

Start time	End time	
<b>Sunday, 28 May 2017</b>		
16:00	18:00	Registration
18:00	19:00	Welcome reception

For each presentation, reference is made to the corresponding page number in the proceedings. Please note that this is only a draft programme. Changes can be made before the start of the conference. The conference organizers are not responsible for any issues resulting from changes made to this programme. Participants should regularly check for programme changes. All travel arrangements made by the conference participants are to be made on a personal basis. The conference organizers take no responsibility in this respect. During the conference, the organizers take no responsibility to personal belongings of participants. As the conference venue is a public area, participants should take proper precaution for personal belongings.

Room colour code	Registration and exhibition area (ground floor)
------------------	---

Conference venue: "Het Pand", Onderbergen 1, 9000 Gent

## International Organizations (Steering Committee)



National Research Council Canada

## Silver Level Sponsors



**Schleibinger Geräte**  
Building Materials Testing Systems

## Bronze Level Sponsors



## Supporting Organization



Start time	End time	Monday, 29 May 2017					
8:00	9:00	Registration					
9:00	9:30	Opening session (Chair: DE SCHUTTER Geert, VAN DEN BOSSCHE Nathan)					
9:30	10:00	Plenary lecture 1A: 3D printed concrete - beyond durability? / SALET Theo (p.3) (Chair: DE SCHUTTER Geert)					
10:00	10:30	Coffee					
10:30	12:30	<b>Session M1 / Theme E. Durability of materials, systems and components / Concrete / Recycling (Chair: MENG Birgit)</b> (10:30) (Keynote) Improving the quality of various types of recycled aggregates by biodeposition / DE BELIE Nele, WANG Jianyun, GARCIA-GONZÁLEZ Julia, RODRÍGUEZ ROBLES Desirée, VANDEVYVERE Brecht, VANHESSCHE Sam, BOON Nico, SCHOON Joris and JUAN-VALDÉS Andrés (p.113) (11:00) Microstructure and permeability of glass waste of concrete in the marine environment / CHAID Rabah, PERROT Arnaud and MERIDA Hacène (p.115) (11:15) Effect of recycled aggregate on concrete permeability to water / CANTERO Blas, SÁEZ DEL BOSQUE Isabel F., MATÍAS Agustín, SÁNCHEZ DE ROJAS María Isabel and MEDINA César (p.117) (11:30) Durability properties of concrete recycling clay-rich dredging sediments as a novel supplementary cementitious material / VAN BUNDEREN Céline, SNELLINGS Ruben, HORCKMANS Liesbeth, DOCKX Joris, VANDEKEYBUS Jos, VAN BALEN Koenraad, VANDEWALLE Lucie and CIZER Özlem (p.119) (11:45) Value-added recycling of construction waste wood into water repellent and fire resistant cement-bonded particleboards / WANG Lei, TSANG Daniel C.W. and POON Chi Sun (p.123) (12:00) The effect of fine crushed concrete aggregate on the durability of structural concrete / DODDS Wayne, GOODIER Chris, AUSTIN Simon, CHRISTODOULOU Christian, DUNNE David and CHAN Matthew (p.125) (12:15) On the quantitative thermogravimetric analysis of calcite content in hydrated cementitious systems / VILLAGRAN-ZACCARDI Yury, EGUEZ ALAVA Hugo, DE BUYSSE Klaartje and DE BELIE Nele (p.221)	<b>Session M2 / Theme F. Service life analysis and prediction methodologies (Chair: DANIOTTI Bruno)</b> (10:30) (Keynote) Design and service life prediction concept for timber structures - Part 1 : A factorization approach based on dose-response models / BRISCHKE Christian, MEYER-VELTRUP Linda, FRÜHWALD HANSSON Eva, NIKLEWSKI Jonas, THELANDERSSON Sven and ISAKSSON Tord (p.295) (11:00) Design and service life prediction concept for timber structures - Part 2 : Climate effects / BRISCHKE Christian, NIKLEWSKI Jonas, FRÜHWALD HANSSON Eva and KAVURMACI Denis (p.297) (11:15) Continuous moisture measurements of exterior wood to simulate time of wetness / VAN ACKER Joris, VAN DEN BULCKE Jan, DE WINDT Imke and DE BOEVER Lieven (p.299) (11:30) Factor method for aluminium windows and curtain walls / RE CECCONI Fulvio, RIGONE Paolo and VATAVALIS Pavlos (p.301) (11:45) The use of a novel prediction methodology to quantitatively assess the service life of 55% Al-Zn Alloy-Coated Steel, low-slope, standing seam roof systems / DUTTON Ron and HADDOCK Rob (p.303) (12:00) Durability of thermal renders: material properties and system performance / MAIA J., RAMOS N. M. M. and VEIGA R. (p.305) (12:15) Durability assessment of mineral wool insulation : what are the thermal properties after 20 years ? / LANGMANS Jelle and ROELS Staf (p.307)	<b>Session M3 / Theme B. Historical buildings and renovation (Chair: JANSSENS Arnold)</b> (10:30) (Keynote) Airflows behind insulated modules attached to façades of old buildings. Combined effects on U-value and drying out of rain water / HAGENTOFT Carl-Eric (p.49) (11:00) The accomplishment of Portuguese thermal code exigencies in old housing buildings' interventions / RAMOS Ana and SILVA J. Mendes (p.51) (11:15) Maintenance of historical buildings - case studies from Belgium and Portugal / HUTSEBAUT-BUYSE Véronique, FLORES-COLEN Inês and LOBO DE CARVALHO José Maria (p.53) (11:30) Evaluation of the hygric properties of a wooden panel painting to perform HAM simulations / DE BACKER Lien, VAN DEN BOSSCHE Nathan, JANSSENS Arnold and DE PAEPE Michel (p.55) (11:45) Parametrical Analysis of Stone Consolidation Actions / BRAUN Franziska and ORLOWSKY Jeanette (p.57) (12:00) Non-destructive investigation of hypogae sites toward conservation and fruition: a case study / DE FINO Mariella, SCIOTTI Albina, RUBINO Rocco and FATIGUSO Fabio (p.59) (12:15) Effect of moisture on delamination of glued laminated timber / MATSUMOTO Yumi and NOGUCHI Takafumi (p.289)			
		Lunch					
		13:30	15:45	<b>Session M4 / Theme E. Durability of materials, systems and components / Concrete / ASR-ACR (Chair: BOKAN-BOSILJKOV Violeta)</b> (13:30) (Keynote) Design of ternary blended cements to control ASR / SHI Zhenguang and SHI Caijun (p.129) (14:00) ASR and mechanical crack width in reinforced concrete / ALAUD Salhin and VAN ZUIL Gideon (p.131) (14:15) Online monitoring of the expansion of alkali-silica reaction affected concrete prisms implemented to the accelerated test at 60°C / WALLAU Wilma, PIRSKAWETZ Stephan, VOLAND Katja, WEISE Frank, MENG Birgit (p.133) (14:30) Preliminary Investigation on the Effect of Cement Replacement by Residues from the Incineration of non-hazardous waste on Strength and Alkali Silica Reaction / JOSEPH Aneta Mary, DOLCE Rosalida, VAN DEN HEDE Philip, SNELLINGS Ruben, VAN BRECHT Andres, GRÜNEWALD Steffen, MATTHYS Stijn and DE BELIE Nele (p.135) (14:45) An ASR-preventive strategy for durable concrete in Sweden / APPELQUIST Karin, TRÄGÅRDH Jan and MUELLER Urs (p.137) (15:00) Experimental and numerical investigation of the dependence between the alkali-silica reaction development and the material microstructure / GRVMIN Witold, KONIORCZYK Marcin, PESAVENTO Francesco, MARCINIAK Alicja and GAWIN Dariusz (p.139) (15:15) A series of "double-multi" models for mechanism studies on ionic transport phenomena in cement based materials / LIU Qing-feng, LI Long-yuan, XIA Jin and FENG Gan-lin (p.141)	<b>Session M5 / Theme G. Durability, LCA and sustainable construction (Chair: HABERT Guillaume)</b> (13:30) (Keynote) Physical and mechanical properties of recycled concrete aggregate exposed to natural and accelerated carbonation / HABERT Guillaume, MARINKOVIĆ Snežana, BRUMAUD Coralie, IGUNTOVIĆ Ivan, DRAGAŠ Jelena and TOŠIĆ Nikola (p.341) (14:00) Quantifying the carbon sequestration potential of exposed reinforced concrete / SOUTO-MARTINEZ Adriana and SRUBAR Wil V. III (p.343) (14:15) Life cycle assessment of façade solutions made of durable reactive powder concrete / AL-AYISH Nadia, MUELLER Urs, MALAGA Katarina and GUONDUNSSON Kjartan (p.345) (14:30) Life cycle assessment of reinforced concrete units / IANNICELLI ZUBIANI Elena Maria, GIANI Martina Irene, GALLO STAMPINO Paola, DOTELLI Giovanni and NANNI Antonio (p.347) (14:45) Vascular self-healing of a reinforced concrete beam under 4-point bending / MINNEBO Pieter, VAN TITTELBOOM Kim, DE BELIE Nele and VAN HEMELRICK Danny (p.349) (15:00) Effects of cellulose fibers on durability of concrete subjected to freezing-thawing and drying-immersion attack / WANG Dezhi, MENG Yunfang and ZHOU Xiangming (p.351) (15:15) Evaluation of the migration coefficient, diffusion coefficient and the ageing factor according to the chloride ingress model described in the fib bulletin 34 applied to Belgian concrete mixtures / DE WINTER Liesbet, MINNE Peter, CASPEELE Robby, CRAEYE Bart, DE SCHUTTER Geert, DE PAUW Peter and DOOMS Bram (p.385) (15:30) Improvement effect on mechanical properties of cementitious-woodship compound board introducing stimulating agent of seawater in disaster situation / TAMURA Masaki and SAYAMA Shunsuke (p.291)	<b>Session M6 / Theme C. Building pathology (Chair: HAGENTOFT Carl-Eric)</b> (13:30) (Keynote) Isopleth ranges for a better understanding of wood decay / HOFBAUER Wolfgang Karl, KRUEGER Nicole, RENNEBARTH Thorsten and MAYER Florian (p.65) (14:00) Recreation of cultural historical values in buildings from before 1945: Inventory with focus on building physics performance / JOHANSSON Pär and WAHLGREN Paula (p.67) (14:15) Detection of chloride-induced corrosion damage at the reinforcement-concrete interface with X-ray computed tomography and acoustic emission / VAN STEEN C., ROEDEL H., WEVERS M. and VERSTRYNGE E. (p.69) (14:30) Evaluation of mould growth in Portuguese dwelling - sensitivity analysis / ALMEIDA Ricardo M.S.F., BARREIRA Eva and BROCHADO João (p.71) (14:45) Application of FMEA and FTA methods on detection and control of building pathologies / SILVA Arthur, VAZQUEZ Elaine, HADDAD Assed, QUALHARINI Eduardo and ALVES Lais (p.73) (15:00) Constructive Characterization and Conservation State of Facades in the Old City Centre of Viseu / SILVA J. Mendes and MOURAZ Catarina P. (p.75) (15:15) Influence of height from the ground in the vertical salinity distribution of marine aerosol / MEIRA Gibson and PINTO Wladimir (p.25) (15:30) Analyzing the local climatic characteristics as a deterioration reason in buildings / GÜZELÇOBAN MAYUK Seher and ÖZTÜRK Selin (p.77)	
				Coffee			
				Plenary Lecture 1B: Advanced high-resolution X-ray CT as a characterization tool to study building materials / CNUUDE Veerle (p.5) (Chair: DE BELIE Nele)			
				16:45	18:00	<b>Poster session with drinks</b> Measurement of materials emissivity using an emissometer: Influence of variations in the procedure / BARREIRA E., SIMÕES M.L. and PEREIRA A. (p.41) Analysis of different frost indexes and their potential to assess frost based on HAM simulations / CALLE Klaas and VAN DEN BOSSCHE Nathan (p.61) Analyzing the Local Climatic Characteristics as a Deterioration Reason in Buildings / GÜZELÇOBAN MAYUK Seher and ÖZTÜRK Selin (p.77) Improvement in Compressive Strength of Internally Deteriorated Timber / GOROMARU Shuhei, OHTSUKA Akiko, IMAMOTO Kei-ichi and KIYOHARA Chizuru (p.107) Investigation of Concrete Repairs of the Concrete Cover Repairs of RC Square Columns / ORETA Andres Winston, DEL CASTILLO Anna Francesca, TAN Romwell Louis and CORNEJO Sarah Linette (p.109) Performance evaluation of polymer modified cement mortars at elevated temperatures / RAJENDRAN Aswathy and GETTU Ravindra (p.167) Effect of additions on binder durability / MEDINA César, ASENSIO Eloy, MEDINA Gabriel, MEDINA José María, RIVERA Julián, FRIAS Moisés and SÁNCHEZ DE ROJAS María Isabel (p.169) Mechanism of pulverized fuel ash and CO2 curing to improve the water resistance of magnesium oxychloride cement / HE Pingping, POON Chi Sun and TSANG Daniel C.W. (p.171) Durability of PTFE-coated glass fabric for architectural membrane structures / TOYODA Hiroshi, ABE Kazuhiro and MOTOHASHI Kenji (p.333) Consequences of an adjusted slip layer thickness for the hardened properties of UHPC / VAN DER PUTTEN Jolien, LESAGE Karel and DE SCHUTTER Geert (p.247) Yantra : A lattice Boltzmann method based simulation tool for modelling physico-chemical processes in concrete at different spatial scales / PATEL Ravi A., PERKO Janez and JACQUES Diederik (p.335) Evaluation of carbon emission for quantification of environmental load on structural wood products in Korea / CHANG Yoon-Seong, KIM Sejong and SHIM Kug-Bo (p.379) Studies on the evolution of alkali silicate in a simulated alkali-silica reaction system / ZHENG Kunpeng, ADRIAENSENS Peter, DE SCHUTTER Geert, YE Guang, TAERWE Luc (p.143) Construction technologies and systems of shelters and temporary houses for improving the living environment for people with pets in disaster situations / KANEMAKI Tomoko and TAMURA Masaki (p.337) Dynamic Vapour Sorption – A versatile technique for materials characterization / SUBRAMANIAN Nachal, NADERI Majid, ACHARYA Manaswini, CATTANEO Damiano and BURNETT Daniel (p.43) Inverse Gas Chromatography as a tool for studying solid surfaces / SUBRAMANIAN Nachal, NADERI Majid, KONDOR Anett, ACHARYA Manaswini and BURNETT Daniel (p.45) Robustness as a tool to improve the durability of self-compacting concrete / VAN DER VURST Farid, LESAGE Karel, VANTOMME John, VANDEWALLE Lucie and DE SCHUTTER Geert (p.249) Casting concrete structures in a smarter way / DE SCHUTTER Geert, LESAGE Karel, EL CHEIKH Khadija, DE SCHRUYVER Robin, MUHAMMAD Metwally and CHIBULU Chizya (p.251) Numerical approach for thixotropic behaviour of concrete – current status / DE SCHRUYVER Robin, LESAGE Karel, EL CHEIKH Khadija and DE SCHUTTER Geert (p.253) Adjusting concrete rheology through mix design – short overview / EL CHEIKH Khadija, LESAGE Karel and DE SCHUTTER Geert (p.255) Interactions between Cement and Combined Concrete Admixtures / LESAGE Karel, VANDEWALLE Lucie, DE SCHUTTER Geert (p.257) Distinct protocols to measure dynamic and static yield stress of fresh cement mortars / QJAN Ye, KAWASHIMA Shiho (p.259) Assessing Mortar Extrudability through the Jolting Test / LESAGE Karel, INGELBRECHT Thomas, DE SCHUTTER Geert (p.261) 3D Printing of cementitious materials / EL CHEIKH Khadija, LESAGE Karel, VAN DER PUTTEN Jolien, VAN TITTELBOOM Kim and DE SCHUTTER Geert (p.263)	
						Room colour code	Meeting room "Refter" (ground floor)
Registration and exhibition area (ground floor)							

Start time	End time	Tuesday, 30 May 2017		
8:00	8:30	Registration		
8:30	10:00	<b>Session T1 / Theme E. Durability of materials, systems and components / Concrete / AAM (Chair: SMELLINGS Ruben)</b> (8:30) (Keynote) Mineralogical stability of Metakaolin-based alkali-activated cements / GEVAUDAN Juan Pablo, CAMPBELL Kate M., KANE Tyler J., SHOEMAKER Richard K. and SRUBAR Wil V. III (p.173) (9:00) An experimental investigation of hardness and pore structure of low-calcium fly ash cement paste internally alkali activated using roof tile waste aggregate / BUI Phuung Trinh, OGAWA Yuko, NAKARAI Kenichiro and KAWAI Kenji (p.175) (9:15) Use of fired-clay brick waste as supplementary cementitious material and alkali-activated cement : influence on alkali-aggregate reaction / GULLANTTE Patricia, KULAKOWSKI P. Marlova and MANCIO Mauricio (p.177) (9:30) Recent studies on durability of alkali-activated materials / ZHANG Jian, SHI Caijun, LI Ning, JIANG Lei and OU Zhihua (p.179) (9:45) A study on the passive state stability of steel embedded in alkali activated slag mortars / CRIADO Maria, MUNDRA Shishir, BERNAL Susan A. and PROVVIS John L. (p.181)	<b>Session T2 / Theme F. Service life analysis and prediction methodologies (Chair: BERTRON Alexandra)</b> (8:30) (Keynote) Multi-scale modeling strategies to improve durability models for service life predictions of concrete structures / PATEL Ravi A., PERKO Janez and JACQUES Diederik (p.309) (9:00) Effect of curing temperatures on the formation factor of capillary pore structure in cement paste / NAITO Daisuke and IGARASHI Shin-ichi (p.311) (9:15) Innovation in Air-Permeability NDT: Concept and Performance / TORRENT Roberto and SZYCHOWSKI Julio (p.313) (9:30) Porosity and mineral textures in Imperial Roman wall concrete, Markets of Trajan, Rome / JACKSON Marie, ZHANG Yi, CHEN Heng and MOON Juhyuk (p.315) (9:45) Interaction between microorganisms and cementitious materials in sewer pipe conditions / GRANDCLERC Anaïs, GUEGUEN-MINERBE Marielle, NOUR Issam, CHAUSADANT Thierry and DANGLA Patrick (p.317)	<b>Session T3 / Theme A. Building physics and durability (Chair: PEIXOTO DE FREITAS Vasco)</b> (8:30) (Keynote) An Approach to Assessing the Long-term Performance of Wall Assemblies – Durability of Low-rise Wood-frame walls / LACASSE Michael A. and MORELLI Martin (p.17) (9:00) Hygrothermal simulation and evaluation of frost risk of masonry walls subjected to internal insulation retrofitting / ZHOU Xiaohai, DEROME Dominique and CARMELIET Jan (p.19) (9:15) An evaluation on preventing delamination of exterior tiles / FUNAKOSHI Kie and NACHI Hiroshi (p.21) (9:30) Study of carbonation progress prediction on existing reinforced concrete buildings with variations in surface mortar layer / SATO Sachie and MASUDA Yoshihiro (p.23) (9:45) Results of an European FP7 project - Microbial performance of "ECO-innovative, Safe and Energy Efficient materials for a healthier indoor environment" / HOFBAUER Wolfgang Karl, KRUEGER Nicole, NAGELE-RENZL Anna and MAYER Florian (p.37)
		Coffee		
		<b>Plenary lecture 2A : Fit for purpose selection of wood materials / VAN ACKER Joris (p.7) (Chair: VAN DEN BOSSCHE Nathan)</b>		
		<b>Session T4 / Theme E. Durability of materials, systems and components / Concrete / Corrosion (Chair: SIDERIS Kosmas)</b> (11:00) (Keynote) Study on corrosion durability with electrochemical tests of GGBS/Portland blends activated by chlorides / SALESSES Bernard, PATAPY Cédric, STEGER Laurent, DEBY Fabrice and CYR Martin (p.183) (11:30) Corrosion Threshold Value of Chloride and Sulphate in Simulated Concrete Pore Solution / LIU Guojian, HUANG Ran and ZHANG Yunsheng (p.187) (11:45) Sodium chloride ingress into OPC concrete subjected to compressive stress / EGUEZ ÁLAVA Hugo, DE BELIE Nele and DE SCHUTTER Geert (p.189) (12:00) Evolution of carbonation rate in concrete under frost attack / MARCINIAK Alicja, GRZYMIŃSKI Tomasz and KONIORCZYK Marcin (p.191) (12:15) Natural and accelerate carbonation in concretes with rice husk ash and recycled concrete aggregate : relationship with water absorption and mechanical strength / SARTORI Bruno, HENTGES Tatiane, KULAKOWSKI Marlova, KAZMIERCZAK Cláudio and MANCIO Mauricio (p.193)	<b>Session T5 / Theme G. Durability, LCA and sustainable construction (Chair: NOGUCHI Takafumi)</b> (11:00) (Keynote) SEACON Project : sustainable concrete using seawater, salt-contaminated aggregates, and non-corrosive reinforcement / BERTOLA Federica, GASTALDI Daniela, CANONICO Fulvio and NANNI Antonio (p.353) (11:30) Freeze-thaw durability of recycled concrete from construction and demolition wastes / JUAN-VALDÉS Andrés, RODRÍGUEZ-ROBLES Desirée, GARCÍA-GONZÁLEZ Julia, MORÁN-DEL POZO Julia M., GUERRA-ROMERO M. Ignacio and DE BELIE Nele (p.355) (11:45) Performance studies of self-compacting concrete by using nano-silica along with superabsorbent polymer / KHAN Asis Kumar and GOEL Rajeev Kumar (p.357) (12:00) Use of copper slag with magnetized water in concrete for sustainable development / WANJARI Swapnil and PATEL Brijbhban (p.359) (12:15) Effect of pumice on frost durability of self-compacting concrete / YÜCEL Hasan Erhan, ÖZ Hatice Öznur and GÜNEŞ Muhammet (p.121)	<b>Session T6 / Theme A. Building physics and durability (Chair: LACASSE Michael)</b> (11:00) (Keynote) A new test standard to evaluate the watertightness of window-wall interfaces / ARCE RECALATA María, GARCÍA MORALES Soledad and VAN DEN BOSSCHE Nathan (p.27) (11:30) Development of experimental methods to evaluate infiltration of wind-driven rain into external thermal insulation composite systems (ETICS) / MOLNÁR Miklós, JÓNSSON Johan and ROSENKVIST Per-Olof (p.29) (11:45) Experimental and numerical analysis of the hygrothermal behaviour of ventilated cavity wall used for external insulation / BENDOUMA Mathieu, COLINART Thibaut and GLOUANNEC Patrick (p.31) (12:00) Analysis of mould growth models and influence of the hygrothermal properties / COLINART Thibaut, BENDOUMA Mathieu and GLOUANNEC Patrick (p.33) (12:15) Tape as a means to ensure air- and watertightness of building joints experimental assessment / VAN LINDEN Stéphanie, MAROY Katrien, STEEMAN Marijke and VAN DEN BOSSCHE Nathan (p.35)
Lunch				
13:30	15:30	<b>Session T7 / Theme E. Durability of materials, systems and components / Concrete / Self-healing (and cleaning) (Chair: MAURY Anibal)</b> (13:30) (Keynote) Influence of the curing period of encapsulated polyurethane precursor on the capillary water absorption of cracked mortar with self-healing properties / VAN DEN HEDE Philip, VAN BELLEGHEM Bjorn, ALDERETE Natalia, VAN TITTELBOOM Kim and DE BELIE Nele (p.197) (14:00) Use of encapsulated healing agents to limit water uptake through cracks in mortar / VAN BELLEGHEM Bjorn, VAN TITTELBOOM Kim and DE BELIE Nele (p.199) (14:15) Self-healing of concrete cracks by the release of embedded water repellent agents and corrosion inhibitors to reduce the risk for reinforcement corrosion / VAN TITTELBOOM Kim, KESSLER Sylvia, DE MAESSCHALK Claudia, VAN BELLEGHEM Bjorn, VAN DEN HEDE Philip and DE BELIE Nele (p.201) (14:30) Evaluation of the performance of self-healing concrete at small and large scale under laboratory conditions / GRUYAERT Elke, DEBBAUT Brenda, KAASGAARD Martin, ERNDAHL SØRENSEN Henrik, PELTO Jani, BRANCO Vanda, MALM Fabian, GROSSE Christian, PRICE Eric, KRÜGER Markus and DE BELIE Nele (p.203) (14:45) Microstructure alteration of PC-GGBS mortars by superabsorbent polymers (SAP) / ALMEIDA Fernando C.R. and KLEMM Agnieszka J. (p.205) (15:00) Internal curing of cement pastes by superabsorbent polymers studied by means of neutron radiography / SNOECK Didier, ALDERETE Natalia, VAN BELLEGHEM Bjorn, VAN DEN HEDE Philip, VAN TITTELBOOM Kim and DE BELIE Nele (p.207) (15:15) Durability of UHPC for façade elements with self-cleaning surfaces / FONTANA Patrick, QVAESCHNING Dirk and HOPPE Johannes (p.209)	<b>Session T8 / Theme D. Diagnosis, repair, and maintenance (Chair: JOHANSSON Pär)</b> (13:30) (Keynote) Applicability of non/minor destructive test methods for evaluation of material properties of existing timber structures / MINAMIKAWA Takaaki, OHTSUKA Akiko, IMAMOTO Kei-ichi and KIYOHARA Chizuru (p.81) (14:00) Maintenance of buildings supported by BIM methodology / SAMPAIO Zita and SIMOES Diogo (p.83) (14:15) Assessment of Nanostructured Inorganic Consolidants Used in Stone Conservation Practice / TAVUKÇUOĞLU Ayşe, CANER-SALTIK Emine, GÜNEY Alp, KARAHAN DAĞ Fulya, ÇETİN Özlem, EROL Fatma, MISIR Çakkan Tunç and ATAKLI Yiğit (p.85) (14:30) Predictive maintenance for monitoring performance decay of plaster coverings according to the criteria of ISO 15686-7 code / NICOLELLA Maurizio, SCOGNAMILLO Claudio and PINO Alessio (p.87) (14:45) Dynamic facility condition index calculation for asset management / MALTESE Sebastiano, DEJACO Mario Claudio and RE CECCONI Fulvio (p.89) (15:00) Reinstallation of Salvaged Historic Terra Cotta / GERNIS Edward and KARRELS Chelsea (p.91) (15:15) Materials analyses guiding for repairs in conservation: An Historical Bath Structure "Yeni Hamam" in Sivrihisar, Turkey / MADANI Nigar, EROL Fatma, ÇETİN Özlem, MISIR Çakkan Tunç, TAVUKÇUOĞLU Ayşe, SALTIK Emine Caner and GÜNEY Alp (p.93)	<b>Session T9 / Theme E. Durability of materials, systems and components / Non-cementitious materials (Chair: MØLLER Eva B)</b> (13:30) (Keynote) Evaluation of Ceramic Tiles on Façades – Case Study / FREITAS Vasco Peixoto de, FERREIRA Cláudia, FREITAS Sara S. de and SILVA Luís Pedro (p.265) (14:00) Determination of wear and material properties of surface protection systems for car parks / LADNER Eva-Maria and BREIT Wolfgang (p.267) (14:15) The assessment over time of the performance of jute-basalt hybrid composites for cladding panels / ENEA Daniele, ALAIMO Giuseppe, FIORE Vincenzo, SCALICI Tommaso, BADAGLIACCO Dionisio and VALENZA Antonino (p.269) (14:30) Puncture and impact resistance of single-ply roofing membranes / TAYLOR Thomas J., BHAWALKAR Sarang and YANG Tammy (p.271) (14:45) Evolution of leached depth of cement asphalt mortar with time in ammonia nitrate solution / WANG Yong, YUAN Qiang , DENG Dehua, XIE Youjun and FANG Lei (p.273) (15:00) Understanding accelerated UV, field, and thermal aging of thermoplastic roofing membranes / XING Linlin and PIERCE Helene Hardy (p.275) (15:15) Durability of waterborne liquid applied roof waterproof coatings / VYÖRYKKÄ Jouko, SZEWCZYK Janah, IMBESI Philip and MIOTTO Cristina (p.277)
		Coffee		
		<b>Plenary lecture 2B : A novel approach towards conservation of the world heritage RC building in Japan / IMAMOTO Kei-ichi (p.9) (Chair: JANSSENS Arnold)</b>		
		<b>Session T10 / Theme E. Durability of materials, systems and components / Concrete / Attack (Chair: BAROGHEL-BOUNY Véronique)</b> (16:30) (Keynote) A new model approach describing the decisive role of acidophilic bacteria on concrete corrosion in sewers / GRENGG Cyrill, MITTERMAYR Florian, KORAIMANN Günther, SZABÓ Máté, DEMENY Attila and DIETZEL Martin (p.211) (17:00) Durability of Cementitious Materials in Acidic Environments: Evaluation of Degradation Kinetics / RAMASWAMY K. P. and SANTHANAM Manu (p.213) (17:15) Understanding the resistance of calcium aluminate cements in sewer environments : role of soluble aluminium on the SOB activity / BUVIGNIER Amaury, PEYRE-LAVIGNE Matthieu, PATAPY Cédric, PAUL Etienne and BERTRON Alexandra (p.215) (17:30) The relative gas permeability: a main indicator of the durability of unsaturated ordinary concrete / KAMECHE Zine Abidine, GHOMARI Fouad, CHOINSKA Marta and KHELIDI Abdelhafid (p.219) (17:45) Leaching of aluminium by blast furnace slag cement linings of drinking water pipes / BERTHOMIER Mathilde, BERTRON Alexandra, LORS Christine, MAZARS Vanessa, HOT Julie, CYR Martin, DAMIDOT Denis and DE LARRARD Thomas (p.223) (18:00) Application of multiple techniques to quantify the pore structure of degraded cementitious materials / PHUNG Quoc Tri, MAES Norbert and JACQUES Diederik (p.217)	<b>Session T11 / Theme D. Diagnosis, repair, and maintenance (Chair: CRAEYE Bart)</b> (16:30) (Keynote) Design of UHPC-AAC light-weight composite façade elements for refurbishment / MICCOLI Lorenzo, FONTANA Patrick, KREFT Oliver, PIETRUSZKA Barbara, LUKASZEWSKA Agnieszka and KLINGE Andrea (p.95) (17:00) Finite difference method based modelling of electrochemical treatment in reinforced concrete structure / GAO Yun and JIANG Jinyang (p.97) (17:15) An investigation into impressed current cathodic protection systems in an Australian jetty / LAW David William and NICHOLLS Peter (p.99) (17:30) The study on the estimation of the deterioration of reinforcing bar in reinforced concrete / WATANABE Ruiko and MIZOBUCHI Toshiaki (p.101) (17:45) Effect of carbonation on sulfate salt weathering of concrete / LIU Zhanqun, DENG Dehua , XIE Youjun, LONG Guangcheng and YUAN Qiang (p.103) (18:00) Assessment of in-situ compressive concrete strength by means of various non/semi-destructive, and destructive techniques / CRAEYE Bart, LAURIKS Leen, VAN DE LAAR Hannes, VAN DER EIJK Jelle and GÜBELS Wilfried (p.105)	<b>Session T12 / Theme E. Durability of materials, systems and components / Non-cementitious materials (Chair: SJÖSTRÖM Christer)</b> (16:30) (Keynote) A review of recent advances on durability of FRP-strengthened masonry / GHIASSI Bahman, MALJAEI Hamid, OLIVEIRA Daniel V. and LOURENÇO Paulo B. (p.279) (17:00) Frost resistance of clay masonry units : experimental parametric study of CEN/TS 772-22 and proposal for its optimization / SMITS Arwen, MERTENS Stijn and GREGOIRE Yves (p.281) (17:15) Preliminary investigation of the durability of structural adhesives using FTIR spectroscopy and chemometrics / NICHOLSON Catherine L., SHAW Patricia and MARSTON Nick (p.283) (17:30) Artificial aging of air-and-vapour barriers / MØLLER Eva B. and HANSEN Thor (p.285) (17:45) Durability and resistance to degradation of hemp fibres-based insulating envelopes / DONATELLI Antonio, CUNA Daniela, TAGLIENTE Maria Antonia, PROTOPAPA Maria Lucia, MEVOLI Anna, AVERSA Patrizia, BLASI Caterina, CAPODICI Laura and LUPRANO Vincenza Anna Maria (p.287) (18:00) Introduction to FP7 H-House project / MALAGA Katarina and SJÖSTRÖM Christer (not in proceedings)
Conference dinner (Entrance ticket required!)				
<b>Room colour code</b>	Meeting room "Refter" (ground floor)	Meeting room "August Vermeylen" (level +2)	Meeting room "Edgard Blancquaert" (level +3)	
	Registration and exhibition area (ground floor)	"Brasserie Oude Vismijn", Rekelingsstraat 5, 9000 Gent (walking distance from conference venue)		

Start time		End time		Wednesday, 31 May 2017				
8:00	8:30	Registration						
8:30	10:00	<b>Session W1 / Special session 2 "NSF Project - Concrete with low clinker cements" (Chair: SCRIVENER Karen)</b> (8:30) General introduction to NSF Project / PALACIOS Marta, SOJA Wioletta, STEFANONI Matteo, MARAGHECHI Hamed, ZINGG Sharon, SCRIVENER Karen, ELSENER Bernhard, HABERT Guillaume, FLATT Robert J (p.385) (9:00) Influence of comb-type superplasticizers on the properties of low clinker cementitious materials. / PALACIOS Marta, NASKAR Nilanjon, BOSCARO Federica and FLATT Robert J (p.387) (9:15) Evolution of microstructure and phase assemblage in blended cement pastes exposed to natural carbonation / SOJA Wioletta, MARAGHECHI Hamed, DURDZINSKI Pawel and SCRIVENER Karen (p.389) (9:30) Corrosion rates in carbonated low clinker cements: are the new binders really sustainable? / STEFANONI Matteo, ANGST Ueli and ELSENER Bernhard (p.391) (9:45) Environmental assessment of radical innovation in concrete structures / ZINGG S., PITTAU F., LÄMMLIN T., HAJESMAELI A., LURA P., DENARIE E., HABERT G (p.393)	<b>Session W2 / Theme G. Durability, LCA and sustainable construction (Chair: DE BRITO Jorge)</b> (8:30) (Keynote) The influence of estimated service life on the embodied emissions of zero emission buildings (ZEBs) when choosing low-carbon building products / FUFU Selamawit Mamo, KJENDSETH WIJK Marianne, DAHL SCHLANBUSCH Reidun and ANDRESEN Inger (p.365) (9:00) Parametric LCA of a ventilated timber wall construction in tall timber buildings / FUFU Selamawit Mamo, SKAAR Christofer, GRADECI Klodian, LABONNOTE Nathalie, TIME Berit and KÖHLER Jochen (p.367) (9:15) Effect of dimensions on embodied environmental impact of buildings / HOXHA Endrit, CHEVALIER Jacques, LE ROY Robert and HABERT Guillaume (p.369) (9:30) Main stadium structures of summer Olympic Games : efficiency assessment of their physical performances / MADANI Nigar, TAVUKÇUOĞLU Ayşe and GÜNEL Mehmet Halil (p.39) (9:45) Use of electric arc furnace slag for the production of durable sustainable concretes / SIDERIS K.K., CHATZOPOULOS A. and TASSOS Ch. (p.361)	<b>Session W3 / Theme E. Durability of materials, systems and components / Concrete / Attack (Chair: FONTANA Patrick)</b> (8:30) (Keynote) Probabilistic evaluation of the concrete durability subject to accelerated decay by salt crystallization / GARAVAGLIA Elsa, TEDESCHI Cristina and PEREGO Sara (p.225) (9:00) Cement paste expansion under external sulfate attack / MA Xu, ÇOPUROĞLU Oğuzhan, SCHLANGEN Erik, HAN Ningxu and XING Feng (p.227) (9:15) The effect of external sulfate attack on concrete, mortar and cement paste / TEDESCHI Cristina, CEFIS Nicola and COMI Claudia (p.229) (9:30) Investigation of the deterioration of blended cement concrete under sulfate attack in terms of interfacial transition zone / WU Kai, SHI Huiheng, GAO Yun, YE Guang and DE SCHUTTER Geert (p.231) (9:45) Accelerated ageing of textile reinforced concrete (TRC) / MALAGA Katarina, WILLIAMS PORTAL Natalie and OUTRAS Ilias (p.233)				
		10:00 10:30 Coffee						
		10:30 11:00 <b>Plenary lecture 3A: Influence of mineral binder type on alkali carbonate reaction / BOKAN-BOSILKOV Violeta (p.11) (Chair: DE SCHUTTER Geert)</b>						
		11:00	12:45	<b>Session W4 / Theme E. Durability of materials, systems and components / Concrete / Additions (Chair: JOHN Vanderley)</b> (11:00) (Keynote) The durability of concrete produced with reclaimed fly ash / THOMAS Michael and MOFFATT Edward (p.155) (11:30) Performance of concrete made with calcined clays, limestone and Portland cement under natural aggressive conditions / MARTIRENA Fernando, RIBALTA Juan, MARAGUESHI Hamed, ROCHA Dayran, ALUJAS Adrian and SCRIVENER Karen (p.157) (11:45) Ultrafine Fly ash and Ultrafine GGBS for High strength and Durable HPC / BANDIVADEKAR Tanuja P. and RATHOD Alok (p.159) (12:00) Self-desiccation and self-desiccation shrinkage of silica fume-cement pastes / LV Yang, YE Guang and DE SCHUTTER Geert (p.161) (12:15) Effect of curing conditions on microstructure, cracking and durability of SCC / BARLUENGA Gonzalo, PUENTES Javier and GUARDIA Cynthia (p.163) (12:30) Durability of ultra-high performance concrete – Experiences from a real-scale application / SPIESZ Przemek and HUNGER Martin (p.165)	<b>Session W5 / Theme F. Service life analysis and prediction methodologies (Chair: VAN DEN BOSSCHE Nathan)</b> (11:00) (Keynote) Benchmarking of different methodologies for service life prediction of ceramic claddings / SILVA Ana, GASPAR Pedro L. and DE BRITO Jorge (p.319) (11:30) A fuzzy expert system in buildings serviceability / PRIETO A. J., MACÍAS-BERNAL J. M., ALEJANDRE F. J. and SILVA A. (p.321) (11:45) The application of survival analysis for service life prediction of building materials : a proof of concept / BUYLE Matthias, BRAET Johan and AUDENAERT Amariyllis (p.323) (12:00) BRAIN : Building Research Analysis and Information Network / SERRAT Carles, GIBERT Vicenç, CASAS Joan Ramon and RAPINSKI Jacek (p.325) (12:15) Air- and watertightness of prefabricated envelope modules for the renovation of buildings / MAROY Katrien, VAN LINDEN Stéphanie, DE VOGELAERE Koen, VAN DEN BOSSCHE Nathan and STEEMAN Marijke (p.327) (12:30) Surface consolidation of natural stones by use of bio-agents and chemical consolidation / WANG Jianyun, FRAEYE Domien, ERSAN Yusuf Cagatay, DE MUYNCK Willem, BOON Nico and DE BELIE Nele (p.329)	<b>Session W6 / Special session "Redmonest - Cultural Heritage" (Chair: COURARD Luc)</b> (11:00) General introduction to Redmonest Project (11:15) Comparison of transparent coatings and water-repellents for the protection of historic buildings made of concrete / CAILLEUX Emmanuel (p.397) (11:30) Water-repellents as alternative carbonation-induced corrosion treatments for reinforced concrete cultural heritage / MARIE-VICTOIRE Elisabeth, BOUICHOU Myriam and JOURDAN Héloïse (p.399) (11:45) Surface Inhibitors for the Non-Invasive treatment of Corroded Structures / ANDRADE Carmen, REBOLLEDO Nuria, and MORALES J.A. (p.401) (12:00) Influence of hydrophobic treatments applications on the concrete carbonation delay / COURARD Luc, LUCQUAID Vincent (p.403)		
12:45 13:45 Lunch								
13:45	15:45			<b>Session W7 / Theme E. Durability of materials, systems and components / Concrete / Fresh concrete and mechanical performance (Chair: IGARASHI Shin-ichi)</b> (13:45) (Keynote) Impact of drying and carbonation on microstructure and dimensional changes for supplementary cementitious materials (SCMs) / BERTIN Matthieu, OMIKIRINE METALSI Othman, BAROGHEL BOUNY Véronique and OURO KOURA Baba Issa (p.235) (14:15) Fracture properties of concrete subjected to heating up to 60°C / MATSUZAWA Koichi and KITSUTAKA Yoshinori (p.237) (14:30) Influence of geometry on the fracturing behavior of textile reinforced calcium phosphate cement using acoustic emission / BLOM Johan and AGGELIS Dimitrios (p.239) (14:45) Experimental Research of Formwork Pressure by Pumping Concrete for an Underground Diaphragm Wall Bottom Up / JIANG Wei, LIU Xian and YUAN Yong (p.241) (15:00) Acoustic emission monitoring of fresh cementitious material / DZAYE Evine Dildar, DE SCHUTTER Geert and AGGELIS Dimitrios (p.243) (15:15) Estimation of concrete's quality based on innovative early age ultrasonic measurements / ILOPOULOS N. Sokratis and AGGELIS G. Dimitrios (p.245)	<b>Session W8 / Theme G. Durability, LCA and sustainable construction (Chair: VAN ACKER Joris)</b> (13:45) (Keynote) Influence of life span prediction on building component's LCA performance / SIE Marion, SUSCA Tiziana, WILLIAMS PORTAL Natalie, DURING Otto, FONTANA Patrick, SJOSTROM Christer and PAYET Jérôme (p.371) (14:15) Roof replacement roof edge design details on commercial roofs for the new requirements of energy codes / HUTCHINSON Thomas W. (p.373) (14:30) Light-weight bathrooms with increased durability / MORELLI Martin and BRANDT Erik (p.375) (14:45) End-of-life consideration for hybrid material systems / AGUSTI-JUAN Isolda, ZINGG Sharon and HABERT Guillaume (p.377) (15:00) Effect of hybrid fiber reinforcement on corrosion induced stiffness degradation of reinforced concrete columns / DUNCAN Jacob F., NGUYEN Wilson and OSTERTAG Claudia P. (p.331) (15:15) (Special presentation CIB W080) Prediction of Service Life of Building Materials and Components / Bruno Daniotti (not in proceedings) (15:30) Durability Research Needs for a Low-Carbon Cement-based Materials Industry / QUATTRONE Marco and JOHN Vanderley M. (p.381)	<b>Session W9 / Theme E. Durability of materials, systems and components / Concrete / Additions (Chair: SHI Caijun)</b> (13:45) (Keynote) Effects of nano-particles on the properties of ultra-high performance cement based composites / RONG Zhidan, SUN Wei and JIANG Guang (p.145) (14:15) Influence of ternary cements containing limestone filler on concrete resistance to carbonation / LAUCH Kim-Séang, DIERYCK Vinciane and VANHAMME Géraldine (p.147) (14:30) Effect of SCMs on capillary sorption over time : relation with drying rate and testing time / ALDERETE Natalia, VILLAGRÁN-ZACCARDI Yury and DE BELIE Nele (p.149) (14:45) Analysis of chloride transport and carbonation in limestone-calcined clay binders with varying kaolinite content / AVET Francois, MARAGHECHI Hamed and SCRIVENER Karen (p.151) (15:00) Influence of concrete composition on chloride ingress and carbonation: analysis by means of an extended data-set / CRAEYE Bart, MINNE Peter, DE WINTER Liesbet, CASPEELE Robby, DE SCHUTTER Geert, DE PAUW Peter and DOOMS Bram (p.153) (15:15) Effects of chloride concentration on microstructure of cement pastes by AC impedance spectroscopy / HU Xiang, SHI Caijun, YE Guang and DE SCHUTTER Geert (p.195) (15:30) The properties of mortar and concrete using Gehlente clinker as fine aggregate / KAWATO Takaya, FUJIWARA Hiromi, MARUOKA Masanori, HAYASHI Kensuke, OTSUKA Ryosuke, OGASAWARA Ken, SHIRAYAMA Kosuke and YAMANAKA Yuto (p.127)		
				15:45 16:00 Coffee				
				16:00 16:30 <b>Plenary lecture 3B: Durability of Concrete Prepared with Ternary Binder Systems Involving Limestone and Calcined clay / SANTHANAM Manu (p.13) (Chair: DE BELIE Nele)</b>				
		16:30 16:45 <b>Closing session (Chair: DE BELIE Nele, JANSSENS Arnold)</b>						
		16:45 17:45 Farewell refreshment						
<b>Room colour code</b>		Meeting room "Refter" (ground floor)	Meeting room "August Vermeylen" (level +2)	Meeting room "Edgard Blanquaert" (level +3)				
Registration and exhibition area (ground floor)								