



April 10 to 13, 2025
Hammamet, Tunisia

Program of the 1st International Conference on Concrete and Circular Economy (CCE2025)



Day 1, April 11th, 2025

8h30 10h30	8h30 9h00	CONFERENCE OPENING Chairs: Atef Daoud (Tunisia), György L. Balázs (Hungary) OPENING SPEECHES President of Sfax University: Ahmed Hadj Kacem Director of National Engineering School of Sfax: Khaled Elleuch
	09h00 09h45	Keynote Speaker 1: Pr. Petr Hájek (Czech Republic) "Sustainable and Resilient Built Environment in a Changing World - Challenge for Concrete Structures"
	9h45 10h30	Keynote Speaker 2: Dr. Dipl.-Ing. Wolfram Schmidt (Germany) "Streamlining multiple heterogeneous renewable supplies to single homogenous supply and value streams for cementitious binders and admixtures"
10h30 11h00	Coffee Break	
11h00 12h40	SESSION 1 VALORIZATIONS OF DEMOLITION WASTE (ROOM 1) Chairs: Amor Ben Fraj (France), Amara Loulizi (Tunisia)	
	11h00 11h20	Demonstration of a circular building process at large scale: CircBoost Pilot project in Norway <i>Iveta Novakova, Sofija Kekez</i>
	11h20 11h40	Circular Economy in the Construction Sector: Challenges and Opportunities in Luxembourg and the Greater Region <i>Monica Louie, Markus SCHÄFER</i>
	11h40 12h00	Recycling of mineral building materials – chances and obstacles <i>Anne Haller, Klaus Holschemacher</i>
	12h00 12h20	IFC-based Demolition Schedule Optimization <i>Melodie Njuguna, Andre Mantelatto, Artur Kuzminykh, Tomo Cerovšek, Manuel Parente, José Granja, Miguel Azenha</i>
	12h20 12h40	Recyclability of demolished diaphragm wall material, <i>Thomas Pichler, Christian Müller, Konrad Bergmeister, Klaus Voit</i>
12h40 14h00	Lunch Break	

	SESSION 2 RECYCLING OF USED MATERIALS (ROOM 1) Chairs: Petr Hájek (Czech Republic), Ildiko Merta (Austria)	
14h00 15h40	14h00 14h20	The contribution of tire recycled materials in the circular economy of cement-based composites <i>Alessandro Fantilli, Isabella Bianco, Gian Andrea Blengini, Bernardino Chiaia</i>
	14h20 14h40	Microstructural and micromechanical study of the interfacial transition zone of recycled concrete by combined Nano indentation and SEM-EDX technique <i>Feng Li, Göran Forbrig, Florian Kleiner, Luise Goebel, Christiane Roeßler, Elske Linß</i>
	14h40 15h00	Valorisation of Plastic Bottle Wastes as Pavement Blocks <i>Azer Maazoun, Oussam Atoui, Ahmed Siala</i>
	15h00 15h20	Inverse Analysis of Shrinkage and Drying Crack Prediction in Bricks Made from Tannery Sludge <i>Armia Ghrairi, Lassad Ajam, Oualid Limam</i>
	15h20 15h40	Recycling of waste fresh concrete as aggregate granules <i>Katalin Kopecskó, Valentina Sütő-Kreis, Olivér Czoboly, György L. Balázs</i>
15:40 16:00	Coffee Break	
	SESSION 3 DESIGN WITH NATURAL FIBER COMPOSITES (ROOM 1) Chairs: Mehdi Sbartai (France), Said Kenai (Algeria)	
16h00 17h40	16h00 16h20	Exploratory Study of the Thermal and Mechanical Performances of Agro-Concrete Using Reed as a Biosourced Aggregate <i>Laura Prévitali, Thouraya Salem, Antonin Fabbri, Teddy Fen-Chong</i>
	16h20 16h40	Rutting resistance of stone matrix asphalt incorporating extracted juncus plant stem fibers <i>Ameni Arfaoui, Houcem Naili, Amara Loulizi</i>
	16h40 17h00	Long-term durability of treated Alfa fibers based-cementitious materials <i>Soukaina Ajouguim, Jonathan Page, Chafika Djelal</i>
	17h00 17h20	Ballistic impact and blast resistance of Alfa reinforced concrete <i>Baya Tahenti, Zied Kammoun, Abdreaaouf Trabelsi</i>
	17h20 17h40	Mechanical and thermal evaluation of new eco-friendly construction material based on recycled raw earth and wood sawdust <i>Mehdi Sbartai, Jinxia HU, Ryad BOUZOUIDJA, Tingting VOGT WU</i>

SESSION 4* RECYCLING OF USED MATERIALS (ROOM 2)		
Chairs: Katalin Kopecskó (Hungary), Ali Sdiri (Tunisia)		
16h00 17h30	16h00 16h15	Evolution of the microstructure of cement paste modified with MCM-41 under thermal loading <i>Maciej Szeląg, Patryk Rumiński, Magdalena Rajczakowska</i>
	16h15 16h30	Development of the microstructure of cement paste modified with basalt powder subjected to thermal loading <i>Patryk Rumiński, Maciej Szeląg, Magdalena Rajczakowska</i>
	16h30 16h45	Reactivity assessment and incorporation of calcined drinking water treatment sludge in ternary cement systems <i>Khaoula Doughmi, Khadija Baba, Yassine Taha</i>
	16h45 17h00	GGBF Slag-Based Geopolymer for Ionic Thermoelectric Energy Harvesting <i>Ghizlane Moutaoukil, Mohamad Barzegar, Guido Goracci, Jorge Sanchez Dolado</i>
	17h00 17h15	New binders and wastes for designing cement-based materials suited for energy harvesting and storage applications <i>Jorge Dolado</i>
	17h15 17h30	Evaluating the Aging Process of Reinforced and Non-Reinforced Concrete with Resin Coatings under Aggressive Environmental Conditions <i>Sofiène Helaili, Abdelaziz Kraiem, Moez Chafra</i>
19h00 21h00	Diner	

- Session 3 and 4 are in parallel
- Session 4 (Abstract only): Presentation 10 mins + 5 mins discussion

Day 2, April 12th, 2025

8h30 9h00	Chairs: Wolfram Schmidt (Germany), Jorge S. Dolado (Spain)	
	PRESENTATION OF <i>fib</i> AND RILEM Prof. György L. Balázs, <i>fib</i> And Prof. Said Kenai, RILEM	
9h00 9h45	Keynote Speaker 3: Dr. Jose C. Matos (Portugal) "Novel Approaches Towards the Sustainable Management of Concrete Civil Infrastructures"	
9h45 10h30	Keynote Speaker 4: Pr. Said KENAI (Algeria) "Valorization of agro-wastes in cementitious composites"	
10h30 11h00	Coffee Break	
11h00 12h40	SESSION 5 ECO-FRIENDLY BINDERS WITH LOW CO₂-EMISSION (ROOM 1) Chairs: José Matos (Portugal), Basma Samet (Tunisia)	
	11h00 11h20	Mechanical and Microstructural Characteristics of Concrete Composed of Recycled Sand and Low-Carbon Cement <i>Ahmad Jan, Lucia Ferrari, Nikola Mikanovic, Mohsen Ben-Haha, Elisa Franzoni</i>
	11h20 11h40	Carbon storage capacity evaluation of incineration ash <i>Marie-Laure Heyndrickx, Beibei Sun, Veerle Boel, Stijn Matthys</i>
	11h40 12h00	Effectiveness of cement replacement materials at different cement content and water-cement ratio <i>Rita Nemes, Anna Szijartó</i>
	12h00 12h20	Quarry Waste Composition Effect on Mechanical Performance of Eco-Friendly Binders <i>Lobna Benzina Mechmeche, Ramy Belhadj, Abderraouf Trabelsi, Mongi Ben Ouezdou</i>
	12h20 12h40	A Study on Utilization of Mussel Shells in Cement Mortar: Enhancing Sustainability and Mechanical Properties <i>Monika Verma, Francesco Colangelo, Ilenia Farina</i>
12h40 14h00	Lunch Break	

SESSION 6 ECO-DESIGN AND ECO-CONSTRUCTION (ROOM 1)		
Chairs : Fakhher Jammousi (Tunisia), Essaieb Hamdi (Tunisia)		
14h00 14h20 14h20 14h40 14h40 15h00 15h00 15h20 15h20 15h40	14h00 14h20	Hygrothermal properties of compacted bio-based blocks (CBB) made from alkali-activated binder and flax shives <i>Leila Ben Bahloul, Jonathan Page, Chafika Djelal-Dantec, mohamed Waqif, Latifa saâdi</i>
	14h20 14h40	Reuse of Dam Sediments as Road Layer Material <i>Sameh Anibi, Souhir Ellouze, Moncef Zairi</i>
	14h40 15h00	Concrete made from Vegetable Shells: Case of Palm Shell <i>M. A. Serifou, Athanas Konin</i>
	15h00 15h20	Effects of Lime and Fibers on BTC Soil Properties <i>Houcem Trabelsi, Souhir Elouze, Ines Garsellaoui, Stéphanie Bonnet</i>
	15h20 15h40	Characterization and Sustainable Use of Dam Sediments for Ceramic Applications: Insights from Zaghouan <i>Assia Boukhili, Rakia S'HABOU, Ali ELLOUZE, Hassib TOUNSI</i>
	15h40 16h00	Coffee Break
SESSION 7 VALORIZATION OF DEMOLITION WASTE AND USED MATERIALS (ROOM 1)		
Chairs: Alessandro Fantilli (Italy), Maciej Szelag (Poland)		
16h00 16h20 16h20 16h40 16h40 17h00 17h00 17h20 17h20 17h40	16h00 16h20	Establishing an efficient method for quantifying the CO ₂ -uptake potential of recycled concrete aggregates <i>Johannes Hron, Oliver Zeman, Konrad Bergmeister</i>
	16h20 16h40	Thermo-Physical Properties of Concrete Containing PET and Artificial Aggregates Prepared from Industrial By-Products <i>Jehangeer Raza, Areebh Abrar, Ilenia Farina, Francesco Colangelo, Narinder Singh</i>
	16h40 17h00	Recycling glass fiber – thermoset composites in cementitious matrices <i>Natalia Lora Acevedo, Hela Bessaies-Bey, Thierry Sedran, Radhouane Masmoudi, Loic Divet, Arezki Tagnit-Hamou, Laetitia Van Schoors</i>
	17h00 17h20	Study of Leaching Behaviour of Copper Slag and Its Alkaline Activation Potential <i>Ingrid Carolina Farias, Diego Aponte, Marilda Barra</i>
	17h20 17h40	Analysis of life cycle environmental impact of artificial aggregates <i>Ilenia Farina, Areebah Abrar, Jehangeer Raza, Narinder Singh, Francesco Colangelo</i>
19h00 21h00	Gala Diner	

Day 3, April 13th, 2025

8h30 10h15	SESSION 8 ECO-FRIENDLY BINDERS WITH LOW CO₂-EMISSION (ROOM 1) Chairs: Josée Duchesne (Canada), Ahmed Jelidi (Tunisia)	
	8h30 9h15	Keynote Speaker 5: Pr. Basma SAMET, Tunisia "Valorization of natural resources and industrial by products in ecological hydraulic binders"
	9h15 9h35	Mechanical Properties of Water-cured One-part Geopolymer Concrete Containing Platinum Slag Aggregate <i>Babatunde Luke L. Ajayi, Mustapha B. Jaji, Adewumi J. Babafemi</i>
	9h35 9h55	Evaluating the Influence of Recycled Concrete Fine Fineness on Fresh and Hardened Properties of Mortar <i>Bayram Tutkun, Farshad Ameri, Daniella mehanni, Katalin Kopecskó, Zaid Khaiqani, Ildiko Merta</i>
	9h55 10h15	Eco-friendly Mortars with Barite and Hydraulic Lime under Thermal Exposure: Study of Morphology, Physical and Mechanical Properties <i>Majed Noumi, Khaled SAIDANI, Lasaad Ajam</i>
10h15 10h45	Coffee Break	
10h45 12h45	SESSION 9 SUSTAINABILITY OF MATERIALS AND STRUCTURES (ROOM 1) Chairs: Olivér Fenyvesi (Hungary), Karim Miled (Tunisia)	
	10h45 11h05	New insights on sustainable development in construction <i>Vyacheslav R. Falikman</i>
	11h05 11h25	Image-based petrographic analysis of aggregates for concrete production Elske Linss, Patrick Hunhold, Daniel Garten, Galina Polte, Katharina Anding, Sandro Weisheit
	11h22 11h44	Performance-Based Assessment of Concrete with PET Fibers from Plastic Waste <i>Omar Mezghani, Jihen Mallek, Mohamed Fourati, Mamadou Diouf, Lala Brahim, Atef Daoud</i>
	11h45 12h05	CIRCULARITY OF CONSTRUCTION MATERIALS: precedence between elements based on digital models for demolition André Mantelatto, Melody Njuguna, Artur Kuzminykh, Manuel Parente, José Granja, Miguel Azenh
	12h05 12h25	Influence of the corrosion process on the formation of crack patterns in reinforced concrete: experimental and numerical study <i>O. Loukil, L. Adelaide, V. Bouteiller, M. Quiertant</i>
	12h25 12h45	Concrete and Climate Change: Adapting to Rising Temperatures and Reducing Environmental Impacts <i>Hatem Affes, Salem Nehme Georges</i>

12h45 14h00	Lunch time	
14h00 15h40	SESSION 10 VALORIZATIONS OF INDUSTRIAL BY-PRODUCT (ROOM 1) Session Chairs: Amara Loulizi (Tunisia), Oualid Limam (Tunisia)	
	14h00 14h20	Performance of recycled concrete aggregates in gravel-cement Mixtures: strength, shrinkage, and durability analysis <i>Oussema Atoui, Azer Maazoun, Ahmed Siala</i>
	14h20 14h40	Comparative study on using primary and secondary textile sludges in sand concrete <i>Ilhem Arfaoui, Marwa Ben Youssef, Karim Miled, Yosra Saad</i>
	14h40 15h00	Relationship between the coarse aggregate and the concrete thermal conductivity <i>Ahmed M Seyam, Rita Nemes, Mohammed Abed</i>
	15h00 15h20	Optimization of Mechanical Properties of Glass Fiber-Reinforced Concrete Using Response Surface Methodology <i>Liqaa Hashim, Omar Mezghani, Jihen Mallek, Atef Daoud</i>
	15h20 15h40	The improvement of the RCC compactness and strength for pavement by the use of the marine sediments of Lagoulette Harbor (Tunisia) <i>Mustpha Sdiri, Mongi Ben ouezdou, Jamel Neji, Nor-Edine Abriak</i>
15h40 16h00	CLOSING CEREMONY AND PRIZES Prof. György L. Balázs (Hungary), Prof. Atef Daoud (Tunisia)	

