



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	<p align="center">CONFERENCE OPENING</p> <p align="center">Chairs: Atef Daoud (Tunisia), György L. Balázs (Hungary)</p> <p align="center">OPENING SPEECHES</p> <p align="center">President of Sfax University: Ahmed Hadj Kacem Director of National Engineering School of Sfax: Khaled Elleuch</p>
	09h00 09h45	<p align="center">Keynote Speaker 1: Pr. Petr Hájek (Czech Republic)</p> <p align="center">"Sustainable and Resilient Built Environment in a Changing World - Challenge for Concrete Structures"</p>
	9h45 10h30	<p align="center">Keynote Speaker 2: Dr. Dipl.-Ing. Wolfram Schmidt (Germany)</p> <p align="center">"Streamlining multiple heterogeneous renewable supplies to single homogenous supply and value streams for cementitious binders and admixtures"</p>
10h30 11h00	Coffee Break	
11h00 12h40	<p>SESSION 1 VALORIZATIONS OF DEMOLITION WASTE (ROOM 1)</p> <p align="center">Chairs: Amor Ben Fraj (France), Amara Loulizi (Tunisia)</p>	
	11h00 11h20	Demonstration of a circular building process at large scale: CircBoost Pilot project in Norway <i>Sofija Kekez, Iveta Novakova</i>
	11h20 11h40	Circular Economy in the Construction Sector: Challenges and Opportunities in Luxembourg and the Greater Region <i>Marie Louie, Markus SCHÄFER</i>
	11h40 12h00	Recycling of mineral building materials – chances and obstacles <i>Klaus Holschemacher, Anne Haller</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, Giovanni 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>Elske Linss, Feng Li, Christiane Roessler, Luise Goebel, Florian Kleiner, Göran Forbrig</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, Oualid Limam, Lassad Ajam</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 18h00	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	Effect of Fiber Treatment and Length on the Rheological and Mechanical Properties of Self-Compacting Concrete <i>Hamza Hasnaoui, Basma Samet, Raja Zmemla, Amel Kallou, Ali Sdiri</i>
	16h40 17h00	Rutting resistance of stone matrix asphalt incorporating extracted juncus plant stem fibers <i>Ameni Arfaoui, Houcem Naili, Amara Loulizi</i>
	17h00 17h20	Long-term durability of treated Alfa fibers based-cementitious materials <i>Soukaina Ajouguim, Jonathan Page, Chafika Djelal</i>
	17h20 17h40	Ballistic impact and blast resistance of Alfa reinforced concrete <i>Baya Tahenti, Zied Kammoun, Abdreaaouf Trabelsi</i>
	17h40 18h00	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 Szelaq, 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 Szelaq, 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 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>Sofiene Helaili</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	
	SESSION 5 ECO-FRIENDLY BINDERS WITH LOW CO₂-EMISSION (ROOM 1)	
	Chairs: José Matos (Portugal), Basma Samet (Tunisia)	
11h00 11h20	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>
11h00 12h40	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 : <i>Fakher Jammousi (Tunisia), Essaieb Hamdi (Tunisia)</i>	
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>
14h00 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: <i>Alessandro Fantilli (Italy), Maciej Szlag (Poland)</i>	
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>
16h00 17h40 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	Diner

Day 3, April 13th, 2025

		SESSION 8 ECO-FRIENDLY BINDERS WITH LOW CO₂-EMISSION (ROOM 1) Chairs: Josée Duchesne (Canada), Ahmed Jelidi (Tunisia)
8h30 10h15	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, Ildiko Merta, Katalin Kopecskó</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	
		SESSION 9 SUSTAINABILITY OF MATERIALS AND STRUCTURES (ROOM 1) Chairs: Olivér Fenyvesi (Hungary), Karim Miled (Tunisia)
10h45 12h45	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 <i>Elske Linss, Patrick Hunhold, Katharina Anding, Galina Polte, Daniel Garten</i>
	11h22 11h44	Performance-Based Assessment of Concrete with PET Fibers from Plastic Waste <i>Omar Mezghani, Jihen Mallek, Mohamed Fourati, Atef Daoud</i>
	11h45 12h05	Semantic Enrichment of BIM Data for Demolition Planning Optimisation: Precedence between Structural Elements <i>André Mantelatto, Artur Kuzminykh, Manuel Parente, José Granja, Miguel Azenha</i>
	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</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)	

