

CMSS23 Program

**4th International Congress on Materials & Structural Stability CMSS23,
8-10 March**

Wednesday 08 March, Open registration

Location 1: Faculty of Science, Av. Ibn Batouta

8⁰⁰-10⁰⁰	Registration General Session 1: Official Opening CMSS23 Belmahi Amphitheater <i>Chairperson: Abdeljebbar Diouri</i>
10⁰⁰-10³⁰	Welcome Reception
10³⁰-11⁰⁰	General Session 2: Belmahi Amphitheater <i>Chairperson: Mohammed Sonebi & Nicolas Roussel</i> Plenary Lecture (1) Karen Scrivener, École polytechnique fédérale de Lausanne, Switzerland, Strategies to reduce CO2 emissions from concrete fast and at scale
11⁰⁰-11³⁰	Plenary Lecture (2) Nele De Belie, Ghent University, Belgium, Understanding the carbonation of concrete with supplementary cementitious materials
11³⁰-12³⁰	Gustavo Colonnetti medallists
12³⁰-13⁰⁰	Oral Communications
	01-58: Influence of calcined clay on workability of mortars with low-carbon cement, Lucia Ferrari, University of Bologna, Italy
	05-95: Performance of calcined clay – GGBFS alkali-activated concrete against carbonation and chloride diffusion, Arnaud Castel, University of Technology Sydney, Australia
	01-275: LC3 cement Stumbling blocks during the industrial dissemination phase, Fernando Martirena, Universidad Central de las Villas, Cuba
	01-484: Valorisation of fines recycled concrete obtained by mechanosynthesis for construction materials production, Othmane Bouchenafa, ESTP Paris-IRC, France
	Group photo

Location 2 : Mohammadia School of Engineers, Av. Ibn Sina

13³⁰- 14³⁰	Lunch
14³⁰-15⁰⁰	General Session 3 : Amphitheater Polyvalent <i>Chairperson: Nele De Belie & Liberato Ferrara</i> Plenary Lecture (3) Nicolas Roussel, Gustave Eiffel University, France Recent advances in digital processing of concrete
15⁰⁰-15³⁰	Plenary Lecture (4) Mohammed Sonebi, Queen's University Belfast, United Kingdom, Over 30 years of experimental affordable house made with gypsum in Morocco
15³⁰-15⁴⁵	RILEM & Youth Council Presentations

15 ⁴⁵ - 16 ¹⁵	Oral Communications	
	O5-120: Study of the mechanisms of the external sulfate attack in supplementary cementitious materials, Othman Omikrine Metalssi, Université Gustave Eiffel, France	
	O3-346: Effects of treated waste wood fibers incorporation on rheological properties of the construction and demolition waste-based geopolymer mortar Mustafa Şahmaran, Hacettepe University, Turkey	
	O3-191: Combining 3D Textiles and Synthetic Microfibers for a Sustainable Strain Hardening Behavior in Cementitious Materials, Didier Snoeck, Université Libre de Bruxelles, Belgium	
	O1-349: Sulphate durability of low carbon cements with high contents of calcined clay. Reasons for the resistant phenomenon, César Pedrajas Nieto-Márquez, Aramburo Pedrajas Consultant, Madrid, Spain (Online)	
16 ¹⁵ -16 ³⁰	Coffee break	
16 ³⁰ - 17 ⁰⁰	Parallel Session 1 : Amphitheater Polyvalent <u>Chairperson</u>: Arnaud Castel & Ravindra Gettu Plenary Lecture (5) Martin Cyr, Université de Toulouse, France Low-carbon binders and SCMs: opportunities and challenges	Parallel Session 2: Amphitheater G <u>Chairperson</u>: Moncef L. Nehdi & Daman Panesar Plenary Lecture (6) Gabriele Tebaldi, University of Parma, Italy Bitumen stabilized materials
17 ⁰⁰ - 17 ¹⁵	Keynote Lecture (1) Alexandra Bertron, INSA Toulouse, France Durability of concrete in sewer networks: understanding mechanisms of cementitious materials resistance and assessment of materials' performance - recent progress and research needs	Keynote Lecture (2) Eshan V. Dave, University of New Hampshire, United States Assessing compatibility between asphalt binders, recycled asphalt materials and recycling agents
17 ¹⁵ - 17 ⁴⁵	Oral Communications	Oral Communications
	O1-183: Substitution of lime by quarry co-products in hemp concrete: impacts on mechanical and thermal properties, Arnaud Perrot, Université de Bretagne Sud, France	O2-495: Influence of Pre-Geopolymer Powder on the Mechanical Properties of Cold Bitumen Emulsion Mixtures, Layella Ziyani, ESTP Paris, France
	O1-11: An exploratory study of FA-based hybrid binder with different alkaline activators, Juan Manuel Etcheverry, Ghent University, Belgium	O2-215: Dynamic Shear Rheometer Determination of Axial E* and Shear G* Complex Moduli for Binder, Nuh Isa, Université Lyon, France
	O1-254: Mechanism of solidification at early age of poured earth by addition of hemihydrate and lime, Samuel Meulenyzer, Holcim Innovation Center, France	O2-219: Influence of aspect ratio on the viscoelastic characteristics of bituminous mixtures in torsion I.J.S. Sandeep, Indian Institute of Technology Madras, Chennai, India
	O1-313: Comparative Life Cycle Assessment Analysis of Mono, Binary and Ternary Construction and Demolition Wastes-based Geopolymer Binders, Obaid Mahmoodi, Toronto Metropolitan University, Canada	O2-218: Quantification of inhomogeneity and anisotropy of bituminous mixtures using biaxial experimental data, Arbin Raj, Indian Institute of Technology Madras, Department of Civil Engineering, Chennai, India
17 ⁴⁵ - 18 ¹⁵	Oral Communications	Oral Communications

	O1-108: Testing alginate- and sulfonate-based superabsorbent polymers as alternative to commercial options used in cementitious materials, José Roberto Tenório Filho, Ghent University, Belgium	O2-55: A new approach for reinforcing the pavement subjected to solicitations and admissible deformations, Omar Ben Charhi, Mohammed V University in Rabat-Morocco
	O1-34: Development of a Cementitious Pozzolanic Material using Calcined Local Clay: Mechanical and Durability Performances, Mohammed Seddik Meddah, Sultan Qaboos University, Oman	O2-123: Cracking susceptibility of asphalt concrete subjected to combined action of moisture, freeze-thaw cycle and long term ageing using semi-circular bending test, Cezary Szydłowski, Gdańsk University of Technology, Gdańsk, Poland
	O1-450: Data provenance - from experimental data to trustworthy simulation models and standards, Jörg F. Unger, Bundesanstalt für Materialforschung und -prüfung, (BAM), Germany	
	O1-96: Ambient-cured Geopolymer Mortars Developed by the Combined Use of Construction and Demolition Wastes, Gurkan Yildirim, Indian Institute of Technology Madras, Chennai, India	O2-144: Sustainability in concrete production: reclaimed asphalt pavement (RAP) as recycled aggregate, Alessandra Michelacci, University of Bologna, Italy
	O1-258: Durability properties of modified ferro-silicate slag concrete, Pithchai Pandian Sivakumar, Beerse, Belgium	O2-386: Flexural Performance of Self-Compacting Concrete Beams Reinforced with Hooked End and Three Dimensional Steel Fibres, Brabha Nagaratnam, Northumbria University, Newcastle, UK
18¹⁵- 18⁴⁵	Oral Communications	Oral Communications
	O1-104: Packing optimization of cement paste incorporating waste perlite powders, Amina Dacić, Budapest University of Technology and Economics, Hungary	O2-156: Reusing waste food-packaging plastic as additive modifier in asphalt mixtures, Antonio Roberto, University of Parma, Italy (Online)
	O1-148: Numerical approach to determine the mechanical properties of fresh and hardened cement paste, Mylvaganam Nithurshan, Faculty of Engineering, Hokkaido University, Sapporo, Japan	O2-168: Engineering behavior of Cold In-Place Recycling Materials, Peter E. Sebaaly, University of Nevada, USA
	O1-220: The influence of cement dosage and aggregate size on properties of the pervious concrete, Abdenour Khezzane, CY Cergy Paris University, France	O2-318: Laboratory and onsite development of Roller Compacted Concrete Pavement (RCCP) containing recycled aggregates from excavated earth, Camille Follet, INSA Rennes, France
	O5-315: Comparative study on the Electrolyte Resistance of Mortars made of Low Carbon Binders, Rebecca Achenbach, Aachen University, Germany	O5-101: Evaluation of sustainability of mortar paving stones: emission of fine particle aerosols by abrasion, Georgiana Francisca Husanu, Spanish National Research Council, Madrid, Spain

Thursday 09 March, Open registration

8³⁰-9⁰⁰	General Session 4: Amphitheater Polyvalent <i>Chairperson:</i> Arnaud Perrot Plenary Lecture (7) Francisca Puertas, Eduardo Torroja Institute for Construction Sciences, Madrid, Spain The Role of cement and concrete in sustainable construction
9⁰⁰-9³⁰	Plenary Lecture (8) Su Taylor, Queen's University Belfast, United Kingdom Towards NetZero and Intelligent Infrastructure through Structural Health Monitoring

9 ³⁰ -10 ⁰⁰	Plenary Lecture (9) Daman Panesar, University of Toronto, Canada Environmental assessment of an industrial heritage building: A canadian case Study	
10 ⁰⁰ -10 ³⁰	Coffee break	
10 ³⁰ - 10 ⁴⁵	Parallel Session 3: Amphitheater Polyvalent <i>Chairperson:</i> Gilberto Artioli & Martin Cyr Keynote Lecture (3) Jianzhuang Xiao, Tongji University, China Sustainability design of concrete structures and structural application of recycled concrete	Parallel Session 4: Amphitheater G <i>Chairperson:</i> Schmidt Wolfram & Alexandra Bertron Keynote Lecture (4) Moncef L. Nehdi, McMaster University, Canada Is net-zero feasible: systematic review of emerging technologies for cement and concrete decarbonization
10 ⁴⁵ - 11 ⁰⁰	Keynote Lecture (5) Sandra Nunes, Delft University of Technology, The Netherlands Truly digital concrete: a reality or a mirage?	Keynote Lecture (6) Raafat El-Hacha, University of Calgary, Canada Ultra-High-Performance Fibre Reinforced Concrete in Modular Construction: Sustainable Solution for Green Housing Challenges (Online)
11 ⁰⁰ - 11 ³⁰	Oral Communications	
	O5-449: Concrete sector on the catch of the data train, Irene Palomar, Universidad de Alcala, Departamento de Arquitectura, Madrid, Espana	O5-568: The Effect of Flow Inlet temperature on Pressure Drop and Fouling Deposit in the Tube Bundle of the Tubular Heat Exchanger, Pichitra Uangpairoj, Suranaree University of Technology, Thailand
	O1-24: Rheology characterization of 3D printing mortars with nanoclays and basalt fibers, Hugo Varela, Universidad de Alcalá, Departamento de Arquitectura, Madrid, España	O6-102: An experimental study on the influence of manufacturing parameters on the hydro-mechanical strength of earth specimen, Erwan Hamard, Université Gustave Eiffel, France
	O6-119: Effect of the thixotropy on the dimensional stability and mechanical performance of 3D printed mortars, Ahmed Loukili, Nantes Université, Ecole Centrale Nantes, France	O1-31: Mechanical and Microstructural Properties of mortar with fine recycled aggregates, Yury A. Villagrán Zaccardi, Sustainable Materials, Flemish Institute for Technological Research, Belgium
	O1-145: Effect of nanoclay in the printability of extrusion-based 3D printable mortar, Sandipan Kaushik, Queen's University Belfast, UK	O6-53: Improving Building Construction Sector in Palestine by Implementing Society 5.0 Technologies, Ahmed Abu Hanieh, Birzeit University, Palestine
	O6-222: Robotic Spray Earth Printing: A novel additive manufacturing process for earthen materials, Gerardo Arcangelo Pacillo, University of Florence, Italy	O2-395: Influence of fiber orientation on the moisture adsorption of continuous bamboo fibers composites, Mouad Chakkour, International University of Rabat, Morocco

11³⁰- 12⁰⁰	Oral Communications	Oral Communications
	O5-303 : Prestressed concrete structures with concentrated tendons - Structural damage due to hydrogen-induced stress corrosion cracking, Gino Ebell, Bundesanstalt für Materialforschung und -prüfung (BAM), Berlin, Germany	O1-135: Additive Earth: Local material processing and fabrication, Alexander Curth, Massachusetts Institute of Technology , Cambridge, USA
	O1-307: Evaluation of AI approach compared to phenomenological model to predict concrete properties based on a set of production data, Arnaud Delaplace, Holcim Innovation Center, Saint-Quentin-Fallavier, France (Online)	O1-129: Application of silica fume based solid activators for the one-part geopolymerization of various aluminosilicate raw materials, Olga Andriana Panitsa, National Technical University of Athens, Greece
	O6-286: Towards the use of artificial intelligence for the quality control of printed materials, Abdelhak Kaci, CY Cergy Paris Université, France	O1-255: Age Influence on Compressive Strength for Concrete Made with Different After Exposed to High Temperatures, Ahmed M. Seyam, Budapest University of Technology and Economics, Hungary
	O5-121: Analysis of chloride penetration for condition assessment of concrete in the marine environment, Dora Kolman, University of Zagreb, Croatia	O6-284: Evaluation of Mechanical Anisotropy Induced by 3D Printing Process of Earth-Based Materials, Said Rahal, CY Cergy Paris Université, France
	O6-107: Influence of petrographical properties on the physico-mechanical behaviour of limestones at high temperatures, Ayoub Daoudi, CY Cergy Paris Université, France	O6-181: Investigation Of The Possible Valorisation Of Arcachon Bay Dredged Sediments In Earth Constructions, Sarah Nassar, Université de Bordeaux, France
12⁰⁰- 12³⁰	Oral Communications	Oral Communications
	O6-447: Reusing of concrete building elements- assessment and quality assurance for service-life, Jan Suchorzewsk, RISE Research Institutes of Sweden	O6-427: In-situ assessment of the hygrothermal performance of earth masonry construction, Noha Al Haffar, Centre scientifique et technique du bâtiment , Champs-sur-Marne France
	O5-488: Galvanic corrosion and service life extension of grouted post-tensioned concrete systems, Karthikeyan Manickam, Indian Institute of Technology Madras, India	O6-193: Development of new intelligent earthen construction materials, Hamza Allam, University of Paris Est Créteil, France
	O5-142: Durability of low carbon concretes with respect to carbonation induced corrosion, Imane Elkhaldi, Ecole Centrale de Nantes, France	O6-295: In-plane experimental analysis and effectiveness of a compatible TRM-strengthening solution for rammed earth buildings” Daniel Oliveira, University of Minho, Portugal
	O1-71: Influence of sawdust and flax shives on the high temperature mechanical behavior of earthen material, Anne-Lise Beaucour, CY Cergy Paris Université, France	O5-378: Experimental validation of electrochemical tomography to locate and quantify localized corrosion, Meeke Van Ede, Institute of Building Materials, Zürich, Switzerland
	O5-316: Influence of CO2 concentration on carbonation behavior of alternative binders, Bettina Kraft, Bauhaus Universität Weimar, F. A. Finger-Institut for Building Materials Science, Weimar, Germany	O1-272: Recycling concrete waste fines to produce lightweight aggregates, Smadar Kedem Elmachily, Technion Institute of Technology, Haifa, Israel
12³⁰- 14⁰⁰	Lunch	

14 ⁰ -14 ³⁰	<p align="center">General Session 5: Amphitheater Polyvalent <u>Chairperson:</u> Su Taylor Plenary Lecture (10) Ravindra Gettu, Indian Institute of Technology Madras, Chennai, India Development of modular textile reinforced concrete elements</p>		
14 ³⁰ -15 ⁰⁰	<p align="center">Plenary Lecture (11) Gilberto Artioli, University of Padova, Italy The nature, historical development, and architectural role of binders</p>		
15 ⁰⁰ -15 ¹⁵	<p align="center">Honors and Medals</p>		
15 ¹⁵ - 16 ¹⁵	<p align="center">RILEM PhD and Post Doc workshop on 3D printing with concrete <u>Chairperson:</u> Nicolas Roussel</p>		
	<p align="center">Oral Communications</p>		
	<p>T-529: Methodology for formulating 3D printable concrete, based on compressive packing model, Victor De Bono, NAVIER, Ecole des Ponts ParisTech (ENPC), France</p>		
	<p>T-554 : Scaling up approach in digital concrete, Seyma Gürel Saydam, ETH Zurich Switzerland</p>		
	<p>T-363: imbibition control in powder for 3D printing of building materials, Valentine Danché, L2MGC, CY Cergy Paris Université, France</p>		
	<p>O6-90: A Numerical Model of 3D Concrete Printing Including Thixotropic Effects, Giacomo Rizzier, Politecnico di Milano, Italy</p>		
	<p>O1-528: Improving the thermal properties of phase change materials incorporated in plaster through 3D-printing, Marwa El Yassi, CY Cergy Paris University Frane</p>		
16 ¹⁵ -16 ⁴⁵	<p align="center">Coffee break</p>		
16 ⁴⁵ - 19 ⁰⁰	<p align="center">Parallel Session 5 Amphitheater Polyvalent workshop on 3D printing with concrete (Continuation)</p> <hr/> <p>T-414: May the gravitational force be with you - Gravity induced testing for 3D concrete printing, Derk Bos, Eindhoven University of Technology, The Netherlands</p> <hr/> <p>O1-433: Intrinsic shape stability of printable concrete filament and its influence on voids generation, John Kolawole, Hybrid 3D Printing Group, Loughborough University, UK</p> <hr/> <p>T-558: In-line measurement systems for 3DCP quality control, Jelle Versteeg, Eindhoven University of Technology, The Netherlands</p>	<p align="center">Parallel Session 6 Amphitheater G <u>Chairperson:</u> Radhakrishna G. Pillai & Emmanuel Keita</p> <hr/> <p align="center">Keynote Lecture (7) Kolawole Adisa Olonade University of Lagos, Nigeria Bio-Concrete utilization in Africa for sustainable and resilient infrastructure</p> <hr/> <p align="center">Keynote Lecture (8) Youssef Habibi Mohammed VI Polytechnic University, Morocco Wood: an inexhaustible resource for sustainable building materials</p>	<p align="center">16³⁰- 18⁰⁰ Springer Workshop On Publication Nathalie Jacobs, Executive publisher at Springer Workshop on Publishing Scientific Research</p>

	<p>T-551: Rheological behavior of printable fiber-reinforced LCCC-based concrete, Silvia Reissig, Institute of Construction Materials, TU Dresden, Germany</p> <hr/> <p>T-367: Very early age drying in 3D printed concrete: microstructural features and damage prevention strategies Laura Caneda Martínez, Université Gustave Eiffel, France</p> <hr/> <p>T-530: Large scale 3D printing of beams reinforced with continuous fiber, Léo Demont, NAVIER, Ecole des Ponts ParisTech (ENPC), France</p> <hr/> <p>T-555: Directional Dependency of 3D Printed Concrete in the Elastic Range, Lien Saelens, Ghent University, Belgium</p> <hr/> <p>T-557: The influence of 3D printed formwork on the carbonation and chloride penetration resistance of concrete, Michiel Bekaert, Ghent University, Belgium</p> <hr/> <p>T-552: Reinforcement Integration in Shotcrete 3D Printing - The Effect of Material- and Process Parameters on the Resulting Bond Quality, Niklas Freund, Institute of Building Materials, Concrete Construction and Fire Safety, TU Braunschweig, Germany</p> <hr/> <p>O6-194: A prediction of the printability of concrete through Artificial Neural Networks, Andrea Marcucci, Politecnico di Milano, Italy</p> <hr/> <p>O6-242 : Automated concrete curing and assessment of strength and durability using IoT system, Woubishet Zewdu Taffese, Arcada University of Applied Sciences, Helsinki, Finland (Online)</p>	<p>17¹⁵: Oral Communications</p> <p>O2-143: Enchantments in Bond in Textile Reinforced Concrete: Experiments and Modeling, Alva Peled, Ben Gurion University of the Negev, Israel</p> <hr/> <p>O3-109: Distribution of synthetic fibers in cementitious composites, Branka Mrduljaš, University of Zagreb Faculty of Civil Engineering, Department of Materials, Croatia</p> <hr/> <p>O3-238: Wood Waste Reuse For Acoustic Insulation Panels In Residential Buildings, Narimane Mahani, Mohammadia School of Engineers, Mohammed V University, Rabat, Morocco</p> <hr/> <p>O4-317: Thermal behavior of polymer foam cavity insulated LSF walls under standard fire conditions, Tomislav Ščapec, University of Zagreb, Croatia</p> <hr/> <p>O2-269: Influence of Rice Husk Ash on Moisture Susceptibility of Warm Mix Asphalt using Chemical based additive, Shiva Kumar Mahto, National Institute of Technology Patna, Bihar India (Online)</p>	
<p>20⁰⁰-22⁰⁰</p>	<p style="text-align: center;">Gala Dinner</p>		

Friday 10 March, Delivery of certificates

8³⁰-9⁰⁰	General Session 6: Amphitheater Polyvalent <i>Chairperson:</i> Jianzhuang Xiao Plenary Lecture (12) Schmidt Wolfram, Federal Institute for Materials Research and Testing, Berlin, Germany Future-oriented standards for cement and admixtures – how Africa can spearhead the implementation of green urban construction materials	
9⁰⁰-9¹⁵	Keynote Lecture (9) Emmanuel Keita, Ecole des Ponts, Gustave Eiffel University, France Process of earthen materials for low-impact construction	
9¹⁵-10⁰⁰	Oral Communications	
	O1-285: A framework for information recovery of cementitious materials under long-term use, Satoshi Fujimoto, Utsunomiya University, Japan	
	O1-468: Optimization of the formulation of a cellular concrete for load-bearing masonry, Heikal Afraitane, Ecole Hassania des Travaux Publics, Casablanca, Morocco	
	O5-273: Change of polymeric gel structure of several foamed plastic insulations deteriorated by moisture, Yoobin Leem, Hokkaido University, Japan	
	O1-46: Evaluation of potential AAR for the Egyptian north coast area, Vyacheslav Falikman, Scientific Research Center Construction, Moscow, Russia	
	O1-36: Carbonation of Concrete Cured under Different Conditions, Kolawole Adisa Olonade, University, Western Campus, Ishaka, Uganda	
	O5-195: Searching for the needle in the haystack - a case study on how machine learning could help to find ideal sustainable building materials, Christoph Völker, Bundesanstalt für Materialforschung und-prüfung, Unter den Eichen, Berlin, Germany	
10⁰⁰-10³⁰	Coffee break	
10³⁰-10⁴⁵	Parallel Session 9 Amphitheater Polyvalent <i>Chairperson:</i> Hassan Ait Ahsaine & Lahoucine ATOURKI Keynote Lecture (10) Timothy Wangler, Institute for Building Materials, ETH Zurich, Switzerland Process-Properties-Performance in 3D Printed Concrete: Focus on Sustainability	Parallel Session 10 Amphitheater G <i>Chairperson:</i> Hakim Abdelgader & Mohammed HADOUCHI Keynote Lecture (11) Mohamed Balli, International University of Rabat, Morocco Magnetic materials for efficient cooling and air-conditioning systems
10⁴⁵-11⁰⁰	Keynote Lecture (12) Rob Wolfs, Eindhoven University of Technology, the Netherlands Lessons learned of project milestone: The first 3D printed concrete house in the Netherlands	Keynote Lecture (13) Enrico Sassoni, University of Bologna, Italy Strengths and weaknesses of traditional and innovative products for consolidation of stones, mortars and bricks

11⁰⁰-11¹⁵	<p align="center">Keynote Lecture (14) Mohammed Abed, King's College, Wilkes-Barre, USA Applying the multi criteria decision making applications in sustainable concrete</p>	<p align="center">Keynote Lecture (15) Radhakrishna G. Pillai, Indian Institute of Technology Madras, Chennai, India Corrosion and service life of steel-cementitious systems – Highlights from 12 years of research</p>
11¹⁵- 11⁴⁵	Oral Communications	Oral Communications
	<p>O1-51: Hydration and durability characteristics of a New Composite Cementitious Binder Containing of Slag and Calcite, Yogarajah Elakneswaran, Faculty of Engineering, Hokkaido University, Sapporo, Japan</p>	<p>O5-87: Moisture diffusion affected by the Knudsen effect in temporal changing pore networks, Christoph Strangfeld, Bundesanstalt für Materialforschung und -prüfung, Berlin, Germany</p>
	<p>O1-98: Investigation of the pozzolanic reactivity of three different grades of calcined marl from phosphate by-products, Abdelmoujib Bahhou, Mohammed VI Polytechnic University, Ben Gue-rir, Morocco</p>	<p>O5-388: Energy performance study of a passive cooling technique applied to the roof of a test cell in Marrakech climate, Abdessamad El Hassnaoui, Cadi Ayyad University, Marrakesh, Morocco</p>
	<p>O1-64: The influence of clinkering conditions and cooling rate on the phase composition of Belite-Ye'elimite-Ferrite (BYF) clinker, Adam Sabbah, Technion ,Faculty of Civil and Environmental Engineering, Israel</p>	<p>O4-70: Welding techniques recommended for duplex steels used in building structures, Mariusz Maslak, Cracow University of Technology, Faculty of Civil Engineering, Cracow, Poland</p>
	<p>O5-69: Eco-efficiency of the lime cycle on lime- based materials: Recyclability, technical feasibility, and life-cycle assessment, Agustin Laveglia, Technical University of Darmstadt, Darmstadt, Germany</p>	<p>O6-187: New insights on conservation of marble artworks from computational chemistry, Antonia E. Papasergio, University of New South Wales, Sydney, Australia</p>
	<p>O3-78: Tensile load-bearing behaviour of concrete components reinforced with impregnated flax fibre textiles, Tânia Feiri, Hochschule Biberach University of Applied Sciences, Institute of Structural Engineering, Biberach/Riß, Germany (Online)</p>	<p>O5-569: The Influence of Reynolds Number on Flow Characteristics, Fouling deposit, and Heat Transfer Performance in the Tubular Heat Exchanger of a Steam Generator, Pasada Yisunzam, Suranaree University of Technology, Nakhon Ratchasima, Thailand</p>
11⁴⁵- 12⁰⁰	<p align="center">Keynote Lecture (16) Luca Valentini, University of Padua, Italy Sustainable sourcing of raw materials for construction</p>	<p align="center">11⁴⁵- 12¹⁵: Keynote Lecture (17-18) Andrea Graziani, Marche Polytechnic University, Italy Alan Carter, School of Higher Technology in Montreal, Canada Multiphase characterization of cold bitumen emulsion materials</p>
12⁰⁰- 12³⁰	Oral Communications	12¹⁵- 12⁴⁵: Oral Communications
	<p>O1-362: Comparative impact of limestone quarry waste fineness on the reactivity of LC3 cement, Matea Flegar, University of Zagreb, Zagreb, Croatia</p>	<p>O1-397: Evaluation of rhyolite rock as a thermocline storage material for medium and high temperature applications, Elbachir Abddaim, Faculté Sciences et Techniques, UCA, Marrakech, Morocco</p>
	<p>O1-385: On the use of non-destructive testing for the measurement of self-healing in lime- based mortars, Franco Grosso Giordano, Ghent University, Belgium</p>	<p>O5-132: Understanding Mineralogy of Incineration Ashes via Raman Imaging, Hamza Samouh, University of Illinois at Urbana- Champaign, USA</p>
	<p>O1-390: Chalcedonite aggregate in lime mortars: assessment of strength, microstructure, and durability, Tomáš Žižlavský, Brno University of Technology, Czechia</p>	<p>O1-314: Characterization and Value-added Application of Low-quality Concrete Waste Based Recycled Aggregates, Mustafa Sahmaran, Hacettepe University, Ankara, Turkey</p>

	<p>O5-180: Development of new methods and materials to characterize the carbonation of recycled aggregates, Farah Kaddah, Ecole centrale de Nantes, France</p>	<p>O1-458: Strength of unfired clay bricks with almond husk additive in relation to surface porosity based on a quantification by SEM images analysis, Othmane Nouredine, ENSAM, Moulay Ismail University, Meknes Morocco</p>
	<p>O1-470: Testing air lime mortars produced with lime of different technology, Maria Stefanidou, School of Civil Engineering, AUTH, Greece (Online)</p>	<p>O1-509: Study of the suitability of unfired bricks based on clay and smmar fibers as an ecological building material with zero carbon footprint, Aziz El-Yahyaoui, ENSAM, Moulay Ismail University, Meknès, Morocco</p>
12³⁰- 14³⁰	Lunch	
14³⁰-14⁴⁵	<p style="text-align: center;">Parallel Session 11 Amphitheater Polyvalent <i>Chairperson:</i> Luca Valentini & Rob Wolfs & Timothy Wangler Keynote Lecture (19) Bassam A. Tayeh, Islamic University of Gaza, Palestine Effect of glass powder on High-strength self-compacting concrete properties</p>	<p style="text-align: center;">Parallel Session 12 Amphitheater G <i>Chairperson:</i> Enrico Sassoni & Kolawole Adisa Olonade & Mohammed Abed Keynote Lecture (20) Hakim Abdelgader, University of Tripoli, Libya Development of a new method of concrete mix design based on the Bolomey method and Abrams's law</p>
14⁴⁵-15¹⁵	Oral Communications	Oral Communications
	<p>O1-282: Influence of alkali leaching on the development kinetics of delayed ettringite formation, Thierry Houndonougbo, Gustave Eiffel University Marne-La-Vallée, France</p>	<p>O6-76: Dynamic response of masonry structure with the application of horizontal seismic band: shake table tests, Florent Vieux-Champagne, Université Grenoble Alpes, France</p>
	<p>O1-196: Hygrothermal behavior of compress earth block envelopes, Giada Giuffrida, University of Paris, France</p>	<p>O6-300: Seismic analysis of wall-to-horizontal diaphragm connections in historical constructions: modelling and application, Fabio Solarino, University of Minho, Guimarães, Portugal</p>
	<p>O1-117: Evaluation of water vapor permeability in mortars produced with crystallizing additive, Carina M. Stolz, Universida de Federal do Rio de Janeiro, Rio de Janeiro, Brazil (Online)</p>	<p>O6-174: Seismic Behaviour of polymeric fiber reinforced cementitious composite in Exterior Reinforced Concrete Beam-Column Joints Loaded Cyclically under Hysteresis Loop, Shwan H. Said, Northern Technical University, Kirkuk, Iraq</p>
	<p>O1-365: Superplasticizers and rheological properties of highly concentrated cement pastes, Xiaohan Yu, Southeast University, China</p>	<p>O1-549: Structure and mechanical study of ground-granulated blast furnace slag based binder and its use in earth concrete, Arthur Lam, Institut de Recherche en Constructibilité IRC, ESTP, Université Paris-Est, Cachan, France</p>
	<p>O2-350: Influence of gradation on compactibility and workability of bituminous mixtures containing recycled polyethylene plastic waste, Gabriel Orozco, École de Technologie Supérieure, Montréal, Québec, Canada (Online)</p>	<p>O2-559: Determination of the Stiffness of Ecological Asphalt Mixtures with Dynamic Non-Destructive Tests, Jean-Claude carret, École de technologie supérieure, Montréal, Canada (Online)</p>
15¹⁵-15⁴⁵	Oral Communications	Oral Communications
	<p>O1-263: Influence of sawdust and soil type on the high temperature behavior of raw earth bricks, Prosper Pliya, CY Cergy Paris Université, France</p>	<p>O5-99: Life Cycle Assessment modelling in Octave/Matlab: Hydrated Lime Manufacturing case study, Luciano Sambataro, TU Darmstadt, Institute of Construction and Building Materials, Germany</p>

	O1-44: Investigations on alkali-activated aggregates from fine recycled construction wastes in concrete, Isabelle Wichmann, Technische Universität Berlin, Department of Civil Engineering, Germany	O6-126: Evaluation of constitutive soil models for the prediction of movements caused by deep excavation, case study, Ghizlane Boulaid, Ecole Mohammadia d'Ingénieurs, Université Mohammed V, Rabat, Maroc
	O6-366: Developing clay-based tile adhesives with good resistance against water, Kassem Nejme, Université Gustave Eiffel, France	O6-330: Modelling of the influence of ballasted columns on the bridge foundation in liquefiable soil, Youness Tlidi, Mohammadia School of Engineers, Mohammed V University, Rabat, Morocco
	O6-82: Non-destructive tests to evaluate the self-healing capacity for a 3D printing ECC material, Fernando Fernández, Instituto de Ciencias de la Construcción Eduardo Torroja. Madrid, Spain	O6-465: Finite element modeling of early-age temperature development of in-situ concrete under variable ambient temperatures, Yaowen Tan, Brunel University London, United Kingdom
	O6-441: A Numerical Study of the Flexion of a Simple Rectangular Reinforced Concrete Beam, Mustapha Kajja, Sultan Moulay Slimane University, Beni Mellal, Morocco	O6-583: Numerical simulation of a dry joint masonry arch in the Volubilis site (Morocco), Mohamed Sekkaki, Moulay Ismail University – Meknes, Morocco
15⁴⁵-16¹⁵	Oral Communications	Oral Communications
	O1-319: Effect of the incorporation of an excavated earth fine-grained fraction in cementitious mixes, Camille Follet, INSA Rennes, France	O6-457: Geotechnical investigation into causes of cracks in educational building and Maintenance Culture Perspective : a Case Study, Taoufik Jebli , ENSAM, Université Moulay Ismail, Meknès- Morocco
	O1-382: Life-cycle assessment of Three Generations of Recycling Concrete Supported by and Multi-Criteria Analysis, Mohammed Abed, King's College, Wilkes-Barre, USA	O5-21: Durability assessment of concrete pipe based calcined clay under highly corrosive environment, Aadil Ejbouh, University Ibn Tofail, Faculty of Science, Kenitra, Morocco
	O1-521: Cement testing potentials in Africa: a case of pan-African interlaboratory testing, Kolawole Adisa Olonade, University of Lagos, Nigeria	O5-453: Phosphoric acid based geopolymers as a new photocatalyst for the degradation of the methylene blue dye in wastewater, Hicham Majdoubi, Mohamed VI polytechnics University, Morocco
	O2-203: Railway ballast aggregate characterization through a new strength index: preliminary suitability evaluation of an industrial by-product for a railway application, Giovanni Giacomello, University of Padova, Italy (Online)	O3-299: Numerical study of thermal stress of a building material based on clay and date palm fibers, Ahmed Lkoun, Hassan II University in Casablanca, Morocco
16¹⁵-17⁰⁰	Oral Communications	Oral Communications
	O1-35: Investigating the Possible Bio-Stabilization of Rammed Earth Through Microorganisms, Busra Akturk, Istanbul Bilgi University, Istanbul, Turkey (Online)	O6-331: Protection of the foundation of the Mohamed IV tower in Morocco against the phenomenon of soil liquefaction, Youness Tlidi, Mohammadia School of Engineers, Mohammed V University, Rabat, Morocco
	O1-280: Factors affecting the stabilization of alpha belite, Antonina Goncharov, Technion, Civil and environmental engineering, Haifa, Israel	O2-560: Subgrade Improvement with Mixed Lime and Cement as Additives, Aizaz Ullah, University of the West of Scotland, Scotland, UK (Online)
	O1-259: Corrosion resistance and bond strength of concrete with ferrochrome slag as coarse and fine aggregates, Kazi Md Abu Sohail, Sultan Qaboos University, Muscat, Oman	O5-60: Study of the effect of class F fly ash on the durability of concrete of water treatment tanks exposed to a high concentration of aluminum sulfate by an electrochemical process, Adil Ech-chebab, Faculty of Sciences, University Ibn Tofail, Kenitra, Morocco

	<p>O1-287: Experimental and theoretical investigation of the properties of PEG/natural clay based hybrids: Effect of monomer volume fraction, Mohammed Belghazdis, Faculty of Sciences, Moulay Ismail University, Meknes, Morocco</p>	<p>O5-278: Experimental investigation on workability and mechanical properties of carbon fiber reinforced high-strength concrete (HSC) containing waste bakelite aggregate (WBA), Robert Bušić, Faculty of Civil Engineering and Architecture University of Osijek, Croatia (Online)</p>
	<p>O1-256: Maturity-based Machine Learning Prediction of Strength Development for Cementitious Composites Incorporating Phase Change Materials, Afshin Marani, McMaster University, Hamilton, Ontario, Canada (Online)</p>	<p>T6-166: Rediscovering raw earth heritage of Champagne area (France): cartography and typology of a specific adobe vernacular architecture, Adrien Aras-Gaudry, Université de Reims Champagne-Ardenne, Reims, France (Online)</p>
<p>17⁰⁰-17³⁰</p>	<p>Closing session</p>	