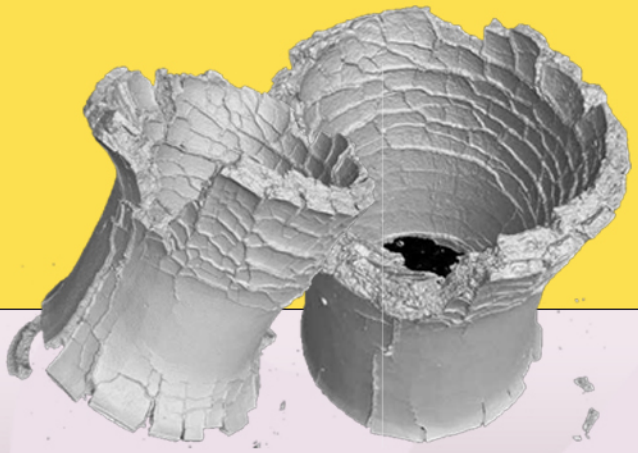
International RILEM Conference on Microstructure Related Durability of Cementitious Composites Microdurability2021



webinar Program

April - May 2021

TU Delft

SOUTHEAST UNIVERSITY 東南大學 1902 南京

aci American Concrete Institute Always advancing

SBT 苏博特 Sobute New Materials Co., Ltd.

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Guidance for the delegates

The Microdurability conference Webinar Series will be held entirely online due to COVID-19. Since we have already used Zoom Webinar in October 2020, we have decided to use that platform again. Following are some important messages for delegates:

- Please install Zoom Client for Meetings in your computer via: https://zoom.us/download.
- Only registered delegates will have access to Zoom Webinar. **You must create an account or log in to Zoom using the same email address you used to register for the conference.** If you are a registered delegate and you cannot access Zoom please contact us as soon as possible.
- Each parallel session (rooms) in the program will have its own separate link. You can join the webinar by clicking the corresponding embedded link in the program PDF. You are required to enter your registration information (first name, last name, email address) only at the first time you join each room.
- When joining the Webinar using the provided private links, you will have the default capabilities as an "Attendee", which means you can observe the webinar content but cannot use microphone, video or share screen. Questions can be submitted using the Q+A Chat function.
- All presentations will be streamed from the pre-recorded video. All presenters of each session will be invited as panelist to answer question lively after the video is played and to join live discussion in the end of each session. Guidance for the presenter can be found in the end of this brochure.
- After each presentation there is 3 minutes for questions. Please type your questions in Chat. The session Chair will pick up questions and convey to the presenter during the live discussion.
- In the end of each session there is a time slot for DISCUSSION, this slot aims to have more time to discuss some general questions related to the session theme. The attendees can submit your discussion topics and questions to the session Chair via Chat.
- All of the parallel sessions will be recorded, and the recordings will be made available in Microdurability Webinar Series in **YouTube Channel** (https://www.youtube.com/channel/UCg2w-HUb_PISoDtjWEhi8Lw) and in **BiliBili Channel** (https://space.bilibili.com/2010984921/channel/detail?cid=180578), allowing you to catch up on sessions you missed during the live event.
- A "Networking" room will be opened 15 minutes before the start of every webinar series. "Networking" room allows you to meet other attendees virtually. Some notifications of the conference will be also displayed in "Networking" room. You can entry "Networking" room via the link: https://tudelft.zoom.us/j/8335337708. The conference staff member in "Networking" room will inform you to switch to the session room 5 minutes before the start of each session.
- A webinar testing session will be arranged on Monday, 26th of April from 14:00 to 17:00 (CET) via Zoom link: https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
- If you have any question please use Chat, or email to i.batterham@tudelft.nl.

General Programme

Note: Time Zone Central European Time (CET)

Series	Date	Time	Rooms	Topic	Link (supscription is required)
Series 1	Thursday, 29th April, 2021	14:00 - 15:00	Plenary	Opening and panel discussion	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
		15:00 - 16: 45	Room 1	Cement hydration	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
		15:00 - 17: 00	Room 2	Special session: Alkali-activated materials 1	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 2	Tuesday, 04th May, 2021	13:00 - 15: 00	Room 1	Service life and durabiilty of concrete	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
		13:00 - 15: 45	Room 2	Special session: Alkali-activated materials 2	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 3	Thursday, 06th May, 2021	13:00 - 15: 00	Room 1	Concrete modelling 1	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
		13:00 - 15:30	Room 2	Special session: Alkali-activated materials 3	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 4	Tuesday, 11th May, 2021	13:00 - 15: 00	Room 1	SCMs and alternative binders	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
			Room 2	Special session: Carbonation	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 5	Thursday, 13th May, 2021	13:00 - 15: 00	Room 1	SHCC, UHPC and UHPFRC	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
			Room 2	Special session: Alkali-silica reaction	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 6	Tuesday, 18th May, 2021	13:00 - 15: 00	Room 1	New materials and technology	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
			Room 2	Transport properties 1	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 7	Thursday, 20th May, 2021	13:00 - 15: 00	Room 1	Durability of concrete	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
			Room 2	Concrete modelling 2	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 8	Tuesday, 25th May, 2021	13:00 - 15: 00	Room 1	Degradation	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
			Room 2	Durability assessment	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
Series 9	Thursday, 27th May, 2021	13:00 - 14:30	Room 1	Recycled materials	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
			Room 2	Transport properties 2	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
		14:30 - 15: 20	Plenary	Closure lecture	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw

Keynote Lectures

Since the keynote lectures have been presented in the Microdurability Webinar last October, under the consensus of speakers we have posted the keynote lectures video on Microdurability Webinar Series in YouTube Channel (https://www.youtube.com/channel/UCg2w-HUb_PISoDtjWEhi8Lw) and in BiliBili Channel (https://space.bilibili.com/2010984921/channel/detail?cid=180578).

Prof. Barbara Lothenbach
Empa, Switzerland
Durability of cementitious materials
https://youtu.be/5lgn_0iU_Tk
https://www.bilibili.com/video/BV1Sb4y1D7Vc

Dr. Jorge Sanchez Dolado
Materials physics center, CSIC, Spain
The usefulness of "useless" nanoscience for improving cementitious durability
https://youtu.be/C7Gn81w_kGc
https://www.bilibili.com/video/BV1z5411c76a

Prof. Jiaping Liu
Southeast University, China
Influence of chemical admixtures on Microstructure and durability of concrete
https://youtu.be/pwV7ENQxuIA
https://www.bilibili.com/video/BV1VB4y1A7cb

Prof. Susan Bernal Lopez
Leeds university, UK
The materials science underpinning the long-term performance of alkali-activated concretes
https://youtu.be/MBYdkw-ZDNQ
https://www.bilibili.com/video/BV1MB4y1c77J

Prof. Peiyu Yan
Tsinghua University, China
The hydration of slag in cement-slag binder under the condition of leaching by soft water
https://youtu.be/Ygz4ofkoX4w
https://www.bilibili.com/video/BV1Sp4y1t7Db

Prof. Gaurav N. Sant
Samueli School of Engineering, UCLA, United States
Machine learning applied to enhance and ensure concrete's durability and performance
https://youtu.be/NeAT6moWU4o
https://www.bilibili.com/video/BV14f4y1s7wK

Prof. Doug Hooton
University of Toronto, Canada
Understanding the differences between chemical and physical degradation mechanisms
https://youtu.be/ro9rUoz6a3E
https://www.bilibili.com/video/BV14K411c7n1

Microdurability Conference Webinar Series Programme

Note: Time Zone Central European Time (CET)

Series 1

Thursday, 29th April, 2021

14:00 - 15:00	**Plenary Session**		https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
14:00		Guang Ye	Welcome and openning
14:10		Erik Schlangen Branko Savija	Panel discussion Panelist: Keynote speakers of Microdurability conference

15:00 - 16:45	**Room 1**	**Cement hydration**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Yamei Zhang**	
15:00		Leo Pel	NACL INTERACTION DURING HYDRATION AS STUDIED BY NMR
15:15		Lzuru Segawa	STRENGTH DEVELOPMENT AND HYDRATION PROGRESS OF A CEMENT-BASED SOLIDIFYING AGENT USED IN CEMENT-TREATED SOIL CONTAINING VOLCANIC MINERAL COMPONENTS
15:30		Zhuqing Yu	EFFECTS OF THE FINENESS OF DENSIFIED SILICA FUME ON THE HYDRATION OF PORTLAND CEMENT
15:45		Semion Zhutovsky	EFFECT OF SULFATES ON HYDRATION AND PROPERTIES OF BELITE-RICH CEMENT PASTE
16:00		André Silva	INFLUENCE OF CARBON DIOXIDE AS A MIXTURE COMPONENT ON THE CEMENT HYDRATION
16:15		Yanliang Ji	THE INFLUENCE OF HYDRATION ON THE MICROSTRUCTURE DEVELOPMENT OF CEMENT PASTE WITH BLEEDING: AN NMR STUDY
16:30			DISCUSSION

15:00 - 17:00	**Room 2**	**Special session: Alkali-activated materials 1**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Organizor:	**Zuhua Zhang and Stijn Matthys**	
15:00		Zuhua/Matthys	INTRODUCTION OF SPECIAL SESSION OF ALKALI-ACTIVATED MATERIALS/DURSAAM MIDTERM WORKSHOP
15:15		Wei Wang	EFFECT OF REACTIVE AGGREGATE ON THE EARLY AGE REACTION OF WATER GLASS ACTIVATED SLAG/FLY ASH MORTARS
15:30		Juan Pablo	CHLORIDE-INDUCED CORROSION OF STEEL REINFORCEMENT IN ALKALI-ACTIVATED SLAG/ METAKAOLIN BLENDED CONCRETES
15:45		Rihards Gailitis	REINFORCED AND PLAIN GEOPOLYMER CONCRETE SPECIMEN CROSS-SECTION COMPOSITION INFLUENCE ON CREEP STRAINS
16:00		Syamak Tavasoli	INVESTIGATION OF POROSITY AND CARBONATION DEPTH IN ALKALI-ACTIVATED GGBS MORTAR
16:15		Hua Dong	DRYING SHRINKAGE OF ALKALI-ACTIVATED SLAG CONCRETE WITH NATURAL/RECYCLED AGGREGATES
16:30		Marcello Mutti	INFLUENCE OF MIX DESIGN PARAMETERS ON REACTIVITY AND SETTING OF ALKALI-ACTIVATED MATERIALS
16:45			DISCUSSION

Microdurability Conference Webinar Series Programme

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Series 2

Tuesday, 04th May, 2021

13:00 - 15:00	**Room 1**	**Service life and durabiilty of concrete**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Qingfeng Liu**	
13:00		Michel Boutz	AGEING COEFFICIENT OF FLY ASH CONCRETE
13:15		Yanbo Liu	SERVICE LIFE PREDICTION OF CONCRETE STRUCTURES UNDER CHLORIDE ENVIRONMENT BASED ON MONTE CARLO METHOD
13:30		Jon Makar	ELECTROCHEMICAL REACTIONS BETWEEN IRON SULFIDE MINERALS AND THEIR IMPLICATIONS FOR CONCRETE DURABILITY
13:45		Kumar Nandhini	DURABILITY INVESTIGATIONS OF MICRO AND NANO SILICA BLENDED CEMENTITIOUS SYSTEMS IN SELF-COMPACTING CONCRETE UNDER ADVERSE CONDITIONS
14:00		Zijian Jia	IN-SITU LEACHING BEHAVIOR OF PORTLAND CEMENT PASTE IN DIFFERENT SOLUTION
14:15		Tiao Wang	A PROBABILISTIC APPROACH FOR ESTIMATING CORROSION POSSIBILITY OF REINFORCED CONCRETE STRUCTURE CONSIDERING CRACK DEVELOPMENT
14:30		Wang Liguo	EFFECT OF EARLY STRENGTH AGENT ON CEMENT SLURRY CONTAINING RETARDER
14:45			DISCUSSION

13:00 - 15:45	**Room 2**	**Special session: Alkali-activated materials 2**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Organizor:	**Zuhua Zhang and Stijn Matthys**	
13:00		Stephanie Staquet	INFLUENCE OF THE MS-MODULUS ON THE EARLY AGE VOLUME CHANGE AND HEAT RELEASE OF SLAG AND FLY ASH PASTES ACTIVATED BY SODIUM HYDROXIDE AND SODIUM SILICATE
13:15		Zhenming Li	MITIGATING THE AUTOGENOUS SHRINKAGE OF ALKALI-ACTIVATED SLAG BY INTERNAL CURING
13:30		Ivana Krajnovic	INFLUENCE OF CURING CONDITIONS ON ALKALI-ACTIVATED MORTARS INTENDED FOR CONCRETE REPAIR
13:45		Yi Wang	STRAIN HARDENING BEHAVIOUR OF PVA FIBRE REINFORCED GEOPOLYMER COMPOSITES
14:00		Shizhe Zhang	DEVELOPMENT OF STRAIN-HARDENING GEOPOLYMER COMPOSITE THROUGH MICROMECHANICS MODELLING
14:15		Bruna Juvêncio Frasson	MICROSTRUCTURE AND PROPERTIES OF HYBRID COAL GANGUE-BASED ALKALI-ACTIVATED CEMENT
14:30		Zongxian Huang	STRENGTH AND MICROSTRUCTURE OF ALKALI-ACTIVATED PHOSPHOROUS SLAG BINDER: EFFECTS OF ACTIVATOR TYPE/DOSAGE AND PHOSPHOROUS SLAG CHEMICAL COMPOSITION
14:45		Saeid Ghorbani	INFLUENCE OF WATER/BINDER RATIO ON WORKABILITY AND STRENGTH OF TERNARY SLAG BASED AAM
15:00		Luiz Miranda de Lima	EVALUATION OF THE ROLE OF CATIONIC SPECIES IN DETERMINING REACTIVITY OF PRECURSORS OF ALKALI-ACTIVATED SYSTEMS
15:15		Laura Rossi	FIBRE-REINFORCED ALKALI-ACTIVATED MATERIALS (FRAAMS)
15:30			DISCUSSION

Microdurability Conference Webinar Series Programme

Note: Time Zone Central European Time (CET)

Series 3

Thursday, 06th May, 2021			
13:30 - 15:00	**Room 1**	**Concrete modelling 1**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Huisu Chen**	
13:00		Quoc Tri Phung	A PHENOMENOLOGICAL MODEL FOR HYDRATION HEAT EVOLUTION OF A CEMENTED WASTE FORM
13:15		Deqing Xie	DYNAMIC PACKING MODEL OF 2D FULLY-GRADED ARBITRARY SHAPED CONCRETE AGGREGATE
13:30		Zhangli Hu	COMPARISON OF NUMERICAL PREDICTIONS FOR EARLY-AGE CREEP
13:45		Yogarajah Elakneswaran	FE INCORPORATION IN CEMENT HYDRATES: EXPERIMENTS AND THERMODYNAMIC MODELING
14:00		Han Wei	HYDRATION BEHAVIOR OF MAGNESIUM AMMONIUM PHOSPHATE CEMENT AND STABILITY ANALYSIS OF ITS HYDRATION PRODUCTS THROUGH THERMODYNAMIC MODELING
14:15		Kosuke Handa	MODELING AND VOLUME EXPANSION SIMULATION OF CEMENT PASTE WITH CSA TYPE EXPANSIVE ADDITIVE
14:30		Zhiyuan Xu	LATTICE BOLTZMANN SIMULATION OF CHLORIDE TRANSPORT IN ALKALI-ACTIVATED SLAG
14:45		Yun Chen	A MOLECULAR DYNAMICS STUDY OF N-A-S-H GEL WITH VARIOUS SI/AL RATIOS
15:00			DISCUSSION

13:00 - 15:30	**Room 2**	**Special session: Alkali-activated materials 3**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Organizor:	**Zuhua Zhang and Stijn Matthys**	
13:00		Yuwei Ma	CHLORIDE DIFFUSION OF ALKALI-ACTIVATED FLY ASH/SLAG CONCRETE
13:15		Richard Caron	MECHANICAL PROPERTIES AND SHRINKAGE OF ALKALI-ACTIVATED SLAG CONCRETE
13:30		Beibei Sun	A REVIEW: THE STRENGTH INFLUENCE FACTORS OF SLAG AND FLY ASH BASED ALKALI ACTIVATED MATERIALS
13:45		Xiaomei Wan	A STUDY ON FRACTURE TOUGHNESS OF ULTRA-HIGH TOUGHNESS GEOPOLYMER COMPOSITES BASED ON DOUBLE-K CRITERION
14:00		Bruna Juvêncio Frasson	EFFECT OF PORTLAND CEMENT ADDITION ON INITIAL DISSOLUTION OF COAL GANGUE BASED ALKALI-ACTIVATED CEMENT
14:15		Thi Nhan Nguyen	EFFECT OF PRECURSORS AND WATER TO BINDER RATIOS ON THE WATER PERMEABILITY OF ALKALI-ACTIVATED MORTARS
14:30		Xiuhui Liang	UTILIZATION OF BIOMASS FLY ASH IN ALKALI-ACTIVATED MATERIALS
14:45		Lazar Azdejkovic	DURABILITY ASSESSMENT OF ALKALI-ACTIVATED TEXTILE REINFORCED MORTAR (AATRM) CONSISTING OF METAKAOLIN/LADLE FURNACE SLAG-BASED GEOPOLYMER AND BASALT FIBER TEXTILE
15:00		Cassandre Le Galliard	ASSESSMENT OF ALKALI-ACTIVATED SLAG CARBONATION
15:15			DISCUSSION

Microdurability Conference Webinar Series Programme

Note: Time Zone Central European Time (CET)

Series 4

Tuesday, 11th May, 2021

13:00 - 15:00	**Room 1**	**SCMs and alternative binders**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Nele De Belie**	
13:00		Patricija Kara De Maeijer	APPLICATION OF ULTRA-FINE FLY ASH AS CEMENT REPLACEMENT FOR SUSTAINABLE CONCRETE WITH OPTIMAL PACKING DESIGN
13:15		Qiao Wang	UNIDIRECTIONAL SULFATE INGRESS IN LIMESTONE CALCINED CLAY CEMENT (LC3) PASTES UNDER CYCLIC EXPOSURE
13:30		Luís Urbano Durlo Tambara Júnior	EFFECT OF CHLORIDE SALTS ON THE HYDRATION OF SULFOALUMINATE CEMENT
13:45		Shuai Bai	EXPLORING THE POTENTIAL OF NANO-SIO2 TO PREVENT EARLY-AGE FROST DAMAGE IN PORTLAND CEMENT PASTE
14:00		Vaishnav Kumar	INFLUENCE OF EXTERNAL ENVIRONMENT ON EARLY-AGE EXPANSION CHARACTERISTICS OF CALCIUM SULFOALUMINATE CEMENT-BASED BINDERS
14:15		Rohollah Rostami	THE EFFECT OF SAP AND SCM ON MICROSTRUCTURE DEVELOPMENT IN EARLY AGE FIBRE REINFORCED MORTARS
14:30		Shiyu Zhuang	RELATIONSHIP BETWEEN THE WATER ABSORPTION AND THE CHLORIDE ION PENETRATION OF BLENDED CEMENT CONCRETE WITH VARIOUS SCMS: A PRELIMINARY EVALUATION ON WHETHER WATER ABSORPTION CAN PROVIDE A RELIABLE ESTIMATION OF OTHER TRANSPORT PROPERTIES
14:45			DISCUSSION

13:00 - 15:05	**Room 2**	**Special Session on Carbonation**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Organizor:	**Marija Nedeljkovic**	
13:00		Marija Nedeljkovic	INTRODUCTION
13:05		Jin Peng	EFFECT OF CA BACTERIA ON THE CARBONATION PROCESS OF g-C2S
13:20		Claudia Romero Rodriguez	ACCELERATED CARBONATION OF ORDINARY PORTLAND CEMENT PASTE AND ITS EFFECTS ON MICROSTRUCTURE AND TRANSPORT PROPERTIES
13:35		Wei Chen	CARBONATION RESISTANCE OF POLYALUMINUM MODIFIED BLAST FURNACE SLAG BLENDED CEMENT PASTE
13:50		Quoc Tri Phung	A CONTINUUM MODEL FOR CARBONATION CURING OF FIBER-CEMENT COMPOSITES
14:05		Janez Perko	DEVELOPMENT OF A PORE SCALE MODEL FOR THE CARBONATION OF HARDENED CEMENT PASTE
14:20		Christian Paglia	THE AIR PERMEABILITY, CARBONATION AND CHLORIDE CONTENT ALONG A CONCRETE HIGHWAY UNDERPASS
14:35		Marija Nedeljkovic	CARBONATION RATES OF ALKALI-ACTIVATED AND CEMENT-BASED CONCRETES
14:50			DISCUSSION

Microdurability Conference Webinar Series Programme

Note: Time Zone Central European Time (CET)

Series 5

Thursday, 13th May, 2021

13:00 - 15:00	**Room 1**	**SHCC, UHPC and UHPFRC**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Frank Dehn**	
13:00		Yanbo Liu	MECHANICAL AND CHLORIDE PERMEABILITY PROPERTIES OF COARSE FIBRE REINFORCED CONCRETE
13:15		Anna Antonova	CONTACT BETWEEN CEMENTITIOUS MATRIX AND FIBRES INFLUENCED BY THE MODIFICATION OF THEIR PARAMETERS
13:30		SiYi Ju	EFFECT OF FINE AGGREGATE ON RHEOLOGICAL PROPERTIES OF ULTRA-HIGH PERFORMANCE CONCRETE （UHPC）
13:45		Taotao Feng	EFFECT OF ULTRA-FINE FLY ASH ON THE MECHANICAL AND SHRINKAGE PROPERTIES OF ULTRA-HIGH PERFORMANCE CONCRETE
14:00		Jiandong Wu	DEVELOPMENT OF AN ECO-FRIENDLY HIGH STRENGTH AND HIGH DUCTILITY CEMENTITIOUS COMPOSITES (ECO-HSHDCC) INCORPORATING GLASS POWDER
14:15		Amin Abrishambaf	MICROSTRUCTURAL STUDY OF A UHPFRC INCORPORATING ECAT
14:30		Yanbo Liu	INFLUENCE OF AMBIENT TEMPERATURE ON THE MECHANICAL PROPERTIES OF MACRO FIBRE REINFORCED CONCRETE
14:45			DISCUSSION

13:00 - 15:05	**Room 2**	**Special Session on Alkali-silica Reaction**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Organizor:	**Zhenguo Shi**	
13:00		Zhenguo Shi	INTRODUCTION
13:05		Andreas Leemann	CHARACTERIZATION OF ASR PRODUCTS FORMED IN CONCRETE AGGREGATES
13:20		Xiujiao Qiu	MODELLING OF MICROSTRUCTURE OF ASR INFLUENCED CEMENT-BASED MATERIALS
13:35		Tyler Oesch	ANALYSIS OF THE POROSITY OF ALKALI-SENSITIVE AGGREGATES FOR THE ASSESSMENT OF MICROSTRUCTURE-DEPENDENT SOLUBILITY IN THE CONTEXT OF ASR
13:50		Yuya Takahashi	ANALYTICAL STUDY ABOUT THE EXPANSION PROGRESS OF CONCRETE EXPOSED TO COMBINED ALKALI SILICA REACTIONS AND FREEZING THAWING CYCLES
14:05		Wei Wang	EFFECT OF REACTIVE AGGREGATE ON THE EARLY AGE REACTION OF WATER GLASS ACTIVATED SLAG/FLY ASH MORTARS
14:20		Qingfeng Liu	MULTI-PHASE MODELLING OF MULTI-SPECIES TRANSPORT IN CONCRETE: IN CASE OF ELECTROCHEMICAL PROTECTION FOR BOTH ASR AND CHLORIDE ATTACK
14:35		Zhenguo Shi	SYNTHESIS OF ALKALI-SILICA REACTION (ASR) PRODUCTS AND THE ROLE OF AL AND LI IN MITIGATING ASR
14:50			DISCUSSION

Microdurability Conference Webinar Series Programme

Note: Time Zone Central European Time (CET)

Series 6

Tuesday, 18th May, 2021

13:00 - 15:00	**Room 1**	**New materials and Technology**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Tetsuya Ishida**	
13:00		Fuhai Li	RESEARCH ON GREY TARGET DECISION-MAKING OF OPTIMAL LIGHTWEIGHT AGGREGATE SHOTCRETE MIXING RATIO BASED ON COMPREHENSIVE PERFORMANCE
13:15		Chen Chen	RESEARCH ON PREPARATION AND PROPERTIES OF C-S-H/PEG1000 PHASE CHANGE COMPOSITE
13:30		Kalina Grabowska	INTERNAL HYDROPHOBIZATION BY MEANS OF ORGANOSILICON COMPOUNDS
13:45		Shengtian Zhai	RESEARCH ON MECHANICAL PROPERTIES AND MICRO-MECHANISM OF GRAPHENE CEMENT-BASED COMPOSITES
14:00		Estefania Cuenca	MICROSTRUCTURAL INVESTIGATION OF NANOCELLULOSE ADDITION ON THE PERFORMANCE OF CEMENTITIOUS MATERIALS CURED IN AGGRESSIVE ENVIRONMENTS
14:15		Jolien Van Der Putten	3D PRINTING OF CEMENTITIOUS MATERIALS WITH SUPERABSORBENT POLYMERS: A DURABLE SOLUTION
14:30		Chao Zhang	PREDICTING THE YIELD STRESS OF 3D PRINTING MORTAR BASED ON THE FLOWABILITY OF PASTE AND EXCESS PASTE THICKNESS
14:45		Sha Yang	LIGHTWEIGHT AGGREGATE CONCRETE WITH FOAMED BINDER MATRIX FOR SUSTAINABLE APPLICATIONS
15:00			DISCUSSION

13:00 - 15:00	**Room 2**	**Transport properties 1**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Chair:	**Pietro Lura**	
13:00		Yuanzhang Cao	THE COMPETITIVE DIFFUSION PROCESS OF CHLORIDE INTO MORTAR IMMERSED IN CHLORIDE-SULFATE SOLUTION
13:15		Yawar Abbas	REAL-TIME CHLORIDE DIFFUSION COEFFICIENT IN CONCRETE USING EMBEDDED RESISTIVITY SENSORS
13:30		Leo Pel	SIMULTANEOUS MEASUREMENT OF NA AND CL DIFFUSIVITY IN POROUS MEDIA BY RADIAL DIFFUSION USING NMR
13:45		Julien Gonthier	ADVANCED CHARACTERIZATION OF CHLORIDE BINDING IN OPC AND LC^3 PASTES
14:00		Haiwei Zhu	ADVANCES IN CHLORIDE DIFFUSION OF CONCRETE EXPOSED TO MARINE FIELD ENVIRONMENT
14:15		Bo Ran	SULFATE DIFFUSIVITY ALTERED BY PORE CRYSTALLIZATION DUE TO CHEMICAL SULFATE ATTACK OF CEMENT-BASED MATERIALS
14:30		Jingbin Yang	EFFECTS OF THE PRE-ABSORPTION OF SUPERABSORBENT POLYMERS AND THE WATER-CEMENT RATIO OF PASTE ON THE ADSORPTION-DESORPTION OF SUPERABSORBENT POLYMERS: AN NMR STUDY
14:45		Mickael Saillio	INFLEUNCE OF THE POROUS NETWORK ON CHLORIDE DIFFUSION IN PRESENCE OF SULPHATE
15:00			DISCUSSION

Microdurability Conference Webinar Series Programme

Note: Time Zone Central European Time (CET)

Series 7

Thursday, 20th May, 2021

13:00 - 15:00	**Room 1**	**Durability of concrete**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw	
	Chair:	**Wei Chen**		
13:00		Karen Scrivener	DEVELOPPING A GENERIC APPROACH TO DURABILITY	
13:15		Ding Nie	NUMERICAL ANALYSIS OF CALCIUM LEACHING ON THE DURABILITY OF DAM CONCRETE	
13:30		Antony Joseph	MICRO- AND PORE STRUCTURE ANALYSIS OF VOLCANIC ASH BLENDED CEMENT PASTE	
13:45		Carolina Azambuja	ANALYSIS OF THE DURABILITY OF HIGH STRENGTH CONCRETE WITH SUPERABSORBENT POLYMER	
14:00		Aliaksandra Tsitova	ANALYSIS OF MICROCRACKING FORMATION DURING BASIC AND DRYING CREEP IN CEMENTITIOUS MATERIALS	
14:15		Cong Tian	EARLY CRACKING OF CEMENTITIOUS MATERIALS BASED ON THE ECCENTRIC RING TEST	
14:30		Emanuele Rossi	ON THE APPLICABILITY OF A PRECURSOR FOR BACTERIA-BASED SELF-HEALING CONCRETE DERIVED FROM ORGANIC WASTE STREAMS	
14:45			Discussion	

13:00 - 15:00	**Room 2**	**Concrete modelling 2**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg	
	Chair:	**Eddy Koenders**		
13:00		Khalil Ferjaoui	MULTISCALE MODELLING OF CHLORIDE TRANSPORT IN CEMENTITIOUS MATERIALS AT THE ATOMIC AND PORE NETWORK SCALES	
13:15		Zhidong Zhang	MODELLING EFFECT OF COARSE AGGREGATES ON OXYGEN TRANSPORT AND CORROSION PRODUCTS PRECIPITATION IN REINFORCED CONCRETE	
13:30		Xintong Wu	THERMODYNAMIC MODELING OF THE REACTIONS OF SELF-HEALING AGENTS AND THE CHEMICAL BINDING OF AGGRESSIVE IONS IN SEA WATER	
13:45		Peng Gao	PREDICTION OF THE CHEMICAL SHRINKAGE OF PORTLAND CEMENT	
14:00		Shengying Zhao	MODELLING COMPRESSIVE BEHAVIOUR OF CEMENT PASTE WITH SUPERABSORBENT POLYMER	
14:15		Krishnya Siventhirarajah	A MULTISCALE MODEL FOR PREDICTING THE MECHANICAL PROPERTIES OF CEMENT PASTE	
14:30		Shuguang Li	QUANTITATIVE ANALYSES OF AGING STATUS OF DAM CONCRETE FOR A 25-YEAR-OLD DAM	
14:45			Discussion	

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Series 8

Tuesday, 25th May, 2021

13:00 - 15:00	**Room 1**	**Degradation**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Camen Andrade**	
13:00		Emanuele Rossi	A STUDY OF THE ELASTIC MODULI AND CHEMICAL COMPOSITION OF NATURALLY-GENERATED CORROSION PRODUCT THROUGH NANO-INDENTATION AND ENERGY DISPERSIVE X-RAY SPECTROMETRY (EDS)
13:15		Stefan Ullmann	EFFECT OF YOUNG'S MODULS ON THE DEGRADATION OF REPAIR MORTARS CHLORIDE MIGRATION RESISTANCE UNDER COUPLED LOADING CONDITIONS
13:30		Jie Hu	THE INFLUENCE OF LIGHTWEIGHT FUNCTIONAL AGGREGATES ON THE ACIDIFICATION DAMAGE IN THE EXTERNAL ANODE MORTAR DURING CATHODIC PROTECTION FOR REINFORCED CONCRETE
13:45		Marija Krstic	ASSESSMENT OF FREEZE-THAW RESISTANCE OF CEMENT BASED CONCRETE WITH GROUND GLASS – POZZOLAN THROUGH X-RAY MICRO TOMOGRAPHY
14:00		Haochuan Wang	DETERIORATION OF ORGANIC COATINGS ON CONCRETE UNDER ARTIFICIAL AGING
14:15		Yogesh Kumar Ramu	PORE SOLUTION CHEMISTRY OF EXPANSIVE HEAT CURED CEMENTITIOUS SYSTEMS
14:30		Kai Yang	WILL ORTHO-ENRICHED WATER INCREASE THE DURABILITY OF CONCRETE?
14:45			DISCUSSION

13:00 - 15:00	**Room 2**	**Durability assessment**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Chair:	**Jiaping Liu**	
13:00		Shiyu Sui	CHLORIDE BINDING ASSESSMENT IN C3S SYSTEMS WITH CALCINED CLAY
13:15		Min Pang	CHARACTERISTICS OF FLY ASH BLENDED MORTARS UNDER AMMONIUM CHLORIDE SOLUTION LEACHING
13:30		Philipp Kunz	DIFFUSION OF CHLORIDES IN STRAIN-HARDENING CEMENT-BASED COMPOSITES
13:45		Xiaoxian Wang	INFLUENCE OF DIFFERENT CORROSION SOLUTIONS ON REINFORCED CONCRETE BY DIC AND TRADITIONAL STRAIN TEST
14:00		Shaoxiong Ye	IN SITU OBSERVATION OF TRICALCIUM ALUMINATE DISSOLUTION IN WATER
14:15		Xu Zhenhai	DETERIORATION OF CEMENT MORTARS PARTIALLY IMMERSED IN SULFATE
14:30		Hongzhi Zhang	ASSESSING PROPERTIES OF HYDRATING CEMENT PASTE USING X-RAY COMPUTED TOMOGRAPHY CHARACTERISATION
14:45			DISCUSSION

Microdurability Conference Webinar Series Programme

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Series 9

Thursday, 27th May, 2021

13:00 - 14:30	**Room 1**	**Recycled materials**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
	Chair:	**Mirja Illikainen**	
13:00		Marija Nedeljkovic	MULTI-LEVEL CHEMICAL CHARACTERIZATION OF DUTCH FINE RECYCLED CONCRETE AGGREGATES: A COMPARATIVE STUDY
13:15		Antonis Kanellopoulos	THE EFFECT OF MINING WASTE ON THE DURABILITY INDICATORS OF CEMENT-BASED COMPOSITES
13:30		Yubo Sun	POTENTIAL APPLICATION OF MSWI BOTTOM ASH AS SUBSTITUTE MATERIAL IN PORTLAND CEMENT CONCRETE
13:45		Chunping Gu	THE EFFECT OF SULFATE-RICH SEWAGE SLUDGE ASH ON THE VOLUME DEFORMATION AND MICORSTRUCTURE OF CEMENT PASTE
14:00		Mark Bediako	COMPRESSIVE STRENGTH AND PORE STRUCTURE STUDIES OF CLAMP-FIRED WASTE POWDERED CLAY BRICK AS A SUPPLEMENTARY CEMENTITIOUS MATERIAL
14:15		Lixiao Zhao	INFLUENCE OF THE RELATIVE MOLECULAR MASS OF VISCOSITY ENHANCERS ON CHLORIDE DIFFUSION IN MORTARS: A PERLIMINARY STUDY

13:00 - 14:30	**Room 2**	**Transport properties 2**	https://tudelft.zoom.us/webinar/register/WN_bPHHbPjVSi-gmN0K413oWg
	Chair:	**Mark Alexander**	
13:00		Carmen Andrade	QUANTIFIYING WATER PERMEABILITY AND PORE SIZE THROUGH CAPILLARY ABSORPTION
13:15		Mingqi Li	CONTINUUM PERCOLATION THRESHOLD AND IONIC DIFFUSIVITY OF POROUS MEDIA CONSISTING OF ASYMMETRICAL OVOIDAL PORES
13:30		Kotaro Ishikawara	COMPRESSIVE STRENGTH AND CHLORIDE ION PERMEATION RESISTANCE OF MORTAR CONTAINING CLINKER WITH DIFFERENT MINERAL COMPOSITION AS AN AGGREGATE
13:45		Xuande Chen	EFFECT OF THE TEMPERATURE ON THE WATER TRANSPORT BY CAPILLARITY INTO THE CONCRETE POROSITY
14:00		Jiaqi Zhao	INVESTIGATION ON EFFECT OF TIME DEPENDENT SURFACE CHLORIDE CONCENTRATION ON APPARENT AVERAGE CHLORIDE DIFFUSION COEFFICIENT IN CONCRETE
14:15		Fabien Georget	THE ROLE OF THE MICRON-SCALE IN REACTIVE TRANSPORT PROCESSES

14:30 - 15:20	**Plenary Session**	**Closure lecture**	https://tudelft.zoom.us/webinar/register/WN_g-WwYwbHSWSoRf0iNl5xiw
14:30		Klaas van Breugel	WHY CEMENT-BASED MATERIALS COULD MAKE THE DIFFERENCE?
15:00		Changwen Miao	ANNOUCEMENT OF NEXT MICRODURABILITY CONFERENCE
15:10		Guang Ye	CLOSURE REMARKS

Guidance for presenting authors, session chair and panellist

Thank you very much for providing the recording of your full presentations. This document aims to address how the online conference will be held, and what is required of you as presenting authors, session Chair or keynote speakers.

All presentations will be streamed from the recordings provided to the conference organizers using Zoom. There will be no requirement to give a live version of your presentation.

Each parallel session shown in the program will have its own separate Zoom webinar room. All registered delegates will be provided with the joining links for each of these rooms with the finalized conference program. Session chair and panellist will receive a private invitation to access to the sessions.

When delegates join the webinar by clicking the provided links, they will have the default capabilities of an "Attendee", meaning that they can observe the webinar content but cannot use their microphone, video, or share their screen. Questions can be submitted using the Q+A Chat function.

Delegates who are presenting authors, or session Chair or panellist: please check the conference program to see when your pre-recorded talk or your duties are scheduled. We request that you:

- Join your session 5 minutes before the start of that session.
- When you enter, please press the "Raise hand" button to indicate you require attention. The Conference account (Zoom Host) will change your zoom status from "Attendee" to "Panelist" – this will enable you to use your microphone and video, which will allow you to chair a session, or as presenter to address questions from the audience after your pre-recorded presentation has ended.
- We kindly ask you to **stay as "Panelist"** until the end of the session for the final DISCUSSION. Some delegates could still ask questions, if any, on your presentation.

Please note that when your role is changed, **Zoom will reboot** – don't worry, it has not removed you from the meeting. In case that you could not be present for the Q+A after your presentation, please kindly inform the conference organizers via the email address: i.batterham@tudelft.nl.