



第五届国际材料与结构研究实验联合会混凝土智能建造会议暨第六届3D打印混凝土材料和结构国际会议

**5th RILEM International Conference on Concrete and Digital Fabrication &
6th International Conference on 3D Printing Concrete Materials and Structures**

RILEM DC & 3DPCMS

Program

Organizers:

Southeast University, RILEM

Co-organizers:

State Key Laboratory of Engineering Materials for Major Infrastructure

China Concrete & Cement-based Products Association (CCPA)

Sobute New Materials Co., Ltd

15-21 October 2026

Nanjing, China

Conference Program

● Welcome	P01
● Host Organizers	P03
● Conference Chairs and Steering Committee	P04
● Organizing Committee	P05
● Scientific Committee	P06
● Supporting Organizations and Sponsors	P07
● Host Venue	P11
● Agenda Overview	P13
● PhD Course	P15
● RILEM TC Meetings	P18
● Conference Day 1	P19
● Conference Day 2	P24
● Conference Day 3	P39
● Profile of Host Organizers	P45
● Profile of Sponsors	P50
● Contacts	P56
● Notes	P57

It is a great pleasure to welcome you to RILEM Digital Concrete 2026 (DC2026) and the 6th International Conference on 3D Printing Concrete Materials and Structures (3DPCMS-2026) in Nanjing, China. Following the first Digital Concrete conference at ETH Zurich in 2018, and subsequent meetings in Eindhoven in 2020, Loughborough in 2022, and Munich in 2024, we are delighted to bring the Digital Concrete community to Asia for the first time. We hope this conference will provide not only a platform for sharing the latest research, but also plenty of opportunities to meet, discuss, and develop new collaborations.

The response to the conference has been truly encouraging. More than 320 abstracts from 160 organizations across 41 countries were submitted, followed by more than 250 full-paper and extended-abstract submissions for peer review. Following a thorough evaluation by the Scientific Committee, 192 contributions have been selected for oral presentation. The technical program covers a broad range of topics, from mixture design, rheology, and fresh-state behavior to process control, printing strategies, mechanical performance, durability, and microstructure. We will also explore structural optimization, reinforcement, numerical simulation, alternative materials, and emerging manufacturing approaches. A dedicated focus on applications and standardization will provide opportunities to discuss how research can be translated into engineering practice and industrial adoption.

But a conference is about much more than presentations and papers. Discussion and interaction are at the heart of Digital Concrete. We hope you will take the opportunity to ask questions, challenge ideas, share your own experience, and, perhaps most importantly, talk to people you have not met before. With participants coming from different disciplines, institutions, and countries, we are looking forward to the conversations that happen between the formal sessions as much as those taking place within them.

The scientific program will also feature 10 plenary lectures and 22 invited talks delivered by leading experts in the field. These distinguished speakers will share their insights and the latest developments in digital concrete from a wide range of perspectives, offering opportunities to explore emerging ideas, technologies, and directions for the field.

We are also pleased to bring together a series of parallel sessions, poster presentations, and the PhD course, providing different opportunities for the community to exchange knowledge and experience. We encourage you to make full use of the program, engage with the speakers and presenters, and join the discussions throughout the conference.

We would like to express our sincere thanks to all speakers, Steering committee, Scientific and Organizing Committee members, partners, and volunteers who have contributed their time and effort to make this conference possible. We are particularly grateful to RILEM, our academic and industry partners, and all our sponsors, 3D Kenyo Printing (platinum), VERTICO (platinum), NIUMAG (golden), ZHICHUANGCHI (golden), Holcim (golden), and GUANLI (golden), for their generous support.

Finally, we hope you enjoy your time in Nanjing. Beyond the conference rooms, we hope you take the opportunity to experience the city, meet old friends, make new ones, and take home some new ideas—and perhaps a few new collaborations.

From the Scientific and Organizing Committees, we wish you an inspiring, enjoyable, and successful RILEM DC 2026 and 3DPCMS-2026.

Welcome to Nanjing!



Hosts



Southeast University



RILEM

Co-hosts



State Key Laboratory of Engineering Materials
for Major Infrastructure



China Concrete & Cement-based Products Association (CCPA)



Sobute New Materials Co., Ltd. (Sobute)

Conference Chairs

● Chairs

Changwen Miao	Southeast University
Jiaping Liu	Southeast University

● Co-chairs

Yamei Zhang	Southeast University
Yongmo Xu	China Concrete & Cement-based Products Association

Steering Committee

● Chairs

Nicolas Roussel	Gustave Eiffel University
-----------------	---------------------------

● Members

Robert Flatt	ETH Zurich
Freek Bos	Technical University of Munich
Richard Buswell	Loughborough University
Dirk Lowke	Technical University of Munich
Viktor Mechtcherine	Dresden University of Technology

● Chairs

Yamei Zhang	Southeast University
-------------	----------------------

● Co-chairs

Yu Chen	Southeast University
Wenqiang Zuo	Southeast University

● Invited Members

Yunsheng Zhang	Southeast University
Hailong Wang	Zhejiang University
Jianzhuang Xiao	Tongji University
Hai Fang	Nanjing Tech University
Li Wang	Hebei University of Technology
Peng Feng	Tsinghua University
Dongmin Wang	China University of Mining and Technology-Beijing
Yu Chen	China Concrete & Cement-based Products Association

● Members

Zijian Jia	Nanjing Tech University
Cheng Yu	Sobute New Materials Co., Ltd
Zhangli Hu	Southeast University
Youjing Mei	Southeast University
Zhenhua Duan	Tongji University
Xingzi Liu	Southeast University
Min Yang	CCCC First Highway Consultants Co., Ltd.
Ruilin Cao	Nanjing Tech University
Mingyang Feng	China Construction Eighth Engineering Division. Co. LTD

● Chairs

Viktor Mechtcherine	Dresden University of Technology
---------------------	----------------------------------

● Co-chairs

Nicolas Roussel	Gustave Eiffel University
Freek Bos	Technical University of Munich
Dirk Lowke	Technical University of Munich

● Members

A. V. Rahul	Indian Institute of Technology Tirupati
Abdullah Anwar	The University of Melbourne
Adewumi Babafemi	Stellenbosch University
Alexandre Pierre	CY Cergy Paris University
Ambily Parukutty Sanker	CSIR-Structural Engineering Research Centre
Anabela Guillarducci	UTN Santa Fe
Antonella D’ Alessandro	University of Perugia
Arnaud Perrot	Université de Bretagne Sud
Behzad Zahabizadeh	University of Minho
Binrong Zhu	Nanjing Forestry University
Chalermwut Snguanyat	SCG Cement Co., Ltd.
Christiane Richter	Technical University of Munich
Costantino Menna	University of Naples Federico II
Dengwu Jiao	City University of Hong Kong
Derk Bos	Eindhoven University of Technology
Dirk Lowke	Technical University of Munich
Emmanuel Keita	Gustave Eiffel University
Fabian Meyer-Broetz	PERI 3D Construction GmbH

● Members

Freek Paul Bos	Technical University of Munich
Gerius Moelich	Ramboll
Giacomo Rizzieri	Politecnico di Milano
Gideon van Zijl	Stellenbosch University
Giuseppe Loporcaro	University of Canterbury
Haodao Li	Shenzhen University
Heejeong Kim	University of Arizona
Hélène Lombois-Burger	Holcim Innovation Center
Hojae Lee	Korea Institute of Civil Engineering and Building Technology
Hongjian Du	National University of Singapore
Hongzhi Zhang	Shandong University
Huawei Liu	National University of Singapore
Ikenna Desmond Uwanuakwa	Gordion Beton
Ilhame Harbouz	Mohammed VI Polytechnic University
Inka Mai	Leibniz University Hannover
Ivan Navarrete	Pontificia Universidad Católica de Chile
Jacques Kruger	Stellenbosch University
Jaime Mata-Falcón	Universitat Politècnica de València
Jing Yu	The University of Hong Kong
John Kolawole	University of Birmingham
Khadija El cheikh	Buildwise
Laura Sofia Gomez Jaramillo	Delft University of Technology
Léo Demont	École Nationale des Ponts et Chaussées
Luca Breseghello	Technical University of Denmark

● Members

Lucas Lima	ETH Zurich
Lucia Ferrari	University of Bologna
Maris Sinka	Riga Technical University
Ming Xia	Hangzhou Guanli Intelligent Technology Co., Ltd.
Mohammed Sonebi	Queen’s University Belfast
Nabil Khatib	Mohammed V University in Rabat
Nan Zhang	Swinburne University of Technology
Nesil Ozbakan Orhan	Eskisehir Technical University
Nicolas Ducoulombier	XtreeE
Ojas Chaudhari	RISE Research Institutes of Sweden
Paulo Cruz	University of Minho
Paulo Matos	Santa Catarina State University
Pranay Singh	University at Buffalo
Liberato Ferrara	Politecnico di Milano
Reine Karam Cabrerizo	Vicat
Renata Monte	University of São Paulo
Richard Buswell	Loughborough University
Rob Wolfs	Eindhoven University of Technology
S.H. Chu	Aalto University
Sadegh Ghourchian	Umdasch Group Ventures
Sai Kala Kondepudi	Dresden University of Technology
Sandra Nunes	Delft University of Technology
Shin Hau Bong	Swinburne University of Technology
Shubham Raj	CSIR-Central Road Research Institute

● Members

Silvia Parmigiani	Politecnico di Torino
Sri Kalyana Rama Jyosyula	Mahindra University
Sriramya Nair	Cornell University
Tobias Neef	Dresden University of Technology
Timothy Wangler	ETH Zurich
Venkatesh Naidu Nerella	Putzmeister Engineering GmbH
Vítor Cunha	University of Minho
Xiangming Zhou	Brunel University of London
Yakubu Mustapha Karkarna	Federal University of Technology
Yamei Zhang	Southeast University
Yaxin Tao	Tongji University
Yi Wei Daniel Tay	Nanyang Technological University
Yi Zhang	Ghent University
Yiwei Weng	The Hong Kong Polytechnic University
Yiyuan Zhang	Ghent University
Youssef El Bitouri	IMT Mines Alès
Yu Chen	Southeast University
Zengfeng Zhao	Tongji University
Zeynep Basaran Bundur	Özyeğin University
Zhendi Wang	China Building Materials Academy
Zhengwu Jiang	Tongji University
Zijian Jia	Nanjing Tech University

Supporting Organizations

Chinese Ceramic Society
CCCC First Highway Consultants Co., Ltd.
China Resources Building Materials Technology Holdings Limited
Nanjing Institute for Intelligent Additive Manufacturing Co., Ltd

Platinum Sponsors

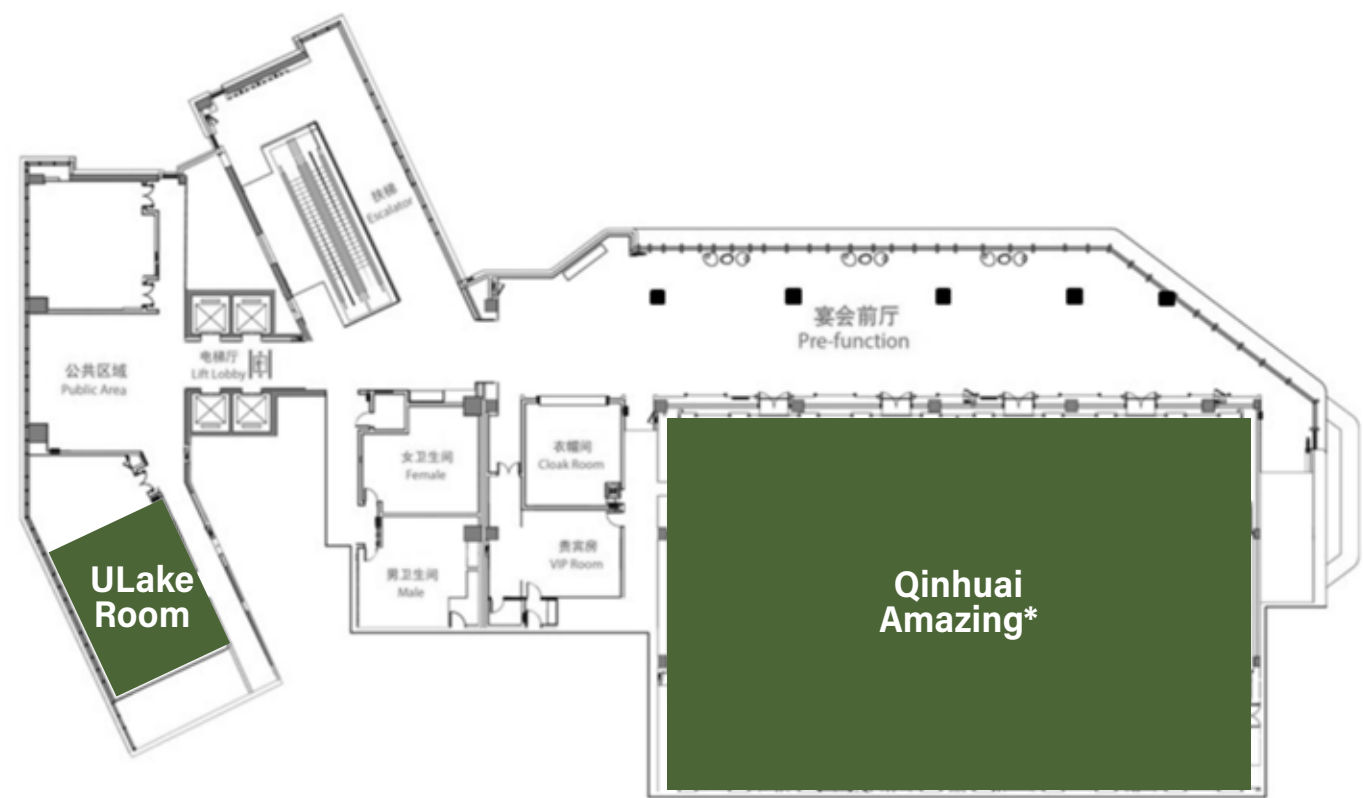
3DKenyoPrinting VERTICO

Gold Sponsors



3rd floor

Qinhuai Amazing* will be divided into Rooms A and B for the parallel sessions.



- 3楼 尚秦淮厅
- 3F Qinhuai Amazing
- 3楼 尚秦淮A厅
- 3F Qinhuai Amazing A
- 3楼 尚秦淮B厅
- 3F Qinhuai Amazing B
- 3楼 悠湖厅
- 3F ULake Room

5th floor



- 5楼 智慧厅
- 5F Knowledge Room
- 5楼 悠谷厅
- 5F Upark Room

Pre-conference				
Date	Oct. 15	Oct. 16	Oct. 17	Oct. 18
Agenda	Early-registration	Doctoral Course		Registration TC meetings
Morning		Session 1 @ J-1, Room 311, Southeast University	Session 3 @ J-1, Room 311, Southeast University	9:00~20:00 All day @ Main Hall
Noon		Lunch @ Taobei Restaurant (2nd floor)	Lunch @ Taobei Restaurant (2nd floor)	
Afternoon	15:00~20:00 Registration for attendees of doctoral course @ Main Hall (1st floor)	Session 2 @ J-1, Room 311, Southeast University	15:00~20:00 Registration for TC meeting @ Main Hall (1st floor), Qinhuai South Hotel	
Evening		Dinner @ Six Gardens Restaurant		
Venue	Qinhuai South Hotel	Southeast University		Qinhuai South Hotel

Transportation for the Doctoral Course: All attendees must take the 8:00 a.m. bus from Qinhuai South Hotel to Southeast University. If you miss the bus, you will unfortunately miss the course.

Registration on October 17: Attendees arriving on October 17 may register at the main hall of Qinhuai South Hotel between 15:00 and 20:00.

Conference			
Date	Oct. 19, Day 1	Oct. 20, Day 2	Oct. 21, Day 3
Morning	Opening & Plenary @ Qinhuai Amazing (3rd floor)	Parallel Sessions @ Qinhuai Amazing A (3rd floor), Qinhuai Amazing B (3rd floor), ULake Room (3rd floor), Knowledge Room (5th floor), UPark Room (5th floor)	Parallel Sessions @ Qinhuai Amazing A (3rd floor), Qinhuai Amazing B (3rd floor), ULake Room (3rd floor), Knowledge Room (5th floor), UPark Room (5th floor)
Noon	Lunch @ Buffet (1st floor)	Lunch @ Buffet (1st floor)	Lunch @ Buffet (1st floor)
Afternoon	Parallel Sessions @ Qinhuai Amazing A (3rd floor), Qinhuai Amazing B (3rd floor), ULake Room (3rd floor), Knowledge Room (5th floor), UPark Room (5th floor)	Parallel Sessions @ Qinhuai Amazing A (3rd floor), Qinhuai Amazing B (3rd floor), ULake Room (3rd floor), Knowledge Room (5th floor), UPark Room (5th floor)	Plenary & Closing @ Qinhuai Amazing (3rd floor)
Evening	Dinner @ Buffet (1st floor)	Banquet @ Qinhuai Amazing (3rd floor)	
Venue	Qinhuai South Hotel		

October 16, 2026	
Venue: J-1, Room 311, Southeast University	
8:30-8:40	Welcome Address Yamei Zhang (Professor, Southeast University, China) Nicolas Roussel (Research Director, Gustave Eiffel University, France)
8:40-9:40	Rheology Nicolas Roussel (Research Director, Head of the CPDM Laboratory, Gustave Eiffel University, France)
9:40-10:00	Tea Break
10:00-11:00	Chemistry of Cementitious Materials Timothy Wangler (Lecturer, Department of Civil, Environmental and Geomatic Engineering, ETH Zürich, Switzerland)
11:00-12:00	Concrete Design, Microstructure and Mechanical Properties Yu Chen (Professor, Southeast University, China)
12:00-12:30	Building Impact Together: Journal of Cement and Concrete Composites's Journey and the Power of Its Authors Nemkumar Banthia (Professor, University of British Columbia, Canada)
12:30-14:00	Lunch
14:00-15:00	Early Age Deformation Emmanuel Keita (Researcher, Laboratoire Navier, Gustave Eiffel University, France)
15:00-16:00	Durability and Quality Control Inka Mai (Professor, Institute of Building Materials Science, Leibniz Universität Hannover, Germany)
16:00-16:30	Tea Break
16:30-17:30	AI, Tools and Processes Richard Buswell (Professor) and Babak Jamhiri (PhD Researcher) (Building Systems Engineering, Loughborough University, United Kingdom)
19:00-21:00	Dinner

Bus departure time: 8:00, from Qinhuai South Hotel to Southeast University; 18:00, from Southeast University to Six Gardens Restaurant; 21:00, from Six Gardens Restaurant to Qinhuai South Hotel.

October 17, 2026	
Venue: J-1, Room 311, Southeast University	
8:30-9:30	Reinforcement Integration Viktor Mechtcherine (Professor of Construction Materials, TU Dresden, Germany)
9:30-10:30	Structural Behavior Freek Bos (Professor, Technical University of Munich, Germany)
10:30-10:50	Tea Break
10:50-11:50	Design and Application Harald Kloft (Professor, Institute of Structural Design, TU Braunschweig, Germany)
11:50-12:20	Insights into the Nature Portfolio and the Editorial Process Shuyan Xiong (Associate editor, Nature Communication)
12:20-12:30	Closing Address Viktor Mechtcherine (Professor of Construction Materials, TU Dresden, Germany)
12:30-14:00	Lunch

Bus departure time: 8:00, from Qinhuai South Hotel to Southeast University; 14:00, from Southeast University to Qinhuai South Hotel.

October 18, 2026	
Venue: UPark Room (5th floor), Qinhuai South Hotel	
9:00-12:00	RILEM Technical Committee Meeting - 303 PFC
12:00-14:00	Lunch
14:00-17:00	RILEM Technical Committee Meeting - 304 ADC
18:00-20:00	Dinner

Monday morning, October 19, 2026	
Venue: Qinhuai Amazing (3rd floor)	
Opening ceremony	
Host: Yamei Zhang (Chair of the organizing committee, Southeast University)	
8:30-9:00	Welcome Speech • <u>Youhong Sun</u> (Academician of the Chinese Academy of Engineering, President of Southeast University) • <u>Changwen Miao</u> (Academician of the Chinese Academy of Engineering, Chair of the conference, Southeast University) • <u>Nicolas Roussel</u> (Former president of RILEM, Chair of conference steering committee, Gustave Eiffel University)
	Photo-Taking
Plenary Session 1	
Chairs: Viktor Mechtcherine, Jay Sanjayan	
9:00-9:30	<u>Yi Min 'Mike' Xie</u> (Hohai University) Generalized Topology Optimization for Architectural Design
9:30-10:00	<u>Arnaud Perrot</u> (University of Southern Brittany) Earth and Concrete 3D Printing: Similarities, Differences, and Shared Lessons
10:00-10:30	Coffee/Tea break
10:30-11:00	<u>Ena Lloret-Fritschi</u> (Università della Svizzera italiana) Producing the Negative: Toward Circular Concrete Construction
11:30-12:00	<u>Emmanuel Keita</u> (Université Gustave Eiffel) No Formwork, No Protection: From Early-Age Drying to Curing in 3D Printed Concrete
12:00-12:30	<u>Venkatesh Nerella</u> (Putzmeister Engineering GmbH) Back to the Future: Load-Bearing On-Site 3D Printing Using Standard Ready-Mix Concrete and Digital Material Supervision

Monday afternoon, October 19, 2026 Venue: Knowledge Room (5th floor)	
Parallel Session 1: Mixture Design Chairs: Paulo Ricardo de Matos, Jie (Jerry) Xu	
14:00-14:25	Weiguo Xu (Tsinghua University) AI Design and 3D Printing: A New Way for Building Construction (Invited talk)
14:25-14:40	Paulo Matos (Santa Catarina State University) Cement Reduction in 3DCP via Aggregate Optimization through Design of Experiments (DOE)
14:40-14:55	Chao Liu (Qingdao University of Technology) 3D-Printed Foam Concrete: Rheological Properties, Printability, and Pore Structure
14:55-15:10	Michaël Ramaekers (Ghent University, Student) 3D-printing of Cementitious Oyster Reef Substrates with Optimized Bioreceptivity to Enhance Larval Settlement
15:10-15:25	Xiao Huan (Southeast University, Student) Material Design and Performance of Set-on-Demand Seawater–Sea-Sand Mortar for 2K 3D Printing
15:25-15:40	Coffee/Tea break
15:40-15:55	Sándor Sóllyom (Budapest University of Technology and Economics) Development and Printability of Alkali-Activated 3D Printable Concrete for 1K Printing
15:55-16:10	Passarin Jongvisuttisun (SCG Cement Co. Ltd.) Interface Bond Strength of Low Carbon 3D Printed LC ³ Mortar–UHPC Hybrid Systems with Reinforcement Strategies
16:10-16:25	Andrei Shpak (SINTEF Community) Development of Extrudable Low-Carbon Concrete for pH-sensitive Reinforcement
16:25-16:40	Yukuan Deng (Nanyang Technological University, Student) Machine-Learning-Based Printability Screening of Cementitious Mixtures Using Fresh-State Indicators and Early-Age Mechanical Descriptors
16:40-16:55	Benedikt Grimm (Technical University of Munich, Student) Towards Sustainable 3D Concrete Printing: Optimizing Binder Systems for Near-Nozzle Binder-Aggregate Mixing
16:55-17:10	Enlai Dong (Southeast University, Student) Optimization Design Principle and Performance Regulation of 3D Printed Ultra-High-Performance Concrete (UHPC)
17:10-17:25	Sourour Elleuch (University of Pau and the Pays de l'Adour, Student) Effect of Weather Conditions on the Printability of Cementitious Materials for 3D Printing
17:25-17:40	Weijian Xu (The Hong Kong University of Science and Technology, Student) Investigating the Mechanisms of Biochar-Induced Modification of Tricalcium Aluminate Hydration

Monday afternoon, October 19, 2026 Venue: Qinhuai Amazing A (3rd floor)	
Parallel Session 2: Rheology and Early-age Properties Chairs: Emmanuel Keita, Le Teng	
14:00-14:25	Robert Flatt/Matineh Mahmoudid (ETH Zurich) VMAs: Very Mysterious Admixtures for Digital Fabrication (Invited talk)
14:25-14:40	Mehran Khan (University College Dublin) Rheology-Driven Optimisation of Superplasticizer and Fibre Dosage in Low-Carbon Concrete
14:40-14:55	Le Teng (Southeast University) Synergetic Effect of Viscosity Modifying Admixtures and Polycarboxylate Superplasticizer on Rheological Properties of Cement Paste with Low Water-to-binder Ratio
14:55-15:10	Gagan G S (Indian Institute of Technology Tirupati, Student) Effect of Sodium Hexametaphosphate on the Rheology and Dispersibility of Kalonite-Based Earthen Mixtures
15:10-15:25	Shuaijie Lu (Tongji University, Student) Effect of CO ₂ Mixing and Waste Glass Powder on the Performance of 3D Printed Cementitious
15:25-15:40	Coffee/Tea break
15:40-15:55	Hengrui Liu (The Hong Kong Polytechnic University) Kinetic Evolution of the Internal Flocculation-Linkage Network within Cementitious Materials Subject
15:55-16:10	John Temitope Kolawole (University of Birmingham) Filament Skin Contribution to the Layer Interface and Anisotropy of Additively Manufactured Concrete
16:10-16:25	Haodao Li (Shenzhen University) Effect of Viscosity-Modifying Agents on Rheology and Fiber Distribution of 3D-Printed Ultra-High-Performance Concrete
16:25-16:40	Albert Gomzyakov (Dresden University of Technology, Student) Influence of Extrusion-Induced Normal Stresses on the Buildability of 3D-Printed Concrete
16:40-16:55	Weiwei Zhang (City University of Hong Kong, Student) Time-Dependent 3D Printability of One-Part Alkali-Activated Materials
16:55-17:10	Silvia Reißig (Dresden University of Technology, Student) Towards CO ₂ -Assisted Rheology Control in LC ³ -Based 3D Concrete Printing
17:10-17:25	Jielin Tao (City University of Hong Kong, Student) Magneto-Responsive Flow Behavior of Lightweight Concrete for 3D Printing with Magnetic Core-Shell Aggregates
17:25-17:40	Huamin Sun (Southeast University, Student) Effect of Addition Mode of VMA and PCE on Dynamic and Static Yield Stress of Cement Paste

Monday afternoon, October 19, 2026
Venue: UPark Room (5th floor)

Parallel Session 3: Process Control and Printing Strategies

Chairs: Yaxin Tao, Shravan Muthukrishnan

14:00-14:25	<u>Yaxin Tao</u> (Tongji University) A Process-Oriented Perspective on Multi-K 3D Concrete Printing (Invited talk)
14:25-14:40	<u>Viktor Mechtcherine</u> (Dresden University of Technology) Robotic Fabrication of Curved Concrete Shell Modules Using 3D Concrete Printing on an Adaptive Mold
14:40-14:55	<u>Chao Li</u> (Technical University of Munich) Towards Design Decision Support System in Digital Fabrication with Concrete – Case Study of Knowledge Formalization for SC3DP Ribbed Slab
14:55-15:10	<u>Manuel Megnet</u> (Technische Universität Braunschweig, Student) Enabling Precise Process Control with Flow Rate Measurements for Concrete in Shotcrete 3D Printing
15:10-15:25	<u>Yan Sun</u> (The University of Hong Kong, Student) Spatial Optimization of Fiber Orientation in 3D-Printed FRCC: The Role of Nozzle Geometry and Fiber Parameters
15:25-15:40	Coffee/Tea break
15:40-15:55	<u>Wen Si</u> (Yancheng Institute of Technology) A Comprehensive Review of Rheological Dynamics and Process Parameters in 3D Concrete Printing
15:55-16:10	<u>Kaname Saitoh</u> (Sika Japan Ltd.) Integrated Design and Fabrication of 3D Concrete Printed Wall Structures using FEA and Modular Printing
16:10-16:25	<u>Lingwei Xia</u> (Hohai University) Optimization of Filling Path and Structure for 3D Concrete Printing Under Manufacturing Constraint
16:25-16:40	<u>Ando Jacobi</u> (Leibniz University Hannover, Student) Enroute Towards Surface-Like Structures with I3DCP - Geometric and Mechanical Node Properties Depending on Material and Process Parameters
16:40-16:55	<u>Yuxin Lin</u> (University of Michigan, Student) Time-Aware Robot Motion Planning for Non-Planar 3D Concrete Printing
16:55-17:10	<u>Jiazhe Chen</u> (Xi'an University of Architecture and Technology, Student) Path Planning for Free-Form 3D Concrete Printing Using Reinforcement Learning
17:10-17:25	<u>Inken Jette Rasehorn</u> (TU Berlin, Student) Optimizing Inter-Filament Bonding via Path Planning in 3DCP (online)
17:25-17:40	<u>Caleb Lunsford</u> (Cornell University, Student) Influencing the Stability of Planar Digitally Fabricated Concrete Overhangs through Process Parameter Control

Monday afternoon, October 19, 2026
Venue: Qinhuai Amazing B (3rd floor)

Parallel Session 4: Reinforcement and Hardened Properties

Chairs: Shunzhi Qian, Rahul Attupurathu Vijayan

14:00-14:25	<u>Shunzhi Qian</u> (Nanyang Technological University) From Printable ECC to Lightweight Reinforced Column by Assembly (Invited talk)
14:25-14:40	<u>Xiaoyu Luo</u> (Chang'an University) Layout of Threaded Rod to Enhance Interfacial Bonding Properties between 3D Printed and Post-Cast Concrete
14:40-14:55	<u>Guido Silva</u> (Pontificia Universidad Católica del Perú) Mechanical Characterization of 3D-Printed Earthen and Cementitious Mortars Using Embedded Sensing
14:55-15:10	<u>Aobakwe Ditlhokwa</u> (Stellenbosch University, Student) Performance Evaluation of 3D Printed Concrete (3DPC) with Construction and Demolition Waste and Recycled 3DPC-Derived Aggregates: Mechanical Properties and Resistance to Carbonation and Chloride Ingress
15:10-15:25	<u>Kailun Xia</u> (Southeast University, Student) Tough, Thermal Insulating and Scalable Puff Pastry-Inspired Architected Cementitious Material via Simple Rolling-Folding
15:25-15:40	Coffee/Tea break
15:40-15:55	<u>Hui Zhang</u> (North University of China) Multiscale Investigation of Inner-Structure and Mechanical Performance in 3D Printed Concrete
15:55-16:10	<u>Yuto Kitamura</u> (Obayashi Corporation) Shear Behavior of Concrete Beams Using 3D Printed Permanent Formwork Reinforced by Continuous Fiber
16:10-16:25	<u>Faisal Mukhtar</u> (King Fahd University of Petroleum & Minerals) 3D Printed Mortar Integrated with Graphene Derivatives for Strain Monitoring
16:25-16:40	<u>Syed Humayun Basha</u> (Huaqiao University) Performance of 3D-Printed High-Strength Concrete Shear Walls under Axial Compressive Loads
16:40-16:55	<u>Arunkumar Senthilmurugan</u> (Indian Institute of Technology Tirupati, Student) Tension Stiffening and Crack Evolution in 3D-Printed Concrete Beams with External TRC Reinforcement Using Digital Image Correlation
16:55-17:10	<u>Min Zhou</u> (University of Sheffield, Student) Using Thin Textile-Reinforced Mortar Overlay as ‘Post-Printing’ Reinforcing Method for 3D-Printed Concrete
17:10-17:25	<u>Spandana Paritala</u> (Indian Institute of Technology Hyderabad, Student) Comparative Analysis of Fracture Response in Cast and 3D Printed Steel Fiber-Reinforced Concrete
17:25-17:40	<u>Xinze Li</u> (China Building Materials Academy, Student) Bond-Slip Mechanism of Longitudinal Reinforcement in 3D Printed Concrete

Monday afternoon, October 19, 2026
Venue: ULake Room (3rd floor)

Parallel Session 5: Material Circularity and Sustainability

Chairs: Nicolas Roussel, Zhangli Hu

14:00-14:25	Nicolas Roussel (Gustave Eiffel University) Climate Change Contribution of 3D Printing Technologies: The Trade-Off between Material and Process Impacts and Its Dependency on Geometry (Invited talk)
14:25-14:40	Iván Navarrete (Pontificia Universidad Católica de Chile) Particle Size Considerations for Mine Tailings in 3D Printable Mortars: Insights from Chile and Japan
14:40-14:55	Yan Zhou (Changsha University of Science and Technology) Investigation of Thermal and Mechanical Properties of 3D Printable Cementitious Composites Incorporating Basalt Fiber and Waste Glass Aggregates
14:55-15:10	Yukuan Deng (Nanyang Technological University, Student) Sustainable Construction through Biomimicry in 3D Printed Concrete Structures
15:10-15:25	Md Tareq Hossain Khondoker (University of New South Wales, Student) Prediction of Buildability of Low-Carbon Mixes for 3D-Printing Based on Penetration Test
15:25-15:40	Coffee/Tea break
15:40-15:55	Muhammad Junaid Munir (Jinan University) Plastic Waste-Based Concrete Produced by Compression Casting: Structural Performance Enhancement and Environmental Gains
15:55-16:10	Lucio Blandini (University of Stuttgart) Sustainable Mineral Structures: Lines of Research on Circular and Bio-Based 3D Printing Processes
16:10-16:25	Syed Minhaj Saleem Kazmi (Jinan University) Holistic Assessment of Sustainable Forced-Compacted Concrete with 100% Incinerator Bottom Ash: Performance Enhancement, Life Cycle and Economic Insights
16:25-16:40	Jiapan Sun (Tongji University, Student) 3D Printability Verification of Metakaolin-BIBA Based Alkali-Activated Mortar
16:40-16:55	Niklas Meier (Technische Universität Braunschweig, Student) Reuse of Unbound Material in 3D Concrete Printing by Selective Cement Activation
16:55-17:10	Janitha Migunthanna (Swinburne University of Technology, Student) Performance of Waste Clay Brick-Based Binders and Recycled Glass Aggregates in Concrete 3D Printing
17:10-17:25	Miguel Otero Sáenz de Lubiano (AIMEN Technology Centre, Student) 3D Printing of Bio-Based Mortars with Advanced Functionalities for Sustainable Modular Construction
17:25-17:40	Jihye Jhun (Nanyang Technological University, Student) Engineering Biochar-Modified 3D-Printable Concrete: Effects of Dosage and Pretreatment Strategies

Tuesday morning, October 20, 2026
Venue: Knowledge Room (5th floor)

Parallel Session 6: Numerical Simulation

Chairs: Liberato Ferrara, Yiwei Weng

8:30-8:55	Liberato Ferrara (Politecnico di Milano) A Unified Modelling Framework for Simulating Extrusion, Layer Deposition and Buildability in 3D Concrete Printing (Invited talk)
8:55-9:10	Juba Amrioui (Polytech Tours) Asymmetric Static Mixer for 2K Mortar and Adjuvant in 3D Concrete Printing: CFD-Optimized Design for Enhanced Mixing
9:10-9:25	Passarin Jongvisuttisun (Thammasat University) Seismic Performance of 3D-Printed Walls with and Without Internal Bracing: A Numerical Investigation
9:25-9:40	Manfang Lin (Tongji University, Student) Comprehensive Numerical Insights into Rebar-Free 3D-Printed ECC Arches
9:40-9:55	Hamed Sadaghian (Loughborough University, Student) Numerical Investigation of Anisotropy in High- Performance 3D-Printed Concrete under Compression
9:55-10:25	Coffee/Tea break
10:25-10:40	Maxime Pierre (Navier, Institute Polytechnique de Paris) A Multiphysics Modelling Software for 3D Concrete Printing Simulation from Deposition to Hardened State
10:40-10:55	Katarzyna Ostapska (SINTEF) Buildability Simulation for Sustainable AM Concrete
10:55-11:10	Daniel Helmuth Meile (Technical University of Denmark, Student) Sequential Multi-Material Extrusion Additive Manufacturing of Cementitious Materials
11:10-11:25	Tiangang Ren (The University of Manchester, Student) A Modified Concrete Damage Plasticity (CDP) Model for the Analysis of 3D-Printed Concrete Structures
11:25-11:40	Koussay Daadouch (Ruhr University Bochum, Student) 3D Concrete Printing: Towards Reliable Structural-Scale Simulations
11:40-12:20	Pitch poster

Tuesday morning, October 20, 2026 Venue: Qinhuai Amazing A (3rd floor)	
Parallel Session 7: Rheology and Early-age Properties Chairs: Deyu Kong, John Kolawole	
8:30-8:55	Wenqiang Zuo (Southeast University) Drying-Induced Damages in Exposed Fresh Cement-Based Materials at Very Early Ages from Standard Casting to 3D Printing (Invited talk)
8:55-9:10	Rafael Giuliano Pileggi (University of São Paulo) Relationship Between Squeeze Flow Behavior and Printability of Cement-Based Compositions for 3D Printing
9:10-9:25	Junli Liu (The Hong Kong Polytechnic University) Using CO ₂ Flash Mixing to Achieve Rapid Rheological Modification of 3D-printed Mortar in 2K System
9:25-9:40	Tiago Canavarro Cavalcante (Federal University of Rio de Janeiro, Student) Effects of Pumping and Extrusion on the Rheological Properties of Cement-Based Printable Mortars
9:40-9:55	Yi Zhang (Ghent University, Student) Pore Structure of 3D Printed Porous Cement-Based Materials Before and After Extrusion
9:55-10:25	Coffee/Tea break
10:25-10:40	Jacquet Yohan (Technical University of Denmark) The “Beam-Bending Test” – Capturing Fresh-State Damage to Address Quality and Durability
10:40-10:55	Ruilong Li (The Hong Kong Polytechnic University) Evolutionary Behaviour of the Biaxial Strength Envelope of 3D-printed Concrete at Early Ages
10:55-11:10	Shengbo Cheng (Technical University of Munich, Student) Printability Assessment of a 2x2-materials Matrix for Functionally Graded 3DCP
11:10-11:25	Maria J. Cuevas-Mansilla (Pontificia Universidad Catolica de Chile, Student) Dual Role of Steel Microfibers in 3D Concrete Printing: Reinforcement and Temperature Sensitivity Reduction
11:25-11:40	Hao Zhang (National University of Singapore, Student) Characterization on Fresh Properties and Numerical Simulation of Underwater 3D Concrete Printing at Varying Water Depths
11:40-12:20	Pitch poster

Tuesday morning, October 20, 2026 Venue: UPark Room (5th floor)	
Parallel Session 8: Process Control and Printing Strategies Chairs: Li Wang, Inka Mai	
8:30-8:55	Li Wang (Hebei University of Technology) Forming-Performance Synergistic 3D Printing Technology and Equipment of Low-carbon Concrete (Invited talk)
8:55-9:10	Kolluru V.L. Subramaniam (Indian Institute of Technology Hyderabad) Carbon Nanotubes for Functionalized Interfaces with Enhanced Stress Transfer and Penetration Resistance in Printed Layered Assemblies
9:10-9:25	Rijiao Yang (Zhejiang University) A Bionic Swallow Nest Strategy for Unsupported Pneumatic 3D Printing of Concrete
9:25-9:40	Christopher Watson (University of Michigan, Student) Functionally Graded Lattice Walls via Continuous Eulerian Toolpaths for Robotic 3D Concrete Printing
9:40-9:55	Stefan Zimmermann (ETH Zurich, Student) The Rock’N’Roll Band: A Compact Setup to Study 3DCP Layer Deposition and Its Monitoring
9:55-10:25	Coffee/Tea break
10:25-10:40	Lizhi Zhang (Southeast University) Roll-Pressing Additive Manufacturing of Lunar Building Materials for In-Situ Construction
10:40-10:55	Satoshi Murata (Taisei Corporation) Field Verification of RC Walls Using External Shoring-Free 3D Concrete Printing Formwork with Productivity Effects of Material and Construction Conditions
10:55-11:10	Yuhan Li (Xi’an Jiaotong-Liverpool University, Student) Fractal-Based Toolpath in 3D Concrete Printing for Freeform Lattice Shell Structures
11:10-11:25	Dmitrii Sokolov (Dresden University of Technology, Student) A Virtual Testbed for Motion-Coupled Layer Geometry Generation in 3D Concrete Printing
11:25-11:40	Wenyu Lin (Hebei University of Technology, Student) Thermal-Responsive In-Situ Polymerization for Dense Reinforcement of 3D Printed Concrete
11:40-12:20	Pitch poster

Tuesday morning, October 20, 2026 Venue: Qinhuai Amazing B (3rd floor)	
Parallel Session 9: Reinforcement and Hardened Properties Chairs: Viktor Mechtcherine, Zhenhua Duan	
8:30-8:55	Viktor Mechtcherine (Dresden University of Technology) Concrete Printing with Textile Reinforcement (Invited talk)
8:55-9:10	Sizhe Wang (Nanyang Technological University) Automated Flexible Reinforcement for 3D Printed Concrete Using Continuous Cables
9:10-9:25	Egemen Ertem (Loughborough University, Student) Interpreting the Influence of Defects in 3D Printed Mortar on Compressive Strength under Slant Shear Loading
9:25-9:40	Jianye Chen (Zhejiang University, Student) Performance Study of Mechanically Interlocking Interfaces for 3D-Printed Polymer-Concrete Composite Beam
9:40-9:55	Heinrich Els (Stellenbosch University, Student) Characterizing Unrestrained Drying Shrinkage of 3-Dimensional Printed Concrete with Varying Aggregate to Binder Ratios
9:55-10:25	Coffee/Tea break
10:25-10:40	Junjie Zeng (Adelaide University) Bending Behavior of 3D-Printed Functionally Graded Concrete Plates with Synchronized Embedded FRP Grid Reinforcement
10:40-10:55	Akilesh Ramesh/Saya Ramakrishnan (University of Southern Queensland) Enhanced Fire Resistance of Textile-Reinforced 3D-Printed Structures Using Nickel Slag Impregnated Glass Fibre Yarns
10:55-11:10	Fabian Fritz (Technische Universität Wien, Student) Load-Bearing Behaviour of T-Beams with Robotically Fabricated Reinforcement Cages
11:10-11:25	Fei Teng (The Hong Kong Polytechnic University, Student) Automated Multi-material 3D Concrete Printing with Hybrid Reinforcements for Simultaneous Flexural Strength and Ductility Enhancement
11:25-11:40	Beifang Deng (Nanyang Technological University, Student) A Modular and Automated Three-Directional Reinforcement Strategy for 3D Printed Concrete Structures
11:40-12:20	Pitch poster

Tuesday morning, October 20, 2026 Venue: ULake Room (3rd floor)	
Parallel Session 10: Structural Optimization Chairs: Harald Kloft, Youbao Jiang	
8:30-8:55	Chao Liu (Xi'an University of Architecture and Technology) Low-Carbon 3D Printing of Coarse-Aggregate Concrete: Construction and Performance Control (Invited talk)
8:55-9:10	Youbao Jiang (Changsha University of Science and Technology) Mechanical and Energy Storage Characteristics of Interlayer Interlocking 3D Printed Concrete Based on a Novel Nozzle
9:10-9:25	Chung Kin hung (The Hong Kong Polytechnic University) Translating Concrete 3D Printing Research into Public Applications: A Case Study in Hong Kong
9:25-9:40	Gokul Santhosh S (Indian Institute of Technology Madras, Student) Modular 3D Concrete Printed Reinforced Beams
9:40-9:55	Niklas Mueller (RWTH Aachen University, Student) Robotic Fabrication Methods for Optimized Lightweight Slabs with Foam Concrete Void Formers
9:55-10:25	Coffee/Tea break
10:25-10:40	Wen Zhou (Nanyang Technological University) Anisotropic Topology Optimization for Fiber-Reinforced Concrete Printing
10:40-10:55	Huawei Liu (National University of Singapore) Structural Performance of Reinforced 3D Printed Concrete Wall Structures
10:55-11:10	Marc-Patrick Pfleger (University of Applied Sciences Vienna, Student) Structural Optimization of Reinforced Concrete Slabs with 3D-Concrete Printed Hollow Bodies for Material and CO ₂ Reduction
11:10-11:25	Sven Engel (RWTH Aachen University, Student) Automated Multimodal Fabrication: Integrating Robotic Milling of Fresh 3D-printed Concrete
11:40-12:20	Pitch poster

Tuesday afternoon, October 20, 2026 Venue: Knowledge Room (5th floor)	
Parallel Session 11: Durability and Microstructure Chairs: Jinlong Pan, Timothy Wangler	
14:00-14:25	Timothy Wangler/Lucas Nascimento (ETH Zurich) (Re)Carbonation: A New Opportunity for Sustainable 3D-Printed Concrete (Invited talk)
14:25-14:40	Annie Bai/Nan Zhang (Swinburne University of Technology) Improving Carbonation Resistance of 3D-Printed Concrete Filaments
14:40-14:55	Léopold Denis (Gustave Eiffel University, Student) Carbonation Kinetics in Printed Mortars: A Study of Early-Age Environmental Effects
14:55-15:10	M. Mirza Abdillah Pratama (University of Sheffield, Student) Chloride Transport Behaviour in 3D-Printed Low-Carbon UHPC Incorporating High-Volume of GGBS
15:10-15:25	Yijian Miao (The University of New South Wales, Student) Ultra-Low-Degree-Polymerization Polyvinyl Alcohol as a Crystallization-Catalytic Agent for Self-Healing Concrete
15:25-15:40	Coffee/Tea break
15:40-15:55	Jyotish Kumar Das (University of Sheffield) Role of Corrosion Inhibitors on Chloride Transport Mechanism in 3D-Printed Concrete Under Combined Chloride-Sulphate Exposure
15:55-16:10	Minxin Yang (The Hong Kong Polytechnic University) Non-Destructive and Real-Time Detection of Surface Moisture via Near-Infrared Spectroscopy in 3D Printed Concrete
16:10-16:25	Léopold Denis (Gustave Eiffel University, Student) Effect of Printing Pressure on the Morphology and Size Distribution of Entrained Air in 3D-Printed Mortars
16:25-16:40	Qian Lin (Southeast University, Student) Moisture Transport Characteristics of 3D-Printed Concrete: Analysis of Capillary Water Uptake Behavior
16:40-16:55	Raja Dilawar Riaz (University of New South Wales, Student) Rapid Chloride Permeability Assessment of 3D-Printed Stay-in-Place (SIP) Formworks with Supplementary Cementitious Materials

Tuesday afternoon, October 20, 2026 Venue: Qinhuai Amazing A (3rd floor)	
Parallel Session 12: Rheology and Early-age Properties Chairs: Dirk lowke, Yiyuan Zhang	
14:00-14:25	Dirk Lowke (Technical University of Munich) A Concept to Combine Rheological Quality Assessment with Reinforcement Integration in 3D Concrete Printing (Invited talk)
14:25-14:40	Yiyuan Zhang (Ghent University) Active Magnetorheology Control of Cementitious Materials for 3D Printing
14:40-14:55	Michael Unterreiner (Technical University of Munich, Student) Microwave Transmission-Based Process Monitoring for Multi-Material Concrete 3D Printing
14:55-15:10	Ruijian Zheng (Southeast University, Student) The Role of Micro-Roughness on the Yield Stress for Cement-Based Suspensions Application to LC ³ Type System
15:10-15:25	Paula Heik (Bauhaus-Universität Weimar, Student) Magnetorheological Control of Cementitious Materials Using Hard Magnetic Particles
15:25-15:40	Coffee/Tea break
15:40-15:55	Amarteja Kocherla (Federal Institute for Materials Testing and Research) Real-Time Monitoring of 3D Printed Concrete Structures Using Embedded Multi-Modal Sensor Arrays
15:55-16:10	Liangchao Liu (Xi'an University of Architecture and Technology, Student) Effects of CO ₂ Mineralization Synergistic Construction on the Performance of 3D Printed Concrete
16:10-16:25	Seong Jun Ha (Pusan National University, Student) Mechanical Mixing-Based CNT Dispersion for 3D Printable Conductive Cementitious Composites
16:25-16:40	Meng He (Wuhan University of Technology, Student) On-Demand Setting for β -hemihydrate Gypsum 3D Printing via Persulfate Advanced Oxidation
16:40-16:55	Lucia Ferrari/Liberato Ferrara (Politecnico di Milano) Rheological Assessments and Simulation Insights for 3D Printing of Mortar Containing Ceramic Waste

Tuesday afternoon, October 20, 2026 Venue: UPark Room (5th floor)	
Parallel Session 13: Process Control and Printing Strategies Chairs: Richard Buswell, Nan Zhang	
14:00-14:25	Richard Buswell (Loughborough University) Framing the Future: 3D Concrete Printing, Hybrid Manufacturing and the Role of Artificial Intelligence and Machine Learning (Invited talk)
14:25-14:40	Reza Moini (Princeton University) Principal Component Analysis (PCA) for Assessing Effectiveness of the Pressure-based Feedback Control in Robotic Concrete Additive Manufacturing (online)
14:40-14:55	Liping Lv (Xi'an University of Architecture and Technology, Student) Integrated Multi-Objective Optimization for Multi-Head Collaborative 3D Concrete Printing via a Tertiary-Tree Enhanced Genetic Algorithm
14:55-15:10	David Richter (Technical University of Munich, Student) Incremental Redundancy-Aware Motion Planning for Continuous Mobile Extrusion in Constrained Architectural Environments
15:10-15:25	Jennifer Viola Rudolph (Technical University of Braunschweig, Student) Mixing- and Dual-Nozzle Concepts for Shotcrete 3D Printing - Investigations on Material and Strand Homogeneity
15:25-15:40	Coffee/Tea break
15:40-16:05	Günther Meschke (Ruhr University Bochum) Computational Modeling of 3D Printed Concrete: Extrusion, Deposition and Fiber Orientation (Invited talk)
16:05-16:20	Zibo Zuo (Shanghai Construction Group Co., Ltd.) Monitoring and Control of Large-Scale On-Site 3D Printing Processes
16:20-16:35	Paulo J. S. Cruz (University of Minho) Hybrid Robotic Fabrication of Cementitious Materials: Integrating 3D Concrete Printing and Cable-Based Excision within the Rheological Fabrication Window
16:35-16:50	Matineh Mahmoudi (ETH Zurich, Student) AI-Driven Tool Development for Concrete Printing Expertise Documentation and Transfer
16:50-17:05	Hauke Heeren (Leibniz University Hannover, Student) Print-While-Drive: Mobile 3D Printing with Localization-Error Compensation via As-Built Contour Feedback
17:05-17:20	Ying Wei (Zhejiang University, Student) Fiber Distribution and Migration Behavior in 3D-Printed Fiber-Reinforced Concrete

Tuesday afternoon, October 20, 2026 Venue: Qinhuai Amazing B (3rd floor)	
Parallel Session 14: Reinforcement and Hardened Properties Chairs: Freek Bos, Wen Zhou	
14:00-14:25	Freek Bos (Technical University of Munich) RILEM TC 304-ADC Recommendations for Specimen Preparation, Mechanical and Durability Testing of Cementitious 3D Printed Materials (Invited talk)
14:25-14:40	Salwa Belhadi (Ghent University, Student) Portland-Limestone Cement as a Reduced-Clinker, Sole Binder for Extrusion-Based 3D Concrete Printing
14:40-14:55	Longsheng Wang (Adelaide University, Student) Enhancement of Interlayer Bond Strength Using Interlocked Filaments and Characterization of Their Post-Peak Behavior
14:55-15:10	Valentin Peinhopf (University of Applied Sciences Campus Wien, Student) Experimental and Numerical Investigation of Fiber Optic Sensing Systems in 3D-Printed Concrete Beams
15:10-15:25	Jianhua Cheng (Southeast University, Student) Mechanical Response and Damage Evolution of 3D-Printed ECC Under Dynamic Impact and Elevated Temperature
15:25-15:40	Coffee/Tea break
15:40-15:55	Erich Rodriguez (Federal University of Santa Maria) Alkali-Activated 3D Concrete Printing for Meter-Scale Application
15:55-16:10	Kaiyuan Zhu (Adelaide University, Student) Anisotropic Electro-Mechanical Behaviour of 3D Printed GNP-enhanced Self-Sensing Cementitious Composites under Compression Using Acoustic Emission and Digital Image Correlation
16:10-16:25	Lien Saelens (Ghent University, Student) Flexural Bond Tests on Hybrid 3D Printed – Cast Concrete Interfaces with Different Bond Improvement Strategies
16:25-16:40	Donghao Zhu (Tongji University, Student) Thermal Treatment of Residual Tuff Mud for 3D Printed Cementitious Material

Tuesday afternoon, October 20, 2026 Venue: ULake Room (3rd floor)	
Parallel Session 15: Structural Optimization Chairs: Hailong Wang, Jacquet Yohan	
14:00-14:25	Hailong Wang (Zhejiang University) Optimization and Engineering Applications of 3D Concrete Printing Technology (Invited talk)
14:25-14:40	Philip Tarek Wehbe (Carinthia University of Applied Sciences) Material Savings for Bored Piles Using 3D-Printed Recess Formers
14:40-14:55	Patiphat Jiramarootapong (SCG Cement Co., Ltd.) Structural Behavior of 3D Printing Formwork: As a Partial Load-Carrying Element in Residential Concrete Columns
14:55-15:10	Elisabeth Radl (University of Applied Sciences Vienna, Student) Increasing Punching Shear Capacity of Flat Slabs Using 3D Concrete Printed Permanent Formwork Elements
15:10-15:25	Christiane Richter (Technical University of Munich, Student) A Multi-fidelity Workflow for Digital Concrete: Integrating Rapid Equilibrium Form-Finding with Continuum FEM Evaluation
15:25-15:40	Coffee/Tea break
15:40-15:55	Zhenbang Liu (Nanyang Technological University) Apply Mesoscale Numerical Simulation Method to Study Relationship between Pore Property and Mechanical Anisotropy of 3D Concrete Printing Deposited Layer
15:55-16:10	Teck Neng Wong (Nanyang Technological University Singapore) Computational Fluid Dynamics Simulations of the Effects of Flow Conditions in 3D Concrete Printing
16:10-16:25	Mohammad Olabi (Technical University of Munich, Student) Structural Assessment of Layer-wise Form-found 3D Printed Vaulted Structures
16:25-16:40	Hao Yu (City University of Hong Kong, Student) Simulating Material Extrusion and Flow in 3D Concrete Printing
16:40-16:55	Youness Abousaid (University of Orleans, Student) Structural Scale Validation of Spherical Penetration Based Green Strength Identification for 3D Printed Mortar Cylinders

● Poster Sessions

Note: 3 min oral presentation for each poster!

Tuesday morning, October 20, 2026 Venue: Knowledge Room (5th floor)	
1	Dengyu You, Alireza Kashani (University of New South Wales) Early-Age Shrinkage-Induced Cracking in 3D Construction Printing
2	Miguel Otero, Lorena Freire (AIMEN Technology Centre) 3D Printing of Bio-Based Mortars with Advanced Functionalities for Sustainable Modular Construction
3	Raja Dilawar Riaz, Nyan Lin Htet Aung, Alireza Kashani (University of New South Wales) Rapid Chloride Permeability Assessment of 3D-Printed Stay-in-Place (SIP) Formworks with Supplementary Cementitious Materials
4	Yunxuan Li (Chongqing University) Drying Shrinkage Mitigation for 3D-Printed Concrete by Various Strategies
5	Sourour Elleuch, Imen Othmane, Hélène Carré, Vincent Trincal, Joao Mendes (University of Pau and Pays de l'Adour) Effect of Weather Conditions on the Printability of Cementitious Materials for 3D Printing
6	Shunyang Yao, Min Zhou, Doo-Yeo Yoo, Behzad Nematollahi (University of Sheffield) Reducing Cost and Environmental Footprint of 3D-Printed UHPC Using Recycled Tire Steel Fibers
7	Tiago Canavarro Cavalcante, Oscar Aurelio Mendoza Reales (Federal University of Rio de Janeiro) Effects of Pumping and Extrusion on the Rheological Properties of Cement-Based Printable Mortars
8	Qing Zhang (Holcim Innovation Center) A New Advance in 3D printable concrete for better Marine Ecology

● Poster Sessions

Note: 3 min oral presentation for each poster!

Tuesday morning, October 20, 2026 Venue: Qinhuai Amazing A (3rd floor)	
1	<u>Gwangmin Park, Jae Hong Kim</u> (Korea Advanced Institute of Science and Technology) Rheological and Energy Dissipation Characteristics of Fresh Mortar with Post-Vibration Effect
2	<u>Seung Mo Kim, Jae Hong Kim</u> (Korea Advanced Institute of Science and Technology) Vibration-Induced Thixotropic Control for Precast Concrete Modules Printing
3	<u>Jongsu Choi, Inkuk Kang and Jae Hong Kim</u> (Korea Advanced Institute of Science and Technology) Active Rheology Control Based on Magneto-Rheological of Cement Mortar Incorporating Various Magnetic Particles
4	<u>Md Tareq Hossain Khondoker, Alireza Kashani</u> (University of New South Wales) Prediction of Buildability of Low-Carbon Mixes for 3D-Printing Based on Penetration Test
5	<u>Wen Si, James Bradshaw, Swathi Balasubramanian, Mehran Khan, Ciaran McNally</u> (University College Dublin) Rheology-Driven Optimisation of Superplasticizer and Fibre Dosage in Low-Carbon Concrete
6	<u>P. Heik, F. Ehle, T. Echt, L. Göbel</u> (Bauhaus-Universität Weimar) Magnetorheological Control of Cementitious Materials Using Hard Magnetic Particles
7	<u>Mudo Li</u> (The Hongkong University of Science and Technology) Predicting Stochastic Fracture in Hardened Alite Paste via a Microstructure-Informed Multiscale Reconstruction of Mechanical Fields

● Poster Sessions

Note: 3 min oral presentation for each poster!

Tuesday morning, October 20, 2026 Venue: UPark Room (5th floor)	
1	<u>Schönsee, E., Hüsken, G., Strangfeld, C</u> (Bundesanstalt für Materialforschung und -prüfung) Small-scale tests: Towards interlayer bonding evaluation using laser reflection intensity
2	<u>Fei Teng, Minxin Yang, Jie Yu, Yiwei Weng</u> (The Hong Kong Polytechnic University) Automated Multi-material 3D Concrete Printing with Hybrid Reinforcements for Simultaneous Flexural Strength and Ductility Enhancement
3	<u>Yang, M., Bidoia, J., Keita, E., Weng, Y., Roussel, N</u> (The Hong Kong Polytechnic University) Non-destructive and Real-time Detection of Surface Moisture via Near-Infrared Spectroscopy in 3D Printed Concrete
4	<u>Shinya Yamamoto</u> (Shimizu Corporation) On-site Printing of Reinforced Column Members Using Material Jetting 3D Concrete Printer
5	<u>Yan Sun, Guoqiang Du, Xiaowei Deng, Ye Qian</u> (The University of Hong Kong) Spatial Optimization of Fiber Orientation in 3D-Printed FRCC: The Role of Nozzle Geometry and Fiber Parameters
6	<u>Lingwei Xia</u> (Hohai University) Optimization of Filling Path and Structure for 3D Concrete Printing under Manufacturing Constraint
7	<u>Beifang Deng</u> (Nanyang Technological University) A Modular and Automated Three-Directional Reinforcement Strategy for 3D Printed Concrete Structures

● Poster Sessions

Note: 3 min oral presentation for each poster!

Tuesday morning, October 20, 2026 Venue: Qinhuai Amazing B (3rd floor)	
1	<u>Xiao Zhao, Mehdi Chougan, Ravi Ranade, Behzad Nematollahi (University of Sheffield)</u> Elevated Temperature Performance of 3D-Printed Low-Carbon Alkali-Activated UHPC
2	<u>Prashant R. Singh, Spandana Paritala,Shubham Raj, K. V. L. Subramaniam (Indian Institute of Technology Hyderabad)</u> Improving Interlayer Strength and Chloride Resistance in Extrusion-Based 3D Printed Concrete
3	<u>Spandana Paritala, P. R. Singh, B. A. K. Naik, U. K. Raghu, K. V. L. Subramaniam (Indian Institute of Technology Hyderabad)</u> Comparative Analysis of Fracture Response in Cast and 3D Printed Steel Fiber-Reinforced Concrete
4	<u>Marcella S. Barbosa, Moisés R. S. Lima, Mariah X. Brito, Marcos A.S. Anjos, Sandra Lucas (Federal University of Paraíba)</u> Assessment of 3D Printed Lightweight Cementitious Composites Reinforced with Polypropylene Fibers
5	<u>Egemen Ertem, Liam Whyte, Chris Peacock, Richard A. Buswell (Loughborough University)</u> Interpreting the Influence of Defects in 3D Printed Mortar on Compressive Strength under Slant Shear Loading
6	<u>Kaiyuan Zhu, Giang D. Nguyen, Tran T. Tung, Abdul H. Sheikh, Ching-Tai Ng (Adelaide University)</u> Anisotropic Electro-Mechanical Behaviour of 3D Printed GNP-Enhanced Self-Sensing Cementitious Composites under Compression Using Acoustic Emission and Digital Image Correlation
7	<u>Sixue Chen (Northeast Forestry University)</u> Carbonation-Regulated Algal-Bacterial Treatment for Interfacial Filling and Mechanical Homogenization of 3D-Printed Mortar

● Poster Sessions

Note: 3 min oral presentation for each poster!

Tuesday morning, October 20, 2026 Venue: ULake Room (3rd floor)	
1	<u>Gokul Santhosh S, Manu Santhanam, Benny Raphael (IIT Madras)</u> Modular 3D Concrete Printed Reinforced Beams
2	<u>Kaname Saitoh, Jing Cui, Jiahui Cui,Chihiro Matsushita, Shifan Zhang, Leon Troussel (Sika Japan Ltd.)</u> Integrated Design and Fabrication of 3D Concrete Printed Wall Structures using FEA and Modular Printing
3	<u>Li Yuhan, Iasef Md Rian (Xi'an Jiaotong-Liverpool University)</u> Fractal-Inspired Toolpath in 3D Concrete Printing for Freeform Lattice Shell Structures
4	<u>Hao Li, Cong Zhou, and Jie Xu (Huazhong University of Science and Technology)</u> Early Experimental Study on Heat Dissipation Performance of Concrete Gyroid Porous Structures
5	<u>L Nienaber, Prof G van Zijl, Prof J Kruger, Dr K Timm (Stellenbosch University)</u> Calibration of the Material Partial Factor for 3D Printed Concrete
6	<u>Philip Tarek Wehbe, Gert Eilbracht, Andreas Trummer, Stefan Peters (Carinthia University of Applied Sciences)</u> Material Savings for Bored Piles Using 3D-Printed Recess Formers
7	<u>Fabian Fritz, Patrick Huber, Tobias Huber (Vienna University of Technology)</u> Load-Bearing Behaviour of T-Beams with Robotically Fabricated Reinforcement Cages

Wednesday morning, October 21, 2026 Venue: Qinhuai Amazing A (3rd floor)	
Parallel Session 16: Application and Standardization Chairs: Junjie Zeng, Behzad Nematollahi	
8:30-8:55	Mingcheng Li (Kenyo Tech Middle East 3D Printing Factory Ltd.) Case Introduction of Large-Scale 3D Concrete Printing in Practice Presentation (Invited talk)
8:55-9:10	Muhammad Usman (National University of Science and Technology) A Novel High Performance Concrete Overlay Approach for Enhancing Interlayer Performance of 3D Printed Concrete
9:10-9:25	Tae-Kyung Kim (Chung-Ang University, Student) Digital Fabrication and Flexural Behavior of Prestressed Concrete Beam with 3D-Printed Concrete Permanent Formwork
9:25-9:40	Wen-Shan Cui (ETH Zurich, Student) Print and Scan - Digital Documentation for Repair Monitoring of 3D-Printed Concrete Structures
9:40-9:55	Markus Colyn (Stellenbosch University) 3D Printed Geopolymer Interlocking Panels as a Sustainable Construction Method for the Global Low Income Housing Market
9:55-10:10	Ruby Gibson (Stellenbosch University, Student) 3D Printable Concrete with Supercapacitance Potential
10:10-10:25	Coffee/Tea break
10:25-10:40	Romain Mesnil (Institut Polytechnique de Paris) Cross-ply Composites from 3D-Printed Fibre-Reinforced Concrete
10:40-10:55	Jianzhong Lai (Nanjing University of Science and Technology) Equipment Development, Material Design, and Static-Dynamic Mechanical Properties of 3D Printed Concrete
10:55-11:10	Ojas Arun Chaudhari (Research Institutes of Sweden) Bridging Digital Design and Robotic Printing: Case Studies on 3D Concrete Printing of Prefabricated Elements
11:10-11:25	Romain Mesnil (Institut Polytechnique de Paris) Measuring Yield Shear Strains of Fresh 3D Printable Mortars with DIC Pocket Shear Vane Tests: Sample Size and Vane Influence Zone Study

Wednesday morning, October 21, 2026 Venue: UPark Room (5th floor)	
Parallel Session 17: Application and Standardization Chairs: Bian Wang, Jay Sanjayan	
8:30-8:55	Qing Zhang (Holcim Innovation Center) VillaSprint2, the First On-Site 3D Printed Residential Building in France: Learning for the Construction Sector (Invited talk)
8:55-9:10	Gerrit Marius Moelich (Rambøll Denmark A/S, Copenhagen) Conceptual Design of a 160m High Wind Turbine Tower with 3D Concrete Printing
9:10-9:25	Seiichi Kanno (JGC Corporation) On-site Construction of Hybrid Structures Using 3D Concrete Printing: A Case Study for Storage Shelters in a Harsh Environment
9:25-9:40	Qing Zhang (Holcim Innovation Center) Structurally Optimized 3D printed Concrete for a New Era of Marine Construction
9:40-9:55	Linda Nienaber (Stellenbosch University, Student) Calibration of Material Partial Factor for 3D Printed Concrete
9:55-10:10	Qing Zhang (Holcim Innovation Center) Low-Carbon Footprint 3D Printing Inks
10:10-10:25	Coffee/Tea break
10:25-10:40	Sava Ramakrishnan (University of Southern Queensland) Performance and CO ₂ Sequestration Potential of 3D-Printed Structures using Biochar-Carbon sink Concrete
10:40-10:55	Alireza Sepidbar/Maxime Pierre (Université Gustave Eiffel) An In-Line Method for Estimation of Early-Age Stiffness of 3D Concrete Printing
10:55-11:10	Shadi Nazarian (University of Texas at Arlington) Cool Under Fire: Sustainable Design Meets Wildfire Defense (Online)
11:10-11:25	Gabriel Comerlato (ETH Zurich, Student) 2K 3D Concrete Printing with Limestone Calcined Clay Binder
11:25-11:40	Hossein Adel (CY Cergy-Paris University, Student) Low-Carbon 3D Concrete Printing Using Glass-Activated Limestone-Clay Systems

Wednesday morning, October 21, 2026 Venue: Qinhuai Amazing B (3rd floor)	
Parallel Session 18: Application and Standardization Chairs: Tao Ding, Cheng Yu	
8:30-8:55	Cheng Yu (Jiangsu Subote New Materials Co., Ltd.) To Measure the Plastic and Drying Shrinkage of 3D Printing Concrete Closer to the Actual Application (Invited talk)
8:55-9:20	Volker Ruitinga (Vertico) Advanced Concrete Printing (Invited talk)
9:20-9:35	Kim Timm (Stellenbosch University) Standardising Digital Production Data for 3D Printed Concrete Walls: Proposed Product Data Templates based on EN ISO 23386/23387
9:35-9:50	Tao Ding (Tongji university) 3D-Printed Functionally Graded Concrete A Novel Perspective on Structure-Function Integration
9:50-10:05	Luca Breseghello (Technical University of Denmark) Functionally Graded 3D-Printed Concrete Façades: Continuous Porosity Control Through Design for Adaptive Building Envelopes
10:05-10:25	Coffee/Tea break
10:25-10:40	Patiphat Jiramarootapong (SCG cement Co.,Ltd) Segmental Bridge Construction Using 3D Printed Formwork with HPC Core for Urban Canal Crossings
10:40-10:55	Liberato Ferrara (Politecnico di Milano) Novel Methodology to Assess Early-Age Interlayer Behaviour in 3D-Printed Concrete Under Mechanical Disturbance
10:55-11:10	Miguel Prieto (RISE Research Institutes of Sweden) Design Integration of Structural, Thermal, and Durability Performance in a Fully Mineral 3D-Printed Ventilated Façade Element
11:10-11:25	David Gierlinger (Graz University of Technology, Student) Structural Design and Testing of a Filigree 3D Printed Concrete Façade Panel

Wednesday morning, October 21, 2026 Venue: Knowledge room (5th floor)	
Parallel Session 19: Reinforcement and Hardened Properties Chairs: Nicolas Ducoulombier, Chao Zhang	
8:30-8:45	Lecheng Lu (Xiamen Zhichuangchi Technology Co., LTD) Research on 3D Printed Concrete Synchronous Rebar Planting Method Based on Four-Axis Transverse and Longitudinal Linkage Control
8:45-9:00	Dong Cui (Nanjing University of Science and Technology) Sequence-Dependent Interfacial Evolution in Alternating OPC-AAS 3D Concrete Printing
9:00-9:15	Nicolas Ducoulombier (XtreeE) Fast Modelling of Brittle Failure Probability for the Design of Unreinforced 3D-Printed Formworks
9:15-9:30	Abdul Azziz Al Farhan (Loughborough University, Student) From CAD to Delivery in Under 17 Hours: The Productivity Gains of Hybrid 3D Concrete Printing
9:30-9:45	Shiqi Wang (The Hong Kong University of Science and Technology, Student) Biochar-Functionalized Lightweight Ultra-High-Performance Concrete for Sustainable Infrastructure
9:45-10:00	Jiacheng Xiao (The Hong Kong University of Science and Technology, Student) Unlocking the Latent Reactivity of Steel Slag through Mechanochemical Activation Method
10:00-10:25	Coffee/Tea break
10:25-10:40	Chao Zhang (The Hong Kong University of Science and Technology) Enhancing 3D Printable Concrete by Biochar Integration
10:40-10:55	Aivars Alt (TTK University of Applied Sciences) 3D Concrete Printed Formwork: Early Assessment of Integral Structural and Lost Formwork Functions
10:55-11:10	Pengpeng Jia (Tianjin University, Student) Design and Mechanical Performance Investigation of 3D-Printed Cementitious Composites Modified with Crumb Rubber and Rice Husk Ash
11:10-11:25	Lucas de Lima (ETH Zürich, Student) Creepy Results in 3DCP

Wednesday morning, October 21, 2026 Venue: ULake Room (3rd floor)	
Parallel Session 20: Durability and Microstructure Chairs: Nemkumar Banthia, Pan Feng	
8:30-8:55	Nemkumar Banthia (The University of British Columbia) Multiscale Interfacial Mechanics and Rheology-Driven Bond Dynamics as they Affect 3D printed Layered Systems (Invited talk)
8:55-9:20	Zijian Jia (Nanjing Tech University) The Coupling Effect of Viscosity Modifying Agents and Printing Process on the Air-Void Structure Formation of 3D Printed Air-Entrained Concrete (Invited talk)
9:20-9:35	Slava Markin (Sika Deutschland CH AG & Co KG) In-Situ Monitoring and Controlling of Plastic Shrinkage in 3D-Printed Concrete Elements
9:35-9:50	Dengyu You (The University of New South Wales, Student) Early-Age Shrinkage-Induced Cracking in 3D Construction Printing
9:50-10:05	Niklas Freund (Technical University of Braunschweig, Student) Effect of Material and Process Parameters on Carbonation Behaviour of Shotcrete 3D Printing Elements
10:05-10:25	Coffee/Tea break
10:25-10:40	Dirk Lowke (Technical University of Munich) Evaluating GGBFS as Cement Substitution in Particle bed 3D Concrete Printing by Selective Cement Activation: Effect on Strength and Temperature Development
10:40-10:55	Ramesh Nayaka/Anitha Nayak (Indian Institute of Technology Dharwad) Thermal Performance and Life Cycle Environmental and Cost Assessment of Low-Carbon 3D Printable Concrete Ink Incorporating Recycled Construction Waste
10:55-11:10	Eric Schönsee (Bundesanstalt für Materialforschung und -prüfung, Student) Small-Scale Tests: Towards Interlayer Bonding Evaluation Using Laser Reflection Intensity
11:10-11:25	Wenjing Yang (Southeast University, Student) Questioning the Protective Role of Bleeding Against Drying-Induced Microstructural Damages
11:25-11:40	Prashant R. Singh (Indian Institute of Technology Hyderabad, Student) Improving Interlayer Strength and Chloride Resistance in Extrusion-Based 3D Printed Concrete

Wednesday afternoon, October 21, 2026 Venue: Qinhuai Amazing (3rd floor)	
Plenary Session 2 Chairs: Nicolas Roussel, Yan Zhuge	
13:30-14:00	Ana Anton (Anton Reiter) Designing for Additive Construction
14:00-14:30	Wei She (Southeast University) Material and Process Integrated Design for Lunar In-Situ Construction
14:30-15:00	Martin Classen (RWTH Aachen University) From Fabrication Process to Structural Performance: Exploring Design Models for Digitally Fabricated Concrete
15:00-15:30	Coffee/Tea break
15:30-16:00	Manu Santhanam (IIT Madras) Rational Method of Materials Selection to Improve Sustainability of 3D Concrete Printing (Online)
16:00-16:30	Min Yang (CCCC First Highway Consultants Co.Ltd) Evolution and Case Studies of Concrete 3D Printing Bridge Design and Construction Methods
16:30-17:00	RILEM digital concrete award lecture
Closing ceremony Host: Nicolas Roussel (Chair of the steering committee, Gustave Eiffel University)	
17:00-17:30	• A summary of the conference • Announcement of conference awards • Announcement of the next RILEM DC • Official closing of the conference

Southeast University

Located in Nanjing, the ancient capital of six dynasties, Southeast University (SEU) is a prestigious university with a strong reputation both in China and abroad. Founded in 1902, SEU is a comprehensive, research-oriented university with engineering as its defining strength. As a national key university directly under the Ministry of Education and jointly supported by Jiangsu Province, Southeast University is one of the universities included in China's Project 985 and Project 211. In 2017, SEU was selected as a Class A university under China's Double First-Class initiative.

SEU has 39 schools and departments, 3,070 full-time faculty members and 43,651 full-time students, including 2,381 international students. Twelve disciplines at SEU are listed in China's Double First-Class Initiative, tying for eighth nationwide. Eighteen disciplines rank among the top 1% worldwide in ESI, with Engineering ranked 13th and Computer Science 5th globally—both in the top 0.01%. Materials Science, Chemistry and Clinical Medicine rank among the top 0.1% in ESI.

SEU has established close partnerships with more than 60 world-class universities and high-level research institutions from over 20 countries and regions. SEU spearheaded the establishment of the first UK-China University Consortium on Engineering Education and Research and the first World University Alliance on Carbon Neutrality. It has also established 24 international joint research platforms in areas such as architecture, communications, biomedicine, zero-carbon energy, and intelligent manufacturing.

RILEM

Founded in 1947, RILEM is the International Union of Laboratories and Experts in Construction Materials, Systems and Structures. Its mission is to advance free-access scientific knowledge related to construction materials, systems and structures and to encourage transfer and application of this knowledge world-wide. RILEM brings together leading experts in construction practice and science including academics, researchers, testing laboratories and authorities.

RILEM main goals are to promote sustainable and safe construction, and improved performance and cost benefit for society; to stimulate new directions of research and its applications, promoting excellence in construction; to favor and promote interdisciplinary and multidisciplinary cooperation at international scale by open access to advanced knowledge.

At the heart of RILEM's work are its international Technical Committees. They bring together experts across disciplines and countries to examine emerging topics, assess research findings and publish state-of-the-art reports and technical recommendations. RILEM's conferences and educational activities provide further opportunities to exchange knowledge and involve young researchers.

Digital fabrication is one of the fields addressed by this work. Two RILEM Technical Committees working on concrete printing will meet during DC2026, on Sunday, the 18th of October: TC 303-PFC, Performance requirements and testing of fresh printable cement-based materials, and TC 304-ADC, Assessment of additively manufactured concrete materials and structures.

RILEM is delighted to welcome participants to DC2026, held jointly with the 2026 edition of the International Conference on 3D Printing Concrete Materials and Structures (3DP-CMS). Bringing together researchers and industry professionals from around the world, this joint conference offers a major opportunity to advance knowledge and collaboration in digital concrete and 3D printing in construction.

State Key Laboratory of Engineering Materials for Major Infrastructure

The State Key Laboratory of Engineering Materials for Major Infrastructure was approved for establishment in December 2024 through the reorganization of the State Key Laboratory of High Performance Civil Engineering Materials. It is jointly hosted by Jiangsu Sobute New Materials Co., Ltd., Southeast University, and Jiangsu Research Institute of Building Science Co., Ltd. Academicians of the Chinese Academy of Engineering, Miao Changwen and Liu Jiaping, serve as Chief Scientist and Director, respectively.

The Laboratory addresses the demand for high-strength, tough, durable, and low-carbon engineering materials for major infrastructure subjected to complex loading, harsh environments, and extreme conditions. Its fundamental research focuses on the mechanisms governing material performance across scales, time-dependent damage under coupled factors, and the integration of data and knowledge. Key technological priorities include simultaneously enhancing strength and toughness, ensuring exceptionally long service life, scaling up the production of advanced materials, and enabling multi-objective intelligent design. The Laboratory also advances 3D intelligent construction for major infrastructure, including rheology control, low-carbon and recycled printable materials, architected cementitious metamaterials, and lunar 3D printing.

It has more than 200 permanent staff, including two academicians of the Chinese Academy of Engineering and 18 nationally recognized research talents. Its research facilities comprise over 2,000 instruments and equipment sets valued at more than RMB 200 million, supporting investigations from molecular structure to macroscopic performance. Pilot production lines facilitate the translation of research findings into engineering applications. By advancing fundamental theories and transformative technologies across the material life cycle, the Laboratory aims to become an international leader in engineering materials research, technical standards development, and innovative applications.

China Concrete & Cement-based Products Association (CCPA)

China Concrete & Cement-based Products Association (CCPA) was founded in 1986. It is a national industrial association registered with the Ministry of Civil Affairs. Voluntarily formed by enterprises, institutions and relevant social organizations along the industrial chain, CCPA aims to boost the growth of concrete and cement-based products industry. Its services basically cover material R&D, design, manufacturing, construction and equipment across upstream and downstream sectors, with over 2,100 members.

Upholding the principle of innovative development, the Association adheres to the tenet of “independence, self-reliance, self-improvement and self-discipline”. It fully implements the development philosophy of innovation, coordination, green development, openness and sharing, improves service resources and capacity for governments, the public, enterprises and members, and develops branded services with industrial features.

Its secretariat runs 13 functional departments and oversees 33 branches, delivering high-quality all-round services covering quality standards, technology promotion, policy research, conferences & exhibitions, credit evaluation, international cooperation as well as education and training. Abiding by laws and practicing core socialist values, CCPA commits itself to serving members, industry, government and society as an industrial guide and service provider.

Sobute New Materials Co., Ltd. (Sobute)

Sobute New Materials Co., Ltd. (Sobute for short) is a leading provider of advanced civil engineering materials. It specializes in the research and development, manufacturing, and sales of concrete admixtures, while continuously making breakthroughs in the development and commercialization of functional products, including waterproofing and repair materials and transportation infrastructure materials.

Sobute has consistently pursued a development strategy driven by technological innovation. It has established a number of leading research and development platforms, including the National Key Laboratory of Materials for Major Infrastructure Engineering. It has also built a highly specialized and experienced technical talent pool characterized by comprehensive professional expertise, a well-balanced age structure, strong innovation capabilities, and extensive experience in technology commercialization.

Sobute operates under a group-based management and chain-based operating model, with manufacturing bases established across Jiangsu, Sichuan, Tianjin, Xinjiang, Guangdong, Guangxi, and other regions. It has established and maintained an integrated management system covering quality, environmental management, occupational health and safety, and measurement management. Automated process control has been implemented throughout the entire manufacturing process.

Sobute adheres to a customer-centric philosophy and provides customers with consultative technical and marketing services, which is supported by highly qualified professional personnel and advanced testing facilities. Sobute’s products have been successfully applied in a large number of major national infrastructure projects, including the Hong Kong-Zhuhai-Macao Bridge, Shenzhen-Zhongshan Link, Tianwan Nuclear Power Plant, Baihetan Hydropower Station, Lanzhou-Xinjiang High-Speed Railway, South-to-North Water Diversion Project, Wuxi Taihu Tunnel, and so on.

Guided by its corporate mission of “Creating Better Materials, Building a Better Future,” Sobute upholds the core values of “Openness, Innovation, Integrity and Win-Win Cooperation”, and continuously seeks to create value for all stakeholders and aspires to become a modern technology-driven enterprise that leads the industry and earns the respect of society.

PLATINUM SPONSOR

3D Kenyo Printing
(Nanjing Kenyo Precision Machine Manufacture Shares Co., Ltd)

Nanjing Kenyo Precision Machine Manufacture Shares Co., Ltd is a leading integrated provider of 3D concrete printing technology in China. The Company delivers end-to-end solutions spanning independently developed 3D printing equipment, UHPC core printing materials, and comprehensive printing services for diverse construction applications. With more than 140 core technology patents, Kenyo has established a robust independent intellectual-property portfolio and a strong foundation for continuous innovation. Dedicated to the intelligent development of 3D concrete printing, Kenyo combines engineering expertise with self-developed AI model systems to advance smarter, more efficient construction. Its dual-headquarters strategy connects its China headquarters in Nanjing with its overseas headquarters in Abu Dhabi, UAE, supporting an international network for research and development, operations, project delivery, and customer service.

Kenyo's mature and reliable technology has been validated through a range of landmark projects in China and abroad. These include printed buildings, villa applications, highway sound barriers, and municipal facilities, as well as a 300-square-meter 3D-printed warehouse and a 1,200-square-meter 3D-printed exhibition hall in Abu Dhabi. The Company is also developing a 38,000-square-meter intelligent factory in Abu Dhabi, planned to commence operations by the end of 2026, further strengthening global production capacity and service reach.

Compared with conventional construction methods, Kenyo's 3D concrete printing solutions offer faster execution, controllable costs, and intelligent manufacturing capabilities. They are well suited to villas, warehouses, industrial facilities, public infrastructure, and other building scenarios, providing modern construction with lighter, smarter, and more cost-effective ways to build.

PLATINUM SPONSOR

VERTICO

Vertico is a Dutch technology company at the forefront of robotic 3D concrete printing, developing advanced solutions for architecture, construction, education and research. With more than 60 systems sold across six continents, we are the leaders in our field, with a significant share of our systems installed at universities, educational institutions and research organisations.

Collaboration with academia is a central part of Vertico's development. We work closely with universities and research institutes on material development, new printing technologies and applications for digital concrete manufacturing. Vertico participates in numerous research projects and grant-funded programmes, while also supporting independent and commercially funded research. This continuous interaction between industry and academia helps advance both our own technology and the wider field of 3D concrete printing.

Our fully integrated solutions combine robotic systems, concrete printheads and dedicated software, delivering high print quality, ease of use and exceptional geometric freedom. Systems range from accessible research and educational platforms to advanced solutions for industrial production. We even have a collaborative robot system designed specifically for academia called our LabCell.

At the core of our most advanced technology is the Accelerator Printhead (2K). Its advanced mixing introduces liquid accelerant directly at the nozzle, allowing concrete to harden within seconds. This enables large overhangs, intricate patterns, complex geometries and non-planar printing while maintaining precision and consistent print quality. Vertico further expands these possibilities through robotic concrete milling. By combining additive and subtractive manufacturing within a single robotic workflow, printed concrete can be precisely milled to create smooth surfaces, sharp details and complex finishes.

GOLD SPONSOR

Holcim

Headquartered in Zug, Switzerland, Holcim is the world's leading partner for sustainable construction, with net sales of CHF 15.7 billion in 2025. Present across 45 markets in Europe, Latin America, Asia, the Middle East and Africa, the Group employs more than 50,000 people and is recognized as a Global Top Employer. Guided by its purpose of "building progress for people and the planet," Holcim weaves sustainability and innovation through cement, ready-mix concrete, aggregates and building solutions, spanning infrastructure, industrial facilities and residential and commercial buildings.

Its NextGen Growth 2030 strategy answers the defining forces reshaping cities: rapid urbanization, large-scale energy refurbishment, stricter climate codes, the shift to modular and offsite construction, and the localisation of supply chains. A complete portfolio spans foundations, flooring, walling and roofing. Flagship brands include ECOPlanet low-carbon cement, ECOPact green concrete and ECOCycle circular technology, which converts construction and demolition waste into reusable aggregates—advancing the vision of "building cities from cities" and easing the strain on virgin resources.

Holcim pursues science-based net-zero goals aligned with 1.5°C pathways, combining calcined clay supplementary cementitious materials, energy-efficient plants and carbon capture platforms such as CaptureLab, while engineering durable, climate-resilient materials that cut the whole-life carbon of built assets. Through open cooperation, the Group drives industry-wide standardization: long-term partnerships with universities, engineering firms and industrial organisations scale circular techniques and low-carbon materials across the value chain. Backed by rigorous safety management, local community engagement and continuous workforce development, Holcim operates responsibly in every market it serves.

Committed to transforming the built environment, Holcim delivers practical, scalable solutions for greener, smarter and more resilient infrastructure worldwide.

GOLD SPONSOR

NIUMAG

NIUMAG Analysis, a high-tech enterprise founded in 2003, delivers end-to-end low-field nuclear magnetic resonance (LF-NMR) solutions. Its business scope covers R&D and sales of instruments, professional application technology support, and third-party testing services. The company has independently developed a full portfolio of low-field NMR instruments, breaking overseas technical monopolies.

Its systems are widely used in energy, cementitious materials, geotechnical engineering, oilfield services, food and agriculture, life sciences, materials science, education, and textiles. Its wholly-owned subsidiary, Suzhou TAINIU, operates a CNAS and CMA-accredited laboratory, providing reliable LF-NMR testing and customized analytical solutions. With over 20 years of expertise in LF-NMR technology, NIUMAG undertakes the National Major Scientific Instrument Project, hosts a National Postdoctoral Research Station, and has been recognized as a national Specialized, Refined, Differential and Innovative "Little Giant" Enterprise. Listed on NEEQ (stock code: 836507), NIUMAG pursues continuous technological innovation and popularization of scientific education, striving to build a world-leading magnetic resonance brand.

Our partners engaged in cement-based material research include Tsinghua University, Southeast University, Tongji University, Wuhan University of Technology, Shenzhen University, University of Jinan and Jiangsu Sobute New Materials Co., Ltd. International clients cover Harvard University, University of Vienna, Khalifa University, Saint-Gobain and Saudi Aramco.

GOLD SPONSOR

ZHICHUANGCHI
(Xiamen Zhichuangchi Technology Co., Ltd.)

NIUMAG Analysis, a high-tech enterprise founded in 2003, delivers end-to-end low-field nuclear magnetic resonance (LF-NMR) solutions. Its business scope covers R&D and sales of instruments, professional application technology support, and third-party testing services. The company has independently developed a full portfolio of low-field NMR instruments, breaking overseas technical monopolies.

Its systems are widely used in energy, cementitious materials, geotechnical engineering, oilfield services, food and agriculture, life sciences, materials science, education, and textiles. Its wholly-owned subsidiary, Suzhou TAINIU, operates a CNAS and CMA-accredited laboratory, providing reliable LF-NMR testing and customized analytical solutions. With over 20 years of expertise in LF-NMR technology, NIUMAG undertakes the National Major Scientific Instrument Project, hosts a National Postdoctoral Research Station, and has been recognized as a national Specialized, Refined, Differential and Innovative "Little Giant" Enterprise. Listed on NEEQ (stock code: 836507), NIUMAG pursues continuous technological innovation and popularization of scientific education, striving to build a world-leading magnetic resonance brand.

Our partners engaged in cement-based material research include Tsinghua University, Southeast University, Tongji University, Wuhan University of Technology, Shenzhen University, University of Jinan and Jiangsu Sobute New Materials Co., Ltd. International clients cover Harvard University, University of Vienna, Khalifa University, Saint-Gobain and Saudi Aramco.

GOLD SPONSOR

GUANLI

(Hangzhou Guanli Intelligent Technology Co., Ltd.)

Guanli Technology has been dedicated to intelligent construction for more than a decade and is a leading full-scope provider of 3D-printed building solutions. Headquartered in Xiaoshan, Hangzhou, the company has branches in Beijing, Shandong and Shanxi, as well as in Japan, Singapore and Dubai.

The company's concrete and mortar 3D printing equipment covers three series — laboratory, factory and on-site — in more than 20 models. MOLI, its fully self-developed intelligent control system for 3D-printed building, integrates multiple algorithms, requires no third-party slicing or offline programming, and converts models into printing paths in seconds. This greatly reduces operational difficulty and improves efficiency, meeting the industrialised, large-scale construction needs of 3D-printed buildings. The company holds 6 invention patents and 17 utility model patents, along with other intellectual property, and has led or participated in the formulation of more than 30 industry standards. Over the past five years, the company has completed more than 1,000 3D-printed projects and products worldwide — houses, bridges, municipal facilities, outdoor furniture, sculptures and marine structures — repeatedly pioneering the industry and twice winning global architectural design awards. Flagship projects include five 9-metre-high nest-style hotel buildings in Jinchang, Gansu; a 16-metre pedestrian bridge in Ningbo, Zhejiang; a 5,600 m² mosque in Jeddah, Saudi Arabia; Singapore's first in-situ 3D-printed kindergarten; and a 430 m² two-storey in-situ 3D-printed villa in Dubai. Its market reaches more than 20 countries and regions overseas — including the United States, Singapore, Australia, Japan and Saudi Arabia — and serves more than 1,000 clients.

General information

digitalconcrete2026@gmail.com

Oral presentation file

x.liu@seu.edu.cn

Other issues

Yamei Zhang	ymzhang@seu.edu.cn
Yu Chen	y_chen@seu.edu.cn
Wenqiang Zuo	wenqiangzuo@seu.edu.cn
Zijian Jia	jzjjzj18@163.com

