

## 12th, 13th & 14th December 2024, The Lalit, Mumbai



## INDIA CHAPTER OF AMERICAN CONCRETE INSTITUTE

2-3, Nagree Terraces, Soonawala Agiary Road, Mahim (W), Mumbai 400 016, India.

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www.rnrconf4icaci.com/

## **Supporting Organisations**

















































Late Mr. R. N. Raikar

India Chapter of American Concrete Institute (IC-ACI), since its inception in 1979, has catapulted into a national body for concrete excellence due to untiring efforts of late Mr. R.N. Raikar. IC-ACI has been honoured with 'Excellent Chapter Award' from our parent body ACI consecutively for the last 21 years – a feat it continues to achieve to date.

ACI, in its centennial year, conferred on him the highest individual honour of being an 'Honorary Member' of the Institute in recognition of his service to the concrete industry. As a tribute to his legacy, the R. N. Raikar conference series aims to salute global concrete icons of Indian origin.

#### INVITATION

India Chapter of American Concrete Institute cordially invites you to 4th R. N. Raikar Memorial International Conference & Ghosh-Mukherjee International Symposium on ADVANCES IN SCIENCE & TECHNOLOGY OF CONCRETE on 12th, 13th, and 14th December 2024 in Mumbai.

It would be a technical extravaganza with something for everyone - architects, consultants, contractors, material scientists, manufacturers and suppliers, researchers, technocrats, and academia from all across the globe. See you at the conference...

'Incredible India' is a unique tourist destination, and the weather in December is going to be just perfect throughout India.

#### Conference Honorees: Ghosh-Mukherjee International Symposium



Dr. S. K. Ghosh heads the consulting practice, S. K. Ghosh Associates LLC, Palatine, Illinois, now a subsidiary of the International Code Council. Dr. Ghosh is active on many national technical committees, is an Honorary Member of ACI, and is a Fellow of ASCE, SEI, and PCI. He is a member of ACI Committee 318, Standard Building Code, and the ASCE 7 Standard Committee (Minimum Design Loads for Buildings and Other Structures). He is a former member of the Boards of Direction of ACI, the Earthquake Engineering Research Institute, and the Building Seismic Safety Council. He is a member of the Board of Governors of ASCE's Structural Engineering Institute. Dr. Ghosh has influenced seismic design provisions in the United States for many years. In addition to authoring many publications in the area of structural design, Dr. Ghosh has investigated and reported on structural performance in the most recent earthquakes. He is currently leading a World Bank project on building code enforcement in Dhaka, Bangladesh.



Prof. Abhijit Mukherjee

Prof. Abhijit Mukherjee is a Civil Engineer, researcher and educator. Prof. Mukherjee is Dean at Curtin University, Australia. He has taught structural mechanics, structural design, structural stability, and finite element analysis courses. His industrial consultations are on structural assessment, structural rehabilitation, and new structural materials. He loves to work on the rehabilitation of heritage structures. His research is on sustainable engineering practices. He approaches sustainable practices from three directions - the development of new sustainable materials, monitoring the health of existing infrastructure and extending the life of infrastructure through rehabilitation and retrofitting.

#### MESSAGE: ACI INCOMING PRESIDENT: Michael J. Paul (2024-2025)



Mr. Michael J. Paul

The Institute is pleased to join the India Chapter - ACI for the 4th R N Raikar Memorial International Conference - Advances in Science & Technology of Concrete. As the next president of ACI, I welcome the opportunity to inaugurate the conference proceedings and address leaders in all facets of concrete construction.

As one of the preeminent knowledge-sharing events in the South Asia region, the international conference will feature a wide array of technical presentations on timely topics in the concrete industry, plus student competitions and a variety of networking

As a leading global authority dedicated to the best use of concrete, ACI has been delivering concrete knowledge for more than a century, and the R N Raikar Memorial International Conference is another example of how ACI members keep the Institute Always Advancing.



Dr. Surendra Manjrekar CHAIR - CONFERENCE

Dr. Surendra Manjrekar is Chairman and Managing Director of Sunanda Specialty Coatings Pvt. Ltd. and is an 'Honorary Member' of the American Concrete Institute (2018) and Honorary Fellow' of the Institute of Concrete Technology (ICT), UK (2022).

Construction Industry Development Council (CIDC) India honoured him with the "Industry Doyen Award" (2017). He was three times "President of the India Chapter of ACI" and is "Principal Convener of ACI Certification in India" (2008 - present).

Dr. Manjrekar is a Vice Chancellor appointee on the "Internal Quality Assurance Cell" of Dr. Homi Bhabha State University, Mumbai, as an Industry representative. He is a Special Signatory to the MOU for technical co-operation between India, Singapore, Vietnam, and Malaysia organized by ACI in Singapore (2019). He is active in concurrent R&D work in the fields of Corrosion Prevention in RCC/PSC structures with special emphasis on infrastructure, 3rd Generation Corrosion Inhibiting Admixtures, Internal Curing, Repairs of Dams, Bridges, Irrigation Canals, water-related structures, Polymers, Underwater Concreting, CO2 sequestration in polymers, Nano molecule Soil Stabilization, Waterproofing, Anti-freezing Admixtures in Concrete.



Mr. Chetan R. Raikar

Mr. Chetan Raikar is Chairman & Managing Director of Structwel Designers & Consultants Pvt. Ltd, an engineering consultancy of 50 years of glorious standing; apart from being on panels of many international and national forums and institutions, is a professional Structural Engineer with a B. E. in Civil Engineering from Sardar Patel University, Gujarat, and a Master's degree of Science in Conservation of Heritage structure from Herriot – Watt University, Edinburgh, United Kingdom. Chetan has to his credit many awards from several prestigious organizations and Govt. of Maharashtra. Some of them are the Young member award for professional achievement in 1999 by ACI, the Excellence vocational award by Rotary International District in 2009, and the 'Maharashtra cha Kohinoor' award in March 2013 from Govt. of Maharashtra, ACI Chapter Activities Awards in 2018 and 'Industry CONVENER - CONFERENCE Captain Award' in 2018 instituted by CIDC (Construction Industry Development Council), Govt. of India.

> Chetan is the Lead Auditor and Technical Auditor for the National Accreditation Board of Laboratories, Quality Council of India, in accordance with ISO/IEC 17025. He is also an ISO 9001-2008 Lead Assessor and an Accredited Mediator certified by the Indian **Institute of Arbitrators & Mediators**

## **Topics for Conference**

#### **Novel Cements and Advanced Materials**

- Advances in science and technology of cement, admixtures, and concrete
- Advances in materials concept and tailored material properties
- Energy efficient process and materials
- Fibre reinforced concrete
- Green concrete
- Heavy density concrete
- Hot weather / cold weather concreting
- Nano technology
- New cements such as LC3
- Other related developments
- Permeable concrete
- Phase change materials (PCM)
- Recycled Concrete Aggregates & Concrete
- Self consolidating/ compacting concrete
- Ultra high performance concrete
- Underwater concrete

#### **Performance in Service, Prediction of Service**

- Durability of concrete
- Improved performance of shrinkage cracking
- Innovative solutions for corrosion prevention of rebars
- Service life and life cycle analysis
- Smart materials
- Structural health monitoring
- Sustainability of concrete
- Transport properties of concrete

#### Fire

- Characterisation of fire, blast and impact loading on structures Behaviour of structural materials at high temperatures
- Design of structures for improved resilience
- Design of Bridges for Fire & Blast Resistance
- Effects of Fire & Blast on Facades & Glass Assemblies
- Effects of Fire and Blast on Steel connections
- · Strengthening, retrofit and repair

#### **Earth-based Materials**

- Advances in structural and civil engineering applications
- Concrete construction & maintenance of structures in different fields of infrastructure, such as: -Aviation, Structures - Railways / Metros, Ports, Harbours and Nuclear Plants
- Dismantling of structures
- Innovative and cost effective fire resistant solutions
- Innovative therapies & Practices in structural designs
- Quality control related to concrete structures
- Research and current developments
- · Seismic retrofitting
- · Structural Steel Quality control related to concrete structures

# Characterization, Testing and Monitoring Materials and their Properties and Associated Modeling

- Advanced models from nano to macro scale
- Advances in software
- Advances in testing of material properties
- Advances in material modeling, fresh state to early age to fracture and damage mechanics
- Experimental analysis of concrete structures
- Monitoring concrete properties during construction
- Multi-scale modeling
- Non-destructive testing
- Sensors

#### **Precast & Pre-Stressed Concrete:**

- Connections in Precast Jointed Systems
- Fast Track Precast Construction
- Precast Concrete Technology
- Precast Concrete Tunnel Segments
- Precast Pavements
- Prestressed Concrete

#### **Other Topics**

- 3D printing
- Aggregates
- Alternative cement
- · Asphalt and bituminous materials
- ASF
- Bacterial processes
- Bio-based materials
- Carbonation
- Carbon-based nanomaterials
- Cement chemistry
- Coating materials
- · Composite and hybrid structures
- Concrete in fire
- Creep and Shrinkage
- Curing of concrete
- Deterioration mechanisms
- Design
- Deleterious ions
- Durability
- Sustainable materials
- Early age properties of concrete
- Explosion
- Fibers
- Fracture
- Hydration and micro structure development Admixtures
- Impact
- Masonry
- · Materials processing
- Natural stone
- NORMs
- Nuclear concretes
- Numerical Modeling
- Polymers
- Prestressed concrete
- Protection and renovation of heritage structures Freeze-Thaw
- Recycle aggregate
- · Rheology of concrete
- SAPs / Internal curing
- Self-healing asphalt
- Self-healing concrete
- Soil Materials
- Special Construction Materials and Components Bitumen/Asphalt
- Structural aspects
- Sustainable materials
- Textile reinforced concrete
- Timber
- Transport properties
- Waste materials

#### **IMPORTANT DATES AND DEADLINES**

- Last date for abstract submission: 30th April 2024
- Review of the abstract by Scientific Committee: 15th May 2024
- Last date for paper submission: 15th July 2024
- Review of paper by Scientific Committee: 15th September 2024

Last date for final paper submission
15th October 2024

## **Delegate Fees**

Indian Delegates

Before 1st October 2024: INR 12,000 + 18% GST

After 1st October 2024: INR 13,500 + 18% GST

International Delegates Before 1st October 2024: USD 500 (Including Taxes)

After 1st October 2024: USD 625 (Including Taxes)

Discount on • 25% discount - Main Authors • 50% discount - Students

delegates fees • 10% discount - Members of ICACI / Supporting Orgs • 60% discount - ICACI Student Members

Authors/presenters need to pre-register

Conference fee includes a delegate kit, conference document, lunch and tea/coffee on all days

| PARTNERSHIP OPPORTUNITIES (TAXES ADDITIONAL AS APPLICABLE) |           |          |          |        |          |       |                   |
|--|-----------|----------|----------|--------|----------|-------|-------------------|
| FEATURES / CATEGORIES                                      | SOLITAIRE | PLATINUM | DIAMOND  | GOLD   | SILVER   | KIT   | LUNCH /<br>DINNER |
| Amount (INR)   | 25 Lacs   | 10 Lacs  | 7.5 Lacs | 5 Lacs | 2.5 Lacs | 1 Lac | 5 Lacs            |
| Complimentary Delegates                                    | 15        | 10       | 7        | 5      | 3        | 1     | 5                 |
| Presentation Slots   | 15 Mins   | 10 Mins  | 5 Mins   | 5 Mins | 5 Mins   | -     | 5 Mins            |

| ADVERTISEMENTS: ALL VOLUMES CONFERENCE PROCEEDINGS |             |             | Entitlements   |  |
|--|-------------|-------------|--|--|
| Features/Categories                                | INR (Total) | USD (Total) |  |  |
| Back Cover   | 1.5 Lacs    | 3000        | One Full Page Advertisement in the Volume of conference  |  |
| Front Inside Cover                                 | 1 Lac       | 2500        | proceedings with brand exposure by way of complimentary advertisement in IC-ACI Quarterly and logo presence on |  |
| Back Inside Cover                                  | 1 Lac       | 2500        | conference website with link to your Website   |  |
| First 4 & Last 4 Pages                             | 70000       | 1750        |  |  |
| Inside Pages                                       | 60000       | 1500        | One Full Page Advertisement in the Volume of conference proceedings  |  |

| EXHIBITION STALL (Taxes addition as applicable): Charges per stall |              |               |  |  |  |
|--|--------------|---------------|--|--|--|
| Size of Stalls   | INDIAN (INR) | FOREIGN (USD) |  |  |  |
| 3M X 2M (6sqm)   | 90000        | 2000          |  |  |  |

### **Mode of Payment**

By cheque or demand draft payable at Mumbai in favour of "India Chapter of ACI".

For electronic transfer IFSC Code: IDIB000M008. SB A / C: 000000419657905 SWIFT: IDIBINBBBFT

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Bank Address: 1, 1A Raj Mahal CHS., Plot No. 542, MMC Road, Mahim (West), Mumbai 400 016.

Online Registration can be done at www.icaci.com

#### International Organising Committee (IOC) / Scientific Committee

Prof. Rishi Gupta, Cananda

Prof. Ing Bohumil Kasal, Germany

Prof. Sudharshan N. Raman, Malaysia

Prof. Alejandro Durán Herrera, Mexico

Prof. Nishant Garg, USA

Prof. V.M. Malhotra, Canada

Prof. Giorgio Ferrari, Italy

Prof. Pericles C. Stivaros, New York

Prof. Ashok Kakade, USA Prof. P.A.M. Basheer, UK

Prof. Kazunori Fujikake, Japan

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Prof. Liberato Ferrara, Italy

Prof. Sokhwan Choi, Korea

Prof. Raquib Ahsan, Bangladesh

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Prof. Johann Plank, Germany

Prof. Naser Kabashi, Kosovo

Prof. Deepak K. Kamde, France

Prof. Rajan Suwal, Nepal

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Prof. Moza AL Salim, Oman

Prof. Prasad Rangaraju, USA

Prof. Harald Justnes, Norway

Dr. Didar Cheema, Australia Prof. Nancy Soliman, Mexico Dr. Ahmad Abdelrazaq, USA

#### **National Organising Committee (NOC)**

Dr. S. K. Manjrekar, Chair

Mr. Chetan R. Raikar. Convener

Mr. Sourabh Manjrekar, President, IC-ACI

Dr. Vishal Thombare, Vice President, IC-ACI

Dr. Yogini Deshpande, Hon. Secretary, IC-ACI

Mr. Sunny Surlaker, Imm. Past President, IC-ACI

Mr. Pankaj Shah, Past President, IC-ACI

Dr. Raghuvir Salkar, Past President, IC-ACI

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Dr. Shashank Mehendale

Prof. Radhakrishna G Pillai

Prof. Kolluru V. L. Subramaniam Dr. Siddhartha Bhattacharya

## **List of Confirmed Speakers**



Dr. Aleena Alex

**Topic:** Self-healing and carbonation in concrete



**Prof. Nishant Garg** 

**Topic:** Evolution of kaolinite morphology upon exfoliation and dissolution: Evidence for nanoscale layer thinning in metakaolin



Prof. Ing Bohumil Kasal, Germany

Topic: Adhesive woodconcrete problematic



Dr. Didar Singh Cheema Australia

**Topic:** Delithiated β-Spodumene Of Lithium Mineral Extracting Process, A Potential Supplimentary Cementitious Material For Geopolymer & Conventional Concrete Applications With Reduced Co<sub>2</sub> Footprint



Dr. Ahmad Abdelrazaq

Topic: Design and Construction of Merdeka 118 Tower using High Performance Concrete: Pushing the Boundaries of Concrete Technology for Megatall Building



Prof. Nilüfer Zihnioglu Turkey

**Topic:** The Fresh State Properties of Seawater Mixed Calcium **Aluminate Cement** 

#### **List of Confirmed Speakers**



Prof. Deepak K. Kamde France

**Topic:** Corrosion characteristics of steel-concrete interface with low-carbon binders.



Prof. Kazunori Fujikake Japan

**Topic:** Fundamental study on crumb rubber mortars as shockabsorbing materials.



Prof. Giorgio Ferrari Italy

**Topic:** Low Carbon Concrete Admixtures. A New Class Of Products For Concrete Net Zero 2050 Scenario



Prof. Thaung Htut Aung Thailand

**Topic:** Application of Resilience-based Design Approach in the Structural Design of Tall Buildings



Prof. Harald Justnes Norway

**Topic:** Aluminium reinforced concrete in a resource utilization and recycling perspective



Prof. Dr. Johann Plank Germany

**Topic:** Decarbonization Strategies for the Global Cement and Concrete Industry



Prof. Raquib Ahsan Bangaladesh

**Topic:** Wavelet-Based Identification of Effective Prestress of a Damaged Prestressed Concrete Girder.



Prof. Naser Kabashi Kosovo

**Topic:**Replacement Of Fine Aggregate And Cement With Stone Dust And Influence In Properties Of Concrete



Prof. Liberato Ferrara Italy

**Topic:** A holistic approach to sustainability of concrete: upgrading the perspective from material to structural design and life cycle assessmen



Prof Gaurav Sant USA Topic: Title to be communicated



Prof. Narayanan Neithalath

**Topic:** Title to be communicated



**Dr. Rishi Gupta Topic:** Title to be communicated



Prof. Ashok Kakade USA

**Topic:** Title to be communicated



Prof. Pericles C. Stivaros New York

**Topic:** Title to be communicated



Prof. Sudharshan N. Raman Malaysia

**Topic:** Title to be communicated



Prof. Pedro Borges Mexico

**Topic:** Title to be communicated



Prof. Pengkun Hou China

**Topic:** Title to be communicated



Prof. Alejandro Durán Herrera Mexico

**Topic:** Title to be communicated



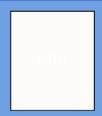
Prof. Mohan Malhotra Canada

**Topic:** To be communicated



Prof. Prasad Rangaraju

**Topic:** Title to be communicated



Dr. Ahmed Khalfan Said Al Washahi

**Topic:** Total Replacement of Cement with Fly Ash and GGBS in Mortar Mix



Prof. Nancy Soliman Mexico

**Topic:** Title to be communicated



Dr. Sook Fun Wong China

**Topic:** Title to be communicated

#### **REGISTRATION FORM**

(Photocopy if necessary)

# 4TH R. N. RAIKAR MEMORIAL INTERNATIONAL CONFERENCE

# Ghosh – Mukherjee International Symposium on Advances in Science & Technology of Concrete

Dates: 12th, 13th, & 14th December 2024,

Venue: The Lalit Mumbai.

| Delegate Nam   | e: (Dr. / Ms. / Mr.)             |  |         |
|----------------|----------------------------------|--|---------|
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| -              | Date                             | Signature  |         |