chenglin Sun*
12:00-12:15	Adoption of Stainless Steel in Bridge Construction for Safety and Sustainability	Nirmalya Bandyopadhyay , Amitabha Ghoshal
12:15-12:30	Underground Metro: A Solution for Sustainability	Vinay Gupta
12:30-14:00	Lunch / YE Speed Networking (13:00 - 14:00)	

Session 14 (Hall-2)

Case Studies in Sustainable Materials, Technology and Practices

Chair: A K Banerjee

Time	Title	Presenter
11:00-11:15	Construction Aspects of Multispan Cable stayed bridge at Ambhora using C-frame type form-Traveller	Jithendra B
11:15-11:30	First time Use of Lead Rubber Bearing for Seismic Isolation of a continuous Bridge in India - a CASE STUDY	Shilpi Srivastava , Sanjay Jain
11:30-11:45	Double-Decker - Nagpur Metro Flyover with Spine & Wing Superstructure	Sachin More* , Manoj T. P.
11:45-12:00	Study of A Monumental Stair Susceptible to Excessive Vibrations Due to Human Movements	Mehdi Setareh
12:00-12:15	Designing World Tallest Statue for Wind: Statue of Unity	Rahul P S , Cini Anoop, K Suresh Kumar

12:15-12:30	488 University Avenue - Toronto: Redefining possible in the vertical expansion of buildings	Bujar Morava , Shayne Love
12:30-14:00	Lunch / YE Speed Networking (13:00 - 14:00)	

Session 15 (Hall-3)		
Analysis, Research and Standardisation		
Chair: Guy Larose		
Time	Title	Presenter
11:00-11:15	Research on creep and shrinkage effects of steelconcrete- Ultra-High Performance Concrete (UHPC) composite structure under different construction methods	Songsong Guo , Deng guomin, Shi shudong, Ma xiaogang, Zhang dawei, Guo songsong, Liu chao
11:15-11:30	Butt-jointed reinforcement bars in the longitudinal joints of tunnel segments: Experimental investigation	Clemens Proksch-Weilguni* , Marion Decker, Johann Kollegger
11:30-11:45	Bridge Cables Non-Destructive Testing	Hans Eirich , Daniel C. Ruff
11:45-12:00	Seismic performance of Rigid-frame suspension composite bridges	Cheng Peng* , Zhang Xuejian, Liu Xiaoxian, Yin Yonggao
12:00-12:15	Numerical modeling of rigid frame suspension composite bridge	Chenfei Wu* , Zhou Wenrui, Liu Xiaoxian, Yin Yonggao
12:15-12:30	In-Plane Behavior of Strengthened Unreinforced Masonry Infill Walls: Experimental and Numerical Study	Jaya Kumar Bhaskar , Dipendu Bhunia
12:30-14:00	Lunch / YE Speed Networking (13:00 - 14:00)	

Session 16 (Hall-4)		
Special Session : Existing Bridges - Our Vital Responsibility in BIM Environment		
Chair: Ketil Aas-Jakobsen		
Time	Title	Presenter
11:00-11:15	Digital Bridge Schwindegg (Germany): Ab initio monitoring for sustainable lifecycle management	Johannes Wimmer* , Thomas Braml
11:15-11:30	Digitalization of bridge inventory via automated analysis of point clouds for generation of BIM models	Lazar Rakic , Rade Hajdin, Holger Diederich, Rico Richter, Justus Hildebrand, Sebastian Schulz, Jürgen Döllner, Jennifer Bednorz
11:30-11:45	Linking BrIM to BMS for bridges concepts	Ketil Aas- Jakobsen , Assad Jamal, Joar Tistel
11:45-12:00	Gabm - empowering the micro bridge Inventory owners	Mayuri Tundalwar
12:00-12:15	An Overview of the BIM implementation on Chilean Bridges	Matias Andres Valenzuela Saavedra , Marcelo Marquez & Leonardo Roca, José Luis Seguel
12:15-12:30	Experimental Investigation on The Performance of Unreinforced Masonry Infill Walls With Openings Under Seismic Loading	Kristian Schellenberg
12:30-14:00	Lunch / YE Speed Networking (13:00 - 14:00)	

Session 17 (Hall-5)		
<i>Sustainability in Built Environment</i>		
<i>Chair: Mahesh Tandon</i>		
Time	Title	Presenter
11:00-11:15	CROSFALL A knowledge sharing newsletter to create a safer built environment	Alok Bhowmick
11:15-11:30	A machine learning-based methodology of integrating loading data and load effect data for long span bridge assessment	Cong (Simon) Ye* , Paresh Vishnoi, Ngai Yeung, Steve KITE
11:30-11:45	The second generation of Eurocode 4	Stephen Hicks
11:45-12:00	Efficiency and Cost Effectiveness of Ground Source Heat Pump for Five Storied Office Building	Priyanka Bhartiya
12:00-12:15	Restructuring Construction Thinking for Urban Material Reuse (RECUR)	Reza Haghani , Debra Laefer
12:15-12:30	Sustainable facade constructions	Barbara Siebert , Geralt Siebert
12:30-14:00	Lunch / YE Speed Networking (13:00 - 14:00)	

Session 18 (Hall-6)		
<i>Heritage Structures, Poverty Alleviation and Social Sustainability</i>		
<i>Chair: Nirav Mody</i>		
Time	Title	Presenter
11:00-11:15	Bridge construction using decommissioned wind turbine blades as a poverty alleviation centric technology: possibilities and implementation example	Bartosz Piątek* , Mateusz Rajchel, Maciej Kulpa, Tomasz Siwowski
11:15-11:30	Mobility Architecture as a Driver of Social Sustainability Outcomes	Tine Weissshappel Holmboe , Poul Ove Jensen, Jesper Henriksen, Catherine Merlo*
11:30-11:45	Sustainable and resilient structures	Jaiprasad Ramakrishna , Dasari Taranath
11:45-12:00	Deep vision-based stone deterioration assessment of Indian heritage structures using synthetic and real-time environment	T. Jothi Saravanan
12:00-12:15	Poverty Alleviation - Habitats and Infrastructures for the Under Privileged	Bidhan Chandra Roy , Raghuram Ekambaram
12:15-12:30	Sustainability of Heritage Structures : Conservation Issues & Challenges	NC Pal
12:30-14:00	Lunch / YE Speed Networking (13:00 - 14:00)	

Session 19 (Hall-1)		
<i>Sustainability in Transportation Structures</i>		
<i>Chair: R. K. Jaigopal</i>		
Time	Title	Presenter
14:00-14:15	Structural Rehabilitation of Viaduct Cernicchiara	Francesco Fanigliulo
14:15-14:30	Designs and embodied carbon showcasing Mumbai Trans Harbour Link	Anoop Singh Jangi , Lars Lundorf Nielsen
14:30-14:45	Bridges A catalyst as well as a driver for sustainable development	Venkatachalam Karthik , Suman Chattopadhyay, Partha Roy, Koyya Satyanarayana

14:45-15:00	Experience as Incentive: Promoting Sustainable Urban Mobility Through Bridge Design	Tine Weissappel Holmboe , Jesper Henriksen, Susanne Bendsen, Tony Ao Han, Jin Wang, Catherine Merlo
15:00-15:15	Net Zero implementation on transportation projects	Sachin , Ashwinikumar Thakur
15:15-15:30	An update on the carbon footprint of bridges	Spandan Murthy , David Collings
15:30-16:00	Coffee / Tea Break (Exhibition Area)	
16:00-17:30	YEP Pecha Kucha Session	

Session 20 (Hall-2)		
<i>Case Studies in Sustainable Materials, Technology and Practices</i>		
<i>Chair: Vinay Gupta</i>		
Time	Title	Presenter
14:00-14:15	Cable replacement of Fernando Reig Bridge in Alcoy, Alicante (Spain)	Javier Torrico Liz , Torrico, Javier, Hugo Corres, Javier León, Julio Sánchez, Cristina Sanz, Gemma Fernández
14:15-14:30	Multi-faceted Approach to School Earthquake Safety in Westernmost Nepal	Hari Kumar , Dinesh Joshi, Veronica Cedillos, Upama Ojha, Janise Rodgers, Heidi Stenner
14:30-14:45	Underground Metro Projects-structural Engineering Challenges	Navneet Gupta , Mahesh Tandon
14:45-15:00	Construction Of 4-lanes Signature Bridge Between Okha And Beyt Dwarka In The State Of Gujarat	Rajiv Ahuja , Deepak Singla
15:00-15:15	83.92 m Wide Rail Over Bridge Chipiyana, Gautam Buddha Nagar, UP, India	Satyam Gupta*
15:15-15:30	Optimal Solution for Shallow Tunnel at Dwarka Expressway	Mangesh Sawant
15:30-16:00	Coffee / Tea Break (Exhibition Area)	
16:00-17:30	YEP Pecha Kucha Session	

Session 21 (Hall-3)		
<i>Analysis, Research and Standardisation</i>		
<i>Chair: Barbara Siebert</i>		
Time	Title	Presenter
14:00-14:15	Comparative Study of the Statistical Methods of Fragility Curve Generation	Biswa Kumar Balla , Shakil Manandhar, Sushmita Maharjan
14:15-14:30	An Evaluation of Human Bouncing Force Excitation	Mehdi Setareh , Huy Pham
14:30-14:45	Analysis of a cross-section of a steelconcretecomposite beam	Patricia Vanova , Daniel Dubecky, Michala Weissova, Vincent Kvocak
14:45-15:00	The usage of polymer-based materials in civil engineering	Michala Weissová , Vincent Kvocak, Daniel Dubecky, Patricia Vanova

15:00-15:15	The smart FRP panel for bridge redecking development and experimental validation of panel panel and panel girder connections	Bartosz Piątek* , Maciej Kulpa, Tomasz Siwowski
15:15-15:30	Influence of endurance of stud shear connectors on the reliability of steel-concrete superstructures of road bridges	Nikolai Kozak* , Anton Syrkov, Vladimir Bystrov, Dmitry Yaroshutin
15:30-16:00	Coffee / Tea Break (Exhibition Area)	
16:00-17:30	YEP Pecha Kucha Session	

Session 22 (Hall-4)		
<i>Digital Initiatives (BIM, Artificial Intelligence, 3D Printing)</i>		
<i>Chair: Jose Romo Martin</i>		
Time	Title	Presenter
14:00-14:15	Integration of BIM in Bridge Management - Enhanced Predictive Functionality	Atharvi Sanjay Thorat , Sachidanand Joshi, Harshali Dehadray, Mayuri Tundalwar
14:15-14:30	Restructuring Construction Thinking for Urban Material Reuse	Debra Laefer , Reza Haghani
14:30-14:45	Long-term shape sensing of bridges with automated ROI extraction of LiDAR point clouds	Ganesh Kolappan Geetha , Sung-Han Sim
14:45-15:00	Use of terrestrial 3D laser scanning technology for examination of transportation structures	Dmitry Yaroshutin , Dmitriy Shestovitskiy*, Anton Syrkov, Nikolay Kozak
15:00-15:15	Role of Artificial Intelligence in Sustainable Bridge Design	Saju S. , Nisha G K
15:15-15:30	A Robotic and Automatic Solution for Identifying Frequencies and High-resolution Mode Shapes of Bridge Structures an Experimental Study	Xudong Jian* , Eleni Chatzi, Zhilu Lai
15:30-16:00	Coffee / Tea Break (Exhibition Area)	
16:00-17:30	YEP Pecha Kucha Session	

Session 23 (Hall-5)		
<i>Sustainability in Built Environment</i>		
<i>Chair: Karel Terwel</i>		
Time	Title	Presenter
14:00-14:15	Development of low-cost seismic isolators using scarp rubber tyre pads for sustainable disaster mitigation	Dhanashree Tulankar , Manish Kumar, Suhasini Madhekar
14:15-14:30	Making Sustainability as Core of Engineering Education	Shantanu Apte
14:30-14:45	Sustainable development of sports stadiums	Dr. Sven Schmedes
14:45-15:00	Current Knowledge, Challenges, and Facilitating Factors from the National Survey on Sustainability in the Building and Construction Sector	Shivam Srivastava
15:00-15:15	Service-life and Sustainability of Structure in Tropical Condition	Bishwajit Bhattacharjee
15:15-15:30	A Case Study on the Performance Based Enhancement of Cementitious Systems through Sustainable Nanomaterials	Mainak Ghosal , Arun Kumar Chakraborty
15:30-16:00	Coffee / Tea Break (Exhibition Area)	
16:00-17:30	YEP Pecha Kucha Session	

Session 24 (Hall-6)		
Analysis, Research and Standardisation		
Chair: Arndt Goldack		
Time	Title	Presenter
14:00-14:15	Experimental corrosion investigation of untreated suspension bridge main cables	Kazuhiro Miyachi , Haruki Oishi, Takeshi Yajima, Moritoshi Yano
14:15-14:30	The need for research and innovation to facilitate upscaling of low-carbon concrete	Rasmus Rempling , Mats Karlsson, Ignasi Fernandez
14:30-14:45	Opportunities in Civil Projects with Artificial Intelligence	Alexander Kjellgren , Per Kettil, Rasmus Rempling, Mats Karlsson
14:45-15:00	Structural performance assessment of posttensioned concrete beams by embedded continuous fibre optics	Daniel Ekström
15:00-15:15	Implementation of controlled flexibility as a seismic strategy towards building sustainable infrastructure in India	Santanu Majumdar
15:15-15:30	Performance Evaluation of Off-Site Construction Method for Mass Housing Projects using Building Information Modelling (BIM) Approach	Ramesh Nayaka
15:30-16:00	Coffee / Tea Break (Exhibition Area)	
16:00-17:30	YEP Pecha Kucha Session	
18:00 - Onwards Gala Dinner - AAIOL, Safdarjung		
(Coaches will depart from Venue Hotel - Vivanta Dwarka - Hotel Porch at 18.00 hrs to AAIOL, Safdarjung)		

Technical Programme | Day 3 - 22nd September, Friday

08:00 - 09:00 Hrs | Registration (Pre-Functions Area)

Plenary Session - Keynote Session 6: Prof. Helena Gervasio (Hall 1+ Hall 2+ Hall 3) <i>Time: 09:00-09:30</i> <i>Co-Chairs: Prem Krishna, Harshavardhan Subbarao</i>
Plenary Session - Keynote Session 7: Mr. Sanjay Pant (Hall 1+ Hall 2+ Hall 3) <i>Co-Chairs: Prem Krishna, Harshavardhan Subbarao</i> <i>Time: 09:30-10:00</i>
Coffee / Tea Break (Exhibition Area) <i>Time: 10:00-10:30</i>

Session 25 (Hall-1)		
Sustainability in Transportation Structures		
Chair: Carlos Mendez-Galindo		
Time	Title	Presenter
10:30-10:45	Structure as Symbolism: Pylons as Tools for Cultural Expression in Asian-Pacific Infrastructure	Catherine Merlo
10:45-11:00	Use of Waste Plastic for Road Construction in Delhi NCR Region	Ambika Behl, Shankh Das , Saurabh K Verma, Saurabh Chandra
11:00-11:15	Indian Institution of Bridge Engineers (IIBE) for Sustainable Construction of Bridges	Vinay Gupta
11:15-11:30	Sustainable Solutions for Major River Crossings in Bangladesh	Prakash Sahoo , Paul Sanders, Prof. Jørgen S. Steenfelt, Amar Bahra, James Worth
11:30-11:45	Top-Down Construction in Railway Projects: A Sustainable Solution	Ankit Gupta
11:45-12:00	Planning Zoji-La tunnel for sustainable ecosystem	Indresh Kumar Pandey
12:00-13:30	Lunch / YE Speed Networking (12:30 - 13:30)	

Session 26 (Hall-2)		
Case Studies in Sustainable Materials, Technology and Practices		
Chair: Raad Abdul-Aziz		
Time	Title	Presenter
10:30-10:45	Case Study on Re-use of Dismantled Concrete Drain in A Highway Widening Project of India	Runal Kanti Bhattacharyya , Monali Bose
10:45-11:00	Design of Tall Railway Bridges in North Eastern States, India	Sumantra Sengupta
11:00-11:15	Residual Fatigue Strength Assessment & Rehabilitation of Rajendra Setu, Mokama, India	Jatin Singla* , Sumantra Sengupta
11:15-11:30	Design and construction staging of a 300m steel bridge renovation on a wharf	Felix de Meijier , D.C. Tjepkema, F. van Dooren
11:30-11:45	Mumbai Trans Harbour Link - A leap over Sea	Ekhlq Ahmed Khan
11:45-12:00	Construction of New Brahmaputra Bridge Road Works near Tezpur - An Insight	Anupam Das
12:00-13:30	Lunch / YE Speed Networking (12:30 - 13:30)	

Session 27 (Hall-3)		
<i>Analysis, Research and Standardisation</i>		
<i>Chair: Matias Valenzuela</i>		
Time	Title	Presenter
10:30-10:45	Seismic Isolation Design for Achieving Post- Earthquake Functionality	Anoop Mokha
10:45-11:00	Flexural Behavior of Perforated Steel Beams with Multiple Web-Corrugations and Openings	Fayaz Ahmad Sofi , Salman Sultan, and Showket A. Kumar
11:00-11:15	Effects of polyvinyl alcohol fiber on bond behavior between concrete and steel rebar	Xuhui Zhang* , Qi Lu
11:15-11:30	Studies on the microstructure of carbondioxide sequestered cement paste	Pranjal Vishnukumar Chechani , A. Ramaswamy
11:30-11:45	Image analysis of concrete surface for investigating the influence of aggregate distribution and load induced damage on the chloride permeability of concrete measured using RCPT (ASTM-C1202)	Pankaj Mishra
11:45-12:00		
12:00-13:30	Lunch / YE Speed Networking (12:30 - 13:30)	

Session 28 (Hall-4)		
<i>Climate Change Adaptation and Disaster Resilience</i>		
<i>Chair: Steve Kite</i>		
Time	Title	Presenter
10:30-10:45	Failure Analysis: Shallow and Deep Causes Assessment Methodology	Shaikh Mohammad Alavee* , Laurent Rus, Carlos Moreno, Shaikh Mohammad, Arif Shahid, Iftekhar Ahmed, Tapas Chowdhury
10:45-11:00	Climate Change Induced Carbonation of Reinforced Concrete Buildings in European Cities	Helena Gervásio , Silvia Dimova, Maria Luísa Sousa, Guido Rianna, Emilio Bastidas-Arteaga, Maria Nogal
11:00-11:15	Embodied Energy and Urban Infrastructure: Mitigating Impact of Climate Change	Satyaki Bhattacharyya , B C Roy
11:15-11:30	Seismic Resilience Assessment of Aging Highway Bridge Considering Climate Change Effects	Chirdeep N R , Bahurudeen A, Shivang Shekhar
11:30-11:45	Seismic Hazard Evaluation and Damage Assessment of Bridges	Rajat Dabral
11:45-12:00	Sustainable and Green Construction Technologies in India	Sanjay Kumar Nirmal
12:00-13:30	Lunch / YE Speed Networking (12:30 - 13:30)	

Session 29 (Hall-5)		
<i>Case Studies in Sustainable Materials, Technology and Practices</i>		
<i>Chair: Jonathan McGormley</i>		
Time	Title	Presenter
10:30-10:45	Characterization Of The Site-effects On The Local Seismic Hazard Assessment For A Long Span Suspended Bridge In Southern Chile	Galo Valdebenito , José Luis Seguel
10:45-11:00	Case Study: Implementation of UHPFRC Technology in India - Pilot Bridge Project.	Sudeep Joshi
11:00-11:15	Design of 102.6 M Single Span Ultra-High Performance Concrete Segmental Bridge Girder.	Sudeep Joshi , Sayali Tatar, Pratiksha Pawar
11:15-11:30	Construction of Underpass by Box Pushing across NH-48 near Aerocity, Delhi.	Rajiv Sharma, Rajeev Singhal
11:30-11:45	Precast PSC Segmental Girders – An overview of failures during construction based on some case studies	Anil K Shrivastava

11:45-12:00	
12:00-13:30	Lunch / YE Speed Networking (12:30 - 13:30)

Session 30 (Hall-6)		
<i>Analysis, Research and Standardisation</i>		
<i>Chair: Debra Laefer</i>		
Time	Title	Presenter
10:30-10:45	Verification of reinforced concrete D-regions designed with Strut-and-Tie models by nonlinear FE-Methods	Arndt Goldack , Seyed Mohammad Javad Mohseni
10:45-11:00	Seismic retrofitting of multi-storey rcc building using fluid viscous dampers and comparing the results before and after Retrofitting	Arup Saha Chaudhuri , Md. Toshif Alam
11:00-11:15	Ultrasonic pulse velocity testing for evaluation of stabilized soil in pavement structures	Vinay Angadi , Rakshitha S
11:15-11:30	Mechanical Performance of Ultra-High Performance Concrete for Bridge Applications	P N Ojha , Brijesh Singh
11:30-11:45	Effect of Pedestrians on Vehicular Speed and Capacity of Hilly Roads	Chirag Nagar
11:45-12:00	Seismic protection of built environment. The Revision of the European Standard EN 15129 on Anti-Seismic Devices	Tobia ZORDAN , Renzo Medeot
12:00-13:30	Lunch / YE Speed Networking (12:30 - 13:30)	

Session 31 (Hall-1)		
<i>Special Session: New Indian Guidelines on Cable-Stayed Bridges and Extradosed Bridges</i>		
<i>Chair: Govind Sharan</i>		
Time	Title	Presenter
13:30-13:45	A new Guideline for Design, Construction and Maintenance of Extradosed Bridges in India	Alok Bhowmick
13:45-14:00	The new IRC Guidelines for Cable-Stayed Bridges in India	Mahesh Tandon , Navneet Gupta
14:00-14:15	Seismic & Wind provisions for cable stayed and extradosed bridges in Indian new guidelines	Prem Krishna
14:15-14:30	Construction aspects of cable-stayed and extradosed bridges in new Indian guidelines	V N Heggade
14:30-14:45	Design and Analysis of Hybrid Cable-Stayed Bridges: A Comprehensive Study	Bhushan Vishnu Nahire , PVSS Ravi Prasad
14:45-15:00		
15:00-15:30	Coffee / Tea Break (Exhibition Area)	

Session 32 (Hall-2)		
<i>Case Studies in Sustainable Materials, Technology and Practices</i>		
<i>Chair: Catherine Merlo</i>		
Time	Title	Presenter
13:30-13:45	Advantage of 4th Generation Modular Joint from life cycle cost point of view A case study	Chinmoy Ghosh
13:45-14:00	Semi Integral Structures - Mauritius Light Rail Transit System	Navin Kumar Chaudhary , Venkateswararao Surati
14:00-14:15	Evaluation of longitudinal forces on substructure of railway bridges due to increased axle loading and speed through full scale field investigations	B Arun Sundaram , Voggu Srinivas, S.parivallal And Saptarshi Sasmal

14:15-14:30	Condition Assessment and measures to Repair and Retrofit Baghajatin ROB, Kolkata	Amit Kumar Gorai* , Abhishek Kaushik
14:30-14:45	1d Consolidation of Soil at Sumari Uttarakhand Considering Variable Compressibility	Saurav Raturi , Ayush Nautiyal, Shashank Bhatra
14:45-15:00	Design and Construction Challenges-Extradosed Bridge over Hatania-Doania River in West Bengal	Akhilesh Gupta , Deepak Singla
15:00-15:30	Coffee / Tea Break (Exhibition Area)	

Session 33 (Hall-3)		
<i>Analysis, Research and Standardisation</i>		
<i>Chair: Laurent Rus</i>		
Time	Title	Presenter
13:30-13:45	Flexural Behaviour of Carbon Textile Reinforced Concrete (CTRC) panels	Sophia Immanuel , Baskar K
13:45-14:00	Classifying Failure Modes of Ultra-High-Performance Fiber Reinforced Concrete Fracture Beams Using Acoustic Emission Technique	Chandrashekhar Lakavath , Mohit Singh, S Suriya Prakash
14:00-14:15	Effect of Vertical Irregularities on Buildings in Different Seismic Zones of India	Shrey Pradhan , Musharraf Ahmad, Praveen Baghel
14:15-14:30	The Sheaf: Expressive Geometry Through Collaborative Computational Design and Low-Tech Construction Methods	Niklas Johansson , Lukas Nordström, Jonas Runberger, Alexander Sehlström
14:30-14:45	Studying the effect of vertical irregularities on the seismic vulnerability of setback buildings using Linear and Non-Linear methods	Aamna Sarfaraz
14:45-15:00	Is Nonlinear Analysis Becoming a Standard Tool For Design and Assessment of Reinforced Concrete Structures?	Jan Cervenka , Jiří Rymeš, Libor Jendele, and Radomír Pukl
15:00-15:30	Coffee / Tea Break (Exhibition Area)	

Session 34 (Hall-4)		
<i>Sustainability in Built Environment</i>		
<i>Chair: Randi Muff Christensen</i>		
Time	Title	Presenter
13:30-13:45	Innovative Solution to Urban Infrastructure: Special Solution to Conventional Structure Planning	Satyaki Bhattacharyya , B C Roy
13:45-14:00	A roadmap for implementing integrated asset management for sustainable water Infrastructure in India	Harshal Tikam , Abhiram Shukla
14:00-14:15	Different approach of the construction sustainability	Corneliu Bob
14:15-14:30	A sustainable roadmap for affordable housing in India. A benchmarking approach to achieve the SDGs	Ann Francis* , Albert Thomas
14:30-14:45	Life Cycle Cost Analysis and Use of Continuously Reinforced Concrete Pavement (CRCP) in the Bharatmala PariyojanaProject	Lakshmana Rao Pydi
14:45-15:00	Effects of Moisture Ingression In Building Envelope Through Moisture Index (MI) And Wind Driven Rain Index (WDRI)	Lukesh Parida , Harris Showkat Kangoo, Sumedha Moharana
15:00-15:30	Coffee / Tea Break (Exhibition Area)	

Session 35 (Hall-5)		
<i>Sustainability in Built Environment</i>		
<i>Chair: Umesh Rajshirke</i>		
Time	Title	Presenter
13:30-13:45	Protecting Reinforced Concrete Structures with Thermal Sprayed Zinc Anodes	Rahul Sharma , M.C. van Leeuwen, F. Prenger
13:45-14:00	Continuous Galvanized Rebar for Corrosion control in RCC structures	Rahul Sharma , Frank E. Goodwin, Gary W Dallin, Rakhi Sharma
14:00-14:15	Glass Fibre Reinforced High Volume Fly Ash Mixed Green Sustainable Concrete	Arup Saha Chaudhuri , Somsubhra De
14:15-14:30	Application of Textile Waste Fiber in Mortar Strengthening towards Upgrading the Performance of Masonry Structure	Nikhil Ranjan , Susanta Banerjee, Sreekanta Das
14:30-14:45	Resource-efficient and climate-friendly design of concrete structures through advanced structural safety concepts	Ramon Hingorani , Jochen Köhler
14:45-15:00	The Feasibility Study of Net Zero Energy Building with Carbon Credits for Sustainable Future: A Case Study in Chandigarh	Vishal Sharma
15:00-15:30	Coffee / Tea Break (Exhibition Area)	

Session 36 (Hall-6)		
<i>Sustainability in Transportation Structures</i>		
<i>Chair: S.K. Nirmal</i>		
Time	Title	Presenter
13:30-13:45	A synthesis of techniques and ideas to optimise the life cycle of bridges in practice	Richard Hao , John Steele
13:45-14:00	Tibetan bridges - from adventure to sustainability	Silvia Mirabella , Franco Clerici, Laura Lombardi
14:00-14:15	Lightly Loaded Bridge	Prabu Raja
14:15-14:30	Modular Designs for Sustainable Railway Stations	Mark de Melo , Kulvinder Rayat, Francis Archer, Kim Quasi
14:30-14:45	The Climate Action Plan and Sustainability in Construction	Gagan Anand
14:45-15:00		
15:00-15:30	Coffee / Tea Break (Exhibition Area)	

Plenary Session - Keynote 8: Mr. Anurag Jain (Hall 1+ Hall 2+ Hall 3)		
<i>Co Chairs: V. N. Heggade, Mike Schalaich</i>		
<i>Time: 15:30:16:00</i>		
Closing Ceremony / Valedictory Session (Hall 1+ Hall 2 + Hall 3)		
<i>Time: 16:00:17:30</i>		

Accompanying Person Programme

(Complimentary – Please contact Travel Desk for Booking)

Three optional social tours have been organized during the congress for 'accompanying person' to get a feel of Capital City. These tours are on complimentary offer to the people registered as Accompanying person and can be booked from travel desk at the congress venue for next day. Please note that the tours will be offered to first 20 participants booked for each tour.



Visit to Qutab Minar

Date: Wednesday, 20 September 2023
Time: 14:00 - 18:00 Hrs

Qutub Minar - The Qutub Minar complex is located in Mehrauli. Qutub Minar, the tallest stone tower in India, is a remarkable testament to Islamic culture. This tower stands at a height of 72.5 meters and dates back to the 13th century. Adjacent to it is the Quwwat-ul-Islam mosque, the first-ever mosque constructed in India. Additionally, a renowned iron pillar from the 5th century stands before the mosque, which has remarkably remained rust-free for over 1500 years!



Visit to Delhi Haat

Date: Thursday, 21 September 2023
Time: 09:30 - 13:30 Hrs

Dilli Haat is a open-air market, food plaza, and craft bazaar located in Delhi. It transports you to the magical world of Indian art and heritage presented through a fascinating panorama of craft, cuisine and cultural activities. It is not just a market place; it has been visualized as a showpiece of traditional Indian culture- a forum where rural life and folk art are brought closer to an urban clientele.



Visit to Ambience Shopping Mall

Date: Thursday, 22 September 2023
Time: 09:30 - 13.30 Hrs

Ambience Mall, Gurgaon is a shopping mall in Gurgaon, Haryana, India. It contains a total built-up area of 18 lakhs square feet. Most floors have a shopping area of 860 meters. Ambience Mall has more than 230 stores and food outlets. Its parking space can accommodate about 4000 vehicles.

Social Tours

Delhi Sight-seeing Tour

Date: Tuesday, 19th September 2023

Duration: 6 Hrs (Pick up at 10 AM from Conference hotel (Vivanta, Dwarka, Delhi) and Drop back at conference venue at approx 4 pm)

Visit: The architectural marvels of Mughal Era – Humayun's Tomb & Qutub Minar. Drive past India Gate and President House.

Qutub Minar - The Qutub Minar complex is located in Mehrauli. Qutub Minar, the tallest stone tower in India, is a remarkable testament to Islamic culture. This tower stands at a height of 72.5 meters and dates back to the 13th century. Adjacent to it is the Quwwat-ul-Islam mosque, the first-ever mosque constructed in India. Additionally, a renowned iron pillar from the 5th century stands before the mosque, which has remarkably remained rust-free for over 1500 years!



Humayun's Tomb - A UNESCO World Heritage monument, was built by the widow of the second Mughal Emperor, Humayun. It stands as an exceptional example of Indo-Persian architecture and serves as a precursor to the Taj Mahal.

Drive past India Gate and the President's House - India Gate is a war memorial dedicated to Indian soldiers who died during World War I. The eternal flame, fueled by gas, serves as a tribute to the soldiers who lost their lives in the service of the nation. The President's House is a heritage building where the President of India resides.



TOUR COST : EUR 35 Per Person

TOUR COST INCLUDES:

- ☐ Sightseeing by air-conditioned vehicle
- ☐ Monument Entrances (single)
- ☐ Accompanied English Speaking Guide
- ☐ All applicable taxes.

TOUR COST DOES NOT INCLUDE:

- ☐ Any Meals
- ☐ Items of personal like tips, camera fees etc
- ☐ Any other services / items not specified under "Tour Cost Includes..."

For tour booking, please contact Trave Desk near Registration Area



Same Day Agra Tour

Date: Saturday, 23rd September 2023

Itinerary : (DELHI – AGRA – DELHI) 203 Kms, Approx 4 hrs drive one way.)

0700 hrs : Pick up from conference venue hotel, (Vivanta, Dwarka, Delhi) and Drive to Agra via Yamuna Express Way.

1100 - 1230 hrs : Upon arrival in Agra, visit Taj Mahal - world famous marble mausoleum built by Emperor Shah Jehan in the ever lasting memory of his beloved wife Mumtaz Mahal. It is widely considered as one of the most beautiful buildings in the world and stands as a symbol of eternal love. Taj Mahal is the finest example of Mughal architecture, a style that combines elements from Persian, Islamic and Indian architectural styles. In 1983, Taj Mahal became a UNESCO World Heritage Site.



13:00 - 1400 hrs : Lunch at a deluxe restaurant

1415 - 1500 hrs : Visit Agra Fort which is a huge monument of red sandstone, 2 km northwest of Taj Mahal was built by the Mughals during 1565-1571. The fort contains wonderful mosques and palaces in red sandstone and white marble erected by two generations of inventive builders during the time of Akbar and afterward during the time of Jehangir and Shahjahan.



1530 - 1600 hrs: Shopping at Agra which is famous for its marble and soft-stone inlay work, leather goods, brassware and carpets which involve delicate yarn overlays. Semi-precious and precious jewellery in ornate Mughal style is also available.

1600 hrs: Drive back to Delhi, reach Hotel 2000 Hrs (approx.)

TOUR COST: EURO 88 per person

TOUR COST INCLUDES:

- Transportation in an AC vehicle
- Buffet lunch at a deluxe restaurant
- Entrance tickets for Taj Mahal and Agra Fort
- Services of English-speaking guide in Agra
- Parking, toll charges and other government taxes

TOUR COST DOES NOT INCLUDE:

- Items of personal nature drinks, things other than specified.
- Any other personal expenses.

For tour booking, please contact Trave Desk near Registration Area

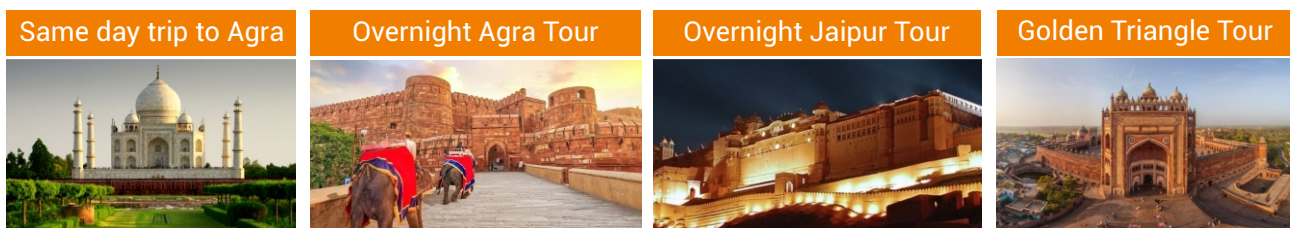


Local Delhi / Accompanying Person Tours



Participants can book Half Day Pre/Post Congress Tours to Experience the cultural heritage and beauty of Lutyens' Delhi.

Pre and Post Tours



Participants can also book Pre and Post Congress Tours (Same day or Overnight tours) to Experience the allure of its ancient history like wonder of the world Taj Mahal or UNESCO World Heritage Sites at Jaipur Pink City.

For booking of the above (Local Tours or Pre Post Tours), please contact Trave Desk near Registration Area

Sponsorship and Exhibition Opportunities

We have further opportunities for companies looking to increase their visibility at IABSE Congress 2023 New Delhi. We would also be happy to discuss any desired tailored requirements you have. For more information, please visit website and download the Sponsorship and Exhibition brochure.

Sponsorship Opportunity

Name: Mr. R K Pandey
Phone: +91 83769 00509
Email: rkpandey@nhai.org

Exhibition Space

Name: Mr. Harish Papnai
Phone: +91 99682 51564
Email: secretariatingiabse@gmail.com

International Queries

Name - Cheryl Arante Cornelio
Phone - +41 43 443 9754
Email: cheryl.cornelio@iabse.org

IABSE 2023 Congress Sponsors

Gold Sponsors



Silver Sponsors



Lanyard Sponsor



Lunch Sponsor



Ram
Chandra
Paul

YEP Sponsor



Technical Tour



Vishnu
Prakash
R PungliaLtd

Tea/Coffee Sponsors

SHRI ANKUR BANSAL

KEZHALEO RULHO

JKM INFRA

S. M. INFRABUILD PVT LTD

Other Sponsors



Exhibitors





SP Singla Constructions Pvt.Ltd
Building Infrastructure for future

BRIDGES THAT LEAD TO THE FUTURE

S.P. Singla Constructions Pvt. Ltd. has built a repute over 27 glorious years as a highly sought after company for critical and time bound bridges in India.

INDIA'S
1st

& 2nd longest Multi
Span Extradosed Bridge
across the Ganges

700+

completed projects
pan India

INDIA'S
1st

& 2nd longest Cable Stayed
Bridges at Kapurthala &
Beyt-Dwarka, Gujrat

500%

Growth in revenues
in last 10 years

OUR EXPERTISE

- Deep Foundations
- Long Span Bridges
- Urban Flyovers/Elevated Roads/BRTS
- Elevated Metro Viaducts/Station Buildings
- Aqueducts/Spillways/Jetties
- Box Pushing / Diaphragm Walls
- Flexible/Rigid Pavement Roads
- Metro Rail Corridors



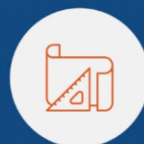
EXPERTISE

Domain Focused with
expertise in Bridge
Constructions



QUALITY

Global Technical
Collaborations ensure
world class quality



DESIGN

In house team of
designers and
experts available



ON TIME

Monitored projects
result in savings in time
and budget

REGISTERED OFFICE:

1006-1007, 10th Floor, Pearls Best Heights-1, Netaji
Subhash Place, Pitampura, New Delhi - 110 034, India
Ph.: +91-11-27357408, TeleFax: +91-11-47595569
Email: delhioffice@spsingla.com

CORPORATE OFFICE:

#47, Sector-9, Panchkula, Haryana - 134113, India
Ph.: +91-172-2571595, 4052563, 2570440, 2563209
Email: spscpk@gmail.com
Website: www.spsingla.com



Bridging the gap between east and west

Together with customer

societies grow and flourish. We do that by co-creating sustainable and beautiful solutions that improve the quality of life for people today and many generations ahead.

Our starting point is gaining a deep understanding of our customers, their aspirations and concerns. This is what sets us apart and how we deliver long-term value.

Primarily located in Scandinavia, the UK, North America and India, we are currently 7,500 people, who offer our expertise in engineering, architecture, energy and environment.

COWI



STAINLESS STEEL FOR BRIDGES, TUNNELS & ROADS

STAINLESS STEEL INFRA SOLUTIONS THAT LASTS FOR CENTURIES



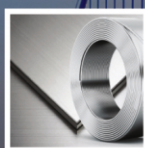
ATLEAST
2X LIFE



NEGLECTIBLE
MAINTENANCE



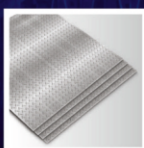
SAFER



Coil & Sheets



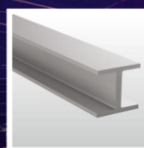
Rebars



Chequered
Sheets



Cable Trays



Girders



INDIA'S NO.1 STAINLESS STEEL BRAND



Automobiles



Architecture



Coinage



Defence



Nuclear



Pipes
& Tubes



Process
Engineering



Railways



Razor Blades



White Goods
& Hollow-ware

Visit: www.jindalstainless.com to know more or write to us at infinity@jindalstainless.com

Contact for Advisory: Mr. Nagarajan P, +91 81307 57806

*Conditions apply

WHERE DESIGN, INNOVATION & ADVANCE TECHNOLOGY MAKE A DIFFERENCE



DILIP BUILDCON LIMITED
INFRASTRUCTURE & BEYOND

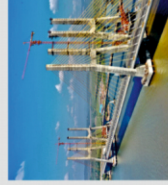
PRESENTING THE EFFICIENT AND ON-TIME DILIP BUILDCON

Since inception, Dilip Buildcon Limited understands the importance of executing projects with entrepreneurial passion, quality engineering and innovative approaches, which showcase the completion of projects within or before scheduled time line. We have transformed the landscapes of the country by constructing **Roads, Bridges, Dams, Canal, Tunnels, Metro rail, Airports, Water Supply, Mining Infrastructure and Urban Development Projects**, having worth of more than **₹50,006 crore** PAN India. We have been able to deliver most of the projects on or before time consistently with the workforce of over **26,743 employees**, which includes a diligent Project Management Team, competent Engineers, Skilled Operators using our own "State-of-the-Art Fleet" and **Equipment of more than 10,340 numbers**. No wonder our consolidated revenue has grown by **17.8% CAGR** in the last 10 Financial Years.

DIVERSIFIED AREAS OF EXPERTISE



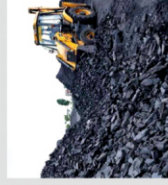
ROADS



SPECIAL BRIDGES



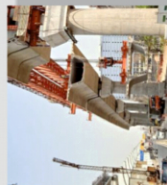
AIRPORT



MINING



TUNNEL



METRO



WATER SUPPLY



IRRIGATION



OUR PAN INDIA PRESENCE

www.dilipbuildcon.com



Indian Academy of Highway Engineers

Ministry of Road Transport and Highways,
Government of India

A-5, Sector-62, Delhi-Meerut Expressway, Noida-
201309, UP

www.iahe.org.in, iahe-training@gov.in

The Indian Academy of Highway Engineers (IAHE) is a prestigious national training institute dedicated to sharing knowledge and exchanging experiences related to the construction and maintenance of roads, bridges, tunnels, and road transportation. It covers various aspects such as technology, equipment, research, planning, finance, taxation, organization, and policy issues.



(Call on the Hon'ble President of India by Officers of CES (Roads) on 06th February 2023 at Rashtrapati Bhavan)



(Address by Hon'ble Minister MoRT&H on Highway for 21st Century India- Modern Technologies for Highway Officers - 25th July to 27th July 2022)

The academy aims to achieve the following objectives:

- Provide training to professionals in the highway sector, both at the entry level and during their service, across Central & State Governments, Public, and Private sectors.
- Foster the development of character and all-round personality among highway sector engineers as part of Human Resource Development.
- Offer assistance to various organizations in establishing their training institutes and training their faculty.
- Promote cooperation and facilitate the exchange of knowledge, ideas, and experiences in all areas of highway engineering among engineers in India and abroad.
- Conduct training programs for highway professionals from various Afro-Asian countries, Countries under SAARC, India Africa Forum Summit (IAFS), India Technical & Economic Cooperation (ITEC), ASEAN-India Fund (AIF) etc.



In essence, the Indian Academy of Highway Engineers is a leading institution in the field of highway engineering, committed to training professionals, fostering development, and facilitating knowledge sharing both Nationally and Internationally.

Building Nation through Capacity Building





T AND T INFRA LTD.



Ambhora Cable Stayed Bridge, Nagpur.



Shri S. M. Tandulkar
Chairman & Whole Time Director



Shri S. B. Thorave
Managing Director & CEO

T AND T INFRA LTD.

Office A1/1 to 5, Vishnu Vihar,
Bibwewadi-Kondhwa Road,
Marketyard, Pune - 411 037.

Tel. : (020) 24275945, 24265080

E : info@tandtinfra.com, www.tandtinfra.com





MONTECARLO
BORN TO ACHIEVE



Engineering the Future with our Infrastructure Expertise



Highways



Railways
& Metro



Building &
Factories



Mining



Energy
Infrastructure



Water &
Irrigation



Montecarlo House:

Sindhu Bhavan Road, Bodakdev, Ahmedabad - 380058. Gujarat, India.



+91 79 71999300 / 301



mclindia.com



Quality Derives from Professionalizing Leadership Attributed to Innovation

PTs \ Cable Systems\ Engineering Solutions\ Engineering bearings & Expansion joints
Structural Health Monitoring Systems (SHMS)



OVM

LIUZHOU OVM MACHINERY CO.,LTD

No.1Yang Hui Road,Liuzhou,Guangxi,545006,P.R. China
Tel:86-772-3116402 Fax:86-772-3118665 E-mail:sales@ovm.cn
Website:www.ovm.cn

 **SCON**
INFRA PRESTRESS LLP

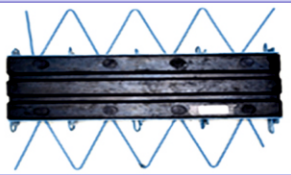
110-111 & 113, R Plazzia, Swastik Regalia Tower, Kavesar, Waghbil Road,
Off. Ghodbunder Road, Thane (W) 400604
E-mail: info@sconinfra.com
Website: www.sconinfra.com

JK Prestressing Co.

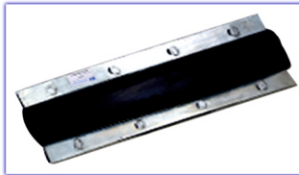


POST TENSION MATERIAL & EQUIPMENTS

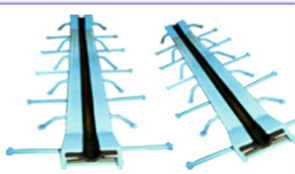
EXPANSION JOINTS



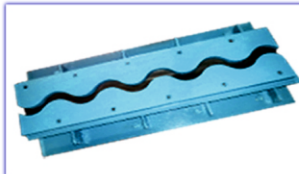
**SLAB SEAL
EXP. JOINT**



**OMEGA SEAL
JOINT**



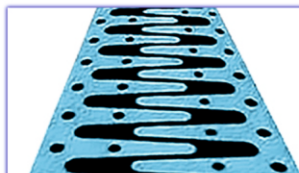
**STRIP SEAL
EXP. JOINT**



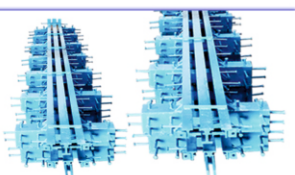
**SINUS TYPE
EXP. JOINT**



**STAINLESS STEEL
EXP. JOINT**



**FINGER TYPE
EXP. JOINT**



**MODULAR
EXP. JOINT**



**COMPRESSION
SEAL**

**SCAN
For E-Catalogue**

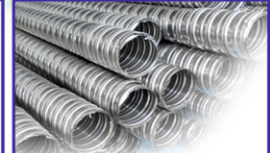


PRODUCTION UNIT

M/s JK Prestressing Co.
471, Ishapur, Delhi Road, Yamuna Nagar-135001,
Haryana, India
+91-98120-50180, +91-70567-70303, +91-70567-70404
jkpc1981@gmail.com, sales@jkpcin.com
www.jkpcin.com
City Office : 506, Model Town, Yamuna Nagar-135001,
Haryana, India



**Multipull Prestressing
Jack & Power Pack**



Metallic Sheathing



Grout Pump & Agitator



**Electric Grout Pump with
Agitator Single & Double Drum**



HDPE Sheathing



**Void Former,
Coupler & End Cone**



**Anchor Cone &
Anchor Head**



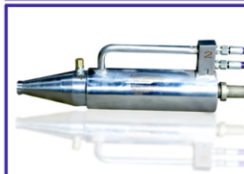
Dead End Anchorage



Flat Anchorages



Rubber Bunk/Rubber Cap



Single Pull Jack



**Multi Use
Wedge & Barrel**



**Hydraulic Jack
with Hand Pump**



Live Wedges

engineering connections®

Infrastructure | Buildings | Industrial structures

since 1963

mageba is one of the world's leading suppliers of high quality structural bearings, expansion joints as well as seismic protection and structural health monitoring systems for infrastructure, buildings and industrial structures. To date, mageba has supplied bearings and expansion joints for more than 25,000 structures, meeting even the exceptional challenges posed by a number of the world's largest bridges. The company was established in 1963 and today employs approximately 1,000 staff worldwide, of which 150 are qualified engineers. Around the world, over 50 partner companies represent mageba and serve our customers in their local markets.

Join us on our online channels

YouTube **Linked**in

structural bearings | expansion joints | seismic devices | structural monitoring

mageba
mageba-group.com



Mehul Construction Co. Pvt. Ltd.

SPECIALISTS IN:

- Roads & Bridges
- Highways and
- Building infra projects



**MAKING A
HIGHWAY
FOR
BETTER
FUTURE**

Registered office: "Padmavati complex", 91 Civil Lines, Saat Rasta, Solapur - 413003 Maharashtra (India)

Tel No. 0217-2312796/97

Email: mcpl.ltd@gmail.com, info@mccpl.net

CIN : U45202MH1985PTC037560

About IABSE

The International Association for Bridge and Structural Engineering (IABSE) is a scientific and technical Association comprising members in 100 countries and counting 55 National Groups worldwide. Founded in 1929 it has its seat in Zurich, Switzerland. IABSE's aim is to promote the advancement of structural engineering practice while taking into consideration technical, economic, environment, aesthetic and social aspects. IABSE deals with all types of structures, composed of various structural materials. To fulfill its mission IABSE organises Symposia and Congress and publishes the quarterly journal Structural Engineering International (SEI), Congress Proceedings, as well as publications reflecting the work of its technical groups. It creates technical groups as required by needs and technological progress, offers activities within National Groups of IABSE, supports Young Engineers with a programme and presents annual awards for outstanding achievements in research and practice that advance the profession of structural engineering.



Contact

IABSE Secretariat



For IABSE Secretariat & International Queries

Name: Cheryl Arante Cornelio
Phone - +41 43 443 9754
Email: cheryl.cornelio@iabse.org

ING-IABSE Secretariat



For Registration, Exhibition & Sponsorship Queries

Name: Mr. Harish Papnai
Phone: +91 9968251564
Email: secretariatingiabse@gmail.com

Conference Manager



For Onsite Exhibition & Fabrication Queries

Name: Mr. Niranjana Kumar
Phone: +91 9810621454
Email: congress@ingiabse.org

For Local/ Pre & Post Tours, Accommodation & Local Transport Queries

Name: Mr. Hemant Tripathi
Phone: +91 98108 31093
Email: congress@ingiabse.org