

Day 2 - Thursday, 20.06.2024

8:00 - 8:45 AM Registration

08:45 - 09:30 AM Keynote Lecture: Prof. Behrokh Khoshnevis - *Birth, Growth, and Impacts of Construction-Scale 3D Printing*

09:30 - 10:15 AM Keynote Lecture: Prof. Ueli Angst - *Revolutionizing Condition Diagnosis and Predictive Forecasting: Synergizing Sensors, Robots, AI, and Predictive Modelling*

10:15 - 10:30 AM Networking and Coffee Break

10:30 - 11:15 AM Keynote Lecture: Mr. Daniel Kjørberg Siraj - *From Buzzwords to Action*

11:15 - 12:00 PM Keynote Lecture: Ms. Helle Redder Mømsen - *The Collaborative Efforts of Nordic Countries to Reduce Climate and Environmental Impact from Construction*

12:00 - 1:00 PM Lunch

Time	Session M06: Eco-Friendly and Innovative Ultra-High Performance Concrete	Session A04: Innovations in Sustainable Building	Session C04: Computational Methods in Engineering Structures	Session S04: Evolution, Revolution, Circulation for a Net Zero Timber Built Environment	Session M07: Geopolymers: Sustainable Alkali Activated Materials	Session P05: Crafting Net-Zero Urban Evolution with Positive Energy Districts
	Session chair: Hella Gether	Session chair: Habbiba Beyers Matassa and Faris Spasari	Session chair: Vagelis Plevris	Session chair: Kristine Nore, Wendy Muijs	Session chair: Sheng Pleshav	Session Chair: Savis Gohari
	Room: Storåsen 101 & Auditorium	Room: Malmrosen I 101 & Auditorium	Room: Malmrosen 2 101 & Auditorium	Room: Liseåsen 101 & Auditorium	Room: Malmrosen 1 101 & Auditorium	Room: Liseåsen 101 & Auditorium
1:00 PM	448 Effects of Superabsorbent Polymers and Natural Zeolites on the Properties and Pore Structure of Ultra-High Performance Concrete <i>Zin, C., Wu, W., Li, B., Chen, Yang, T.</i>	120 Smart Technologies: New Perspectives for the Heritage Environment <i>Carpacci, M., Fogli, V., Davoli, P.</i>	405 Exploring the Predictive Performance of Simple Regression Models and ANN in 3D Truss Analysis <i>Pérez, V., Jiménez-Roa, A., Ebead, Usama A.</i>	211 SHITRE - Evolution, Revolution, or a Circulation for a Net Zero Timber Built Environment? <i>Abus, K., Wuyts, W., Rygh, E.</i>	209 Life Cycle Assessment of Geopolymer Concrete Made With Tailings From Ironite Mining <i>Bekele, S., Geben, G.</i>	198 Citizen Engagement and Co-Creation in a Net-Zero Built Environment Transition: Challenges, Best Practices <i>Kurba, Christian W., Belay, Abene M., Hailu, Ahmed S., Dandacha, A.</i>
1:15 PM	153 Effect of high dosage of steel fibres on the mechanical properties of UHPFRC: Application of Response Surface Method <i>Abu, A., Kouamri, M.</i>	478 Energy Communities for the Decarbonization of Historical Villages: A Case Study in Italy <i>Piva, F., Baccato, S.</i>	324 Sustainable Method for Determining Shear Strength Parameters by Machine Learning <i>Chen, Zhong, Chen, Yiqun, Li, Rui, Sui, Ke, X.</i>	206 Applying Value Engineering Function Analysis to the Process for Building Disassembly and the Recovery of Wood and Timber for Construction <i>Steen, Rasmus, L.</i>	170 Formulation and assessment of alkali-activated lunar regolith <i>Drouot, A., Goudon, A., Favre, M., Dapont, Marie C., Pleshav, S., Valentin, L.</i>	205 Leadership and Orchestration of PED Projects: An Organizational Perspective <i>Barzani, M., Mellor, Anders R.</i>
1:30 PM	235 Reducing the CO2 Footprint of LHPCC Through Portland Cement Substitution <i>Lasse, L., Sørensen, Anders A., Hagen, M., Thorsen, Rasm T.</i>	117 Post-Project Evaluation: A Perspective for Effective and Sustainable Healthcare Design <i>Sachdev, L., Di Giulio, R.</i>	426 Dynamic Behavior of Imperfect FGM Beams with Various Porosity Distribution Rates: Analysis and Modeling <i>Ural, L., Plevris, V., Maden, R.</i>	207 Upcycling of Single-use Pallet Wood to Cross Laminated Timber <i>Stark, M., Heidebrecht, J., Gotsch, R., de Jong, J.</i>	200 Effect of Lime Kiln Dust Concentration on Reaction Kinetics of Slag-based Geopolymers <i>Shah, S., Pleshav, S., Parnis, R.</i>	232 Evaluating Digital Citizen Participation in Smart Cities <i>Ashraf, A., Ashraf, M., Collins, D., Tenebeber Saaj, A., Johansen, A.</i>
1:45 PM	495 Preliminary Environmental Assessment of Ultra-High Performance Concrete Mixtures <i>Franzoni, L., Bozorgmehr Nia, S., Shahe, B., Kouamri, M.</i>	406 Sustainable Service Ecosystems in Positive Energy Districts: A Conceptual Framework to Steer Long-term Impacts <i>Vigilante, A., Vahokari, K., Huuskainen, M., Nilsson, T.</i>	326 Genetic Algorithms for Minimizing Material Usage in Seismic Upgrading of Existing RC Structures <i>Ural, L., Plevris, V., Maden, R.</i>	210 Birko's Evolution Pathways of Circular Systems: Solutions for a Net-zero Timber-Built Environment <i>Muñoz, J., Strand-Jørgensen, M., Knut, S., Erikson, A., F. Jørgensen, P., Østergaard, A., Rygh, E., Krenn, A., Maters, A., Sadek, J., Gierme, I., Vassari, V., G. Nyström, A., Nore, K.</i>	335 Coarse-Grained Monte Carlo Simulations with Coarse Cells for Geopolymer Nucleation at Different pH Values <i>Castillon Valencia, N., Soudki, M., Ukrainczyk, N., Koenders, E.</i>	482 Exploring Multi-Level Governance Networks in Deployment of Positive Energy Districts: Case of Salzburg <i>Chen, C., Gohari, S.</i>
2:00 PM	397 Developing Eco-Friendly Ultra-High Performance Concrete by Utilizing Recycled Alternatives <i>Wang, J., Nyland, A., Bozorgmehr Nia, S., Kouamri, M., Shahe, B.</i>	251 SUSTAINABLE METAMODULES: Disseminating Sustainable Practices in Design Workflow via BIM-Based Approaches <i>Corradi, F., Spasari, F., Matassa, Habbiba M.</i>	459 Advancing Sustainability Through Structural Optimization: Innovations in Material Efficiency and Environmental Impact Reduction <i>Plevris, V., Goudon, A., Jiménez-Roa, A.</i>	157 Framework for Quality Documentation for Reclaimed Structural Timber Components <i>Jariga, Hussain S., Al-Shayegh, Amine H., Girmiso, Erik L., Krawinkel, D., Tadayon, A.</i>	437 Geopolymer Concrete Pavements Incorporating Reclaimed Aggregates: A Sustainable Approach <i>Chen, A., Ransinchung, GDRN, Kumar, P.</i>	271 Urban Heat Islands in the Urban Built Environment: Quantifying the Spatial Patterns of Urban Intensity in Oslo, Norway Using High-Resolution Crowdsourced Weather Observations <i>Bartoli, Giacomo M., Gertler, Guilherme Soares A., Krawinkel, D., Schmid, Peter G.</i>
2:15 PM	295 Sustainable Engineering Solutions: Enriching Geopolymer Concrete and Composites <i>Barzani, S., Davis, R.</i>	182 Integrated Technical Building Information for Zero-emission Building <i>Liang, Emma Z., Matassa, Habbiba M.</i>	463 Unleashing the Potential of a Sustainable Urban Planning and Design <i>Moravzi, Amir R., Zarden, Ezz H., Nazari, M.</i>	257 Non-destructive Assessment of Reclaimed Timber Elements Using CT Scanning - Methods and Computational Modeling Framework <i>Tarke, M., Sillars, T., Ramagopal Thirumala, M., Adair, J., Wuyts, W.</i>	313 Harnessing Recycled Materials: Development of a One-Part Geopolymer Binder from Calcined Clay and Carbide Sludge <i>Li, Z., Qian, S.</i>	363 The Golden Path of Age-Proofing into Zero Carbon is No Waste and Poverty <i>Toum, Othman M., Solim, M., Justus, H., Westby, H., Møbye, T., Caballero, R.</i>

2:30 - 3:00 PM Networking and Coffee Break

Time	Session M08: Advanced Techniques and Innovative Materials	Session S05: Sustainable Structural Materials and Systems	Session C05: Green Construction and Sustainable Technologies	Session S06: Advancements in Structural Engineering	Session M09: Phase Change Materials	Session P06: Carbon Neutrality and Sustainable Practices in Construction
	Session chair: Hans Baustausen	Session chair: Behrouz Shahe	Session chair: Muhammad H. Baghran	Session chair: Mehdi Kouamri	Session chair: Sara Draz, Leila Farzadi	Session chair: Siram Narasiman
	Room: Storåsen 101 & Auditorium	Room: Malmrosen I 101 & Auditorium	Room: Malmrosen 2 101 & Auditorium	Room: Liseåsen 101 & Auditorium	Room: Malmrosen 1 101 & Auditorium	Room: Liseåsen 101 & Auditorium
3:00 PM	439 Scaling Effect on Mechanical Property of Calcium Silicate Hydrate in Cement Using Reactive Molecular Dynamics <i>Choi, J., Wang, C., Gonzalez-Gonzalez, J. Tu, Y., Fitzgen, L., Sas, G.</i>	303 The Renaissance of Reuse in Norway - the Future is Back <i>Kallios, James G., Vainio, J.</i>	284 Reducing the Carbon-Footprint in new Reinforced Concrete Structures in Aggressive Environments: From Real Experience to Future applications <i>Chen, Zhong, Chen, Yiqun, Li, Rui, Sui, Ke, X.</i>	275 A Concurrent Multi-scale Finite Element Framework for Precast Bolted Beam-Column Connection <i>Milica, G., Haidar, P., Roy Chowdhury, Amar N.</i>	273 Sustainable Self-levelling Mortars with Phase Change Materials for Improved Energy Efficiency in Buildings - Investigation of Rheological, Physical, and Mechanical Properties <i>Azmi, F., Goudon, G., Soudki, M., Goudon, A.</i>	116 Sustainable and Carbon Neutral Built Environment through ECBC Compliance <i>Chen, C., Thakur, R.</i>
3:15 PM	276 Sustainable Strucure: Mix-design Incorporating Microfibrillated Cellulose Adhesive - Investigation of Physical, Mechanical, and Rheological Properties <i>Amir, F., Galante-Smith, H., Sarikh, S., Khatami, A., Shahe, B., Pleshav, S.</i>	266 Numerical Study of a Hybrid Timber-Concrete Floor System <i>Zakaria, Z., Alkhatib, Mohamed M.</i>	184 An overview on the environmental impacts of Timber Concrete Composites <i>Chen, Zhong, Chen, Yiqun, Li, Rui, Sui, Ke, X.</i>	144 Corrosion Risk Assessment of Bridges in Oslo, Norway Based on Visual Inspection <i>Chen, Zhong, Chen, Yiqun, Li, Rui, Sui, Ke, X.</i>	504 Affordable Phase Change Materials in Lightweight Concrete Walls for Superior Hydrothermal Performance <i>Bozorgmehr Nia, S., Shahe, B.</i>	231 Toward Sustainable Building Practices: A whole Life Cycle Assessment (LCA) for a Wooden Single-family building <i>Chen, C.</i>
3:30 PM	346 Numerical Modeling of the pH Effect on the Calcium Carbonate Precipitation by Sporosarcina Pastosii <i>Rohatgi, S., Mavrou, C.</i>	451 Life Cycle Carbon Assessment Methods for Structural Materials in Bridges <i>Christiansen, R., Fiebert, Rasmus, A., Rasmussen, J.</i>	246 In-situ Documentation of Structural Properties of Precast Concrete Elements in Shear Walls <i>Chen, Zhong, Chen, Yiqun, Li, Rui, Sui, Ke, X.</i>	133 Assessment of the Structural Potential of Non-conventional Material Alternatives in Shear Walls <i>Chen, Zhong, Chen, Yiqun, Li, Rui, Sui, Ke, X.</i>	223 Temperature-dependent Dual-operation Mode for Energy Tunnel Integrated with Phase Change Materials in Geothermal Environment <i>Wang, Q., Zhang, J., Xiao, P., Chen, X., Koenders, E., Yuan, Y.</i>	399 Understanding Carbon Negative Potential of Hempcrete Using a Life Cycle Assessment Approach <i>Shah, S., Davi, M.</i>
3:45 PM	450 Performance Evaluation of the Quantification of Cement Microphases using Energy Dispersive X-ray Spectroscopy Imaging <i>Abu, A., Barjag, S., Mendis, P.</i>	329 Sustainable Built-environment: A Holistic Approach Integrating Low-Dung-based Bricks for Environmental, Social, and Economic Benefits <i>Abu, A., Barjag, S., Mendis, P.</i>	494 The role of Environmental Product Declarations in the Decarbonization of Building Materials and Components <i>Abu, A., Barjag, S., Mendis, P.</i>	488 Resource-efficient and Climate-friendly Design of Concrete Structures through Advanced Structural Safety Concepts <i>Hoopmann, E., Köhler, J.</i>	158 The Effect of Phase Change Materials (PCM) on the Thermophysical Properties of Cement Mortar <i>Abu, A., Barjag, S., Mendis, P.</i>	429 Sustainability Potential of the Precast Industry in Kenya <i>Mwangi, Joseph M., Pfeiffer, T., Krawinkel, S., Völker, C., Schmidt, W., Nyababu, Andrew D.</i>
4:00 PM	255 Development of Technology to Utilize unused Inorganic Resources as Supplementary Cementitious Materials for Manufacturing of Low-carbon Cement <i>Choi, Y., Cho, Yong-K., Lim, G., Lee, Bong-C., Jung, Sang-H.</i>	499 Structural Response of CLT Bridge Decks to Heavy Vehicle Loads: A Serviceability Evaluation <i>Lindgreen, E., Askari, M., Vahid, A., Dahlberg, J., Kouamri, M., Shahe, B.</i>	358 Design and Construction of the World First Six-Story Tall Engineered Bamboo Building <i>Wu, E., Hou, Y., Li, X., Xiao, Y.</i>	192 Operational Modal Analysis and Finite Element Model Updating of Natick Tower in Rhodeis, Greece <i>Shah, S., Karim, Amir H.</i>	283 Achieving Net-Zero Buildings with High-Performance Phase Change Material Composites <i>Farzadi, Leila V.</i>	199 Carbon Trading for the Construction Industry: A Systems Theory Approach <i>Kulak, Augustine Senarath, Li, X., Das-Kyri, R., Parera, S.</i>

4:15 - 4:30 PM Group Photo

4:30 PM Adjourn

6:00 - 6:15 PM Departure for Boat/Dinner

7:00 - 10:00 PM Boat/Dinner

10:00 - 10:15 PM Departure for Hotel

Day 3 - Friday, 21.06.2024

8:00 - 8:45 AM	Registration					
08:45 - 09:30 AM	Keynote Lecture: Prof. Sriram Narasimhan - <i>Robots and Sensors for Safer and More Sustainable Infrastructure</i>					
09:30 - 10:15 AM	Keynote Lecture: Mr. Tor Gautestad - <i>The Very First Full-scale Carbon Capture Plant in the Cement Industry – Soon Ready for Commissioning</i>					
10:15 - 10:30 AM	Networking and Coffee Break					
10:30 - 11:45 PM	Session M10: Valorization of Slag in Construction <i>Session Chair: Anna-Lena Jönsson, Susana Garcia SanRico</i>	Session C06: Insulation and Thermal Performance <i>Session chair: Hamideh Mehrdadi</i>	Session C07: Composite Structures, Modular Buildings and 3D Printing Technology <i>Session chair: Behrooz Khativand</i>	Session S07: Carbon Optimization and Durability in Concrete Structure <i>Session chair: Eddie Koenders</i>	Session M11: Innovation in Recycled and Green Materials <i>Session chair: Shiva Khativand</i>	Session P07: Reuse, Recycle & Waste Management <i>Session chair: Alan Taddayon</i>
10:30 AM	Room: Boreal Toril R. Pedersen	Room: Matsumoto I Toril R. Pedersen	Room: Matsumoto 2 Toril R. Pedersen	Room: Likseal Toril R. Pedersen	Room: Matsumoto 1 Toril R. Pedersen	Room: Likseal Toril R. Pedersen
10:35 AM	286 Early-day Effects of Graphene on Na2CO3-Activated GGBS Concrete <i>Zhao, Y., Su, M., Wang, Y.</i>	243 Towards Circular and Sustainable Insulation solutions: Resolving Uncertainty in the Thermal Conductivity of Mycelium-Based Composites <i>Wolman, J., Nade, M., Vlasak, P., Hensk, D., Shea, A.</i>	114 An Experimental Study of Consistency and Strength Variation of 3D Printed Concrete Mixes <i>Vijayarathnam, D., Masten, G., Landa, I.</i>	386 New Technology to Strengthen Carbon Fission in Cement: Hydrophobicity and Microstructure of Carbonized Concrete Using Biore-Mineralization Technology <i>Shah, S., Wang, Y.</i>	412 Discussion of Physical Performance of Hydraulic Lime and Oyster Shell-based Mortars <i>Alvar, D., Flores-Caban, I., Torres, I., Pereira, M.</i>	406 Review of South African Waste Management Practices and its Integration into the Construction Industry <i>Chakrabarti, A., Beuthausen, H., Alexander, M.</i>
10:45 AM	410 Fresh State Properties of Conventional Range Concrete Containing Blast Furnace Slag <i>Wang, C., Lees, Janet M.</i>	121 Effects of Low-carbon Binders on the Mechanical and Thermal Properties of Bio-based Insulation Materials <i>Alam, H., El Hachimi, B., Khativand, F.</i>	233 3D Printing of Geopolymer-based Concrete for Low-Embodied Carbon Construction Applications <i>Alam, S., Gibson, D., Cobb, K., Jefferson, B., Bassett, B., Neeche, N., Mansur, T., Christensen, K., Matthews, J.</i>	180 Importance of Optimally Combining Binder Types and Rebar Cover in Reducing Lifetime CO2 Emissions of RC Structures Exposed to Corrosion Prone Environment <i>Alam, S., Mansur, T.</i>	263 Recycling Seashell as Sustainable Non-Hydraulic Lime Mortar <i>Suhail, U.</i>	127 Recycled Construction and Demolition Waste (CADW) in Low-Strength Concrete for Bricks and Blocks Manufacturing: A Review <i>Simon, G., Beuthausen, H., Alexander, M.</i>
11:00 AM	323 Feasibility Study of Promoted Binder Type Electric Arc Furnace Chilling Slags as Aggregates for Cement Mortar <i>Lin, Hsu-T., Springs, A., Hsieh, M., Masci, G., Cheng, A., Pan, Huang-H.</i>	400 Thermal Performance Characterization of Recycled Textile-based Materials for Building Insulation <i>Alam, S., Abdalrhman Mohamed Khalafallah, E. Almag, A., Alyassaf, A.</i>	140 Composite Facade with Timber and Concrete Connected by Bonding <i>Ball, Z., Michel, L., Perner, E.</i>	219 Reducing Carbon Footprint of RC Structure in Saline Exposure: Bangladesh Perspective <i>Alam, S., Gibson, D., Sultana, M., Sarkar, S., Bhow, A., Mansur, T.</i>	477 Compressive Strength Gain of Glass Powder -Portlandite: An Investigation Towards Minimizing the Use of Waste Glass as Cement Replacement in Concrete <i>Chen, G., Schmitt, M., Wang, Y.</i>	208 Construction Industry and the Circular Economy: A Systems Analysis <i>Alam, S., Beuthausen, H.</i>
11:15 AM	268 Exploring the Potential Utilization of Silicon Manganese Slag as a Supplementary Cementitious Material for Cement Requirement in Developing Low Carbon Composite Bricks <i>Shah, S., Sembrano, M.K., Posa, T., Gubrenaman, F., Khalil, M.</i>	360 An Overview of Thermal Insulation Materials: How Common LCA Balance Can Contribute to Increasing the Energy Efficiency and Reduce Greenhouse Gas Emissions of Buildings? <i>Alam, S., Husein, K., Sanchez, Z., Gannone, Mikaela Isabel S., Tadayon, A.</i>	471 Navigating Sustainability: Engineers' views within the Norwegian construction industry <i>Alam, S., Husein, K., Sanchez, Z., Gannone, Mikaela Isabel S., Tadayon, A.</i>	208 Classification of Concrete Bridges Based on Material Usage for Sustainable Decision-Making <i>Alam, S., Schmitt, M., Husein, K.</i>	172 Production of CSA Binder using Municipal Solid Waste Incineration Fly Ash as a Main Raw Material <i>Alam, S., Schmitt, M., Husein, K., Tadayon, A.</i>	302 Framework for Combined Life Cycle Environmental, Economic, and Social Assessment of Reclaimed Construction Products <i>Alam, S., Schmitt, M., Husein, K., Tadayon, A.</i>
11:30 AM	423 CO2-capturing of Aggregates Extracted from Alkali-activated GGBS Concrete <i>Alam, S., Breit, W.</i>	127 Optimization of Native Wood Fibre Insulation board through LCA analysis <i>Alam, S., Gibson, D., Thomassen, G., Eriksen, P.</i>	458 A Transition to Sustainable Built Environment: A Framework for Modular Building Construction Designed for Diversity <i>Al-Ghamdi, B., Tolboul, S., Mochenne, J.</i>	468 Sustainability and Durability of Concrete Infrastructure – Lessons Learnt from Decades of Research at the University of Cape Town <i>Beuthausen, H., Alexander, M.</i>	353 Investigating Geopolymer Sustainability in Construction <i>Jain, S., C., Tellez, L., Sarkar, S., Khativand, A.</i>	460 Construction and Demolition Waste Classification and Management in a Circular Economy: A Concept Review <i>Alam, S., Schmitt, M., Husein, K.</i>
11:45 - 12:00 PM	Coffee Break					
12:00 - 12:30 PM	Closing Remarks					
12:30 PM	Adjourn					