Innovations in Concrete Construction

5 - 8 March 2013

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

www.ukiericoncretecongress.com

Third Announcement

Congress Collaborating Institutions

Institution of Civil Engineers, UK

Indian Concrete Institute

Japan Concrete Institute

Institution of Structural Engineers, UK

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

Why India?
Concrete Calling!

- India is a country of massive opportunities and potential and has become of strategic importance, globally.
- The Congress will bring together global experts and providers of materials, design, techniques and innovations to this unique event.
- India is well placed to host such an occasion because it can and will act as sounding board for new ideas, knowledge exchange and experience in an environment that lends itself to communication and application resulting in genuine “learning by doing and adoption”.
- India is free spirit that can facilitate collaboration leading to the exploitation of innovation and contribute to concrete’s development globally.
- This Congress offers the opportunity to continue what is new in concrete technology and science with culture.
- Indian culture is different and will leave a lasting impression. This is an opportunity to learn and yet explore its heritage and its people. We hope to welcome you.

Congress Supporting Institutions

AIMAT Associazione Italiana d'Ingegneria dei Materiali

BRITISH PRECAST

CONCRETE SOCIETY

The Irish Concrete Society

NZCS

SINGAPORE CONCRETE INSTITUTE

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Avtar Singh
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Ludhiana, India

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M S Saini
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Ludhiana, India

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Sanjay Goel
DAV Institute of Engineering and Technology, Jalandhar, India

K S Bedi
Guru Nanak Dev Engineering College, Ludhiana, India

Harvinder Singh
Guru Nanak Dev Engineering College, Ludhiana, India

Shamsher B Singh
Birla Institute of Technology and Science, Pilani, 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

Moray D Newlands
University of Dundee, UK

Kevin A Paine
University of Bath, UK

R Pandya
W S Atkins, UK

J Bai
University of Glamorgan, UK

R C Gupta
Malaviya National Institute of Technology, Jaipur, India

M C Narasimhan
National Institute of Technology Karnataka, Surathkal, India

H S Patil
SV National Institute of Technology, Surat, India

N Rajamane
SRM University, Chennai, India

R Mangabhai
Mangabhai Consulting, UK

S Kumar
Assistant, UKIERI Concrete Congress

Hotel Accommodation

To ensure that your stay in Jalandhar can be arranged well in advance, the Organising Committee has drawn up a list of local hotels and where possible negotiated specially discounted rates. Two such lists are available on the Congress Website. The delegates are advised to contact the hotels directly to make their reservations, but let us know at ucc@nitj.ac.in if they experience any difficulty and we would be very happy to assist. Please note that there will be shuttle transport service between all hotels and the Congress venue at all times during the Congress period. For details, please visit Congress Website: ukiericoncretecongress.com

Pre and Post Congress Tours

To ensure that delegates enjoy their visit to India and use the opportunity of coming to the Congress to learn and explore Indian heritage and people, the Organising Committee has negotiated special rates with three major operators for 14 tours across the country and we hope that this will help. For details, please visit the Congress Website: ukiericoncretecongress.com

Traveling 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.

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, but the details regarding mode of payment etc. shall be intimated shortly.

Fee Per Delegate (₹)			
	1 Delegate	2 Delegates	3 or more Delegates
Early bird registration*	5500	5000	4500
Standard registration	8000	7000	6000
Author registration	6500	5500	4500
Student registration	3000	2800	2600

** On or before 15 January 2013*

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 Patiala** **REC Jalandhar-144011, India**
IFSC Code:	**STBP0000841**
SWIFT Code:	**STBPINBB021**

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 or spsingh@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 at the last page of this Brochure.

Concrete Calling!

Chairman's Welcome

Welcome to the second UKIERI Concrete Congress, organised by a group of faculty members from ten academic institutions, whose collective wisdom and ability to work together is helping in establishing the Congress as a bi-annual event.

The special features of the Congress 2013 are that it will be honouring seven experts world over for their outstanding contributions in the area of concrete construction and hosting six conferences covering a very wide spectrum of subject areas, reflecting new developments and innovations in the area of concrete construction, in response to the challenges of sustainability.

I am also pleased to say that the Congress Organising Committee has been working hard to ensure that adequate provision for delegates' accommodation at affordable rates is in place and that overseas delegates, should they wish, can explore India through the pre and post Congress tours arranged for them. During the Congress, arrangements will also be made for the accompanying delegate partners for day tours to places of special attraction such as the Golden Temple in Amritsar.

We are ready to welcome you to Jalandhar and very much hope to see you at the Congress, which we hope would be memorable one for all. Should you have any query please do not hesitate to contact us.

Professor Ravindra K Dhir OBE

Opening Session
Tuesday
5 March 2013
13.30 hrs

UKIERI Concrete Congress: Innovations in Concrete Construction

Dedicated to Dr Jean-Marie Chandelle
Chief Executive, CEMBUREAU, **Belgium**

Opening Paper

The European Cement Industry's Quest for Sustainable Construction, its Contribution, Today and Tomorrow

Jean-Marie Chandelle is the Chief Executive of CEMBUREAU, the European Cement Association, a position he has held since 1996. A qualified Belgian lawyer, with a Master of Laws and a Ph.D, Dr Chandelle has held numerous positions including Legal Counsel to SOLVAY, Secretary General of the Interox Group, and Head of Corporate Communications (SOLVAY Group). He teaches Law at the University of Brussels and has published various books and articles in French and in English on Property law, Environmental law and European law as well as articles on Climate Change, the use of alternative fuels in the European cement industry and on EU Policy. He also produces regular contributions as a columnist to international magazines ("Global Cement & Lime Magazine", "Cement International") on topics related to EU law and policies and features relevant to the cement and concrete industries.

Sponsoring of and Exhibiting at the Congress

Sponsoring the Congress

The focal point of the Congress will be the exhibition and organisations 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	1 /2	3	1 /2	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 sponsorship information, please contact:

Professor Ravindra K Dhir OBE
Congress Chairman

University of Dundee, UK /
Trinity College Dublin, Ireland
t +44 121 4278 108
e r.k.dhir@dundee.ac.uk

Exhibiting at the Congress

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

For exhibition information, please contact:

Professor H S Rai
Congress Joint Secretary

Department of Civil Engineering
Guru Nanak Dev Engineering College
Ludhiana – 141 006 (Punjab)
India
t +91 161 2491 193 (O)
+91 98552 25007 (M)
f +91 161 5064 742, 2502 240 (by attention)
e hsrai@gndec.ac.in, hardeep.rai@gmail.com

Conference 1
Wednesday
6 March 2013

High Performance Concrete Using Admixtures

Dedicated to Professor Peter C Hewlett

Former Chief Executive, British Board of Agrement, **UK**

Themes

- Measuring Performance and Test Methods
- Self Compacting Concrete
- Rheology/Set Controllers
- High Performance Superplasticisers
- Early High Strength Concrete
- High and Ultra High Strength Concrete
- Shrinkage Compensating Concrete
- Water Proofed Concrete
- Enhanced Permeation Properties
- Durability Enhancement
- High Performance in Multi-Aggressive Exposures
- Developments in Under Water Construction
- Foamed Concrete
- Decorative Concrete
- Other Products/Applications

Scientific and Technical Advisory Committee

- **Prof Khalifa Saif Al-Jabri**, University of Sultan Qaboos, **Oman**
- **Prof Adolf Bajza**, Slovak University of Technology, **Slovak Republic**
- **Prof Andrzej M Brandt**, Polish Academy of Science, **Poland**
- **Prof Bjegovic Dubravka**, University of Zagreb, **Croatia**
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- **Prof Ravindra Gettu**, Indian Institute of Technology Madras, **India**
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- **Prof Elsabe Kearsley**, University of Pretoria, **South Africa**
- **Prof Konstantin Kovler**, Israel Institute of Technology, **Israel**
- **Prof Ioanna Papayianni**, Aristotle University of Thessaloniki, **Greece**
- **Prof S A Reddi**, Value Engineering Consultant, **India**
- **Prof Luping Tang**, Chalmers University of Technology, **Sweden**
- **Prof Jianjun Zheng**, Zhejiang University of Technology, **China**

Opening Paper

Professor Peter C Hewlett
Former Chief Executive, British Board of Agrement, **UK**

Paper Title : *Cement Admixtures: Trends, Developments and Attitudes*

Keynote Papers

Dr Bruce Christensen
Vice-President, Global Technology and Innovation Management, BASF Construction Chemicals, Mannheim, **Germany**
Paper Title : *Chemical Admixtures for Concrete: Science, Technology and Applications*

Professor Bishwajit Bhattacharjee
Indian Institute of Technology Delhi, **India**
Paper Title : *Evolution of Modern Sustainable Concrete through Admixtures*

Professor S P Singh
National Institute of Technology Jalandhar, **India**
Paper Title : *Exploring New Frontiers in Structural Research with SCC*

Professor S A Reddi
Value Engineering Consultant, Bangalore, **India**
Paper Title : *Sustainable Concrete for 35 Storey Karle Zenith Towers in Bangalore*

Closing Paper

Professor Harald Justnes
Chief Scientist, SINTEF Building and Infrastructure, Trontheim, **Norway**

Paper Title : *Chemical Admixtures: The Way Forward*

Conference 1: High Performance Concrete Using Admixtures

Self – Curing Concrete, Myth or Fact?
Bruno D'Souza **(China)**

High Performance Superplasticisers for Modern Concrete
Shivram B Bagade, Bruno D'Souza **(China)**

Behaviour of Hybrid Fibre Reinforced High Performance Concrete under Direct Shear
M V Sabeena, N Ganesan, P V Indira **(India)**

Polycarboxylate based Superplasticiser for Applications in Self Compacting High Performance Concrete
Supradip Das **(India)**

Workability of Fibre Reinforced Self-Compacting Concrete
Ankit Gupta **(India)**

Workability of Self-Compacting Concrete Containing Rice Husk Ash
S P Singh, Sarvesh Kumar, Dilraj Singh, Rizwan Khan **(India)**

Green-Super-Plasticizers for Construction Applications by using Biopolymer
Nagesh R Iyer, B Bhuvaneshwari **(India)**

Investigation on the Strength and Permeability of Concrete Reinforced with Hybrid Steel Fibres
S P Singh, Sarvesh Kumar, Amritpal Singh, Daman Kumar **(India)**

Sustainable High Performance Concrete for Bridges
Tejinderpal Singh **(India)**

Strength and Toughness of Steel Fiber Reinforced Self-Compacting Concrete
P Singla, P Jain, S Sethi, P Bansal, S Jain, A Ohri **(India)**

Influence of Corrosion on Bond Strength of Ternary Blended Concrete
P Murthi, K Poongodi **(India)**

Flexural Fatigue Performance of Steel Fibre Reinforced Self Compacting Concrete
S Goel, S P Singh **(India)**

Studies on the High Early Strength Properties of Concrete Containing Flyash, Accelerator and Metallic Fibres
A Sivakumar, V M Soundararajan, A Tayal, I V Singh, S Chauhan, **(India)**

Strength and Flexural Toughness of Self Compacting Fibre Reinforced Concrete
Sumit Arora, S P Singh, Sanjay Goel, Amardeep Singh **(India)**

Hardened Properties of Self-Compacting Concrete Containing Fly Ash, Silica Fume and Lime Powder
Dilraj Singh, Rizwan Khan, S P Singh, **(India)**

Concrete Mix Design IS:10262 – 2009 Vs IS:10262 -1982
Dhirendra Singhal, Sanjiv Aggarwal, Jaspreet Singh Brar **(India)**

Study of Self–Compacting Concrete using Waste Foundry Sand and High Volume Fly Ash
Neelam Pathak, Rafat Siddique **(India)**

Behavior of High Performance Concrete under Repeated Compressive Loading
R B Khadiranaikar, Santosh Murnal **(India)**

Strength and Shrinkage Properties of Self-Compacting Concrete Containing Lime Stone Quarry Fines
Rajesh Kumar, S K Madan, N P Devgan, Roshan Lal **(India)**

A Study on Fresh, Hardened and Durability Properties of Self Compacting Concrete Containing Fly Ash and Metakaolin
A Nehra, R A Khan, S Singhal, A Malik, K Choden **(India)**

Workability Retention of Triple Blend Self Compacting Concrete
Bharathi Ganesh, Dr Hsharada Bai, V R Kawshika **(India)**

Study of Pozzolanic Binders Effects on SCC Durability in Sulfate Environment
Kiachehr Behfarnia, Omid Farshadfar **(Iran)**

Influence of Cement Type and Water-Cement Ratio on Open Porosity and Gas Permeability of Cement Pastes
Tomasz Tracz, Jacek Sliwinski **(Poland)**

The Impact of Steel Fibres Length and Content on Properties of RPC Cured in Different Hydrothermal Conditions
Tomasz Zdeb, Jacek Sliwinski **(Poland)**

Special Self-Compacting Concretes
Darius Stanciu, José Barosso Aguiar, Nicolae Angelescu **(Romania)**

Effectiveness of HPC Mix Composition in Suppressing ASR Expansion
Galal Fares, M Iqbal Khan **(Saudi-Arabia)**

The Use of Foamed Concrete for Housing
E P Kearsley, H F Mostert **(South Africa)**

Ultra High Performance Self Compacting Concrete using Pozzolanic Materials
Yogesh D Barot, Rahul Mathur, Moushumee Bhuyan **(India)**

Durability of High Strength Self Consolidating Concrete using High Volume of Supplementary Cementitious Materials
Ahmed Ibrahim, Hassan El-Chabib **(USA)**

Study of the Behaviour of Pervious Concrete in Extreme Conditions
G Vardaka, A Vlysidis, C Leptokaridis, S Tsimas **(Greece)**

Influence of Mineral and Chemical Admixtures on the Packing Density of High Strength HPC
Jeenu G, Vinod P, Lalu Mangal **(India)**

Strength and Corrosion Properties of Concrete incorporating Metakaolin and Red mud
R Rathan Raj, E B Perumal Pillai, A R Santhakumar **(India)**

Shrinkage in Concretes Containing Fly-Ash
Souptik Sarkar, Aritra Halder, Shashank Bishnoi **(India)**

Damage Assessment and Rehabilitation of Lower Liard Reinforced Concrete Bridge Deck
Alex Taheri **(Canada)**

Ultra High Performance Fiber Reinforced Concrete - Mixture Design and Testing
Petr Konvalinka, Petr Maca, Radoslav Sovják **(Czech Republic)**

Effect of Sawdust Ash and Metakaolin on the Fresh and Hardened Properties of Self Compacting Concrete
Rizwan Khan, Sumit Mahajan **(India)**

Properties of Self Compacting Concrete Incorporating Rice Husk Ash and Metakaolin
S P Singh, Sarvesh Kumar, Dilraj Singh, Rizwan Khan **(India)**

Characterization of Biosealent Properties of Bacillus Subtilus in Concrete
Srinivasa Reddy Vempada, Seshagiri Rao M V, Sasikala C H **(India)**

Correlating Workability of Superplasticised Paste, Mortar and Concrete? Present Scenario
Parth Thaker, Narendera Arora **(India)**

Characteristic Properties of Fibre Reinforced Concrete Reinforced with Polyester Fibre Recron 3s and its Comparison with Plain Concrete
Manik Jain, Piyush Bharti Arora, Roshan Lal **(India)**

Effect of Chloride Attack on the Properties of SFRC Containing Glass Powder as Pozzolana
B R Patagundi, K B Prakash **(India)**

Strength Characteristics of Self-Compacting Concrete
Keenu Nayyar, Jagbir Singh, Manjeet Bansal **(India)**

Development of Self Compacting Concrete: A Literature Review
Rahul Dubey, Pardeep Kumar **(India)**

Mix Proportioning of Self Compacting Concrete – An Experimental Study
Rajesh Kumar, S K Madan, N P Devgan **(India)**

Laboratory Investigation of High Performance Concrete for Highway Pavements
Sanjay Srivastava, S S Jain, M P S Chauhan **(India)**

Experimental Study of Factors Influencing Test Results During the Testing of Concrete
Premkishan Patel, S N Desai **(India)**

Influence of Curing Requirement of High-Performance Concrete in the Hot Environment of Riyadh
M Iqbal Khan **(Saudi-Arabia)**

HPC: How it Performs Under Internal Sulfate Attack and Asr Expansion?
Galal Fares, M Iqbal Khan **(Saudi-Arabia)**

Use of Ternary Cementitious Blends – Relative Performance Gains in Concrete
A N Vyasa Rao, C M Dordi, Ravindra Gettu, Manu Santhanam **(India)**

A Study on Effect of Carbonation on the Properties of Concrete
Dipendu Bhunia, S B Singh **(India)**

Behaviour of Glass Fiber Reinforced Self Compacting Concrete
Sanjay Kumar, M M Prasad **(India)**

High Performance Abrasion Resistant Concrete at Spillway
Vinod Kumar Mauriya, Teofilo Gamayo Jr **(India)**

Conference 2
Wednesday
6 March 2013

Precast Concrete and Construction

Dedicated to Professor Arnold Van Acker

Former Chairman, fib Commission on Prefabrication, **Belgium**

Themes

- Production Processes and Innovations
- Developments in Precast Construction
- Sustainable Design
- Structural Frames
- Architectural Cladding
- Normal/Light Weight Building Blocks
- Concrete Floor Beams/Hollow Core Slabs
- Concrete Pipeline Systems
- Foundation Systems
- Concrete Railway Systems
- Applications in Bridge Construction
- Concrete Tilt up Construction
- Concrete Tunnel Segments
- Codal Provisions and Design Aspects
- Safe Erection/Others

Scientific and Technical Advisory Committee

- **Prof Hakim Abdelgader**, Tripoli University, **Libya**
- **Prof Nemy Banthia**, The University of British Columbia, **Canada**
- **Mr Martin A Clarke**, Chief Executive, British Precast Concrete Federation, **UK**
- **Prof Luiz Carlos Silva Filho**, Federal University of Rio Grande do Sul, **Brazil**
- **Prof Raymond Ian Gilbert**, The University of New South Wales, **Australia**
- **Dr Holger Kartuz**, Editor-in-Chief, CPI Concrete Plant International, **Germany**
- **Prof Ali Kaveh**, Iran University of Science and Technology, **Iran**
- **Prof M Iqbal Khan**, King Saud University, **Saudi Arabia**
- **Prof Peter Konvalinka**, Czech Technical University in Prague, **Czech Republic**
- **Prof Zongjin Li**, Hong Kong University of Science and Technology, **Hong Kong**
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- **Prof S A Reddi**, Value Engineering Consultant, **India**
- **Prof Koji Sakai**, Kagawa University, **Japan**
- **Mr Chris Stanley**, Technical Director, Unibeton, Abu Dhabi, **UAE**
- **Architect Janne Terasvirta**, ALA Architect, **Finland**
- **Prof Jianjun Zheng**, Zhejiang University of Technology, **China**

Opening Paper

Professor Arnold Van Acker
Former Chairman, fib Commission on Prefabrication, **Belgium**

Paper Title : *Precast Concrete: A not to be Missed Construction Technology for 21st Century*

Keynote Papers

Patrick DeClerck
President, Bureau International du Beton Manufacture and MD of DECOMO, **Belgium**
Paper Title : *Architectural Precast Concrete in Europe: A High Quality Construction Material for the Future*

Dr Bernd Wolschner
Board Member, Umwelttechnik Stoiser & Wolschner AG, **Austria**
Paper Title : *Principles of Efficient Factory Management in the Concrete Precast Industry*

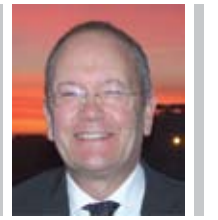
Stephen Carr
Managing Director, Spiroll Precast Services Ltd, **UK**
Paper Title : *Prestressing: Training the Workforce in Quality, Safety and Efficiency*

Dr Holger Kartuz
Editor in Chief, CPI Concrete Plant International, **Germany**
Paper Title : *Quality Control Systems for Precast Plants*

Closing Paper

Martin A Clarke
Chief Executive, British Precast Concrete Federation, **UK**

Paper Title : *Much More than the Concrete*



Conference 2: Precast Concrete and Construction

Seismic Vulnerability Index for Concrete Pipes
Bensaibi Mahmoud, Halfaya Fatma Zohra, Davenne Luc **(Algeria)**

Exploiting Potential of BIM for Precast Construction
Hardeep Rai, Raninder Dhillon **(India)**

Impact Strength of Thin Cementitious Slabs Reinforced with Non-Corrosive Bar Chip Olefin Fibers
P B Sakthivel, A Jagannathan **(India)**

Insitu Concreting of Spillway Girder & Box Bridge
Vinod Kumar Mauriya, Praveen Kumar Yadav, Vinod Kumar Angra **(India)**

Determination of Flexural Behaviour of Ferrocement Slabs
N Kannan, A Jagannathan **(India)**

Effect of Steam Curing on Sorptivity, Water Penetration and Electrical Resistivity of Concrete
Masoud Siminpour, Mohsen Tadayon, Hormoz Family **(Iran)**

The Effect of Density on Mechanical Properties of Freshly Compressed Concrete
Mehdi Nematzadeh, Morteza Naghipour, Javad Jalali, Abolghasem Salari **(Iran)**

Geopolymer Concrete Blocks/Pavers for Precast Applications
Ambily P S, B H Bharatkumar, Nagesh R Iyer **(India)**

Precast Lightweight Large Panel Wall and Roof Elements for Seismic Resistant Buildings
J Annie Peter, J Prabhakar, Nagesh R Iyer **(India)**

Hollowcore Manufacturing and Factory Design
Stephen Carr **(UK)**

Behaviour of Prefabricated Constructions under Lateral Loads
S K Bhattacharyya, A Chourasia **(India)**

Structural and Architectural Façade Construction using Precast Concrete Technology
Nagaraja M Thontalapura **(India)**

Utilising Waste Toner as a Pigment for Sustainable Precast Concrete Elements
Moray Newlands, L J Csetenyi, K Moock **(UK)**

Wholly Precast JJ Flyover in Mumbai with 75 MPa High Performance Concrete
S A Reddi **(India)**

Cost-Efficient Production of Precast Elements: An Expert Insight into Production Methods, Plant Technology and Building Expertise
Steffen Schmitt, Debashish Roy **(UK)**

Precast Concrete Technology: Design Aspects and Implementation in India
Prakash Shah, Deepak Singhavi, Sanjeev Pillai **(India)**

Prospective Housing Technologies for Mass Housing in India
Shailesh Agrawal, J K Prasad, S K Gupta, Dalip Kumar **(India)**

Conference 3: Low Carbon Cements and Concrete in Modern Construction - Remaining Papers

Optimum Design of Reinforced Concrete Structures for Low Embodied Carbon
Mohamed Saafi, David Wani **(UK)**

Development of a Performance-Based Specification for Sustainable use of PFA in Engineering Fill Applications
Jiping Bai, Ivan Skidmore **(UK)**

Behavior of Palm Oil Fuel Ash and Metakaolin Based Geopolymer Mortar
Mohammad Bin Ismail, Taliat Ola Yusuf **(Malaysia)**

Durability of Alkali Activated Fly-Ash Based Geopolymer Concrete under Laboratory and In-situ Aggressive Environment Exposure Conditions
Natalie Lloyd, B V Rangan, Didar Cheema **(Australia)**

Effect of Chemical Composition of Fly-Ashes on the Strength of Concrete
Shashank Bishnoi, Amarpreet Kaur **(India)**

Fly ash: A Renewable Resource for Cement Concrete
Sunil Kumar Chaudhary **(India)**

A Systematic Approach to Geopolymer Concrete
Sunil Kumar Chaudhary **(India)**

Flexural Strength of Polypropylene Fibre Reinforced Concrete with Cement Additions
Raghubir Singh, S P Singh **(India)**

A Study on Barriers against Commercialization of Geopolymer Binders
A N Dehghan, M W Hussin, N Falahati **(Malaysia)**

Conference 3
Thursday
7 March 2013

Low Carbon Cements and Concrete in Modern Construction

Dedicated to John Harrison

Managing Director and Chairman, TecEco P. Ltd, **Australia**

Themes

- Progress in Carbon Foot Print Reduction in Concrete Construction
- Challenges for Developing Countries
- Appropriate Use of Waste Materials
- Engineering and Durability Performance
- Sulphoaluminates
- Magnesium Oxide/Silicate Based Cements
- Geopolymers
- Production/Process Changes
- Mineralised Portland Clinkers
- Zeolite Cements
- Portland Clinker/Fly Ash Cements
- Portland Clinker/Slag Cements
- Low Carbon Concrete and Construction
- Modeling Cement Composites for Strength and Durability
- Other Cements

Scientific and Technical Advisory Committee

- **Prof Hakim Abdelgader**, Tripoli University, **Libya**
- **Prof Adolf Bajza**, Slovak University of Technology, **Slovak Republic**
- **Prof Arnon Bentur**, Israel Institute of Technology, **Israel**
- **Prof Andrzej M Brandt**, Polish Academy of Science, **Poland**
- **Prof Jorge De Brito**, Instituto superior Tecnico, **Portugal**
- **Dr Pal Chana**, Executive, Mineral Products Association, **UK**
- **Dr A K Chatterjee**, Managing Director, Conmat Technologies Pvt Ltd, **India**
- **Dr Per Fidjestol**, Technical Director, Elkem ASA Materials, **Norway**
- **Dr Sujit Ghosh**, Chief Executive Officer, Holcim, **Singapore**
- **Prof Chao-Lung Hwang**, National Taiwan University of Science and Technology, **Taiwan**
- **Prof Mohammad Ismail**, Universiti Teknologi Malaysia, **Malaysia**
- **Prof Harald Justnes**, Chief Scientist, SINTEF Building and Infrastructure, **Norway**
- **Mr Willie Kay**, Managing Director, WAK Technologies, **Singapore**
- **Prof Elsabe Kearsley**, University of Pretoria, **South Africa**
- **Prof M Iqbal Khan**, King Saud University, **Saudi Arabia**
- **Prof Tarun R Naik**, University of Wisconsin-Milwaukee, **USA**
- **Prof K C Gary Ong**, National University Singapore, **Singapore**
- **Mr Bryan Perrie**, Managing Director, Cement and Concrete Institute, **South Africa**
- **Prof Chi Sun Poon**, The Hong Kong Polytechnic University, **Hong Kong**
- **Prof Koji Sakai**, Kagawa University, **Japan**
- **Prof Luping Tang**, Chalmers University of Technology, **Sweden**
- **Prof Josef Tritthart**, University of Technology, Graz, **Austria**
- **Prof Enric Vazquez**, Universitat Politecnica Catalunya (UPC), **Spain**
- **Prof Chung-Chia Yang**, National Taiwan Ocean University, **Taiwan**

Opening Paper

John Harrison
Managing Director and Chairman, TecEco P. Ltd, **Australia**

Paper Title : *Future Concretes in Perspective and Ramifications of Adding Reactive Magnesia to Hydraulic Cement Compositions*

Keynote Papers

Dr Kevin Paine
Dr Socrates Ioannou, Dr Kofi Abora and Dr Keith Quillin, Centre for Innovative Construction materials, University of Bath, **UK**
Paper Title : *Low Carbon Concrete: Research with Non-Portland Cements*

Professor M R Jones
University of Dundee, **Scotland**
Paper Title : *Balancing the Performance and Embodied CO2 Demands of Concrete*

Christopher Stanley
Technical Director, Unibeton Readymix,
Abu Dhabi, **UAE**
Paper Title : *Innovations in Green Optimized Concrete*

Closing Paper

Professor J Tritthart
Mr L Neunteufel and Dr J Juhart, University of Technology, Graz, **Austria**

Paper Title : *Low Carbon Cements and Concrete: An Overview and a Practical Approach*

Conference 3: Low Carbon Cements and Concrete in Modern Construction

Influence of Mineral Addition on Performances of Concrete
Benchiheub Djihen, Amouri Chahinez, Houari Hacène **(Algeria)**

Appropriate Management of High Calcium Fly Ashes towards Maximizing their use in Cement and Concrete
Stamatis Tsimas **(Greece)**

Synergistic Behavior of Power Station and Steel Industry By-Products during Sintering
A Moutsatsou, G Charalampides, E Katsika, V Karayannis **(Greece)**

Experimental Study of Porous Concrete for Sustainable Development
Sarvesh Kumar, Dilraj Singh, Jaspal Singh, Deepinder Singh Aulakh **(India)**

Development of Sustainable Concrete made with Recycled Concrete Aggregates and Fly Ash
Pinal Saini **(India)**

Influence of Microbial Treatment on Alkalinity of Cement Kiln Dust
Kunal Garg, Rafat Siddique, Anita Rajor **(India)**

Abstract-Investigation into the Utilization of Fine Aggregate Waste Pebbles in Green (Pervious) Concrete - A Sustainable Solution for Conserving Water
MohammNadeeed m **(India)**

Flexural Toughness of Hybrid Steel Fibrous Concrete using Post-Crack Strength Method
S P Singh, Sarvesh Kumar, Amrit Pal Singh, Daman Kumar **(India)**

Utilisation and Characterisation of Scrap Tyre Rubber in Concrete
Navneet Sharma, Saleem Akhtar, Mansi Mishra **(India)**

Integrated Dynamic Method of Concrete Mix Design
P M Deshpande **(India)**

Effect of Crushed Lime Stone Dust on Bond Strength of Concrete
Rakesh Kumar, L K Mishra, Vijay Karan Verma **(India)**

Characterization of Sugarcane Bagasse Ash as Supplementary Cementitious Material in Concrete
A Bahurudeen, Manu Santhanam **(India)**

An Appropriate Use of Thermal Power Plant Waste - Pond Ash as Fine Aggregate in Concrete
Ganesh Bharathi, H Sharada Bai, R Nagendra **(India)**

High Performance Concrete in Modern Constructions by using Low Carbon Cement - With Reference to Portland Slag Cement
Sairamesh Mallikarjunan, Shreesh Anant Khadilkar, Hemant Sahu **(India)**

Influence of Fly Ash and Rice Husk Ash on Properties of Concrete
K C Panda, S Sahoo **(India)**

Sustainable Concrete from Waste Dairy Products for a Seismic Design of Structures
K S Satyanarayanan, Kaisar Khursheed, J S Arvind **(India)**

Studies on Geopolymer Concrete with Flyash and GGBS under Different Curing Regimes
M S Sudarshan, K Harish, R V Ranganath **(India)**

Effect of Wollastonite-Fly Ash Combination on Strength, Permeability and Carbonation of Concrete Mixes
Pawan Kalla, Anurag Misra, L J Csetenyi, R C Gupta **(India)**

Strength Prediction Models for Fly Ash Concrete
Samaresh Pan, Santanu Bhanja **(India)**

Effect of Grading of Fine Aggregates on Flow and Compressive Strength of Geopolymer Concrete
Subhash V Patankar, Sanjay S Jamkar, Yuvraj M Ghugal **(India)**

Durability Studies of Geopolymer Concrete against Acid & Sulfate Attack
Prakash R Vora, Urmil V Dave **(India)**

Fresh and Hardened Properties of Controlled Low Strength Material
Darragh O'rourke, Jingran Gao, Roger P West **(Ireland)**

The Use of a Greyness Index Chart as an Indicator of Surface Albedo of Concrete
Angharad Sweeney, Roger P West **(Ireland)**

Concrete Mix Proportioning using Three Equations Method (Laboratory Study)
Hakim S Abdelgader, Ali S El-Baden, A H Fahema, Nicolae Angelescu **(Libya)**

Durability of Hydraulic Lime Concrete with Metakaolin
Paulo Cachim, Ana Velosa **(Portugal)**

Using Fine Recycled Aggregates from Construction and Demolition Waste in Concrete Production: A State-of-The-Art Review
Jorge De Brito, Luís Evangelista **(Portugal)**

Experimental Study on Chloride Migration Coefficients of SCC with Binary and Ternary Mixtures of Fly Ash and Limestone Filler
Pedro Silva, Jorge De Brito **(Portugal)**

Using South African Fly Ashes as a Component of Alkali-Activated Binders
Julia Shekhovtsova, Elsabe P Kearsley **(South Africa)**

Producing Alkali-Activated Slag Concrete in South Africa
Maxim Kovtun, Elsabe P Kearsley, Julia Shekhovtsova **(South Africa)**
Low Carbon Concrete: Research with Non-Portland Cements
Kevin Paine, Socrates Loannou, Kofi Abora, Keith Quillin **(UK)**

Pervious Concrete - A Concrete Step towards Greener Earth – An Indian Perspective
Yogesh D Barot **(India)**

Polymer Effect on the Rheological Properties of the PPC Blends
I Ion, J B Aguiar, N Angelescu, H S Abdelgader **(Romania)**

An Investigation into the Viability and Benefits of Modern Hydraulic Lime Concretes
Ellen Grist, Kevin A Paine, Andrew Heath, Henry Pinder **(UK)**

Low Carbon Cements and Concrete: An Overview and a Practical Approach
J Tritthart, L Neunteufel, J Juhart **(Austria)**

Plastic Waste as Aggregates in Light Weight Concrete: The Effect of Simulated Hydration Process on their Properties
S Gavela, E Babou, P A Tarantilli, V Kasselouri – Rigopoulou **(Greece)**

Behavior of Fly Ash Based Geopolymer Concrete Exposed to Acid, Saline Water & Sodium Silicate
Vikrant Vairagade, Aniket K Chafle, Kavita S Kene **(India)**

Strength of Flyash Based Geopolymer Concrete under Oven Dry Condition
Vikrant Vairagade, Aniket K Chafle, Kavita S Kene **(India)**

Low Cost Green Buildings - Use of Recycled Aggregates
S P Singh, Dilraj Singh **(India)**

Low Carbon Concrete using GGBS
Ashok Kumar Tiwari, Abhishek Bhattacharya **(India)**

Light Weight High Performance Bricks Incorporating Fly Ash
Dilraj Singh, Harkamaljeet Singh Gill, Vikramjit Singh **(India)**

Comparative Study of Treated Recycled Aggregate Concrete Mixtures
Kaushal Sharma, Nikhil Choughule, Harshal Rastogi, Karan Raj **(India)**

Preparation of Soy Protein Based Green Composites
B S Kaith, Jaspreet Kaur Bhatia, R Jindal, R Sehgal **(India)**

Strength and Permeability of Steel Fibre Reinforced Fly Ash Concrete
A P Singh, Navdeep Singh **(India)**

Strength Characteristics of Steel Fibre Reinforced Concrete using Stone Dust as Partial Replacement for Fine Aggregates
Pawan Thakur, A P Singh, S P Singh **(India)**

Geopolymer Precast Concrete
Gurpreet Singh, Tom Dyer **(India)**

Optimization of Mix Proportions for Polymer Concrete using Design of Experiments
Raman Bedi, S P Singh **(India)**

Performance Evaluation of Binder Type in Aggressive Chloride Environment
Sonjoy Deb, Bulu Pradhan **(India)**

Sustainable Development of Concrete using Waste Materials
Rishav Garg, Yogesh Aggarwal, Manjeet Bansal **(India)**

Effect of Corrosion Inhibitors on the Critical Chloride Threshold of Thermo-Mechanically Treated (TMT) Steel
Vibha Venkataramu, Radhakrishna G Pillai **(India)**

Corrosion Rates of Mild Steel and Cold-Twisted Deformed Reinforcing Bars Embedded in Cement Mortar
P K Firodiya, A K Sengupta, R G Pillai, D Menon **(India)**

An Experimental Study of Plain and Reinforced Concrete with Partial Replacement of Stone Dust under Compression and Flexure
Rehan A Khan, M S Jafri **(India)**

Conference 4
Thursday
7 March 2013

Designing Reinforced Concrete for Sustainability

Dedicated to C R Alimchandani

Chairman and Managing Director, STUP Consultants P. Ltd, **India**

Themes

- Design and Analysis of Structural Systems
- Reinforced Cementitious Composites
- Computational Structural Mechanics
- Structural Health Monitoring and Retrofitting
- Life Cycle Analysis
- Safety and Reliability
- Service Life and Sustainable Design Methods
- Structural Optimization
- Minimising Design Cost
- Construction and Environment Issues
- Reinforcing Materials and their Appropriate Use
- Efficient and Appropriate Use of Virgin/Recycled Materials
- Role of Ready Mixed concrete
- Challenges for Developing Countries
- Others

Scientific and Technical Advisory Committee

- **Prof Gyorgy L Balazs**, Budapest University of Technology and Economics, **Hungary**
- **Prof Nemy Banthia**, The University of British Columbia, **Canada**
- **Dr Pedro Castro-Borges**, Centro de Investigación y de Estudios Avanzados del IPN Unidad Mérida, **México**
- **Prof Nouredine Bourahla**, University Saad Dahlab -Blida, **Algeria**
- **Prof Jorge de Brito**, Instituto Superior Tecnico, **Portugal**
- **Prof Sergio Carmona**, Universidad Tecnica Federico Santa Maria, **Chile**
- **Dr Pal Chana**, Executive, Mineral Products Association, **UK**
- **Prof Punchi Bandage Ranjith Dissanayake**, University of Peradeniya, **Sri Lanka**
- **Prof Bjegovic Dubravka**, University of Zagreb, **Croatia**
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- **Dr Mette Glavind**, Director, Danish Technological Institute, **Denmark**
- **Prof Chao-Lung Hwang**, National Taiwan University of Science and Technology, **Taiwan**
- **Prof Ali Kaveh**, Iran University of Science and Technology, **Iran**
- **Mr Jose Kurian**, President, Indian Concrete Institute, **India**
- **Prof Saeed Mirza**, McGill University, Quebec, **Canada**
- **Prof Sudhir Mishra**, IIT Kanpur, **India**
- **Prof Ram Singh Nirjar**, Former Vice-Chancellor, Gautam Buddha University, **India**
- **Prof Deric John Oehlers**, University of Adelaide, **Australia**
- **Prof K C Gary Ong**, National University Singapore, **Singapore**
- **Prof Ioanna Papayianni**, Aristotle University of Thessaloniki, **Greece**
- **Mr Bryan Perrie**, Managing Director, Cement and Concrete Institute, **South Africa**
- **Dr Richard Scott**, Durham University, **UK**
- **Prof Enzo Siviero**, University IUAV of Venice School of Architecture, **Italy**
- **Prof Enric Vazquez**, Universitat Politecnica Catalunya (UPC), **Spain**
- **Prof Chung-Chia Yang**, National Taiwan Ocean University, **Taiwan**
- **Prof Alphose Zingoni**, University of Cape Town, **South Africa**

Opening Paper

C R Alimchandani
Chairman and Managing Director, STUP Consultants P. Ltd, **India**

Paper Title : *Five Decades of Innovations for Creating Sustainable Concrete Structures*

Keynote Papers

Professor Pierre-Claude Aitcin
University of Sherbrooke and Professor Sidney Mindess, University of British Columbia, **Canada**
Paper Title : *Improving the Sustainability of Concrete Structures*

Professor Roger P West
Trinity College Dublin, **Ireland**
Paper Title : *Are Fibres in FRC Everything they are Cracked up to be?*

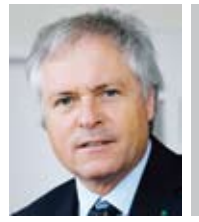
Professor Jorge de Brito
Instituto Superior Tecnico/ICIST Technical University of Lisbon and Professor Luis Evangelista, Instituto Superior de Engenharia de Lisboa, **Portugal**
Paper Title : *Using Fine Recycled Aggregates from Construction and Demolition Waste in Concrete Production: A State of the Art Review*

Dr Mette Glavind
Mr Claus Pade, Dr Lars Nyholm Thrane and Ms Dorthe Mathiesen, Danish Technological Institute, **Denmark**
Paper Title : *Concrete for Sustainable Infrastructure Construction*

Closing Paper

Professor Gyorgy L Balazs
Budapest University of Technology and Economics, **Hungary**

Paper Title : *Codes for Future Concrete Structures – fib Perspective*



Conference 4: Designing Reinforced Concrete for Sustainability

Improving the Sustainability of Concrete Structures
Pierre-Claude Aïtcin, Sidney Mindess **(Canada)**

Concrete for Sustainable Infrastructure Constructions
Mette Glavind, Claus Pade, Lars Nyholm Thrane, Dorthe Mathiesen **(Denmark)**

Protection of Reinforcement in Concrete Using Corrosion Inhibitors
Angeliki Zacharopoulou, Evgenia Zacharopoulou, G Batis **(Greece)**

Reinforced Concrete Corrosion Control with the Usage of Nano Coatings: Comparison with Traditional and High Performance Application Systems
Theodosia Zafeiropoulou, Eleni Rakanta, George Batis **(Greece)**

Investigation on Behavior of Concrete by Partial Replacement of Cement with Rice Husk Ash and Fly Ash Using Steel Fibers
Satish H Sathwane, Kavita S Kene, Vikrant Vairagade **(India)**

Comparative Study on Polypropylene Fiber Reinforced Concrete cum Control Concrete
Vikrant Vairagade, Kavita S Kene, Rakesh Patel **(India)**

Experimental Study on Steel Fibre Reinforced Concrete with Various Aspect Ratios
Vikrant Vairagade, Kavita S Kene **(India)**

Design of Functionally Graded Flexural Member with Fly-Ash
Ketan Bajaj, Yash Shrivastava **(India)**

Shear Strengthening of Pre-cracked RC Beams Using Carbon Fibre Reinforced Polymer Strips
K Swaminathan, Goudappa Biradar, Sandeep Uppar **(India)**

Framework for Repair Prioritization in Deteriorating Reinforced Concrete (RC) Structures
Bishwajit Bhattacharjee, Kamal Kant Jain **(India)**

Applications of ANN in Structural Health Monitoring - A State of the Art Review
Saha Dauji, Kapilesh Bhargava **(India)**

Acceptance Criteria for the Concrete Compressive Strength
K Balaji Rao, M Anoop, Nagesh R Iyer **(India)**

Designing Sustainable Concrete with Service Life of 100 Years
Manish Mokal **(India)**

Finite Element Modelling of Moisture Distribution in Concrete Subjected to Wetting-Drying Exposure
Bishwajit Bhattacharjee, Kaustav Sarkar **(India)**

Optimisation of Piled-Raft Foundation
Harvinder Singh, Prashant Garg, Jagdanand Jha **(India)**

Water Quality Assessment of Selected Towns for Construction Work
Shailendra Kumar Patidar **(India)**

Evaluation of Bond Behaviour of Externally Bonded FRP
Ramesh G, Ravindra Gettu, B H Bharatkumar **(India)**

Analytical Analysis of Reinforced Beam Column Joints on ANSYS
Roshan Lal, Manpreet Kaur **(India)**

Investigating the Use of Bamboo and Polypropylene as a Substitute for the External Steel Reinforcement
Manik Jain, Piyush Bharti Arora, Roshan Lal **(India)**

Performance of High Volume Fly Ash in Concrete: A Comparative Study
Ashish Gupta, Anjani Kumar Nigam, Amitabh Kumar Shrivastava, Satya Prakash Dubey, Purna Kumar Rastogi, Dilip Kumar **(India)**

High Strength Green Concrete
Priyam Gupta, Ashish Gupta, Anjani Kumar Nigam, Amitabh Kumar Shrivastava, M K Sharma, Prianshu Shukla, Abhai Kumar Verma **(India)**

Experimental Investigation of GFRP Strengthened RC Beams under Pure Torsion
Paresh Patel, Vishnu Jariwala, Sharad K Purohit **(India)**

Crucial Sustainability Issues in Respect of Design of Concrete Bridges
Alok Bhowmick **(India)**

Effects of Fibre Geometry and Volume Fraction on the Flexural Behaviour of Steel-Fibre Reinforced Concrete
Kranti Jain, Bhupinder Singh **(India)**

Sustainable Methods to Achieve 120 Year Service Life for Underground Metro Structures
M Ramanathan, J Kalyan Kumar **(India)**

Behaviour of Reinforced DFRCC Structural Elements under Flexural Loading
Madappa V R Sivasubramanian, Tryphena Edward, Priyadarshini Cheyyar Nageswaran **(India)**

Cost Reduction in RCC by Appropriate Combination of Steel and Concrete Grades
N K Khullar, Jaspal Singh, Satinder Kaur, Manpreet Kaur **(India)**

FRP–Strengthened Reinforced Concrete Beams: A Brief Overview on Shear Strength Models
K C Panda, S K Bhattacharyya, S V Barai **(India)**

Effect of Corrosion on Loss of Composite Action between Steel and Concrete
Akshatha Shetty, Katta Venkataramana, K S Babu Narayan, Indrani Gogoi **(India)**

Strength and Permeability of Fly Ash Based Concrete Reinforced with Steel Fibres
Anup Thakur, Sarvesh Kumar, A P Singh **(India)**

Retrofitting and Life Extension of Structures-A Review
Harpreet Gaba, Hardeep Singh Rai, S P Singh, Harvinder Singh **(India)**

Performance of Sustainable Concrete Using Recycled Aggregate
K C Panda, T Jena, S Das **(India)**

Performance of Concrete Mixes Using Recycled Aggregates– A Study Based on Taguchi's DOE Method
Dilip Kumar, M V Ranjani, M Santhosh kumar, Mattur C Narasimhan **(India)**

The Behaviour of the Slab Component of Composite Steel and Reinforced Concrete Joint
Seema, Nadia Baldassino, Riccardo Zandonini **(India)**

Flexural Strengthening of ECC Beams Using Near Surface Mounted (NSM) Hybrid FRP Bars
Shamsher B Singh, Madhurima Bhattacharya, Nikhil Shrivastava, Anubhav Suri, Ayush Gupta **(India)**

Crushing of Concrete in Normal and High Strength Beams under Torsion
Khaldoun N Rahal **(Kuwait)**

Design Optimization of Reinforced Concrete Beams Using Artificial Neural Network
Fathelrahman Mohamed Adam, Sara Ali Babiker, Abdelrahman Elzubier Mohamed **(Sudan)**

Glass Fibre Reinforced Concrete GRC – A Sustainable Material for the 21st Century
Ian White **(UK)**

Sustainable Concrete Technology throughout Entire Life Cycle
Dubravka Bjegovic, Nina Stirmer, Serdar Marijana, Marija Jelcic Rukavina, Ana Baricevic **(Croatia)**

Artificial Neural Network for Concrete Mix Design
M Monjur Hasan, Ahsanul Kabir **(Bangladesh)**

Effect of Cylinder Size on Concrete Strength using Brick Chips as Coarse Aggregate
Ahsanul Kabir, Md Khasro Miah **(Bangladesh)**

A Seismic Reliability Assessment of Reinforced Concrete Integral Bridges Subject to Corrosion
Mairead Ni Choine, Jamie Padgett, Alan O'Connor **(Ireland)**

Integrated Global Vibration and Low Cost EMI Technique for Structural Health Monitoring of RC Structures using Embedded PZT Patches
Naveet Kaur, Neshan Jain, Nikit Gupta, Suresh Bhalla **(India)**

Engineering Characterization of Bamboo as a Sustainable Alternative to Concrete
Suresh Bhalla, Avishek Shaw **(India)**

Review of Non-Destructive Evaluation of Concrete Structures Using Electro Mechanical-Impedance Technique
Sumedha Moharana, Suresh Bhalla **(India)**

Conference 4: Designing Reinforced Concrete for Sustainability

Experimental Study to Detect Corrosion in RC Structures Using Piezo-Ceramic Sensors
T Visalakshi, Suresh Bhalla **(India)**

Sustainable Production of Artificial Aggregates
Raffaele Cioffi, Francesco Colangelo **(Italy)**

Bamboo Beam Elements for Structural Applications
Diwakar Bhagat, Akshi Maheshwari, Suresh Bhalla **(India)**

Composite Bamboo Column for Modern Bamboo Structures
Diwakar Bhagat, Suresh Bhalla **(India)**

Reinforced Concrete Brick Filled Composite Beams for Sustainability
Rakesh Patel, S K Dubey, K K Pathak **(India)**

Durability of the Recycled Aggregates Coming from the Concrete of Demolition
Fazia Boudjemia **(Algeria)**

Numerical Characterization of Damage in Brittle Materials: Local Approach
S Khelifi, N E Hannachi **(Algeria)**

Performance Evaluation of Use of Bio- Material as Coarse Aggregate and Reinforcement in Concrete Column
H M A Mahzuz, Mushtaq Ahmed **(Bangladesh)**

Use of Generalized Bcn Test to Characterize Fiber Reinforced Concrete Properties
Sergio Carmona, Antonio Aguado, Climent Molins **(Chile)**

Numerical Investigation of Headed Studs with Different Head Size
Jindrich Fornusek, Petr Konvalinka **(Czech Republic)**

Study of Corrosion Rate in Carbonated Concrete
Bishwajit Bhattacharjee, Jitu Kujur **(India)**

Impact of Construction Material on Environment,
Hardeep Rai, Puneet Pal Singh Cheema **(India)**

Shear Strength Characteristic of Longitudinally Reinforced Self Compacting Concrete Beams
S P Singh, Kanwarjeet Bedi, Rajesh Kumar **(India)**

Time-Variant Structural Reliability of a Typical Post-Tensioned Bridge: A Case Study
Surya Teja Bonthu, Radhakrishna Pillai **(India)**

Optimization of Concrete Mix Proportioning using Full Factorial Technique
Mohd Shariq, Jagdish Prasad, Ashok Kumar Ahuja **(India)**

Minimum Cost Design of a Reinforced Concrete Frame
Hardeep Rai, Jagbir Singh, Sonia Chutani **(India)**

Concrete for Sustainability and Green Building Considerations
Bhargava Kapilesh, Ranjan Kumar, K Srinivas, S S Shivhare **(India)**

Concrete Construction and Their Sustainability in Environment
Rinku Parashar **(India)**

Behaviour of Reinforced DFRCC Structural Elements under Flexural Loading
Shamsher B Singh, Madappa VR Sivasubramanian, Tryphena Edward, Priyadarshini Cheyyar Nageswaran **(India)**

Compressive and Split Tensile Strengths of Steel Fibre Reinforced Concrete – Influence of Fibre Parameters
A P Singh, Dhriendra Singhal **(India)**

Permeability and Strength Characteristics of Steel Fibre Reinforced Concrete – Influence of Fibre Parameters
M P Singh, A P Singh, S P Singh **(India)**

High Volume Crushed Rock Powder (HVCRP) Concrete for Sustainable Construction
Nagabhushana, H Sharada Bai **(India)**

Effect of Different Wrapping Techniques on Retrofitting of RCC Beam Column Joints using Ferrocement
Prem Pal Bansal, Maneek Kumar, Manzoor Ahmad Dar **(India)**

FRP (Fiber Reinforced Polymer): A Replacement to Steel
Gundeep Bansal, Yogesh Aggarwal, Manjeet Bansal, Paratibha Aggarwal **(India)**

Towards Sustainable Solutions of Structural Landfill Design using Cements
Gurdeepak Singh, Harvinder Singh, B S Walia **(India)**

Damage Localization of an Old Damaged Steel Truss Bridge through Modal Parameters Changes
Suresh Kumar Walia, Hemant Kumar Vinayak, Ashok Kumar, Raman Parti **(India)**

Behaviour of Partially Damaged Concrete Beams Strengthened by GFRP Wrapping
Poulose Maitina, M L Preethi, K A Aboobacker, Thomas Job **(India)**

Bond Strength Evaluation of Recycled Aggregate Concrete using a Pullout Test
Bhupinder Singh, M John Robert Prince **(India)**

A Study on Flexural Strength of Thin Cementitious Composites Reinforced with Steel Fibers
P B Sakthivel, R S Bharath, A Jagannatha **(India)**

Strength Properties of Cementitious Matrix Reinforced with Stainless Steel Fibers
P B Sakthivel, Ratna Sabapathy, A Jagannatha **(India)**

Strengthening and Rehabilitation of Reinforced Concrete Structures: A Literature Review
Rahul Dubey, Pardeep Kumar **(India)**

Strut and Tie Model for the Prediction of Strength of Concrete Deep Beams Reinforced with Hybrid Bars (Steel and GFRP)
S Ramadass, Job Thomas **(India)**

Influence of Moisture State of Natural and Recycled Concrete Aggregates on Mechanical Properties of Concrete
S R Suryawanshi, B Singh, P Bhargava **(India)**

An Investigation on the Performance of PET Reinforced Concrete
Hasan Taherkhani, Jamal Ahmadi, Kianoosh Rahmai **(Iran)**

An Investigation on the Effect of Waste Crumb Tire on the Properties of Concrete
Hasan Taherkhani **(Iran)**

Evaluation of Recycled Concrete Aggregate for its use in Structural Concrete
Koh Siew Kiang, Lye Qao Chun **(Singapore)**

Improving the Sustainability of Concrete Construction
Koh Siew Kiang, Lye Qao Chun **(Singapore)**

Advanced Sensing Technologies for Resilient Civil Infrastructure Systems: Damage and Durability Monitoring of Concrete Structures
Mohamed Saafi **(UK)**

Health Monitoring of Retrofitted RC Beams using Vibration Measurements
Naveen Kwatra, Shruti Sharma **(India)**

Inverse Approaches in Modelling Residual Behaviour of SFRC
G Kaklauskas, A Meskenas, V Gribniak, D Bacinskas, V Gelazius **(Lithuania)**

Behaviour of Class 'C' Fly Ash in High Volume Fly Ash Concrete in Reinforced Cement Concrete Beams
Dr G Mohan Ganesh, M Balamurugan **(India)**

A High Performance Fibre Reinforced Cement Based Plaster for Retrofitting R C Members
Mahmoud R Maheri, Akbar Hajipour **(Iran)**

Self Compacting Concrete Containing Marble Powder and Stone Dust as Fine Aggregate
Kanwarjeet Bedi, Hardeep Rai, Rajesh Aastha **(India)**

Probabilistic Assessment of Flexural Strength of Corrosion Affected RC Beams Considering the Loss of Bond
Kapilesh Bhargava, Yasuhiro Mori, A K Ghosh, Sekhar Basu **(India)**

Dynamic Analysis of Concrete Wind Turbine Towers
Alan O'Connor, Aidan Quilligan **(Ireland)**

Innovative Design at Minimal Operational Cost for Sustainable Concrete Construction
Manjit Kaur **(India)**

Waste Rubber Tire Reinforced Soils - An Overview
Sanjeev Naval, Arvind Kumar, S K Bansal **(India)**

Genesis of UKIERI Concrete Congress

In 2007, a project, funded by UK-India Education and Research Initiative (UKIERI), and chaired by Professor Ravindra K Dhir, brought together academics at ten UK/Indian higher education institutions to collaborate in research in the areas of concrete science, technology and structural engineering and to develop solutions for providing sustainable high performance concrete infrastructure. Sustainability beyond UKIERI has been an integral part of this collaboration, and during the final stages of the project, an International Congress, 'Concrete for 21st Century Construction' dealing with themes of new developments in concrete construction and concrete for high performance sustainable infrastructure was held at the Indian Institute of Technology (IIT) Delhi, India on 8-10 March 2011. More than 300 delegates from cement, construction industry and academic institutions participated in the Congress, which was overwhelmingly supported by the cement and construction industry.

Following this success, the Group decided to establish an International Congress series under the name of UKIERI Concrete Congress of which the one to be held in Punjab, on 5-8 March 2013, will be the second event.

UKIERI Collaborative Concrete Research Project Team

Ms Sally Goggin, British Council, India, Education Director inaugurating the UKIERI Concrete Congress held at IIT Delhi 8-10 March 2011

Conference 5
Friday
8 March 2013

Efficient Concrete Structures

Dedicated to Professor Michel Virlogeux

President, European Construction Institute, **France**

Themes

- High Rise Buildings
- Wide-Span Bridges
- Offshore/Onshore Tunnels
- Naturally Ventilated Structures
- Offshore Oil Applications
- Thermal Mass Effects
- Nuclear Structures
- Embedded Structural and Foundation Systems
- Active and Passive Control Systems
- Plate Systems
- Fire Resistance and Assessment
- Seismic Resistant Structures
- Aesthetics and Sustainability Issues
- Challenges for Developing Countries
- Others

Scientific and Technical Advisory Committee

- **Prof Gyorgy L Balazs**, Budapest University of Technology and Economics, **Hungary**
- **Prof Nouredine Bourahla**, University Saad Dahlab - Blida, **Algeria**
- **Prof Sergio Carmona**, Universidad Tecnica Federico Santa Maria, **Chile**
- **Prof Punchi Bandage Ranjith Dissanayake**, University of Peradeniya, **Sri Lanka**
- **Prof Vyacheslav R Falikman**, State National Research University, **Russia**
- **Prof Luiz Carlos Silva Filho**, Federal University of Rio Grande do Sul, **Brazil**
- **Dr Mette Glavind**, Director, Danish Technological Institute, **Denmark**
- **Mr Jose Kurian**, President, Indian Concrete Institute, **India**
- **Prof Jose Fernando Martirena Hernandez**, Director, Center for Research & Development of Structures and Materials, **Cuba**
- **Prof Saeed Mirza**, McGill University, Quebec, **Canada**
- **Prof Ram Singh Nirjar**, Formally Vice-Chancellor, Gautam Buddha University, **India**
- **Prof Deric John Oehlers**, University of Adelaide, **Australia**
- **Prof S A Reddi**, Value Engineering Consultant, **India**
- **Dr Richard Scott**, Durham University **UK**
- **Prof Enzo Siviero**, University IUAV of Venice School of Architecture, **Italy**
- **Mr Chris Stanley**, Technical Director, Unibeton, Abu Dhabi, **UAE**
- **Architect Janne Terasvirta**, ALA Architect, **Finland**
- **Prof Roger West**, Trinity College Dublin, **Ireland**
- **Prof Alphose Zingoni**, University of Cape Town, **South Africa**

Opening Paper

Professor Michel Virlogeux
President European Construction Institute, **France**

Paper Title : *Cable Stayed Bridges, Modernity and Efficiency*

Keynote Papers

Professor Mahesh Tandon
Managing Director, Tandon Consultants Pvt Ltd, **India**
Paper Title : *Bridges and Flyovers for Commonwealth Games 2010*

Dr James Aldred
Associate Director, AECOM, **Australia**
Paper Title : *Technical Advances in the Use of Concrete for Super Tall Buildings*

Dr Vasudev V Nori
Chairman, Shirish Patel and Associates Consultants Pvt Ltd, **India**
Paper Title : *Efficient Concrete Structures: An Indian Experience*

Closing Paper

Professor Enzo Siviero
University of IUAV of Venice and President of Enzo Siviero & Partners, **Italy**

Paper Title : *Concrete Arch Bridges: Small is Beautiful and Efficient*

Conference 5: Efficient Concrete Structures

Influence of Masonry Infill Panels on the Seismic Response of RC Frame Buildings
Kadid Abdelkrim, D Yahiaoui, A Zaine **(Algeria)**

Assessment of Vulnerability Curves for Algerian Types RC Buildings
Bensaibi Mahmoud, Belheouane Fatma Imene **(Algeria)**

3D Numerical Simulation of Concrete Filled Steel Tubular Columns using ANSYS
P K Gupta, Ziyad Khaudhair, A K Ahuja **(India)**

Review of Concrete Oil and Gas Platforms in Offshore Marine Environment
Rizwan Khan, Suhail Ahmad **(India)**

Foundation Settlements for Footings Embedded in Rock Masses
Ashutosh Trivedi, Naresh Kumar **(India)**

Exposed Reckli Finish Retaining Wall
Manoj Didwania, Hemal Doshi **(India)**

Response of Nuclear Power Plants against Crash of Commercial Aircrafts
Rehan Sadique, Ashraf Iqbal, Paradeep Bhargava **(India)**

Effect of Elevated Temperature on the Compressive Strength and Surface Porosity of HPC
Kishor Kulkarni, K S Babunarayan, Subhash Yaragal **(India)**

Effect of Heating Rate on Strength Retention Characteristics of OPC Concrete
Shree Laxmi Prashanth, K S Babunarayan, Subhash Yaragal **(India)**

Influence of Staircase on the Seismic Behaviour of Multi-Storeyed RC Frame Building
Kaustubh Dasgupta, Namuduri Midhun Tej **(India)**

Seismic Performance of Masonry Infills Reinforced Concrete Buildings
Mohd Danish, Shoeb Masood, Amjad Masood, Mohd Shariq **(India)**

Influence of Slab-Structural Wall Junction on Seismic Behaviour of RC Frame Buildings
Kaustubh Dasgupta, Kaushik Mondal **(India)**

Form Making in Concrete
Anu Singh **(India)**

Residual Behaviour of Pre-Damaged Steel Rebars Exposed to Elevated Temperatures
Virendra Kumar, Umesh Kumar Sharma, Bhupinder Singh, Pradeep Bhargava **(India)**

Constitutive Models for Sustainable Design of Foundation Systems
Harvinder Singh, J N Jha **(India)**

Seismic Behavior of RCC Framed Buildings with Plan Irregularity and Curtailed Shear Wall
R S Malik, S K Madan, V K Sehgal **(India)**

Seismic Behavior of RCC Framed Buildings with Vertical Irregularity
R S Malik, S K Madan, V K Sehgal **(India)**

Assessment of the Seismic Behavior of the Structures Based on the Probabilities: Implementing MPA
Mohsen Javan Pour, Panam Zarfam **(Iran)**

Structural Behavior of Reinforced Concrete Beams Repaired By Fiber Carbon Reinforcement Polymer Plate
Ahmed Segayer, Salim Ahmad, Suad Tleish **(Libya)**

Evaluate the Impact of Concrete and Base Material Properties, and Joint Stiffness on Load Transfer Efficiency of Rigid Airfield Pavements
Yusuf Mehta, A Joshi, D Cleary **(United States)**

Control of Wind-Induced Nonlinear Oscillations in Suspension Bridges using a Semi-Active Tuned Mass Damper
Mohamed Abdel-Rohman **(Kuwait)**

Strengthening and Pounding Risk Mitigation of Multi-Storey RC Adjacent Buildings
Nouredine Bourahla, Salim Tafraout, Farah Kahlouche, Djidjeli Fayçal **(Algeria)**

Competency - A Key Ingredient for the Delivery of Efficient and Sustainable Concrete Structures
B J Magee, P A M Basheer, A E Long, P C Hewlett **(UK)**

Seismic Performance of Partially-Infilled Reinforced Concrete Frames with Glass Fiber Reinforced Polymers
C Jayaguru, K Subramanian **(India)**

Nonlinear Seismic Analysis of Reinforced Concrete Multi-Bay Cylindrical Shell Structures
R Pathak, A Melani, R K Khare, V K Shukla **(India)**

Damage Effects in Concrete Beams and Frames due to Fire-Performance and Assessment
T Sakthivel, C Natarajan, A Rajaraman **(India)**

Sprayed Concrete Lining Performance Analysis for Soft Ground Tunnel Application
Raghuraj Pandya, Ian Turner **(UK)**

Seismic Behaviour of a Ten Storey Frame with External Shear Wall as Lateral Load Resisting System
Sreenivasa Venkatesh, Sharada Bai, Ramya Ramesh **(India)**

Influence of Infill Walls on the Behaviour of RCC Building Frames Subjected to Seismic Loads
Harbhajan Singh, S P Singh **(India)**

Plate Load Test for a Footing Resting on Fiber Reinforced Sand
Arvind Kumar, Arshdeep Kaur **(India)**

Post-Fire Residual Strength and Durability of High Performance Concrete
Umesh Kumar Sharma, Pradeep Bhargava **(India)**

Effect of Dosage of Silica Fume on Thermal Spalling and Residual Strength of High Performance Concrete
Umesh Kr Sharma, Abdul Rahim, K Murugesan **(India)**

A Comparative Study of Seismic Response of Multi-Storeyed Buildings Between IS 1893(Part 1) - 2002 And IITK-GSDMA Proposed Draft Code
A P Singh, S P Singh **(India)**

Behaviour of Contained Masonry Infilled RC Frames Subjected to Seismic Forces
M Mahadev Achar, D S Prakash **(India)**

A Smarter Concrete for Fast-Track Construction
Charles S Jones, S Ramakrishnan **(India)**

Planning in Design & Construction of Bridges Oriented towards Economy & Durability - A Case Study
Mr Harpreet Singh, Mr Sharad Gupta **(India)**

Active Structural Control of Vibration in Buildings
Ahmed Segayer **(Libya)**

Correlation of Properties and Characteristics of Civil Engineering Materials (Concrete) and (RCC) Elements Determined by Destructive and Non Destructive Tests
Siddharth Shankar **(Nepal)**

Achieving Economy & Sustainability in Bridge Design using Integral Bridge Concept - A Case Study for Flyover Near Tata Motors, Pune
Alok Bhowmick, Sanjay Jain **(India)**

Reliability Based Design of Prestressed Concrete Continuous Beams
Satinder Ghuman, V R Sharma **(India)**

Conference 6
Friday
8 March 2013

Fine, Ultrafine and Nano-based Materials in Concrete

Dedicated to P N Balaguru
Distinguished Professor, The State University of New Jersey, **USA**

Themes

- Role of Fine/ Ultrafine/ Nano Materials in Concrete Construction
- Role in Promoting Sustainable Construction
- Fine and Ultrafine Calcium Carbonates and Silicates
- Fine and Ultrafine Fly Ash and Slag Materials
- Metakaolin and Silica Fume Materials
- Nano Structural Superplasticisers
- Nano Silica Additions
- Nano Particles and Tubes
- Nano Materials and Cement Hydration
- Nano Instruments
- Hydration and Microstructure Changes
- Next Generation of Nano-based Concrete Construction Products
- Challenges for Designing Concrete in Developing Countries
- Challenges of Reducing Carbon Footprint
- Others

Scientific and Technical Advisory Committee

- **Prof Arnon Bentur**, Israel Institute of Technology, **Israel**
- **Dr A K Chatterjee**, Managing Director, Conmat Technologies Pvt Ltd, **India**
- **Mr Cyrus M Dordi**, Corporate Head (PQM & CSG), Ambuja Cements Ltd, **India**
- **Dr Per Fidjestol**, Technical Director, Elkem ASA Materials, **Norway**
- **Prof Hong Hao**, University of Western Australia, **Australia**
- **Dr Mohammad Ismail**, Universiti Teknologi Malaysia, **Malaysia**
- **Dr Antonios Kanellopoulos**, Frederick University Cyprus, **Cyprus**
- **Dr Vassilia Kasselouri-Rigopoulou**, National University of Athens, **Greece**
- **Prof S K Kaushik**, Indian Institute of Technology Roorkee, **India**
- **Prof Peter Konvalinka**, Czech Technical University in Prague, **Czech Republic**
- **Prof Konstantin Kovler**, Israel Institute of Technology, **Israel**
- **Prof Zongjin Li**, Hong Kong University of Science and Technology, **Hong Kong**
- **Prof Tarun R Naik**, University of Wisconsin-Milwaukee, **USA**
- **Prof Chi Sun Poon**, The Hong Kong Polytechnic University, **Hong Kong**
- **Prof Karen Scrivener**, Ecole Polytechnique Federale, **Switzerland**
- **Prof S P Shah**, Northwestern University, **USA**
- **Prof Josef Tritthart**, University of Technology, Graz, **Austria**

Opening Paper

Professor P N Balaguru
Distinguished Professor, The State University of New Jersey, **USA**

Paper Title : *Nano Technology and Concrete Structures: Opportunities and Challenges*

Keynote Papers

Dr Per Fidjestol
Managing Director, Elkem ASA material, **Norway**
Paper Title : *Silica Fume for High Performance Concrete*

Mr Georg Dirk
Dirk India Pvt Ltd, **India**
Paper Title : *Potential for Developing 3-Way High performance Concrete Mixes Using Class F Fine and Ultra-Fine Fly Ash*

Mr Cyrus M Dordi
and Dr A N Vyasa Rao, Ambuja Cements Ltd, **India**
Paper Title : *Improvements in Performance of Concrete using Ultrafine Slag*

Professor Hui Li
and Dr H G Xiao, Harbin Institute of Technology, **China**
Paper Title : *Multiple-Functionalities, Modelling and Applications of Concrete Containing Nanomaterials*

Closing Paper

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

Paper Title : *Viewing High Performance Cement and Concrete Research through a Wide Angle Lens*

Conference 6: Fine, Ultrafine and Nano-based Materials in Concrete

Effects of Fungal Treated Waste Foundry Sand on Concrete Properties
Gurdeep Kaur, Rafat Siddique, Anita Rajor **(India)**

Use of Ultrafine Cementitious Material in Concrete
Manish Mokal, N Nayak **(India)**

Influence of Fineness on Physico-Chemical Properties of Cement
B Bhuvaneshwari, Saptarshi Sasmal, T Baskaran, Nagesh R Iyer **(India)**

Civil Engineering Applications of Raw Carbon Nanotubes as Composites in Mortar and Concrete
N C Kothiyal, Dimple **(India)**

Fatigue Analysis of Steel Fibre Reinforced Concrete Containing Cement Additives
G Kaur, S P Singh, S K Kaushik **(India)**

Strength and Water Permeation of Concrete with Blends of Limestone Powder, Metakaolin and Light Fill
Bavita Bhardwaj, S P Singh, Abhimanyu Bhardwaj **(India)**

Application of Nanotechnology in Concrete - A Review
Prem Pal Bansal, Maneek Kumar, Anil Kumar Nanda **(India)**

Study of Silica Fume and Polypropylene Fibres Effect on Water Sorptivity of Concrete
H T Prajapati, N K Arora **(India)**

Suitability of Lime and Pozzolanic Reactivity Test Methods for various Mineral Admixtures
M S Hemalatha, Manu Santhanam **(India)**

Numerical Analysis and Study of Nanomaterials for Repair in Distressed Irrigation Structures
J Nirmala, Dr G Dhanalakshmi, Dr A Rajaraman **(India)**

Water Permeation Properties of Self Compacting Concrete using the Blends of Silica Fumes and Metakaolin
Amardeep Singh, S P Singh, Sumit Arora **(India)**

Production of Nano-Sized Particles from Cement Kiln Dust
Ramzi Taha, Hammad Al-Nasseri, Khalifa Al-Jabri, Ali Al-Nuaimi, A Al Harthy **(Qatar)**

Trailblazing Cementitious Binders
Anuj Choudhari, Bhupinder Singh **(India)**

Utilization of Fine and Ultrafine Fly ash and Slag Material
M N Akhtar, O Hattamleh, J N Akhtar **(Soudi-Arabia)**

Studies on Surface Morphology of Cement Paste by Atomic Force Microscopy
Bishwajit Bhattacharjee, V Sairam **(India)**

Potentials of Nanotechnology in Construction Engineering - Enhancing the Strength of Concrete
Deepak Sharma **(India)**

The use of Nanoparticles and Nanotubes in Construction
Virat Shah **(India)**

Macro Defect Free Concrete for Beam Column Joints
Ravi Sharma, Trilok Gupta **(India)**

Application of Nanotechnology in Concrete Technology
Mithesh Kumar **(India)**

Synergy of Flyash and Ultrafine Slag
Mahipal Burdak, Praveen Kumar, S S Sankhla **(India)**

Strength Development and Water Permeation of Concrete Containing Silica Fume
Shivam Sharma, Rohit Sharma, S P Singh, Rizwan A Khan **(India)**

Concrete towards Perfection
P Srinivasan **(India)**

Phytotoxicity of Arsenic (As) to Rice (Oryza Sativa l.)
Amandeep Kaur, Davinder Singh **(India)**

Effect of Aggressive Environment on Durability of Metakaolin Based Cement Mortar
Maneek Kumar, Prashant Kumar, Shweta Goyal Dev **(India)**

The Effect of High Temperature on Mechanical Properties of Lightweight Expanded Polystyrene Concrete
Peiman Ghaffari, Sara Ghahramani, Abdolrasoul Ranjbaran **(Iran)**

Effect of Date Palm Fibers and Silica Fume on the Mechanical Properties of Fiber Reinforced Concrete
M Iqbal Khan, Wasim Abbass **(Saudi Arabia)**

Nano-Engineered and Self-Sensing Geopolymer Cementatious Material for Sustainable Infrastructure
Mohamed Saafi, Kelly Andrew, David McGhon **(UK)**

Effect of Silica Fume on Steel Slag Concrete
Jagadish Mallick, Asha Patel **(India)**

Reactivity of Alumino-Silicates as Supplementary Cementitious Materials (SCM's) in Autoclaved Hydrated Lime? Silica Binders
Kia Angus, Paul Thomas, Kirk Vessalas, Ahbi Ray **(Australia)**

Effect of Nano-Silica in Cement and Concrete
Thushara Priyadarshana, Ranjith Dissanayake **(Sri Lanka)**

Trade Fair at UKIERI Concrete Congress 2011

In the last UKIERI Concrete Congress held on 8-10 March 2011 at Indian Institute of Technology Delhi, the trade fair has been the focal point of the event. Concrete manufacturers, material suppliers, contractors, publishers, research, educational and professional institutions are all represented. Their fields of expertise cover the various themes of the Congress and this provides an excellent opportunity to augment the knowledge gained at various sessions through technology demonstrations.

Glimpses of the Trade Fair at the UKIERI Concrete Congress held at IIT Delhi in March 2011

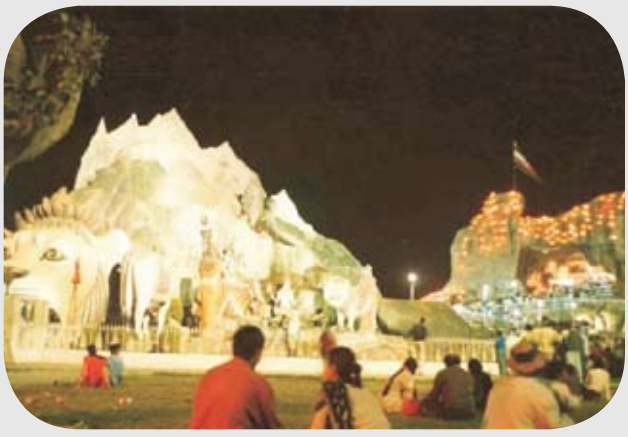
Punjab The Smiling Face of India

Punjab, located in the north west of India, with its capital at Chandigarh, is one of its most prosperous states. The five rivers Sutlej, Beas, Ravi, Chenab and Jhelum gave it its name 'punj-ab' or the 'land of five waters'. Punjab is the cradle of the Indus Valley Civilisation, more than 4000 years old. In 1947, at the end of British Rule, the Punjab was split between India and Pakistan. Some of the main cities in Indian Punjab are Amritsar, Jalandhar, Ludhiana and Patiala. Enriched with a distinct blend of rural and urban flavours, Punjab has a lot to offer to a tourist eye. It has a unique religious legacy with a host of Gurudwaras, the largest and the most prominent being The Golden Temple at Amritsar. The Jallianwala Bagh of Amritsar is another historical spot which reminds one of the Punjab's sacrifices to the freedom struggle of India. Punjab is called the Granary of India or India's bread-basket as it produces 60% of its wheat and 40% of its rice. The famous Bhakra Dam, described as The New Temple of Resurgent India by Pt. Jawahar Lal Nehru, the first Prime Minister of India, is located across Sutlej River near its border. Above all, the warmth and hospitality of the people are the main attractions in this region.

The Golden Temple, Amritsar

Welcome to Jalandhar

An ancient city in Punjab, Jalandhar, ruled by the Hindus and the Mughals in succession, is believed to be the oldest city in Punjab. The city, which has major road and rail connections, is a market for agricultural products, textiles, leather goods, wood products, and sporting goods. Jalandhar today is a highly industrialised centre being India's foremost producer of world class sports equipments. Popularly called the 'Sports City of India' as it has not only the finest sports industry but also has the distinction of producing some of the best sports persons in the country. Jalandhar is also considered as a hub for education as many professional Institutions are situated in the city. It has very alive atmosphere, something that is typical to the whole of Punjab. It is situated at a distance of 146 km from its capital Chandigarh and is at a distance of 350 km from New Delhi on Delhi-Amritsar National Highway. Nearest international airport is at Amritsar at a distance of 90 km.



Sri Devi Talab Temple, Jalandhar

Dr B R Ambedkar National Institute of Technology, Jalandhar

Dr B R Ambedkar National Institute of Technology, Jalandhar (NITJ) is a leading premier autonomous Institution of northern India. The Institute was established in the year 1987 as a Regional Engineering College, which was given the status of National Institute of Technology in the year 2002 by the Government of India. The institute offers Bachelor of Technology (B.Tech.) programmes in nine disciplines of Engineering and Technology along with the Research Programmes leading to Master of Science (M.Sc.), Master of Technology (M.Tech.) and Doctor of Philosophy (Ph.D.). The Institute is located in an eco-friendly environment amidst a rambling campus spread over 154 acres.

The Department of Civil Engineering has the honour of being accredited for a maximum period of five years by the National Board of Accreditation (NBA) in 2004. The Department has also been selected as 'DST-FIST Sponsored Department' by the Ministry of Science and Technology, Government of India.

Sir Allan Langlands, Principal and Vice-chancellor of the University of Dundee, Scotland during his visit to the Institute on its Annual Convocation in 2008 and after laying the foundation stone for the Centre for Concrete Construction

Guru Nanak Dev Engineering College, Ludhiana

Guru Nanak Dev Engineering College, Ludhiana is the oldest engineering college in North India; established in the year 1956 by the Nankana Sahib Education Trust (NSET). The NSET was founded in the memory of the most sacred temple of Nankana Sahib, birth place of Guru Nanak Dev Ji. Shiromani Gurudwara Prabandhak Committee (SGPC), Amritsar, a premier organisation of universal brotherhood, was the main force behind the mission of Removal of Economic Backwardness through Technology. The college is now ISO 9001-2008 certified, having all the courses accredited by National Board of Accreditation (NBA).

The Department of Civil Engineering offers academic programs leading to the award of B.Tech., M.Tech. and Ph.D. degree by the Punjab Technical University, Jalandhar. The Department is well known in the region for imparting consultancy services to Government, Semi Government and private organisations.

Convocation 2011 of
Guru Nanak Dev Engineering College, Ludhiana

Marching Towards Golden Era

Dr Anil Kakodkar, Chairman, Board of Governors of Dr B R Ambedkar National Institute of Technology Jalandhar, Punjab, launched the Silver Jubilee Celebrations of the Institute on 17 October 2011. The launch celebrations were held in the presence of luminaries including former Principals, Directors and members of academic faculty, staff and students in a glittering function. The celebrations include conferences, seminars, workshops, and lectures along with technical and cultural events to make the occasion memorable one for all members of the Institute and their families and the students as well as to underline the beginning of the GOLDEN ERA for the Institute.

UKIERI Concrete Congress has been part of these celebrations. Indeed, the Congress, which has become a major international event, has been designed both to highlight and enhance the glit and glamour of the Silver Jubilee Celebrations and to mark the beginning of the Golden Era for this Institute of National Importance established by Government of India through an Act of Parliament.

Chairman, Dr Anil Kakodkar
launching the Silver Jubilee Celebrations
17 October 2011

Director, Professor S K Das
releasing the first Congress Brochure
13 December 2011

Professor Ravindra K Dhir OBE
delivering Silver Jubilee Lecture
14 February 2012

Launching of Silver Jubilee Celebrations
17 October 2011

Chairman & Director
with Former Principals, Directors & Registrar
17 October 2011

For Further Details and Assistance, Please Contact

Professor S P Singh
Congress Secretary

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UKIERI Collaborative Concrete Research Partners

Concrete Technology Unit, University of Dundee, UK
Birla Institute of Technology and Science, Pilani, India
University of Bath UK
Guru Nanak Dev Engineering College, Ludhiana, India
Indian Institute of Technology Delhi, India
Malaviya National Institute of Technology, Jaipur, India
Dr B R Ambedkar National Institute of Technology, Jalandhar, India
Sardar Vallabhbhai National Institute of Technology Surat, India
National Institute of Technology Karnataka, Surathkal, India
SRM University Chennai, India