

TIME	MAINSTAGE	ROOM A	ROOM B	ROOM C	ROOM D
12:00	Start				
12:00	12:25	Opening and welcome speeches			
12:25	13:05	Keynote lecture <i>Prof. Robert Flatt</i>			
13:05	13:20	Break			
		<b>CCR Special Issue Invited talks</b>	<b>CCR Special Issue Invited talks</b>		
13:20	13:45	<b>3-D printing of concrete: Beyond horizons</b>  <i>Mohammad Khan, Florence Sanchez, Hongyu Zhou</i>	<b>From Smart Dynamic Casting to a growing family of Digital Casting Systems</b> <i>Ena Lloret-Fritschi, Timothy Wangler, Lukas Gebhard, Jaime Mata-Falcón, Sara Mantellato Fabio Scotto, Joris Burger, Anna Szaboo, Nicholas Ruffray, Lex Reiter, Federica Boscaro, Walter Kaufmann, Matthias Kohler, Fabio Gramazio, Robert Flatt</i>		
13:45	14:10	<b>A process classification framework for defining and describing Digital Fabrication with Concrete</b>  <i>Richard Buswell, Wilson Ricardo Leal da Silva, Freek Bos, Roel Schipper, Dirk Lowke, Norman Hack, Harald Kloft, Viktor Mechtcherine, Tim Wangler, Nicolas Roussel</i>	<b>Opportunities and challenges for structural engineering of digitally fabricated concrete</b>  <i>Costantino Menna, Jaime Mata-Falcón, Freek P. Bos, Gieljan Vantghem, Liberato Ferrara, Domenico Aprone, Theo Salet, Walter Kaufmann</i>		
14:10	14:25	Break-out sessions			
		<b>Structural engineering &amp; reinforcement (1)</b>	<b>Rheology &amp; fresh state behaviour (1)</b>	<b>Applications &amp; Case studies (1)</b>	<b>Digital design, Technologies &amp; Industrialization (1)</b>
14:25	14:40	<b>Printed concrete as formwork material: a preliminary study</b>  <i>Michiel Bekaert, Kim Van Tittelboom, Geert De Schutter</i>	<b>Numerical Model Describing the Early Age Behavior of 3D Printed Concrete – work in progress</b>  <i>Sebastian Andersen, Jens Henrik Nielsen, Ieva Paegla, Wilson Ricardo Leal da Silva</i>	<b>Fast Complexity: Additive Manufacturing of Prefabricated Concrete Slabs</b>  <i>Ana Anton, Andrei Jipa, Lex Reiter, Benjamin Dillenburger</i>	<b>3D Concrete Printing - Free form geometries with improved ductility and strength</b>  <i>Zeeshan Ahmed, Alessia Biffi, Lauri Hass, Freek Bos, Theo Salet</i>
14:40	14:55	<b>Bond of reinforcement cable in 3D printed concrete</b>  <i>Freek Bos, Steven Dezaire, Zeeshan Ahmed, Anne Hoekstra, Theo Salet</i>	<b>Characterisation of the Layer Pressing Strategy for concrete 3D printing</b>  <i>Paul Carneau, Romain Mesnil, Nicolas Ducoulombier, Olivier Baverel, Nicolas Roussel</i>	<b>Reinterpreting the historic building fragment using 3D Concrete printing</b>  <i>Juliette Bekkering, Sjef van Hoof, Barbara Kuit, Zeeshan Ahmed, Alessia Biffi</i>	<b>Print Cast Concrete: Additive Manufacturing for 3D Printing Mortar in Robotically Fabricated Green Sand Molds</b>  <i>Christopher Battaglia, Martin Miller, Kho Verian</i>
14:55	15:10	<b>Experimental Investigation of Topology-Optimized Deep Reinforced Concrete Beams with Reduced Concrete Volume</b>  <i>Josephine Carstensen, Yan Liu, Jackson Jewett</i>	<b>A Compendious Rheo-Mechanical Test for Printability Assessment of 3D Printable Concrete</b>  <i>Seung Cho, Jacques Kruger, Frederick Bester, Marchant van den Heever, Algurnon van Rooyen, Gideon van Zijl</i>	<b>A robust mortar and printing system</b>  <i>Jan Blaakmeer, Bruno Lobo</i>	<b>3D printing of a cement-based mortar in a complex fluid suspension: Analytical modeling and experimental tests</b>  <i>Abdeslam Benamara, Alexandre Pierre, Abdelhak Kaci, Yannick Melinge</i>
15:10	15:25	<b>Studying the Bond Properties of Vertical Integrated Short Reinforcement in the Shotcrete 3D Printing Process</b>  <i>Niklas Freund, Inka Dressler, Dirk Lowke</i>	<b>Effect of Metakaolin, Fly ash and Polypropylene Fibres on fresh and Rheological Properties of 3D Printing Based Cement Materials</b>  <i>Marie Dedenis, Mohammed Sonebi, Sofiane Amziane, Arnaud Perrot, Giuseppina Amato</i>	<b>Design and Fabrication of a Non-standard, Structural Concrete Column using Eggshell: Ultra-thin, 3D Printed Formwork</b>  <i>Joris Burger, Ena Lloret-Fritschi, Nizar Taha, Fabio Scotto, Thibault Demoulin, Jaime Mata-Falcón, Fabio Gramazio, Matthias Kohler, Robert Flatt</i>	<b>Experimental study on 3D printing of concrete with overhangs</b>  <i>Francis Brun, Florindo Gaspar, Artur Mateus, João Vitorino, Francisco Diz</i>
15:25	15:40	<b>Aligned interlayer fibre reinforcement and post-tensioning as a reinforcement strategy for digital fabrication</b>  <i>Lukas Gebhard, Jaime Mata-Falcón, Ana Anton, Joris Burger, Ena Lloret-Fritschi, Lex Reiter, Benjamin Dillenburger, Fabio Gramazio, Matthias Kohler, Robert Flatt, Walter Kaufmann</i>	<b>"The Slug test": Inline assessment of Yield Stress for ex-trusion-based additive manufacturing</b>  <i>Nicolas Ducoulombier, Paul Carneau, Romain Mesnil, Leo Demont, Nicolas Roussel, Jean-François Caron</i>	<b>Complex architecture in printed concrete: the case of the Innsbruck University 350th anniversary pavilion Cohesion</b>  <i>Georg Grasser, Lorenz Pammer, Hannah Köll, Emanuel Werner, Freek Bos</i>	<b>Inspection methods for 3D Concrete Printing</b>  <i>Richard Buswell, Peter Kinnell, jie Xu, Norman Hack, Freek Bos, Rob Wolfs, Mehdi Maboudi, Georg Grasser, Peter Massin, Harald Kloft</i>
15:40	15:55	Break-out sessions			
15:55	16:05	Science meets Industry			
16:05	16:15	Wrap-up of the day			

TIME	MAINSTAGE	ROOM A	ROOM B	ROOM C	ROOM D
12:00	Start				
12:00	12:40				
	<b>Keynote lecture - Particle bed 3D printing - Future challenges on the way to application in structural concrete</b> <i>Prof. Dirk Lowke</i>				
12:40	12:50				
	<b>Science meets Industry</b>				
12:50	13:30				
	<b>Keynote lecture - Robots are your friends!</b> <i>Prof. Maarten Steinbuch</i>				
13:30	13:45				
	Break				
		<b>Mixture design, admixtures &amp; alternative binders (1)</b>	<b>Rheology &amp; fresh state behaviour (2)</b>	<b>Mechanical performance (1)</b>	<b>Digital design, Technologies &amp; Industrialization (2)</b>
13:45	14:00	<b>An Fe-rich slag-based mortar for 3D printing</b> <i>Glenn Beersaerts, Sandra Lucas, Yiannis Pontikes</i>	<b>Fresh And Hardened Properties Of 3d-Printed Concrete Made With Dune Sand</b> <i>Hilal El-Hassan, Fady alnajar, Hamad Aljassmi, Waleed Ahmed</i>	<b>Quantitative evaluation of orientation of steel fibers in 3D-printed ultra-high performance concrete</b> <i>Ravendran Arunothayan, Behzad Nematollahi, Jay Sanjayan, Ravi Ranade, Shin Hau Bong, Kamal Khayat</i>	<b>DIGITAL CONSTRUCTION: 3D printing for performative houses</b> <i>Paolo Cascone, Maddalena Laddaga, Federico Forestiero</i>
14:00	14:15	<b>Enhancing buildability of 3D printable concrete by spraying of accelerating admixture on surface</b> <i>Shantanu Bhattacharjee, Manu Santhanam</i>	<b>An experimental testing procedure to assess the buildability performance of 3D printed concrete elements</b> <i>Laura Esposito, Costantino Menna, Domenico Asprone, Chiara Rossino, Maurizio Marchi</i>	<b>Steel fibre links in 3D printed concrete</b> <i>Frederick Bester, Marchant van den Heever, Jacques Kruger, Seung Cho, Gideon van Zijl</i>	<b>Extended Lattice Model to Simulate the Printing Process of 3D Printed Cementitious Materials</b> <i>Ze Chang, Erik Schlangen, Branko Šavija</i>
14:15	14:30	<b>Effect of Wollastonite Micro-Fiber Addition on Properties of 3D-Printable 'Just-Add-Water' Geopolymers</b> <i>Shin Hau Bong, Behzad Nematollahi, Ravendran Arunothayan, Ming Xia, Jay Sanjayan</i>	<b>Investigation on the rheological behavior of lightweight foamed concrete for 3D printing applications</b> <i>Devid Falliano, Giuseppe Crupi, Dario De Domenico, Giuseppe Ricciardi, Luciana Restuccia, Giuseppe Andrea Ferro, Ernesto Gugliandolo</i>	<b>Mechanical characterization of cement-based mortar used in 3DCP including early-age creep effects</b> <i>Lorenzo Casagrande, Laura Esposito, Costantino Menna, Domenico Asprone, Ferdinando Auricchio</i>	<b>Quality assessment of printable strain hardening cementitious composites manufactured in two different printing facilities</b> <i>Stefan Chaves Figueiredo, Anne Linde van Overmeir, Karsten Neffs, Erik Schlangen, Theo A. M. Salet, Branko Savija, Akke S. J. Suiker, Freek P. Bos</i>
14:30	14:45	<b>Synthesis of Hybridized Rheological Modifiers for 3D Printing Concretes</b> <i>AlaEddin Douba, Clare Chan, Stephanie Berrios, Shiho Kawashima</i>	<b>Experimental Investigation on the Early Age Tensile Strength of Fiber Reinforced Mortar Used in 3D Concrete Printing</b> <i>Marta Fioretti, Sriram Kasyapa Kompella, Francesco Lo Monte, Laura Esposito, sandro moro, Costantino Menna, Domenico Asprone, Liberato Ferrara</i>	<b>Influence of pumping/extrusion on the air-void system of 3D printed concrete</b> <i>Arnesh Das, Yu Song, Sara Mantellato, Timothy Wangler, Robert Flatt, David Lange</i>	<b>More Than Meets the Eye? Robotisation and Normativity in the Dutch Construction Industry</b> <i>Tom Coggins, Chantal Muishout, Roel Schipper</i>
14:45	15:00	Break-out sessions			
		<b>Structural engineering &amp; reinforcement (2)</b>	<b>Rheology &amp; fresh state behaviour (3)</b>	<b>Mechanical performance (2)</b>	<b>Digital design, Technologies &amp; Industrialization (3)</b>
15:00	15:15	<b>Bending and Pull-Out Tests on a Novel Screw Type Reinforcement for Extrusion-Based 3D Printed Concrete</b> <i>Lauri Hass, Freek Bos</i>	<b>Transition from fluid to solid concrete in the flexible mould process</b> <i>Steffen Grunewald, Roel Schipper</i>	<b>Fire Behavior of a Printed Sample for Building</b> <i>Mélody Dhondt, Sébastien Rémond, Philippe Leblond, Bunthan Iea, Estelle Hynek, Nicolas Pinoteau</i>	<b>Influence of processing parameters on the layer geometry in 3D concrete printing: experiments and modelling</b> <i>Raphael Comminal, Wilson Ricardo Leal da Silva, Thomas Juul Andersen, Henrik Stang, Jon Spangenberg</i>
15:15	15:30	<b>Load carrying capacity and failure mode of 3D printed mortar wall panel under axial compression loading</b> <i>Patiphat Jiramarootapong, Lapyote Prasittisopin, Chalermwut Snguanyat, Ganchai Tanapornraweeekit, Somnuk Tangtermsirikul</i>	<b>Physico-chemical characterization at early-age of 3D printed mortar</b> <i>Ilhame Harbouz, Emmanuel Rozière, Ammar YAHIA, Ahmed Loukili</i>	<b>Effect of Metallic Fibers on the Print Quality and Strength of 3D Printed Concrete</b> <i>Rashid Hameed, Aurélie Papon, Arnaud Perrot, Damien Rangeard</i>	<b>Automating Concrete Construction: Digital Design of Non-Prismatic Reinforced Concrete Beams</b> <i>Eduardo Costa, Paul Shepherd, John Orr, Tim Ibell, Robin Oval</i>
15:30	15:45	<b>Application of 3D printed segments designed by topology optimization analysis to a practical scale prestressed pedestrian bridge</b> <i>Koji Kinomura, Satoshi Murata, Yujin Yamamoto, Hirotohi Obi, Akihito Hata</i>	<b>Gravity driven tests to assess mechanical properties of printable cement-based materials at fresh state</b> <i>Yohan Jacquet, Damien Rangeard, Vincent Picandet, Arnaud Perrot</i>	<b>Facilitating ductile failure of 3D printed concrete elements in fire</b> <i>Jacques Kruger, Antonio Cicone, Frederick Bester, Marchant van den Heever, Seung Cho, Richard Walls, Gideon van Zijl</i>	<b>Free deposition printing for space truss structures</b> <i>Romain Duballet, Nicolas Ducoulombier, Paul Carneau, Leo Demont, Mahan Motamedi, Romain Mesnil, Olivier Baverel, Jean-François Caron, Justin Dirrenberger</i>
15:45	16:00	<b>Potential approaches for reinforcing complex concrete structures with integrated flexible formwork</b> <i>Minu Lee, Jaime Mata-Falcón, Mariana Popescu, Philippe Block, Walter Kaufmann</i>	<b>Characterizing Extrudability For 3D Concrete Printing Using Discrete Element Simulations</b> <i>Roshan Jayathilakage, Jay Sanjayan, Pat Rajeev</i>	<b>High-performance light-weight concrete for 3D printing</b> <i>Malek Mohammad, Eyad Masad, Thomas D. Seers, Sami G. Al-Ghamdi</i>	<b>Rapid Composite Formwork: An Automated and Customizable Process for Freeform Concrete through Computational Design and Robotic Fabrication</b> <i>Guy Gardner, Kristen Forward, Kim Tse, Karan Sharma</i>
16:00	16:15	Break-out sessions			
16:15	16:25	<b>Science meets Industry</b>			
16:25	16:35	<b>Wrap-up of the day</b>			

TIME	MAINSTAGE	ROOM A	ROOM B	ROOM C	ROOM D
12:00	Start				
		<b>CCR Special Issue Invited talks</b>	<b>CCR Special Issue Invited talks</b>		
12:00	12:25	<b>Extrusion-based additive manufacturing with cement-based materials – Production steps, processes, and their underlying physics: A review</b> <i>Viktor Mechtcherine, Freek Bos, Arnaud Perrot, Wilson Ricardo Leal da Silva, Venkatesh Nerella, Shirin Fataei, Rob Wolfs, Mohammed Sonebi, Nicolas Roussel</i>	<b>Influence of process parameters on the interlayer bond strength of concrete elements additive manufactured by Shotcrete 3D Printing (SC3DP)</b> <i>Harald Kloft, Hans-Werner Krauss, Norman Hack, Eric Herrmann, Stefan Neudecker, Patrick Varady, Dirk Lowke</i>		
12:25	12:50	<b>Numerical simulations of concrete processing: From standard formative casting to additive manufacturing</b> <i>Nicolas Roussel, Jon Spangenberg, Jon Wallevik, Rob Wolfs</i>	<b>Improving printability of limestone-calcined clay-based cementitious materials by using viscosity-modifying admixture</b> <i>Yu Chen, Stefan Chaves Figueiredo, Zhenming Li, Ze Chang, Koen Jansen, Oğuzhan Çopuroğlu, Erik Schlangen</i>		
12:50	13:15	<b>Elastic buckling and plastic collapse during 3D concrete printing</b> <i>Akke Suiker, Rob Wolfs, Sandra Lucas, Theo Salet</i>	<b>On the emergence of 3D printable Engineered, Strain Hardening Cementitious Composites (ECC/SHCC)</b> <i>Victor Li, Freek Bos, Kequan Yu, Wes McGee, Tsz Yan Ng, Stefan Chaves Figueiredo, Karsten Neefs, Viktor Mechtcherine, Venkatesh Nerella, Jinlong Pan, Gideon van Zijl, Jacques Kruger</i>		
13:15	13:30	<i>Break-out sessions</i>			
		<b>Mixture design, admixtures &amp; alternative binders (2)</b>	<b>Rheology &amp; fresh state behaviour (4)</b>	<b>Applications &amp; Case studies (2)</b>	<b>Digital design, Technologies &amp; Industrialization (4)</b>
13:30	13:45	<b>Control of Strand Properties Produced with Shotcrete 3D Printing by Accelerator Dosage and Process Parameters</b> <i>Inka Dressler, Niklas Freund, Dirk Lowke</i>	<b>Investigation on Structural Build-up of 3D Printable Foam Concrete</b> <i>Viacheslav Markin, Irina Ivanova, Shirin Fataei, Silvia Reijßig, Viktor Mechtcherine</i>	<b>Shotcrete 3D Printing technology for the fabrication of slender fully reinforced freeform concrete elements with high surface quality: A real-scale demonstrator</b> <i>Norman Hack, Harald Kloft</i>	<b>Simultaneous Reinforcement of Concrete While 3D Printing</b> <i>Omar Geneidy, Sujay Kumarji, Alexandre Dubor, Aldo Sollazzo</i>
13:45	14:00	<b>Comparison of Printable Inorganic Binders - Key Properties for 3D Printable Materials</b> <i>Tamino Hirsch, Tobias Dorn, Clemens Ehm, Dietmar Stephan</i>	<b>Effect of cement type and limestone powder content on extrudability of lightweight concrete</b> <i>Carla Matthäus, Daniel Back, Daniel Weger, Thomas Kränkel, Jennifer Scheydt, Christoph Gehlen</i>	<b>UHPFRC Pavilion of 3-dimensional pentagon tiling</b> <i>Sung-Gul Hong, John Juhyung Chun, Sung-Hoon Kang, Minsoo Kim</i>	<b>Additive manufacturing by extrusion of lightweight concrete - strand geometry, nozzle design and layer layout</b> <i>Klaudius Henke, Daniel Talke, Carla Matthäus</i>
14:00	14:15	<b>Design of energy-efficient white portland cement mortars for digital fabrication</b> <i>Sibel Kurt, Berrak Avcıoğlu, Tayfun Yıldırım, Zeynep B. Bundur, Halime Paksoy, Eray Aydın, Yiğit Alper Atalay</i>	<b>Numerical modeling of an extrusion-based 3D concrete printing process considering a spatially varying pseudo-density approach</b> <i>Meron Mengesha, Albrecht Schmidt, Luise Göbel, Tom Lahmer, Carsten Könke</i>	<b>Field Considerations for Deploying Additive Construction</b> <i>Megan Kreiger, Brandy Diggs-McGee, Tanner Wood, Eric Kreiger, Bruce MacAllister</i>	<b>Extrusion Nozzle Shaping for Improved 3DP of Engineered Cementitious Composites (ECC/SHCC)</b> <i>Wes McGee, Tsz Yan Ng, Kequan Yu, Victor Li</i>
14:15	14:30		<b>Evaluating the influence of aggregate content on pumpability of 3D printable concrete</b> <i>Manu K. Mohan, A. V. Rahul, Kim Van Tittelboom, Geert De Schutter</i>	<b>Sustainable Reinforced Concrete Beams: Mechanical Optimisation and 3D-Printed Formwork</b> <i>Sébastien Maitenaz, Romain Mesnil, Paul Onfroy, Nicolas Metge, Jean-François Caron</i>	<b>Buildability of geopolymers concrete for 3D printing with microwave heating</b> <i>Shravan Muthukrishnan, Sayanthan Ramakrishnan, Jay Sanjayan</i>
14:30	14:45		<b>2D numerical modelling of particle-bed 3D printing by selective paste intrusion</b> <i>Alexandre Pierre, Daniel Weger, Dirk Lowke, Arnaud Perrot</i>	<b>Thermal and Sound Insulation of Large-scale 3D Extrusion Printing Wall Panel</b> <i>Lapyote Prasittisopin, Kittisak Pongpaisanseree, Patiphap Jiramarootapong, Chalermwut Snguanyat</i>	<b>High-resolution Additive Formwork for Building-Scale Concrete Panels</b> <i>Roberto Naboni, Luca Breseghella</i>
14:45	15:00	<i>Break-out sessions</i>			
		<b>Mixture design, admixtures &amp; alternative binders (3)</b>	<b>Structural engineering &amp; reinforcement (3)</b>	<b>Mechanical performance (3)</b>	<b>Digital design, Technologies &amp; Industrialization (5)</b>
15:00	15:15	<b>Use of the Chemical and Mineral Admixtures to Tailor the Rheology and the Green Strength of 3D Printing Cementitious Mixtures</b> <i>Mohammad Amin Moeini, Masoud Hosseini, Ammar YAHIA</i>	<b>Penetration Reinforcing Method for 3D Concrete Printing</b> <i>Taylor Marchment, Jay Sanjayan</i>	<b>Mechanical Characterization of Layer-by-Layer Interface in Concrete Elements obtained by Additive Manufacturing</b> <i>Rosanna Napolitano, Costantino Menna, Domenico Asprone, Lorenzo Del Giudice</i>	<b>Architectural applications and workflows for additive fabrication with concrete</b> <i>Sven Pfeiffer, Tobias Dorn, Tamino Hirsch, Dietmar Stephan, Vassiliadis Dimitrios</i>
15:15	15:30	<b>Characterising Concrete Mixes For 3d Printing</b> <i>Atteyeh Natanzi, Ciaran McNally</i>	<b>Combining multiple loads in a topology optimization framework for digitally fabricated concrete structures</b> <i>Tommaso Pastore, Costantino Menna, Domenico Asprone</i>	<b>Dynamic behaviour of Layered 3D printed concrete elements</b> <i>Rosanna Napolitano, Costantino Menna, Daniele Forni, Domenico Asprone, Ezio Cadoni</i>	<b>ACDC: The Admixture Controlled Digital Casting and its Application to Thin Folded Concrete Structures</b> <i>Anna Szabo, Lex Reiter, Ena Lloret Fritschi, Timothy Wangler, Fabio Gramazio, Matthias Kohler, Robert Flatt</i>
15:30	15:45	<b>Digital Fabrication with 'Just-Add-Water' Geopolymers: Effects of Curing Conditions and Print-time Interval</b> <i>Behzad Nematollahi, Shin Hau Bong, Ming Xia, Jay Sanjayan</i>	<b>Potential for the integration of continuous fiber-based reinforcements in digital concrete production</b> <i>Martin Scheurer, Gözdem Dittel, Thomas Gries</i>	<b>Characterizing the Fissility of 3D Concrete Printed Elements via the Cohesive Zone Method</b> <i>Marchant van den Heever, Frederick Bester, Seung Cho, Mohammad Sadegh Pourbehi, Jacques Kruger, Gideon van Zijl</i>	<b>Robot-Controlled Fabrication of Sprayed Concrete Elements as a Cyber-Physical-System</b> <i>Ilija Vukorep, Gregor Zimmermann, Tino Sablotny</i>
15:45	16:00	<i>Break-out sessions</i>			
16:00	16:10	<b>Science meets Industry</b>			
16:10	16:20	<b>Wrap-up of the day</b>			

TIME	MAINSTAGE	ROOM A	ROOM B	ROOM C	ROOM D
12:00	Start				
		<b>Mixture design, admixtures &amp; alternative binders (4)</b>	<b>Rheology &amp; fresh state behaviour (5)</b>	<b>Mechanical performance (4)</b>	<b>Digital design, Technologies &amp; Industrialization (6)</b>
12:00	12:15	<b>Advances in Binder Jet 3D printing of non-cementitious materials</b> <i>Pietro Odaglia, Vera Voney, Benjamin Dillenburger, Guillaume Habert</i>	<b>Effect of vibration on rheology of concrete for 3D printing</b> <i>Karthik Pattaje Sooryanarayana, Peter Stynoski, David Lange</i>	<b>3D printing of concrete: the influence on chloride penetration</b> <i>Jolien Van Der Putten, Melissa De Volder, Philip Van den Heede, Geert De Schutter, Kim Van Tittelboom</i>	<b>Reinforced Particle-bed Printing by Combination of the Selective Paste Intrusion Method with Wire and Arc Additive Manufacturing – A First Feasibility Study</b> <i>Daniel Weger, Daniel Baier, Alexander Straßer, Sophia Prötting, Thomas Kränkel, Andreas Bachmann, Christoph Gehlen, Michael Zäh</i>
12:15	12:30	<b>Rubber-cement composites for additive manufacturing: physical, mechanical and thermo-acoustic characterization</b> <i>Matteo Sambucci, Marco Valente, Abbas Sibai, Danilo Marini, Alessia Quitadamo, Ettore Musacchi</i>	<b>Prediction of the yield stress of printing mortar ink</b> <i>Vasilis Sergis, Malo Charrier, Claudiane Ouellet-Plamondon</i>	<b>Effects of Heat-curing and E6-Glass Fibre Reinforcement addition in Powder-based 3DP Cement Mortar Specimens</b> <i>Pshtivan Shakor, Shami Nejadi, Nadarajah Gowripalan</i>	<b>Knitted Concrete</b> <i>Helena Westerlind, José Hernandez Vargas</i>
12:30	12:45	<b>Properties of composite modified with limestone powder for 3D concrete printing</b> <i>Szymon Skibicki, Maria Kaszynska, Nawid Wahib, Mateusz Techman, Karol Federowicz, Adam Zielinski, Tomasz Wroblewski, Norbert Olczyk, Marcin Hoffmann</i>	<b>Dynamic and static yield stress determination of cementitious paste with admixtures</b> <i>Karim Zongo, Malo Charrier, Corentin Duval, Claudiane Ouellet-Plamondon</i>	<b>Effect Of Polypropylene Fibres On The Mechanical Properties Of Extrudable Cementitious Materials</b> <i>Thadshajini Suntharalingam, Brabha Nagaratnam, Keerthan Poologanathan, Phil Hackney, Jeffri Ramli</i>	<b>Concrete 3D printing: System development, process planning and experimental results</b> <i>yu wang, Shuaishuai Li, Tian Qin, ying yu, Jianzhuang Xiao</i>
12:45	13:00	<b>Effect of limestone powder substitution on fresh and hardened properties of 3D printable mortar</b> <i>Yaxin Tao, Karel Lesage, Kim Van Tittelboom, Yong Yuan, Geert De Schutter</i>	<b>Penetration study of liquid in powder bed for 3D powder-bed printing</b> <i>Wenqiang Zuo, Chenghao Dong, Emmanuel Keita, Patrick Belin, Nicolas Roussel</i>	<b>Improving the Bonding Adhesion of the Cold Joints of Normal and Lightweight 3D Printing Mortars</b> <i>Kho Verian, Jarran Ashcroft, Matthew Carli, Randall Bright, Eerik Maandi, Avak Avakian, Edouard Baaklini</i>	<b>Shape accuracy evaluation of geopolymer specimens made using particle-bed 3D printing</b> <i>Ming Xia, Behzad Nematollahi, Jay Sanjayan</i>
13:00	13:15	<i>Break-out sessions</i>			
		<b>Mixture design, admixtures &amp; alternative binders (5)</b>	<b>Structural engineering &amp; reinforcement (4)</b>	<b>Mechanical performance (5)</b>	<b>Sustainability, LCA &amp; economical analyses (1)</b>
13:15	13:30	<b>Rheology evaluation of cement paste with nanoclays, nanosilica and polymeric admixtures for digital fabrication</b> <i>Hugo Varela, Gonzalo Barluenga, Irene Palomar</i>	<b>3D concrete printing on site: a novel way of building houses?</b> <i>Jolien Van Der Putten, Marijke Aerts, Emiel Ascione, Jan Blaakmeer, Joeri Beneens, Alex Van Olmen, Geert De Schutter, Kim Van Tittelboom</i>	<b>Interlayer Effect on Fracture Behavior of 3D Printing Concrete</b> <i>Yun-Chen Wu, Jason Cotrell, Mo Li</i>	<b>Environmental Impacts of 6-Axes Robotic Arm for 3D Concrete Printing</b> <i>Kateryna Kuzmenko, Adelaide Feraille, Olivier Baverel, Nicolas Roussel</i>
13:30	13:45	<b>Geopolymer formulation for binder jet 3D printing</b> <i>Vera Voney, Pietro Odaglia, Coralie Brumaud, Benjamin Dillenburger, Guillaume Habert</i>	<b>Design optimization for 3D concrete printing: Improving structural and thermal performances</b> <i>Gieljan Vantighem, Marijke Steeman, Wouter De Corte, Veerle Boel</i>	<b>Auxetic Behavior of Cementitious Cellular Composites under Uniaxial Compression and Cyclic Loading</b> <i>Yading Xu, Erik Schlangen, Branko Šavija</i>	<b>Preliminary Productivity Analysis of Conventional, Precast and 3D Printing Production Techniques for Concrete Columns with Simple Geometry</b> <i>Raitis Pekuss, Borja Garcia de Soto</i>
13:45	14:00	<b>Lightweight Concrete 3D-Printed by Selective Cement Activation – Investigation of Thermal Conductivity, Strength and Water Distribution</b> <i>Daniel Weger, Heejeong Kim, Daniel Talke, Klaudius Henke, Thomas Kränkel, Christoph Gehlen</i>	<b>Flexural Behaviour of AR-glass Textile Reinforced 3D Printed Concrete Beams</b> <i>Weiqliang Wang, Nikolaos Konstantinidis, Simon Austin, Richard Buswell, Sergio Cavalaro, Domenico Cecini</i>	<b>Impact of Particle Size and Grading on Aggregate-bed 3D Concrete Printing</b> <i>Shiwei Yu, Jay Sanjayan, Hongjian Du</i>	<b>Preliminary Study of the Implications of 3D Printing on the Construction Supply Chain</b> <i>Ayyagari Ramani, Borja Garcia de Soto</i>
14:00	14:15	<i>Break-out sessions</i>			
14:15	14:55	<b>Keynote lecture - 3D Concrete printing in a construction industry 4.0</b> <i>Prof. Theo Salet</i>			
14:55	15:05	<b>Science meets Industry</b>			
15:05	15:45	<b>Keynote lecture</b> <i>Assoc. Prof. Virginia San Fratello</i>			
15:45	16:15	<b>Closing and Awards</b>			