CONCET2020

15TH INTERNATIONAL CONFERENCE ON CONCRETE ENGINEERING AND TECHNOLOGY

Innovation and Resilience in Concrete Construction

20 – 23 July 2020 I Kuala Lumpur, Malaysia

BEM Approved CPD Hours

HRDF CLAIMABLE

Participants

CONFERENCE POSTPONED

Main conference
Technical visit
Pre-conference workshop
Post-conference workshop

About

15th in the series since 1989 and one of the prominent international built environment technical events held in Malaysia

This biennial international conference on concrete engineering and technology, 15th in the series since 1989 is one of the prominent international built environment technical events held in Malaysia, attracting speakers and audiences from across the globe

Since inception, this conference has been jointly organised by;

The Institution of Engineers, Malaysia (lead organiser for CONCET2020)

University of Malaya, Kuala Lumpur, Malaysia

Universiti Teknologi MARA, Shah Alam, Malaysia

Innovation and Resilience in Concrete Construction

CONCET2020 will cover fresh perspectives and the latest in the wider topic of innovation and a more specific topic of resilience, in concrete construction

Innovation Innovation is a wide concept of exploring, creating, changing and adopting. With the pace of change and development seen within Malaysia, the ASEAN region and globally, there is an increasing pressure for industry professionals to meet the demands for better and faster. This in return requires the knowledge of the latest and current, which the conference will explore

Resilience The resilience design institute defines resilience as the capacity to adapt to changing conditions and to maintain or regain functionality and vitality in the face of stress or disturbance. It is the capacity to bounce back after a disturbance or interruption. With this term in mind, the conference will explore advancements in concrete engineering and technology with regards to use of concrete in resilient design in construction, focusing in particular on sustainability, safety and durability

Theme and topics

- New-generation concrete materials
- Recycled materials and by-products in concrete
- Modular and prefabricated construction
- Advanced structures and infrastructure
- Construction management
- Testing, inspection and health monitoring
- Alkali-activated cementitious composite
- 3D printing of concrete
- Building information modelling
- Aging infrastructure
- Repair, rehabilitation and strengthening
- Life-cycle assessment of concrete structures
- Service life design
- Climate-resilient design of concrete structures
- Disaster preparedness and mitigation

Who Should Attend

Gathering of concrete industry professionals from the region and across the globe

This conference gathers concrete industry professionals from the region and across the globe, those in research, design, planning, project, construction and maintenance. Attendees will have the opportunity to learn about advances in the concrete industry and expand their network beyond their immediate environment

- Local authorities
- Academics
- Researchers
- Design and project engineers
- Concrete specialists
- Contractor and project professionals
- Owners and developers of concrete facilities
- Operators of concrete facilities
- Students with interest in concrete

CONFERENCE POSTPONED

Keynote speakers

Professor P. A. Muhammed Basheer
PhD DSc FREng FIAE FICE FACI FICT FIStructE MIE(I) CEng
Chair in Structural Engineering and Head of School of Civil Engineering
University of Leeds, UK

Topic
Durability Assessment of Concretes Under the Combined Chloride and Carbonation Exposure Environments Using Embedded Electrical Sensors

Professor Emad Gad
PhD
Professor and Dean, School of Engineering
Swinburne University of Technology, Australia

Topic
Human-Induced Floor Vibration Assessment and Development of Innovative Passive Dampers

Ir. Adj. A/Prof. Dr. Voo Yen Lei
PhD, UNSW (Australia)
Executive Director and CEO
Dura Technology Sdn Bhd, Malaysia
Adjunct Associate Professor
School of Civil and Environmental Engineering, UNSW Sydney, Australia

Topic
Making UHPC Prefabricated Bridge Elements as Standard Products

Professor Somnuk Tangtermsirikul
D.Eng. (Civil Engineering)
Professor, School of Civil Engineering and Technology
Sirindhorn International Institute of Technology
Thammasat University, Thailand

Topic
Effective Utilization of Fly Ash and Bottom Ash in Concrete Industry in Thailand

Dr. Surendra Keshav Manjrekar
PhD
Chairman and Managing Director
Sunanda Speciality Coatings Pvt Ltd, India

Topic
Newer Corrosion Inhibiting Admixtures to Enhance Service Life for Infrastructures

Professor Kiang Hwee Tan
Dr.Eng., FIES, FJCI, FJSCE, PEng(S)
Professor
National University of Singapore, Singapore

Topic
Innovative Applications of Fibre-Reinforced Concrete in Construction

Ir. Huang Zee Meng
Master of Engineering (NUS)
Associate Principal
Arup, Malaysia

Topic
Development and Implementation of High-Performance Concrete in Merdeka 118 Tower

Prof Khalifa S Al-Jabri
PhD
Professor
Department of Civil and Architectural Engineering
Sultan Qaboos University, Oman

Topic
Properties of Concrete containing Waste Slag as Fine Aggregate at Elevated Temperature

CONFERENCE POSTPONED

Pre-conference workshop

MONDAY 20 JULY

DURABILITY OF CONCRETE STRUCTURES – MECHANISMS, ASSESSMENT METHODS AND ENSURING DURABLE STRUCTURES

Despite numerous reported cases of failure of concrete structures, the durability of concrete is still compromised due to lack of clarity on: the causes of deterioration, interactions between different factors causing the deterioration and the mechanisms themselves, methods of assessing the susceptibility of deterioration as well as the causes and extent of deterioration; and ensuring its performance in the exposure environment. As a consequence, the current situation in most developed countries is that repair and rehabilitation costs of structures far exceed the total budget for capital development programmes. Therefore, an important consideration for the design and construction of durable concrete structures should be to ensure that exposure classes are appropriately identified/specified, concrete is specified and designed for the intended exposure regime, design and construction techniques are suitable for the expected performance, and measures are introduced for monitoring their performance in the service environment during their life so that any deviation from the anticipated performance could be identified in a timely manner and appropriate repair and rehabilitation measures are taken. In addition to dealing with most of the above topics, this workshop will introduce the concept of performance-based specifications for ensuring the durability of concrete structures and a strategy for performance testing using both in-situ test techniques and sensors embedded in concrete

SESSIONS

Mechanisms of deterioration of concrete

Methods of identifying and quantifying the deterioration

Durability designs

Methods of improving the durability

Professor P. A. Muhammed Basheer
PhD DSc FREng FIAE FICE FACI FICT FIStructE MIE(I) CEng
Chair in Structural Engineering and Head of School of Civil Engineering
University of Leeds, UK

Post-conference workshop

THURSDAY 23 JULY

EARTHQUAKE ENGINEERING AND FLOOR VIBRATIONS

This workshop aims to cover fundamentals of structural dynamics and applications in design for earthquakes and floor vibrations. It introduces the principles of dynamics and simplification of structures into single and multi-degree of freedom systems and their response to excitation which form the basis of many design codes

The section on earthquake engineering provides an introduction to plate tectonics, earthquake design philosophy and typical damage types from past earthquakes. The different methods for calculating earthquake actions will be discussed with specific focus on the force based approach which is used in various design standards around the world. Key design factors such as soil amplification, structural ductility and detailing will be covered with a specific focus on concrete structures. Finally, the displacement based method as an alternative to the force based approach for earthquake design and analysis will be introduced

The section on floor vibrations focuses on human induced vibrations especially walking. Explanations of design assumptions and acceptance criteria will be provided. Considerations for prediction of maximum floor vibration will be highlighted to show the limitations and features of various tools. Rectification measures for in-service problematic floors will be covered including the use of passive floor dampers. Specific requirements for sensitive floors such as for hospitals and labs will be highlighted

SESSIONS

Structural dynamics Single degree and multi degree of freedom systems; Earthquake excitation and response including response spectra; Periodic and impulsive dynamic excitation and response

Introduction to earthquakes Inter-plate and intra-plate earthquakes; Earthquake scales, hazard maps, soil effects; Building response and damage from past earthquakes

Earthquake design Earthquake Loading Standards and Force based design; Static force method including hazard, site, building type and ductility; Displacement based design including capacity design method

Floor vibrations Footfall excitation; Design guidelines and acceptance criteria; Analysis considerations; Rectification methods; Sensitive floors

Professor Emad Gad
PhD
Professor and Dean, School of Engineering
Swinburne University of Technology, Australia

Professor John Wilson
PhD
Deputy Vice-Chancellor and Chief Executive Officer
Swinburne University of Technology Sarawak Campus, Malaysia

DAY 1 I TUESDAY 21 JULY

REGISTRATION I REFRESHMENTS, NETWORKING AND EXHIBITION 0800 - 0845

Opening address 0845 - 0910
Chair's opening remark
Address by the guest of honour
Address by the president of IEM

Keynote lecture 1 0930 - 1015
Durability Assessment of Concretes Under the Combined Chloride and Carbonation Exposure Environments Using Embedded Electrical Sensors

Professor P. A. Muhammed Basheer
PhD DSc FREng FIAE FICE FACI FICT FIStructE MIE(I) CEng
Chair in Structural Engineering and Head of School of Civil Engineering
University of Leeds, UK

REFRESHMENTS, NETWORKING AND EXHIBITION 1015 - 1045

Keynote lecture 2 1045 - 1130
Human-Induced Floor Vibration Assessment and Development of Innovative Passive Dampers

Professor Emad Gad
PhD
Professor and Dean, School of Engineering
Swinburne University of Technology, Australia

Keynote lecture 3 1130 - 1215
Making UHPC Prefabricated Bridge Elements as Standard Products

Ir. Adj. A/Prof. Dr. Voo Yen Lei
PhD, UNSW (Australia)
Executive Director and CEO
Dura Technology Sdn Bhd, Malaysia
Adjunct Associate Professor
School of Civil and Environmental Engineering, UNSW Sydney, Australia

LUNCH, NETWORKING AND EXHIBITION 1215 - 1415

Keynote lecture 4 1415 - 1500
Effective Utilization of Fly Ash and Bottom Ash in Concrete Industry in Thailand

Professor Somnuk Tangtermsirikul
D.Eng. (Civil Engineering)
Professor, School of Civil Engineering and Technology
Sirindhorn International Institute of Technology
Thammasat University, Thailand

REFRESHMENTS, NETWORKING AND EXHIBITION 1500 - 1530

Parallel sessions 1530 - 1830
Details to follow

Networking and exhibition 1830 - 1900

Close of Day 1 1900

CONFERENCE DINNER 1900 till late

Tentative programme

DAY 2 I WEDNESDAY 22 JULY

REGISTRATION I REFRESHMENTS, NETWORKING AND EXHIBITION 0800 - 0900

Keynote lecture 5 0900 - 0945
Newer Corrosion Inhibiting Admixtures to Enhance Service Life for Infrastructures

Dr. Surendra Keshav Manjrekar
PhD
Chairman and Managing Director
Sunanda Speciality Coatings Pvt Ltd, India

Keynote lecture 6 0945 - 1030
Innovative Applications of Fibre-Reinforced Concrete in Construction

Professor Kiang Hwee Tan
Dr.Eng., FIES, FJCI, FJSCE, PEng(S)
Professor
National University of Singapore, Singapore

REFRESHMENTS, NETWORKING AND EXHIBITION 1030 - 1100

Keynote lecture 7 1100 - 1145
Development and Implementation of High-Performance Concrete in Merdeka 118 Tower

Ir. Huang Zee Meng
Master of Engineering (NUS)
Associate Principal
Arup, Malaysia

Keynote lecture 8 1145 - 1230
Properties of Concrete containing Waste Slag a Fine Aggregate at Elevated Temperature

Prof Khalifa S Al-Jabri
PhD
Professor
Department of Civil and Architectural Engineering
Sultan Qaboos University, Oman

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LUNCH, NETWORKING AND EXHIBITION 1230 - 1400

Parallel sessions 1400 - 1500
Details to follow

REFRESHMENTS, NETWORKING AND EXHIBITION 1500 - 1530

Parallel sessions continues 1530 - 1740
Details to follow

Close of Day 2 1740 – 1800
Closing address

DAY 3 I THURSDAY 23 JULY I TECHNICAL VISIT

Details to follow
Limited to 35 person

Email shahrul@iem.org.my to reserve your place

PRE-CONFERENCE WORKSHOP I MON 20 JULY

DURABILITY OF CONCRETE STRUCTURES – MECHANISMS, ASSESSMENT METHODS AND ENSURING DURABLE STRUCTURES

REGISTRATION I REFRESHMENTS, NETWORKING AND EXHIBITION	0800 - 0900
Opening address	0855 - 0900
Session 1 Mechanisms of deterioration of concrete	0900 - 1030
REFRESHMENTS, NETWORKING AND EXHIBITION	1030 - 1100
Session 2 Methods of identifying and quantifying the deterioration	1100 - 1230
LUNCH, NETWORKING AND EXHIBITION	1230 - 1400
Session 3 Durability designs	1400 - 1530
REFRESHMENTS, NETWORKING AND EXHIBITION	1530 - 1600
Session 4 Methods of improving the durability	1600 - 1730
Q&A	1730 - 1830
Close of pre-conference workshop	1830

POST-CONFERENCE WORKSHOP I THU 23 JULY

EARTHQUAKE ENGINEERING AND FLOOR VIBRATIONS

REGISTRATION I REFRESHMENTS, NETWORKING AND EXHIBITION	0800 - 0855
Opening address	0855 - 0900
Session 1 Structural dynamics	0900 - 1030
REFRESHMENTS, NETWORKING AND EXHIBITION	1030 - 1100
Session 2 Introduction to earthquakes	1100 - 1230
LUNCH, NETWORKING AND EXHIBITION	1230 - 1400
Session 3 Earthquake design	1400 - 1530
REFRESHMENTS, NETWORKING AND EXHIBITION	1530 - 1600
Session 4 Floor vibrations	1600 - 1730
Q&A	1730 - 1830
Close of post-conference workshop	1830

Register

Book online at www.concet2020.com

Registration fees

	Main conference [1]		Pre-conference workshop Post-conference workshop *Per conference*		
	Early registration [2]	Standard registration	Early registration [3]	Standard registration	Registration via email or walk-ins
Presenting author (local institution)	RM850	-	-	-	-
Presenting author (foreign institution)	RM1500	-	-	-	-
Subsequent papers by the same presenter (local institution)	RM500	-	-	-	-
Subsequent papers by the same presenter (foreign institution)	RM850	-	-	-	-
Member of organising institutions [4]	RM900	RM1,000	RM450	RM500	RM550
Student member of organising institutions [4]	RM800	RM850	RM400	RM450	RM500
Non-member	RM1,000	RM1,200	RM550	RM600	RM650
Non-member (student) [5]	RM850	RM1,000	RM450	RM500	RM550
Spouse	RM600	-	-	-	-

CONFERENCE POSTPONED

1 Main conference ticket covers

Access to all plenary, parallel sessions and technical visit+ (3 days)
Lunch and light refreshments
Conference dinner
Access to the conference exhibition

+ Limited spaces. See programme for details

2 Early bird registration open until 31 March 2020

3 Early bird registration open until 30 April 2020

4 Members of UM and UiTM to submit proof document to obtain the rate

5 Submit proof document for discounted rate

Proof document to be submitted to concet2020@iem.org.my

Presenting authors will be sent a link for online payment

CPD HOURS

Main conference	tbc
Technical visit	tbc
Pre-conference workshop	tbc
Post-conference workshop	tbc

Stay up to date at www.concet2020.com

Opportunity to sponsor and exhibit

Being one of the prominent international built environment technical events held in Malaysia, CONCET2020 offers an excellent opportunity to showcase products and services to a local and international audience of the built industry

If you would like to enhance your brand through association with CONCET2020, please get in touch for more information on the sponsorship and exhibition packages available

Visit the conference website for more details on the sponsorship and exhibition packages available or contact shahrul@iem.org.my

IEM The Institution of Engineers, Malaysia

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UNIVERSITI TEKNOLOGI MARA

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