



Wednesday 30.09.2026						
8:15 - 8:45	Registration <i>Go to Google Maps Location</i>					
8:45 - 9:00	Welcome: Ralf Müller (Vice Dean of Civil & Environmental Engineering) Introduction: Eddie Koenders					
9:00 - 9:30	Keynote Lecture: Jan Wörner					
9:30 - 10:00	Keynote Lecture: Viktor Mechtcherine					
10:00 - 10:30	Coffee Break					
10:30 - 12:30	Parallel-Session 1					
	CARE1 – Low-Clinker Binders, Cement Chemistry & Reactivation		GS1 – Circular Construction, Design for Disassembly & Reuse		AINDT1 – AI-Enabled Damage Detection & Structural Condition Assessment	
	Session Chair: V. Mechtcherine / A. Ramaglia Room: europium		Session Chair: Room: xenon		Session Chair: Room: argon	
	ID	Title & Authors	ID	Title & Authors	ID	Title & Authors
10:30 AM	421	Toward sustainable cement: An electrochemical route to cementitious precursor phase production <i>Ramaglia, A.; Köberle, T.; Bon, V.; Kaskel, S.; Mechtcherine, V.; Matschei, T.; Liebscher, M.; Weidinger, I.</i>	102	Selective Demolition for Validation of Material Mining Tool <i>Kekez-Baran, S.</i>	385	Automated Identification of Damage Levels in Post-Hazard Condition Assessment Scenarios <i>Shastri, R.; Lalpour, A.; Ray-Chaudhuri, S.; Shafei, B.</i>
10:45 AM	218	Diatomaceous Earth as a renewable supplementary cementitious material (SCM) for low-carbon binders <i>Nune, S.; Dani, F.; Ahmed, A. H.; Gelinsky, M.; Liebscher, M.</i>	163	Feasibility assessment of a demountable Post-Tensioned floor system for Design-for-Disassembly <i>Pepe, M.; Latour, M.; Guha, A.; Di Benedetto, S.; Rizzano, G.; Lima, C.; Martinelli, E.</i>	391	A Scalable Artificial Intelligence-Based Framework for Post-Extreme-Event Damage Detection and Assessment <i>Odeh, I.; Shafei, B.</i>
11:00 AM	254	On the way to ultra-low clinker cements - effect of high portions of limestone powder on reaction kinetics, workability and strength <i>Wiese, F.; Sposito, R.; Stengel, T.</i>	243	Structural bias in economic assessment of circular building strategies: A systematic literature review <i>Hashmi, R.; Freer, M.; Welfie, A.; Shamima, M.</i>	200	Net-Zero-Oriented Self-Sensing Cementitious Composites for Lifecycle-Based Structural Health Monitoring <i>Michalek, A.; Dzimtrowicz, A.; Koenders, E.; Sadowski, L.</i>
11:15 AM	217	Thermal Dehydration Behavior of End-of-Life Low Carbon Cementitious Blends towards Reactivation and Reuse Potential <i>Ahmed, A. H.; Thomas, R.; Scheel, J.; Liebscher, M.</i>	255	A Dual-Scale Techno-Economic Modelling Framework for Circular Economy in Buildings <i>Freer, M.; Shamima, M.</i>	252	AI-Based Damage Prediction of Sustainable Reinforced Concrete Columns Using Shape Memory Alloys <i>Alizadeh, M.; Abdolmaleki, A.; Mahboubi, S.; Kioumarsi, M.</i>
11:30 AM	178	Low-Carbon Ultra-High-Performance Concrete Using Seawater and Sea Sand for Coastal Applications <i>Khan, M. S.; Rahman, M. K.; Fasil, M.; Al-Zahrani, M. M.</i>	328	Scan-to-BIM for Circular Pre-Demolition Audits: A Case Study Aligned with EU Net-Zero Construction Objectives <i>Vilbić, K.</i>	272	ML-Based Assessment of Corroded Steel Beam-Column Connections toward Net-Zero Structural Systems <i>Ramezani, F.; Mahboubi, S.; Kioumarsi, M.</i>
11:45 AM	152	PCE-Silane Admixtures for Slump Retention in Ultra-Low Clinker Binders <i>Wang, X.; Sun, Y.; Plank, J.</i>	482	Innovation and sustainability in construction section for the optimised use of fine recycled aggregates from Construction and Demolition Waste <i>Lombardi, R.; Pepe, M.; Martinelli, E.</i>	113	A DIC Based Error Correction Framework for Non Contact Bridge Deflection Monitoring <i>Zhang, W.; Shi, W.</i>
12:00 PM	154	Optimizing Chemical Admixtures for Calcined Clay-Based Net-Zero Binders: Challenges and Solutions <i>Chen, J.; Plank, J.</i>	423	Towards a C-LCSA Ontology-Based Modelling for Deconstruction Processes through DPP <i>Giese, K.; Tokac Celikyay, I.; Mohamad Radwan Omar Chabrawi, A.; Hashash, Z.; et al.</i>	351	Are We Getting What We Paid For When It Comes to De-icers? Review of AI-Powered Field Assessments of Deicer Performance for Highway Operations <i>Teymour, M.; Lian, R.; Acharya, P.; Otten, E.</i>
12:15 PM	350	Performance of Gelatinised Starch-Sawdust Bio-composites towards Low-Carbon Construction Applications <i>Akinlunde, A.; O'Flaherty, F.; Ojedokun, O.</i>	310	Circular economy helping carbon neutrality: from assumption to quantification in the building construction sector in Europe <i>Barbosa, J.; Simoes, S.</i>	167	A Case Study: Half-Cell Potential Testing Strategies for Strand Corrosion Assessment in Prestressed Concrete Sleepers <i>Lambrechts, A.; Beushausen, H.</i>
12:30 - 13:30	Lunch					
13:30 - 15:00	Panel Discussion: Towards Net-Zero Construction: Challenges and Innovation Members: Romildo Toledo Filho / Michael Haist / David Moses / Annemarij Kooistra Moderator: Hans Beushausen					
15:00 - 15:30	Coffee Break					
15:30 - 17:30	Parallel-Session 2					
	CARE2 – Low-Carbon Concrete, Alternative Materials & Durability		GS2 – LCA, Policy & Socio-Economic Net Zero		REC1 – Recycled Ashes, Sand & Secondary Raw Materials	
	Session Chair: H. Le Xuan / H. Kruppa Room: europium		Session Chair: Room: xenon		Session Chair: Frank Dehn Room: argon	
	ID	Title & Authors	ID	Title & Authors	ID	Title & Authors
3:30 PM	274	Lignite fly ash as CO ₂ -storage and SCM <i>Kruppa, H.; Felten, C. C.; Vollpracht, A.</i>	270	Reframing LCA toward circular construction: A multi-life cycle perspective <i>Verstappen, N.; Allacker, K.</i>	137	Electrolytic upgrading of wood fly ash to <i>Ottosen, L. M.; Christensen, I. N.</i>
3:45 PM	172	Climate-friendly accelerated curing of CO ₂ -reduced concrete casting mixtures using green upcycled carbon fiber <i>Glinioz, R.; Funke, H.; Gelbrich, S.; Vogt, C.; Naumann, M.</i>	236	Life Cycle Assessment of Recycled and Warm Mix Asphalt Incorporating Waste Cooking Oil <i>Nurhidayati, Z. A.; Suwarlo, F.; Sami, M. F.; De Backer, H.; Outlier, A.</i>	370	Supercritical CO ₂ Carbonation of Fly Ash Alkali-Activated Materials as a Pathway toward Net-Zero Construction <i>Podnar, T. M.; Kravanja, G.; Knez, Z.</i>
4:00 PM	422	Carbon fiber recovery and polymer upcycling of fiber reinforced composites from the building sector <i>Devasis, M. M.; Ly, P. V.; Scheffler, C.; Elschner, C.; Osterhuhn, O.; Klankermayer, J.; Weidinger, I.</i>	261	Carbon capture to commodity: A framework to support lifecycle emissions accounting of cementitious materials <i>Parker, A.</i>	131	Effects of waste concrete powder and recycled sand on the performance of sustainable mortars <i>Chenmeng, E. A.; Ramabodu, M. S.</i>
4:15 PM	334	Leaching properties of bottom ashes used as fine aggregate <i>Jensen, A.; Ottosen, L. M.; Edvardsen, C. K.</i>	383	Evaluating the Environmental Impacts of Admixture Encapsulation in Stimuli-Responsive Concrete <i>Echt, T.; Göbel, L.</i>	372	Low-carbon concrete with waste ash binders: strength and sustainability evaluation <i>Alawi, N.; Tan Nguyen, K.; Ahmed, A.; Clarke, N.; Ashaka, O.; Huynh, A.</i>
4:30 PM	174	Performance and Durability Response of Seawater-Mixed Limestone Calcined Clay Cement (LC3) under Aggressive Sulphate Exposure <i>Sajid, M.; Rahman, M. K.; Al-Osta, M.; Adekunle, S. K.</i>	441	People-Led Net Zero: A model to promote net zero and application to the built environment <i>Dams, B.; Lattanzio, S.; Atashikhoei, A.; Pashapour, A.; Newnes, L.</i>	347	Functionalization of Recycled Aggregate via Polymer Emulsion for Enhanced Mechanical Properties of Concrete - A review Study <i>Teymour, M.; Acharya, P.</i>
4:45 PM	343	Spatially Resolved Moisture Detection in Concrete Structures via Fiber-Based Sensors using Time Domain Reflectometry <i>Le Xuan, H.; Waschilewski, B.; Cherif, C.</i>	473	Industrial Symbiosis solutions involving steel, construction and building sectors <i>Colla, V.; Branca, T. A.; Petrucciari, A.; Merenda, F.; et al.</i>	147	From Waste to Module: Optimizing Strength and Microstructure of Hybrid Additive Manufactured Structural Elements <i>Abstoß, M.</i>
5:00 PM	487	From Strength Prediction to Time-Dependent Sustainable Mix Optimization: A Unified Experimental-Statistical Framework with Self-Compacting Concrete as a Case Study <i>Kryzhanovskiy, V.</i>	435	Towards circularity: Case Study in Sorlandet, Norway <i>Novakova, I.; Kekez-Baran, S.; Røiri, K.; Ekinli, H.</i>	346	Valorization of Fine Recycled Sands in Dry Screeds through Particle Packing Optimization <i>Yaqub, M.; Boel, V.; Matthys, S.</i>
5:15 PM	348	Behaviour of Puzzle-Shaped Composite Dowels Embedded in Recycled Aggregate Concrete under Shear Loading <i>Fu, Q.; Schäfer, M.</i>	439	Enhancing Walkability in European Cities: A Systematic Review of Urban Design, Mobility and Governance <i>Blixrud, K. G.; Helgesen, S.; Johann, S. T.; Helg, E. G.; Tadayon, A.</i>	365	Mesoscale approach for assessing the properties of recycled concrete aggregates governing carbonation in concrete containing RCA <i>Thommes, E.; Fanara, A.; Courard, L.; Collin, F.</i>
17:30 - 18:30	Break					
18:30 - 21:00	Brewery Evening (optional) Arrival: 18:30 - 19:00 Buffet: 19:00 - 21:00 <i>Go to Google Maps Location</i> (Tickets still available until 23.09. through netzfuture@wib.tu-darmstadt.de)					



Thursday 01.10.2026

9:00 - 9:30	Keynote Lecture: <i>Nele de Belie</i>				
9:30 - 10:00	Keynote Lecture: <i>David Moses</i>				
10:00 - 10:30	Coffee Break				
10:30 - 12:30	Parallel-Session 3				
	CARE3 – Structural Circularity, Efficiency and Digitization	GS4 – Low-Clinker Binders & Cement Chemistry	SMART2 – Digital Decision Support & Net-Zero Management	GS5 – Durability, Damage & Structural Assessment	BEST2 – Bio-Based Composites, Fibres & Emerging Low-Carbon Materials
	Session Chair: <i>S. Muthukrishnan / F. Menzel</i> Room: <i>europium</i>	Session Chair: <i>Room: xenon</i>	Session Chair: <i>Room: argon</i>	Session Chair: <i>Room: neon</i>	Session Chair: <i>Room: helium</i>
	ID Title & Authors	ID Title & Authors	ID Title & Authors	ID Title & Authors	ID Title & Authors
10:30 AM	304 Connecting Material Banks to BIM: Methods for Discoverability, Assessment, and Reuse <i>Gschweilt, L.; Waldert, P.; Lang-Raudaschl, M.; Stavic, M.</i>	151 Challenges and Solutions Towards Decarbonization of the Global Cement Industry <i>Pianik, J.</i>	393 Beyond Aerodynamics: Life Cycle Benefits of Cyber-Physical Morphing Façades for Tall Buildings <i>Dokhaei, B.; Shafei, B.; Allipour, A.</i>	381 Enhancing Durability and Sustainability of RC Marine Infrastructures Under Aggressive Environmental Conditions <i>Alsuftani, R.</i>	140 Supercritical CO ₂ Drying of Reduced Graphene Oxide Monolith Aerogel: Advancing Energy-Efficient Carbon Capture Technology <i>Zabala, D.; Tamsilian, Y.; Fidanchevska, M.; Sanz, O.; et al.</i>
10:45 AM	308 Synergistic Integration of BIM, IoT and Blockchain Technology in Construction: Pathways to a Sustainable, Circular and Net-Zero Future <i>Pitti, H.; Godawatte, G. A. G. R.; Forster, A. M.</i>	179 Accelerating low-carbon cementitious binder development under seasonal resource constraints using AI-driven sequential learning <i>Klewe, T.; Kamashanju, K. C.; Schmidt, W.; Kruschwitz, S.</i>	387 Investigation of Structural Health Monitoring Data for Durability Assessment of Cementitious Repair Materials for Prestressed Concrete Bridges <i>Vakil, A.; Shafei, B.</i>	259 Wet Corrosion Behaviour of High-Strength Steel under Controlled Harsh Environmental Conditions <i>Majidian, A.; Durant, E.; Chauhan, N.; Di Sarno, L.</i>	165 Effect of superabsorbent polymers and cellulose microfibrers on early age shrinkage of 3D printing cement-based mortars <i>Estela, M. P.; Marquez, A.; Ramallo, L.; Folino, P.; Barluenga, G.</i>
11:00 AM	344 Development of Automated Manufacturing Workflows for Material-Efficient Concrete Components in Interlocking Slab Systems <i>Menzel, E.; Weingartz, B.; Sevidik, J.; Classen, M.; Klinkel, S.; Kobbelt, L.</i>	275 Hydration and strength development of very low clinker metakaolin-limestone cement <i>Bian, Z.; Snellings, R.; Cizer, O.</i>	177 Fuzzy-Based Decision-Making Framework for Positive Energy Districts <i>Esmailzadeh, A.; Hamdy, M.</i>	263 Experimental Performance Evaluation Of A Paper-Based Wall System Under Driving Rain and Airborne Sound <i>Bosse, N.; Burdiles, I.; Hoffmann, H.; Bishara, N.; Kraus, M.</i>	181 Synthesis and characterization of coated jute fibers for enhanced durability in civil engineering applications <i>Zamora-Mendoza, L.; Sellitto, E.; Alexis, F.; Lantsoght, E.; Pepe, M.; Di Maio, L.; Martinelli, E.</i>
11:15 AM	251 Levels of reuse: A building classification system for the reuse of elements at their highest possible stage of technical development <i>Lang-Raudaschl, M.; Gschweilt, L.</i>	302 Resolving C-A-S-H composition of aluminosilicate SCM reactions in portlandite model systems: A combined 27Al/29Si solid-state and 1H NMR study <i>Lepêcheur, G.; Skibsted, J.; Joseph, S.; Cizer, O.; Snellings, R.</i>	280 A Flexible Life-Cycle Framework for Digital and Circular Net-Zero Construction <i>Nahod, M.-M.</i>	389 Post-Repair Structural Performance and Integrity Assessment of Precast Prestressed Concrete Beams <i>Pepera, R.; Shafei, B.</i>	282 Structural Enhancement of Miscanthus-Lime Composites Using Auxetic Grid Reinforcement for Net-Zero Construction <i>Khan, M. K.; Vinal, R.; Kripakaran, P.; Evans, K.; et al.</i>
11:30 AM	450 Beyond Technical Circularity: A Circular Socio-Technical Integra-tion Framework for Digital Renovation and Construction <i>Wuebben, D.; Spyidakos, S.; Boemi, S.-N.</i>	318 Alumina phases formed during the hydration of clay-blended cement <i>Black, A.; Russell, M.; Davis, G.; Soutsos, M.; Wilkinson, A.; Nanukuttan, S.</i>	294 A Decision Support Framework for Low-Carbon Concrete Procurement in Construction Management Using Active Learning <i>Nguyen, T. T. H.; Bul, G. B. N.; Tran, D. T.; Ly, H. B.; Jin, R.</i>	405 Damage Evolution in Limestone Calcined Clay Cement Mortars Subject to Cyclic Thermal Loads <i>Chahar, V.; Shafei, B.; Lahoti, M.</i>	336 Investigating the Potential of Biochar as Cement Replacement <i>Teymouri, M.; Wei, L.; Acharya, P.</i>
11:45 AM	244 Integrating Circular Economy Principles in Underground Car Park Structures <i>Novalic, L.; Martins, J.; Matias de Paula Filho, J. H.; Fohl, F.; Gregor, O.; Hechler, O.</i>	431 Influence of polycarboxylate superplasticizers on the viscoelastic-plastic and structural build-up properties of LC4 cement systems <i>González Aviña, J. V.; Saucedo Mamut, G. S.; Durán Herrera, A.; Mendoza Rangel, J. M.; et al.</i>	406 User-Centred Design of a Mobile App to Promote Eco-Friendly Practices Among UK University Students <i>Ponnampurna, D.; Alhawamdeh, M.; Abuezhayeh, S.</i>	472 Shrinkage and shrinkage induced cracking in low carbon cementitious systems (FA, GGBS & LC3): implications for chloride ingress and rebar corrosion <i>Pakela, B.; Beushausen, H.</i>	407 Integrated structural and acoustic performances and assessment of masonry elements reinforced with bio-based systems <i>Paolillo, B.; Guarnaccia, C.; Sommella, P.; Pepe, M.; et al.</i>
12:00 PM	429 D-CONFORM: Digital Construction Using Reinforced Low-Carbon Mineral Foam - Introduction and Initial Outcomes <i>Muthukrishnan, S.; Bielak, J.; Will, F.; Andres, B.; Kaskel, S.</i>	433 Decarbonizing Cement in Concrete: Technologies, Maturity, and Barriers to Industrial Adoption <i>Yang, S.; Ukrainczyk, N.; Koenders, E. A. B.</i>	464 Early Contractor Involvement (ECI) practices in different countries <i>Tadychon, A.; Kiekweg, O. J.</i>	428 Multiphase porosity in recycled concrete: Influence of coarse aggregate pore structure <i>Gómez-Cano, D.; Garzon, J.; Gomez, L.; Hendriks, M.; Gebremariam, A.</i>	273 Growth behavior and preliminary biomineralization screening of basidiomycete fungi for mycelium-based construction materials <i>Cayo, N.; Alviano, D.; Belchior, M.; Rocha, J.; Ciaramella Malta, G.; Ferreira, S.; Toledo Filho, R.</i>
12:15 PM	170 There is always an alternative to demolition <i>Muff Christensen, R.; Firth, I.; Gaimarini, A.</i>	219 Uniaxial Stress-Strain Behavior of High-Volume cement Replaced Low-Carbon Concrete with Icelandic Volcanic Pozzolan and Silicomanganese Slag <i>Mańczak, J.; Hettiarachchi, D.; Samarakoon, S.</i>	448 Participatory ESG Integration in Africa's Cement Industry: Reconciling Net Zero Ambitions with Local Economic Development and Community Well-Being <i>Onsongo, S.; Olukuru, J.; Mwaborje, O.</i>	269 Self-Healing Concrete: The Case of Nordic Countries <i>Stormoen, H.; Tsalkatidis, T.</i>	278 Enhancement of the performance of artificial aggregates derived from Argon Oxygen Decarburization (AOD) slag waste by an innovative laboratory-based approach <i>Kumar, M.; Kizhakkumodom Venkatanarayanan, H.</i>
12:30 - 13:30	Lunch				
13:30 - 14:00	Keynote Lecture: <i>Sophia Villmow</i>				
14:00 - 14:30	Keynote Lecture: <i>Bassem Andrawes</i>				
14:30 - 15:00	Coffee Break & Group Photo				
15:00 - 17:00	Parallel-Session 4				
	CARE4 – LCA, Sustainability Assessment & Industrial Decarbonization	GS6 – Digital Design, Retrofit & Building Transformation	SMART3 – Sustainable Structural Performance & Infrastructure	Corporate Presentations + Start-Up & Scale-Up Session	SPP2 – Net-Zero Concrete: Activation, Hydration & Low-CO ₂ Binders
	Session Chair: <i>K. Kleinschrot / C. Signorini</i> Room: <i>europium</i>	Session Chair: <i>Room: xenon</i>	Session Chair: <i>Room: argon</i>	Session Chair: <i>Romildo Toledo Filho</i> Room: <i>neon</i>	Session Chair: <i>Room: helium</i>
	ID Title & Authors	ID Title & Authors	ID Title & Authors	ID Title & Authors	ID Title & Authors
3:00 PM	424 Towards a harmonized, multi-layered Sustainability Assessment Framework for Circular Construction: Life-Cycle Indicators, Spatial-Temporal Dynamics and the Human Factor <i>Kleinschrot, K.; Böffel, C.; Chabrawi, A. M. R. O.; Gruner, A.; et al.</i>	311 sLender Façade: A Mass-Customised Volumetric Envelope System for Scalable Deep Renovation of Existing Housing Stock <i>Tuksam, S.; Phlak, S.; Orlinski, A.</i>	427 Experimental Investigation of Ultra-High Performance Concrete Shear Walls of Various Height-to-Length Ratios <i>Nawaz, S. R.; Qureshi, M. H.; Vakil, A.; Kioumars, M.; Shafei, B.</i>	Company Presentation: ROXIT <i>Dr.-Ing. Sha Yang</i>	139 Low-CO2 Binders from Burned Coal Dumps: Application <i>Kruppa, H.; Bewa Nobouassaia, C.; Rausch, M.; Warier, G. A.; Cao, D.; Koenders, E.; Vollpracht, A.</i>
3:15 PM	420 Life Cycle Analysis in Construction Sites: A Systematic Review of Methodological Gaps and Standardization Needs <i>Aktas, E.; Tanyer, A. M.</i>	262 Auditing and Retrofitting Building Automation and Control Systems in a Danish Public School Using an Interactive Assessment Tool <i>Jradi, M.</i>	434 Rational Placement of MR Dampers for Optimized Structural Performance <i>Baheti, A.; Ray-Chaudhuri, S.</i>	Company Presentation: Röser Ingenieurbeton <i>Dr.-Ing. Frank Röser</i>	161 Mechanical and durability properties of concrete containing thermally activated concrete fines as supplementary cementitious materials <i>Hoffgen, J. P.; Dehn, F.</i>
3:30 PM	171 Developing embedded GHG emissions accounting framework and calculation tools for Australian cement industries <i>Biswas, W.; Niamoh, A.; Aisbett, E.; John, M.</i>	319 Net Zero Energy Retrofitting in the Hospitality Sector: A Case Study in Southern Spain <i>Mayer, M.; López Müller, E.; Mead, T.; Postigo Del Ser, C.</i>	438 Pathways to Net-Zero Bridge Structures: A Review of Bridge Construction Requirements <i>Cieniewski, W.; Shafei, B.</i>	Company Presentation: Material Performance 59 <i>Prof. Dr.-Ing. Albrecht Gilka-Bożow</i>	206 The AFm Phase Hemicaiboaluminate in Inorganic Binders <i>Hirsch, T.; Klein, F.; Ji, Y.; Stephan, D.; Matschei, T.</i>
3:45 PM	303 Construction and Demolition Waste Classification and Management in a Circular Economy: An Overview of Concept <i>Alhawamdeh, M.</i>	477 Development, Application, and Climate Sensitivity Analysis of Automated BIM. BSA Framework in India Context <i>Md Nasir, M. J.; Prakash, P. R.; Suman, M.</i>	330 An Integrated Circularity-Carbon-Cost Framework for Net-Zero Asphalt Pavements Using High-RAP Mixtures <i>Medeiros Melo Neto, O.; Mendes, L. P. T.; Lopes Lucena, L. C. F.; Joubiat, R.</i>	Company Presentation: CACTA Construction <i>Dr.-Ing. Luciano Sambataro</i>	223 Comparative study of thermal and mechanochemical activation of 2:1 mixed clays: Reactivity enhancement and energy demand <i>Zeidler, R.; Schmidt-Döhl, F.</i>
4:00 PM	338 Construction Waste Management Approaches in China: Identifying Gaps and Emerging Trends Towards Sustainability <i>Fayad, R.; Alhawamdeh, M.</i>	485 From Feasibility to Suitability: A Framework for Industrialized Building Retrofit <i>Hübner, J.; Lattke, F.; Heidecker, M.</i>	309 Machine Learning-based Prediction of Seismic Drift Response of Unreinforced Masonry Walls <i>Hamzeh, M.; Poorahad, P.; Mahboubi, S.; Shrivastav, M.; Kioumars, M.</i>	457 Emerging technologies for structural engineering applications: the experience of TESIS srl <i>Pepe, M.; Lima, C.; Martinelli, E.</i>	265 Effect of Hydration Control Agents on early-age hydration and setting of different cements <i>Schreiber, J.; Kirchberger, I.; Singer, M.; Gunkler, A.; Skibbe, S.; et al.</i>
4:15 PM	289 Carbon-Negative Construction Materials: Integrated AI-Driven Design and CO ₂ Mineralisation for Net-Zero Built Environment <i>Dod, R.; Dhere, A.; Malavadar, P.</i>	124 Multi-Objective Optimization of BIPV Façade Configurations for enhanced Energy, Economic and Environmental Performance <i>Azeem, A.; Thomas, A.</i>	342 Data-driven LCA for parametric optimisation of timber slabs in multi-storey buildings <i>Panik, S.; Müller, M.</i>	486 Introducing Hy4Smeit – Towards Green Steel Production in Europe <i>Hoffmann, C.; Wimmer, G.; Voraberger, B.; Ludwig, H.-M.</i>	276 Effectiveness of Aluminate Hydration Control Additives in cement pastes and mortars <i>Gunkler, A.; Skibbe, S.; Schreiber, J.; Jensen, D.; Gädt, T.; Lowke, D.</i>
4:30 PM	446 Layered Double Hydroxide-Based Binders for Commercially Viable Alkali-Activated Materials <i>Abdel-Gawwad, H.; Stephan, D.</i>	129 Illustrative Material-Level Application of an Integrated Rating Framework for Net-Zero and Resilient Envelope Design in Port Arthur, Texas <i>Nemati Aghdam, M.; Dixit, M.</i>	132 Performance evaluation of sustainable concrete pavement blocks incorporating fly ash and recycled sand <i>Ohemeng, E. A.; Ramabodu, M. S.</i>		388 Pathways to Benefit from Alternative Synthetic Fibers for the Carbon Footprint Reduction of Ultra-High Performance Concrete <i>Ramezani, A.; Shafei, B.</i>
4:45 PM	260 Effect of the durability of a reinforced concrete beam on environmental impacts determined through a life cycle analysis (LCA) <i>Calixte, R.; Gatung'ire, F.; Lopez-Caballero, F.</i>	359 Circular Economy and LCA in Heritage buildings Rehabilitation – Lessons from case studies and practitioners' perspective <i>Fula, S.; Flyen, C.</i>	293 Performance Investigation of a Novel Heat Pipe-based Thermoelectric Rock Bolt (HPRB) for High-Geothermal Tunnels: Experiment and Simulation <i>Yuan, Y.; Cui, P.; Zhang, J.-L.</i>		490 Geopolymers Based on Construction and Demolition Waste: Potential for High-Temperature Applications <i>Šprem, M.; Jelčić Rukavina, M.; Baričević, A.; Serdar, M.</i>
17:00 - 19:30	Break - Transfer to Frankfurt				
19:30 - 22:30	Conference Dinner (Boat-Tour)				



Friday 02.10.2026

9:00 - 9:30	Keynote Lecture: <i>Anna Braune</i>				
9:30 - 10:00	Keynote Lecture: <i>Moritz Dörstelmann</i>				
10:00 - 10:30	Coffee Break				
10:30 - 12:30	Parallel-Session 5				
	GS7 – Alkali-Activated, Geopolymer & Alternative Concrete	GS8 – Sustainable & Resilient Infrastructure Systems	AI NDT2 – Digital, Life-Cycle & Performance Assessment for Net-Zero Infrastructure	GS9 – Innovative Structural & Circular Material Systems	SPP3 – Net-Zero Concrete: Carbonation, CO ₂ Uptake & Carbon-Sink Materials
	Session Chair: <i>Mohammadreza Izadifar</i> Room: <i>europium</i>	Session Chair: Room: <i>xenon</i>	Session Chair: Room: <i>argon</i>	Session Chair: Room: <i>neon</i>	Session Chair: Room: <i>helium</i>
	ID Title & Authors	ID Title & Authors	ID Title & Authors	ID Title & Authors	ID Title & Authors
10:30 AM	112 On the Suitability of Dredged Marine Clays for Alkali-Activated Materials in Marine Environments <i>Safhi, A. E. M.</i> ; Pilehvar, S.; Kioumars, M.	105 Evaluation System and Sustainable Optimization Design of Green and Low-carbon Bridges Song, S.; <i>Wei, X.</i> ; Xiao, L.; Huang, Q.	108 Quantum Computing for Energy and Comfort in Buildings: A Review of Methods Integration Pathways and Research Gaps <i>Hosamo, H.</i> ; Rolfen, C. N.	233 Two-Direction Moment-Resistant Frame made of Thermo Siffened Polymeric Aluminum for a Research Facility Built at the Antarctica <i>Núñez-Moreno, F. A.</i> ; Aristizábal-Vargas, J. S.; Gutiérrez-Quintero, C. A.; Jaramillo-Gómez, L. A.; et al.	141 Influence of Thermal and Carbonation Activation on the Properties of Recycled Concrete Fines <i>Denu, M.</i> ; Höffgen, J. P.; Patel, R. A.; Dehn, F.
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11:15 AM	380 Colorimetric Study on Chemical Deterioration in High-Strength Alkali-Activated Concrete <i>Rakesh, P.</i> ; Venkateswara Rao, S.; Rathish Kumar, P.; Madhavi Latha, K.	404 Sustainable Performance Improvement of AAC Blocks <i>Latha, L.</i> ; Ray-Chaudhuri, S.; Das, D.	386 Strategies to Enhance Bridge Service Life Based on a Systematic Evaluation of the Performance of Approach Slabs Azad, S.; <i>Shafiei, B.</i>	371 Circular repair mortars with recycled fine fractions : a DoE optimisation approach <i>Lanckohr, S.</i> ; Courard, L.	241 Ultra-high performance concrete (UHPC) with high volume of biochar as carbon-sink aggregates <i>Latifi, M.</i> ; Mayer, M.; Koenders, E.; Middendorf, B.
11:30 AM	456 Optimizing hybrid Alkali-Activated Slag Mortars with LCC, CSA Low-Carbon Cements Engineering and Sul-fate Attack Properties <i>Ahmed Abderraouf, B.</i> ; Naweffeh, T.; Berkouche, A.; Aggoun, S.; <i>Chiker, T.</i>	352 Cement free Conductive Concrete Pavement for Cold Weather : A Review Study <i>Acharya, P.</i> ; Teymour, M.	214 A Life-Cycle Sustainability Assessment Framework for Bridges with Parametric Evaluation of Social and Environmental Factors Khare, N.; Mahasrankintakam, A.; P Sulakhe, R.; <i>Ghosh, S.</i> ; et al.	449 Feasibility study on using commercial flue gas to carbonate recycled aggregates for use as an input in concrete production <i>Oliva Rivera, A.</i> ; Malaga, K.; Sadegopan, M.; Nagy, A.	267 Carbonation of Steel Slags and the Potential of a CO ₂ -negative supplementary cementitious material <i>Hoffmann, C.</i> ; Chupakhin, G.; Rößler, C.; Ludwig, H.-M.
11:45 AM	363 Influence of SCBA Treatment, Activator Molarity, and Aggregate Morphology on the Performance of Alkali-Activated Artificial Aggregates and Concrete <i>Patil, R.</i> ; Katare, V.	234 Train Identification of Heavy Haul Railway Bridges Using Structural Health Monitoring Data <i>Mupwedi, E. J.</i> ; Moyo, P.	455 Electric Actuators in Wheel Loaders: A Comparative LCA and LCC study of Conventional and Electric wheel loaders <i>Mamo Fufa, S.</i> ; Homaei, S.; Henke, L.	451 Mapping the knowledge structure of waste concrete powder mortars: a bibliometric and network analysis <i>Ohemeng, E. A.</i> ; Ramabodu, M. S.	183 Unidirectional Carbonation of Limestone Calcined Clay Cement Based Foam Concrete <i>Jose, A.</i> ; Ahmed, A. H.; Butler, M.; Liebscher, M.; Mechtcherine, V.
12:00 PM	362 Effect of water-binder ratio and activator dosage on compressive strength of one-part geopolymer concrete <i>Sharma, D.</i> ; Kumar, A.; Singh, R. B.	198 Place-based Climate Adaptive KPI Framework for Net-Zero Emission Resilient Built Environments: Evidence from an Indonesia Living Lab <i>Prabowo, B.</i> ; Houlihan Wilberg, A.; Rasmussen, F.; <i>Dixit, M.</i> ; et al.	408 Data-Driven Structural Integrity Review and Sustainability Appraisal of the New Yamuna Railway Bridge <i>Baghel, P.</i> ; Latha, L.; Raychowdhury, P.; Ray-Chaudhuri, S.	257 Hardened-State Performance of 3D-Printable Earth–Cement Mortars with Bamboo Particles <i>Palva, R.</i> ; Tinoco, M.; Vegas, V.; Reales, O.; Toledo Filho, R.	488 Screen-overflow biochar as cement replacement and their influence on fresh and hardened concrete properties <i>Mayer, M.</i> ; Schitz, L.; Koenders, E.
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12:30 - 13:00	Closing Ceremony				
13:00 - 14:00	Goodbye Snacks & Drinks				