



UKIERI Concrete Congress

# Concrete: The Global Builder

Working together for durable and sustainable infrastructure

5 – 8 March 2019

**Venue:**

Dr B R Ambedkar National Institute of Technology  
Jalandhar – 144 011 (Punjab) India

[www.ukiericoncretecongress.com](http://www.ukiericoncretecongress.com)



## Third Announcement

The Congress will be honouring seven distinguished persons from world over who have made outstanding contributions in the area of Cement and Concrete Science, Technology, Design and Construction.



Host Organisations:  
Dr B R Ambedkar National Institute of Technology, Jalandhar (Punjab) India  
Guru Nanak Dev Engineering College, Ludhiana (Punjab) India



**C**ONCRETE is a global construction material, serving the social, engineering and commercial needs of the mankind through means of building the essential infrastructure to sustain our progress. The basic materials that comprise concrete are also global and this makes it second to water only in volume consumption. Notwithstanding these benefits, concrete and its providers and users also have responsibilities and obligations in ensuring its correct, durable and sustainable applications. This UKIERI Concrete Congress is being organised to discuss all aspects relating to concrete's current and future contribution as to how we build the established and develop living world. In achieving this aim, the Congress will be working with the stakeholders worldwide, involving researchers, practitioners, professional institutions, trade organisations and the relating Government departments.

The six Conferences comprising the Congress are designed to cover a wide range of issues reflecting concrete's versatility relevance and potential for further exploitation. The proceedings of the Congress will be managed differently, maximizing the delivery of current knowledge as well as the creation of new knowledge, focusing on the advantages and benefits as well as cutting across barriers that can limit applications. The need for future provision whilst responding to environmental concerns will be discussed. There will be opportunity to learn, network, debate and find solutions and opportunities relating to these issues.

The Congress will appeal to providers of services, manufacturers, practicing engineers, designer's consultants and researchers as well as planners and property developers. In fact, to all that relate to concrete's unique contribution to how we live both now and in the future.

## Chief Patrons

**Lalit K Awasthi, Chairman, Board of Governors**  
Dr B R Ambedkar National Institute of Technology, Jalandhar, India

**Gobind S Longowal, President, Managing Committee**  
Guru Nanak Dev Engineering College, Ludhiana, India

## Patrons

**Lalit K Awasthi, Director**  
Dr B R Ambedkar National Institute of Technology, Jalandhar, India

**Sehijpal Singh, Director**  
Guru Nanak Dev Engineering College, Ludhiana, India

## Organising Committee

**Ravindra K Dhir OBE, Chairman**  
University of Birmingham, UK / Trinity College Dublin, Ireland /  
University of Dundee, UK

**H S Rai, Co-chairman**  
Guru Nanak Dev Engineering College, Ludhiana, India

**S P Singh, Secretary**  
Dr B R Ambedkar National Institute of Technology, Jalandhar, India

**Raman Bedi, Secretary**  
Dr B R Ambedkar National Institute of Technology, Jalandhar, India

**A Agnihotri, Dr B R Ambedkar National Institute of Technology, Jalandhar, India**

**K S Gill, Guru Nanak Dev Engineering College, Ludhiana, India**

**B Bhattacharjee, Indian Institute of Technology Delhi, India**

**S Bhalla, Indian Institute of Technology Delhi, India**

**S Bishnoi, Indian Institute of Technology Delhi, India**

**G S Ghataora, University of Birmingham, UK**

**S Goel, DAV Institute of Engineering and Technology, Jalandhar, India**

**R Khan, Aligarh Muslim University, Aligarh, India**

**R Mehra, Dr B R Ambedkar National Institute of Technology, Jalandhar, India**

**C Q Lye, University of Birmingham, UK**

**C J Lynn, University of Birmingham, UK**

**Moray D Newlands, University of Dundee, UK**

**Kevin A Paine, University of Bath, UK**

**A P Singh, Dr B R Ambedkar National Institute of Technology, Jalandhar, India**

**Tarunjit Butalia, The Ohio State University, USA**

**Jagbir Singh, Guru Nanak Dev Engineering College, Ludhiana, India**

**H P Singh, Dr B R Ambedkar National Institute of Technology, Jalandhar, India**

**S B Singh, Birla Institute of Technology and Science, Pilani, India**

**N Singh, Dr B R Ambedkar National Institute of Technology, Jalandhar, India**

**K Kapoor, Dr B R Ambedkar National Institute of Technology, Jalandhar, India**

Opening Session  
Tuesday  
5 March 2019  
13.30 hrs

## UKIERI Concrete Congress - Concrete: The Global Builder

Dedicated to Professor Tom Harrison

### **The Congress will host the following Conferences: Opening Paper:**

**Conference 1:**  
Achieving Performance with Sustainable Materials

**Conference 2:**  
Smart Materials

**Conference 3:**  
Advanced/Effective Precast Concrete Construction

**Conference 4:**  
Urbanisation and Infrastructure

**Conference 5:**  
Asset Management and Protection

**Conference 6:**  
Education, Training, Skills and Research

*The Challenges  
Facing the  
Concrete Industry*



Tom A Harrison is a consultant and Visiting Industrial Professor at Dundee University. After working for contractors in the UK and then for a small design office in Canada, he joined the Cement & Concrete Association in its Construction Research Department. During this time, he achieved a PhD on formwork pressures. He became the Head of Construction and Technology in 1987 and when the C&CA became the British Cement Association and stopped its own research, he became its standards manager. In 1993 he was head-hunted to become the Technical Director of the British Ready-Mixed Concrete Association where he remained until reaching retirement age. He was chairman of the European Ready-Mixed Concrete Organisation's technical and environmental committee for 14 years, chairman of the BSI Concrete committee for 19 years, and actively involved in European and International standardization. While in the process of reducing his CEN activities, he still convenes two working groups and one task group. His other activities including publishing, acting as an expert witness and a member of the Editorial Board, Magazine of Concrete Research.

### Conference 1

Wednesday  
6 March 2019

## Achieving Performance with Sustainable Materials

Dedicated to Professor Jorge de Brito

### Themes

- Recycled and Secondary Materials
- Geopolymers and Aluminosilicates
- Role of Admixtures
- Self Compacting Concrete
- Bamboo Reinforced Concrete
- Processing of Materials
- Sustainable Quarries
- Material Performance Assessment
- Developing Value Added-Use of Materials
- Structural Performance Assessment
- Role of Design/Construction/Specifications
- CO<sub>2</sub> Life Cycles Assessment/Analysis
- Commercialisation of Sustainability
- Environmentally Sensitive Strategies
- Durability Issues
- Future Developments and Trends
- Others

### Opening Paper

*Upscaling the  
Use of Recycled  
Aggregate  
Concrete*



Jorge de Brito, is a full Professor of Civil Engineering in the Department of Civil Engineering, Architecture and Georesources, Head of CERIS Research Centre, Director of the ECO-Construction and Rehabilitation Doctoral Programme at the Instituto Superior Técnico, University of Lisbon, Portugal, where he graduated and obtained his MSc and PhD degrees. Though his research covers bridge management systems and construction technology, the main research area is sustainable construction, with emphasis on the use of recycled aggregates in concrete and mortar. He has participated in 23 competitively-financed research projects and supervised 40 PhD and 180 MSc theses. He is the author of 6 books, 27 book chapters and 390 papers in peer reviewed international journals and has two patents. He is Editor-in-Chief of the Journal of Building Engineering, Associate Editor of the European Journal of Environmental and Civil Engineering and member of the editorial board of 32 international journals and of the following scientific/professional organizations: CIB, FIB, RILEM, IABMAS, IABSE.

## Conference 2

Wednesday  
6 March 2019

## Smart Materials

Dedicated to Professor Deborah L Chung

### Themes

- Super Absorbent Polymers
- Carbon Capture
- Benefitting from Self-healing Phenomenon
- Benefitting from Self Cleaning Phenomenon
- Use of Resin Encapsulation
- Non-Intervention Techniques
- Biotic Bacterial Materials
- Smart Sensors
- Novel Fibres
- Non-Ferrous Reinforcement
- Nano-materials
- Phase Change Materials
- Others

### Opening Paper

*Multifunctional  
Cement-Based  
Materials*



Deborah Chung, received her PhD degree in Materials Science from Massachusetts Institute of Technology and her BS degree from California Institute of Technology. She is Professor in University at Buffalo, the State University of New York, and has authored or co-authored 560 archival international journal papers, in addition to 8 books, which includes, Carbon Composites (Elsevier, 2016). She is the inventor of smart concrete and is an international leader in the field of multifunctional structural materials, with functions including sensing, weighing, nondestructive evaluation, vibration damping, electromagnetic shielding and deicing. Professor Chung is Fellow of ASM International and American Carbon Society. The honours received include, the Pettinos Award from the American Carbon Society, the Top Reviewer Award from the Carbon journal, the Niagara Mohawk Power Corporation Endowed Chair Professorship and the Chancellor's Award for Excellence in Scholarship from the State University of New York, the Honorary Doctorate degree from University of Alicante, Spain, and the Hardy Gold Medal from the American Institute of Mining, Metallurgical, and Petroleum Engineers.

## Conference 3

Thursday  
7 March 2019

## Advanced/Effective Precast Concrete Construction

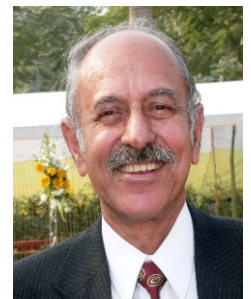
Dedicated to Professor Mahesh Tandon

### Themes

- Formwork and Falsework
- Microwave Curing
- Elevated Temperature/Steam Curing
- Use of Fly Ash and Blastfurnace Slag
- Geopolymers
- Use of Admixtures/Pigments
- Self Compacting Concrete
- Use of Fibres
- Pre- and Post-Stressing
- Offsite and Onsite Manufacture
- Concrete Finishes
- Pigmentation
- Concrete Facades
- Infrastructure, Housing and Buildings
- Quality Management Systems
- Health and Safety
- Sustainability of Precast Concrete
- Others

### Opening Paper

*Precast Concrete  
Construction Technologies for  
Metro Projects in India*



Mahesh Tandon, Managing Director Tandon Consultants Pvt Ltd and Guest Professor at IIT Gandhinagar, India is an international expert in the field of Structural Engineering. Many of the structures designed by Professor Tandon have been widely acclaimed and have received recognition in India as well as internationally. He is an Honorary Fellow, Indian Concrete Institute, President, Indian Society for Wind Engineering (2015-2018), Immediate Past President, Indian Association of Structural Engineers (2015-16), Member, National Committee of Civil Engineering, Institution of Engineers (India) (2015-2018). Under the AICTE-INAE program he was appointed Distinguished Visiting Professor at IITs Kanpur, Roorkee and Gandhinagar (2005-2015). He has accreditation of International Professional Engineer (India). Some of his recent major projects include the Viaducts, Bridges, Stations Underground Constructions and Depots of Metro projects throughout India. Professor Tandon has made significant contributions in the development of a culture for innovation in structural engineering by sharing his expertise and experience. His special areas of interest also include motivating the next generation to adopt Civil Engineering as their profession in life.



## Conference 4

Thursday  
7 March 2019

## Urbanisation and Infrastructure

Dedicated to Professor Manamohan R Kalgal

### Themes

- Roads and Bridges
- Tunnels
- Utilities
- Water and Sewage Structures
- Flood and River/Coastal Defence
- Railway Network
- Offshore Structures
- Power Generation Structures
- Airports and Docks
- High-rise and Sub-structures
- Housing Development
- Commercial Buildings
- Public Buildings
- Lean Construction
- Innovative Developments
- Composite Construction
- Others

### Opening Paper

*The Role of  
Concrete in Mass Housing  
and Road Infrastructure*



Manamohan Kalgal, with an M.E in Prestressed Concrete and PhD in Concrete Structures from IISc Bangalore, spent more than 20 years in teaching, research and consultancy. He is the Co-inventor for a Patented Process for Total Replacement of Sand by Pond Ash in Concrete. He moved to industry in 2003 as Head, technical and business development of a Pre-stressing company BBR(I). He joined UltraTech Cement Ltd., as Head, Building Products Division in 2007. He also served as Joint President & Head, Technical Services and is presently Technical Advisor at UltraTech. He is actively involved in several professional bodies. He is Fellow of Indian Association of Structural Engineers and Association of Consulting Civil Engineers (India). He was VP (South) of IAStructE and Secretary General of ACCE(I). At Indian Concrete Institute he was VP (South) and President (2015-17). He is also elected as Vice President of Asian Concrete Federation for 2017-19. He has been actively involved in organizing several national and international conferences. He has published/presented more than 40 papers in national and international journals and conferences.

## Conference 5

Friday  
8 March 2019

## Asset Management and Protection

Dedicated to Professor Peter Robery

### Themes

- Protection Against Deterioration
- Assessing Structural Condition
- Planning Considerations
- Structural Health Monitoring
- Change of Use
- Repair Methodologies
- Resin Injection
- Sprayed Concrete
- Developing Self Healing Techniques
- New Techniques and Repair Materials
- Conservation
- Cladding, Render and Coatings
- Others

### Opening Paper

*Best Practice in the  
Management and  
Protection of  
Concrete Assets*



Peter Robery, is a Royal Academy of Engineering, visiting professor in forensic engineering, University of Birmingham, UK and Director, Robery Forensic Engineering Limited, UK. After completing his PhD at the University of Leeds, he joined TEL specialising in inspection, testing, maintenance and repair. He joined consulting engineers Maunsell in 1995 (now AECOM) as director responsible for the UK's 21km long elevated Midland Links motorway viaducts, including Spaghetti Junction. Joining Halcrow in 2004 (now Jacobs), he undertook repair scheme designs for existing assets with premature deterioration and predictive durability designs for new build assets in harsh Middle and Far East climates. He is Fellow of the Royal Academy of Engineering, Institution of Civil Engineers, Institute of Concrete Technology and Concrete Society (president 2006-08) and member of the ICE Forensic Engineering Expert Panel and chair of B/517/8, responsible for the UK's contribution to the repair product standard BS EN 1504. He has authored of over 80 papers on the management of infrastructure assets, including testing, repair and monitoring.

**Themes**

- Vocational Qualification Schemes
- Apprenticeship Schemes
- Career Structures
- Stems
- European level Qualifications/Schemes
- University Education Schemes
- Distance/On-line learning
- Professional Recognitions
- Continuing Professional Development
- Life Long Learning
- Role of Research
- Structured Research
- Pedagogical Matters
- Others

**Opening Paper***Sharing Concrete  
Knowledge Globally*

Roger West, is a Fellow of Trinity College Dublin, a Chartered Structural Engineer and Fellow of the Institution of Engineers of Ireland. He is the Director of the Structural laboratories in Trinity and has been Director of Postgraduate Teaching and Learning for Engineering, Director of the multi-stream MSc in Civil Engineering and is a former Head of Department. He is Chairman of the Irish Concrete Durability committee, for ten years a Board member of the international journal, Magazine of Concrete Research and is a member of the Institute of Concrete Technology, based in the UK, where he has been involved with teaching and examining of the Advanced Concrete Technology Diploma course for several years. Starting it in 2011, he has been co-supervising research, lecturing and promoting staff and student exchanges with India on a very regular basis, principally with IIT Delhi, BITS Pilani and Thapar University. He is much travelled in India. He has over 200 peer-reviewed publications principally in concrete technology, construction innovation, IT in construction and education.

**Sponsoring of and Exhibiting at the Congress**

The focal point of the Congress will be the exhibition and organizations are invited to sponsor the event and take the opportunity to exhibit and network with the delegates. Sponsors, depending on package, will gain exposure from a range of promotional benefits as shown below:

Sponsorship and Benefits						
Sponsorship Package	Cost (₹ in Lacs)	Free Delegates	Exhibition Spaces (Units)*	Dinner Spaces	Presentation at Opening Session (Minutes)	'Ad' Space in Final Programme (Page)
Patron	10	20	4	20	30	1
Platinum	4	8	3	8	15	1/2
Diamond	3	6	2	6	10	1/2
Gold	2	4	1	4	--	1/4
Silver	1	2	1	2	--	1/4
Congress Dinner	1½	3	1½	3	--	1/4
Congress Lunch	1	2	1	2	--	1/4

\* 2 meter length

In addition, Congress Website will prominently display details of Sponsors and link directly to the Sponsor's own Website. Sponsor's company profile will also be printed in the programme given to all the delegates at the Congress.

For sponsoring and exhibiting information, please contact:

**Professor Ravindra K Dhir OBE**  
Congress Chairman

University of Birmingham, UK / Trinity College Dublin,  
Ireland / University of Dundee, UK  
Tel: +44 121 4278 108  
Email: r.k.dhir@bham.ac.uk

Organisations may simply wish to be Exhibitors at the Congress (at the cost of ₹ 0.50 Lacs per unit space). Please contact.

## Call for Papers

Prospective authors are invited to submit papers which are relevant to the themes of the conferences. Authors should submit full length papers prepared as per the guidelines available on the Congress Website latest by **30 November 2018** indicating which Conference and theme under which the paper is to be considered

## Congress Fees

The Congress fee will include all lunches, teas/coffees, refreshments, Congress dinner and proceedings. It has been devised to have wide international participation. The fee structure is shown below.

Fee per Delegate (₹)			
	1 Delegate	2 Delegates	3 or more Delegates
Early bird registration*	5500	5000	4500
Standard registration	8500	7500	6500
Author registration	6500	5500	4500
Student registration	3000	2500	2000

\* On or before 31 December 2018

## Registration / Payment Details

The delegates can register by filling up the Registration Form which is supplied separately. The Registration Form can also be downloaded from the Congress Website. The payments such as Registration Fee and Sponsorship etc. can be made either by Bank Transfer or by Demand Draft, the details for which are given below:

### Payment by Bank Transfer

Account Name: **UKIERI Concrete Congress**  
Account No.: **65155472509**  
Bank: **State Bank of India**  
**REC Jalandhar-144011, India**  
IFSC Code: **SBIN0050841**  
SWIFT Code: **SBININBB440**

### Payment by Demand Draft

Demand Draft in favour of **UKIERI Concrete Congress**, payable at **Jalandhar**

Kindly send the Registration Form (supplied separately) and the Confirmation Receipt of the Bank Transfer by e-mail at [ucc@nitj.ac.in](mailto:ucc@nitj.ac.in) or the hard copies of the same or Demand Draft along with Registration Form to the Congress Secretary to the address given in the adjacent column.

## Language and Venue

The language of the Congress is English and will be held at Dr B R Ambedkar National Institute of Technology, Jalandhar (Punjab), India.

## Accommodation

Limited accommodation is available in the Institute Guest House. A list of hotels in the city offering discounted Congress rates will be provided on the Congress website shortly. Please note that the accommodation is not included in the Congress fee and the delegates are responsible for their own accommodation.

## Travelling to Jalandhar

The city of Jalandhar is situated on National Highway No 1. It is 350 km away from New Delhi and is easily accessible by train. The Shatabdi Express trains plying between New Delhi and Amritsar (via Jalandhar City) are the best mode of travel to and from Jalandhar. The nearest international airport is at Amritsar about 90 km from Jalandhar.

## For Further Details, Please Contact

**Professor S P Singh**, Congress Secretary  
Department of Civil Engineering  
Dr B R Ambedkar National Institute of Technology  
P.O. REC  
Jalandhar – 144 011 (Punjab), India  
t +91 181 3082 000 Extension 2305 (O)  
+91 98140 88475 (M)  
e [ucc@nitj.ac.in](mailto:ucc@nitj.ac.in)



**UKIERI Concrete Congress**  
**Concrete: The Global Builder**  
Working together for durable and sustainable infrastructure  
5 – 8 March 2019, Jalandhar (Punjab) India