#### Certificate of Attendance

Upon the completion of the two-day seminar, participants will receive a seminar certificate from the University.

#### Registration & Inquiry

JCI-USM Joint Seminar on Practical Approaches towards Assessment, Repair and Strengthening of Crack Damaged Concrete Structures  4 <sup>th</sup> – 5 <sup>th</sup> August 2015  Venue: SERC, Engineering Campus, Universiti Sains Malaysia  Registration Form				
Fill up this form for a registration				
Name :	1.			
	2.			
	3.			
Designation:				
Organization :				
Address :				
Tel : (Office)		Tel : (Mobile)		
Fax:		Email :		
PARTICIPANT FEE RM 600 USD 180 RM 450				
(please tick 🗸 )	(Local)	(International)	(Student)	
TOTAL	RM	CLOSING DATE:	CLOSING DATE: 30th JULY 2015	

Please make you payment to "USAINS HOLDING SDN BHD (Account No : 8003817364, CIMB Bank Berhad, USM Branch)" and email your proof of payment to the secretariat at before 30th July 2015. [Swift Code : CIBBMYKL]

Bank Transfer (CiMBClick, Maybank2u etc. Money Order, LO/PO, Cheque, Bank Draft)

The form can be sent via fax/mail/email to:

#### Secretariat

JCI-USM Joint Seminar on Practical Approaches towards Assessment, Repair and Strengthening of Crack Damaged Concrete Structures
School of Civil Engineering, Engineering Campus, Universiti Sains Malaysia
14300 Nibong Tebal, Pulau Pinang, Malaysia
Email: aezahara@usm.my / cebad@usm.my
Tel: +604-599 6219 / 6201 / 6283 Fax: +604-594 1009

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JCI-USM Joint Seminar on Practical Approaches towards Assessment, Repair and Strengthening of Crack Damaged Concrete Structures

12 CPD Hours Approved (BEM)
CCD Points Pending Approval (CIDB)

4<sup>th</sup> - 5<sup>th</sup> August **2015 SERC, Engeering Campus Universiti Sains Malaysia** 

In most cases, cracking in concrete is always associated with one or a combination of factors such as drying shrinkage, thermal contraction, restraint (external or internal) to shortening, subgrade settlement, and applied loads. In addition, cracks in concrete structures often occur due corrosion of steel reinforcement which may take place after several year in service. Further deterioration due to cracking could be evaded through proper planning for the assessment, repair and strengthening of the crack damaged concrete structures. Thus, a comprehensive procedures and guidelines for assessing, repair and strengthening of cracks in concrete structures are necessary and highly demanded. The revised version of "Practical Guideline for Investigation, Repair and Strengthening of Cracked Concrete Structures -2009" has been recently published by Japan Concrete Institute (JCI). The guideline has been drafted based on the compilation of research data collection and hands-on experience of engineers (case study) in Japan. It contains useful technical knowledge and information to be shared with overseas counterparts on crack assessment, rehabilitation and maintenance.

### Who Should Attend

Consulting Engineers. Academicians. Project Managers. Project Engineers. Civil and Structural Engineers. Project Coordinators. Supervisors. Quantity Surveyors. Maintenance Personnel. Technicians. Technical Assistants & Contractors.

## **Participant**

SEMINAR FEE

LOCAL INTERNATIONAL

STUDENT

RM 600 USD 180

RM 450

# **Speakers**



Dr. Toshiro Kamada, Professor Osaka University, Japan *Area of Specialization:* 

- Maintenance of Civil Structures
- Non-Destructive Testing of Concrete

Dr Badorul Hisham Abu Bakar, Professor School of Civil Engineering, Universiti Sains Malaysia

Area of Specialization:

- Structural Engineering
- Masonry Structures
- Timber Structures
- UHPFRC for Repair Material





Dr. Takahiro Nishida, Associate Professor
Department of Civil & Earth Resources Engineering, Graduate School of Engineering,
Laboratory on Innovative Techniques for Infrastructures (ITIL), Kyoto University

Area of specialization:

- Maintenance of Concrete Structures
- Corrosion of Steel
- Use of Industrial By-Products in Concrete

Dr. Megat Azmi Megat Johari, Associate Professor School of Civil Engineering, Universiti Sains Malaysia

- Area of Specialization:
- Supplementary Cementitious Materials
- High Strength and High Performance Concrete
- Alkali Activated Binders
- Concrete Evaluation and Retrofitting





Dr. Hiroshi KASAl Chief Research Engineer Building Construction and Materials Group, Kajima Technical Research Institute, Japan

Area of specialization

- Durability and Rehabilitation of Concrete Structures
- Carbon Dioxide Reduction Concrete Using Fly Ash or Blast Furnace Slag
- Quality Control of Concrete Filled Steel Tube or Light-Weight Concrete

Dr. Norazura Muhammad Bunnori, Associate Professor, School of Civil Engineering, Universiti Sains Malaysia

- Area of Specialization:
- Structural Engineering
- Structural Health Monitoring
- Non Destructive Testing and Evaluation
- Acoustic Emission (AE) Technique in Damage Assessment Evaluation



4.15pm - 4.45pm

4.45pm - 5.00pm

Q&A

Closing Ceremony, Presentation of Certificate

## Seminar Programme

DAY 1 (4th August 2015)				
Time	Presentation	Speakers		
8.30am - 9.00am	Registration			
9.00am - 9.15am	Opening remarks	Dean, School of Civil Engineering, USM.		
9.15am - 10.30am	Introduction of JCI Guideline Cracks Investigation Method	T. Kamada		
10.30am - 11.00am	Tea Break			
11.00am - 12.00pm	Type of Cracks and Cause Estimation	T. Kamada		
12.00pm - 12.30pm	Q & A			
12.30pm - 2.00pm	Lunch			
2.00pm - 3.00pm	Crack Detection using Non-destructive Evaluations	T. Nishida		
3.00pm - 3.30pm	Tea Break			
3.30pm - 4.30pm	Application of AE in Cracks Monitoring	Norazura Muhammad Bunnori		
4.30pm - 5.00pm	Q &A			
DAY 2 (5 <sup>th</sup> August 2015)				
Time	Presentation	Speakers		
9.00am - 10.15am	Evaluation of Cracks and Judgment for Repair and Strengthening	T. Nishida		
10.15am - 10.45am	Tea Break			
10.45am - 12.45am	Repair and Strengthening	H. Kasai		
12.45am - 1.00pm	Q & A			
1.00pm - 2.00pm	Lunch			
2.00pm - 2.45pm	Self-healing Concrete : A Solution for Cracks	Badorul Hisham Abu Bakar		
2.45pm - 3.15pm	Tea Break			
3.15pm - 4.15pm	Corrosion Damaged Concrete Structures: Mechanisms, Assessment, Repair and Prevention	Megat Azmi Megat Johari		

Deputy Dean Research and

Postgraduate Studies