

17th International Conference on Durability of Building Materials and Components

DBMC 2026

Oral Presentation and Poster Schedule

Montréal, Canada

July 20–24, 2026

Organized by Concordia University and the National Research Council Canada

Topic ID	Session topic
T01	LCA, embodied carbon, circular economy & decarbonization
T02	Concrete durability, degradation & structural performance
T03	Low-carbon binders, cementitious materials & mix design
T04	Hygrothermal, moisture transport & HAM simulation
T05	Energy performance, thermal comfort, HVAC & retrofit
T06	Timber, wood, CLT & mass-timber durability
T07	Additive manufacturing, 3D/4D printing & printable materials
T08	Climate-change resilience, hazards & urban microclimate
T09	Heritage, masonry, stone & conservation
T10	Digitalization, AI/ML, BIM, sensing & robotics
T11	Service life, maintenance, reliability & asset management
T12	Mortars, plasters, renders, ETICS & surface finishes
T13	Bio-based, geosourced, insulation & novel functional materials
T14	Monitoring, NDT, diagnostics & field/lab testing methods
T15	BIPV, solar envelope systems & adaptive façade technologies
T16	Policy, standards, industry transformation & decision frameworks
T17	Airtightness, water-control layers & enclosure detailing
T18	Other Construction Topics

Oral Presentation Schedule

Slot 1 - Tuesday, July 21, 2026 - 10:45-12:15

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)	Session F (3.285)
Topic	Mixed: Low-Carbon Binders + Embodied Carbon & LCA	Concrete Durability	Hygrothermal & HAM	Timber Durability	Additive Manufacturing	Mixed: Energy & Retrofit + Embodied Carbon & LCA
10:45-11:00	11747 T01 Toward Low-Carbon Cement: Flash-Calcined Sediment-Based Ternary Binders Zeraoui, Ahmed; Benzerzour, Mahfoud; Abriak, Nor Edine	11599 T02 From Durability Threat to Climate Asset: Leveraging Corrosion-Resistant Rebar... Mancio, Mauricio; Menegussi Portela, Giovanna; Aguiar, Jose Renato Lima; da S...	11409 T04 Hygrothermal performance assessment of light-frame timber walls for mid-rise ... Park, Ji Hun; Kang, Seong Taek; Kang, Yujin; Kim, Sumin	11115 T06 Enhancing Mass Timber Durability: Lessons from the CRAMM Risk Assessment Tool Johns, Dorothy; Richman, Russell	11368 T07 Mechanical Performance of 3D Printed Concrete: Comparing Cast and Printed Con... Hentschel, Alexander; Woods, Joshua; Fam, Amir	11124 T01 High- and ultrahigh-strength concrete as a sustainable solution for arctic regions? cwirzen, ANDRZEJ; Rajczakowska, Magdalena
11:00-11:15	11560 T03 The Resilience of Cement-based concrete and geopolymer concrete exposed to se... Akiyeye, Joseph Olawale (1); Labiran, John Oluwole (2); Igba, Uvieoghene Tob...	11600 T02 Influence of Iron Ore Sand on the Mechanical Properties and Durability of Con... Branco, Luiz Antonio Melgaço Nunes (1); Bento, Luciano dos Reis (2); Menezes,...	11200 T04 Durability of chopped straw and corn stover insulated retrofits under high in... Conley, Brock; Pope, Hamish; Carver, Mark	11309 T06 Investigating the Impact of Climate, Geography and Preservatives on the Durab... Stokes, Kathryn; Li, Zhengwei; Lanner, Michael; Cooley, Sarah; Nicholson, Cat...	11386 T07 Title: Redesigning Conventional Clay Bricks for Sustainability: 3D Printing a... Saad, Esraa; Correa, David	11554 T01 BIM-based Embodied Carbon Evaluation of Longevity-designed Prefabricated Housing: A Case Study of Wood-Bamboo Wall Component Maintenance Huang, Baolin; Li, Ruotian; Zhang, Hong
11:15-11:30	11619 T03 Performance of geopolymer fiber-reinforced concrete after exposure to elevate... Abadel, Aref A; Alqarni, Ali S; Alharbi, Yousef R	11618 T02 Towards using piezo-impedance intelligence for carbonation sensing in cementi... Haq, Moinul; Tee, Kong Fah; Al-Osta, Mohammed	11221 T04 Rain penetration into drainage cavities at parapets and wall flashings of mid... Endo, Suguru (1); SAITO, Hiroaki (2); MATSUOKA, Daisuke (3); MIYASHITA, Yuma ...	11324 T06 R&D project on the durability of the exterior walls in mid- and high-rise tim... Tsuchimoto, Takahiro (1); Saito, Hiroaki (2); Wakiyama, Yoshio (3); Naruse, T...	11398 T07 Durability of 3D-Printed High-Performance Concrete Containing Phosphate-Based... DAS, JYOTISH KUMAR; GUADAGNINI, MAURIZIO; NEMATOLLAHI, BEHZAD	1316 T05 Exploring the long-term performance of air purifiers in removing particulate matter and formaldehyde across different residential environments Xu, Jing; Zhou, Yucan; Liu, Junjie
11:30-11:45	11752 T03 Optimized and Sustainable Utilization of Top and Bottom Mine Tailings as a Pa... Alqarni, Ali S.	11624 T02 Evaluation of long-term degradation of reinforced concrete buried ducts in ac... ALLAIN, Frédéric (1); LEGRIX, Alexis (2); BONNEAU, Juliette (1)	11495 T04 Impact of SS-NMR-derived Liquid Diffusivity on Hygrothermal Simulation of Bui... Yari, Hossein; Esmizadeh, Elnaz; Riahinezhad, Marzieh; Wang, Lin; Dragomiresc...	11395 T06 Development of Machine Learning Models for Hygrothermal Performance Predictio... Akhavan Shams, Sina (1); Ge, Hua (1); Wang, Lin (2)	11430 T07 Properties of Cementless Printable Mortar as a Function of Material Compositi... Lin, Wei-Ting (1); Ho, Chia-Ying (1); Cheng, An (1); Chen, Jie (1); Hebda, Ma...	11143 T05 AIRStat: A Learning Thermostat for Energy-efficient Buildings Ashraf, M. Nauman; Aliabadi, Amir A.
11:45-12:00	11727 T13 Durability Assessment of Graphene Oxide-Tailored Ternary Blended Nano-Concret... Anwar, Abdullah; Ngo, Tuan; Liu, Xuemei; Zhang, Lihai	11627 T02 Durability of concrete in nuclear systems: Review of Degradation mechanisms a... Abdelaziz, Moataz; Bassuoni, M.T.	11250 T04 Experimental Analysis of the Hygrothermal Behaviour of a Steel-Framed Buildin... Foster, Morgan; Baldwin, Christopher; Cruickshank, Cynthia A.	11399 T06 Hygrothermal Analysis of CLT Wall Assemblies with Vapor Retarder Design : A C... Lee, So-min; Lee, Jeong-hun	11437 T07 Feasibility of a 3D-Printed Passive House Multi-Family Building in Northern C... Reda, Ibrahim; Jetlaoui, Chaima; David, Laliberté; Qi, Dahai	11188 T05 Study of the Thermal Performance of a Foam Concrete Living Unit in Burkina Faso OUEDRAOGO, Lareba Adélaide (1); KAM, Sié (1); MESSAN, Adamah (2); BLANCHART, Philippe (3); BATHIEBO, Dieudonné Joseph (1)
12:00-12:15	11733 T16 The Impact of Building Information Modelling Integration in Academic Curricul... Bamgbose, Olusayo Ayobami (1); Fatai Ogunbayo, Babatunde (2); Ohis Aigbavboa,...	11630 T02 Effectiveness of Methyl Methacrylate Coating Modified with Nano-Alumina Under... Ariyadasa, Madhushani (1); Bassuoni, Mohamed (1); Ghazy, Ahmed (1,2)	11284 T04 Hygrothermal performance assessment of thermally retrofitted wood-frame build... Wang, Lin; Bas, Canan; Lacasse, Michael; Mahdavi, Alireza;	11429 T06 Feasibility assessment of hinoki CLT for building envelope applications Kang, Seong Taek; Park, Ji Hun; Kim, Sumin	11454 T07 Assessment of Test Methods for Freeze-Thaw Durability Performance of Additive... Lyu, Chen; Hartell, Julie Ann	

Oral Presentation Schedule

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Slot 2 - Tuesday, July 21, 2026 - 14:45-16:15						
Presentation Time (Room)	Session A (3.285)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)	Session F (3.210)
Topic	Infrastructure & Civil Assets	Embodied Carbon & LCA	Low-Carbon Binders	Digitalization & AI	Bio-Based Materials	Heritage & Masonry
14:45-15:00	1344 T18 Evaluating the Durability of Marine Concrete Piles under Multi-Ion induced De... Annamalaisy Sannasiraj, Rishwanth Darun (1,2); Chronopoulos, Dimitrios (2);...	11578 T01 Scaling Embodied Carbon Assessment in Residential Construction: From Research... Racusin, Jacob; Trottier, Mélanie	1414 T03 Evaluation of High-Limestone PLC Concretes for Chloride Resistance: Role of P... Wang, Chengkai; Medeiros, Rennan; Sanchez, Leandro	11232 T10 Building Information Modeling (BIM) for Durability and Service Life Assessment... Osman, Mohamed; Soliman, Ahmed	1304 T13 Casting Direction and Thickness Effects in PCM-Modified Hemp-Lime Composites Zhang, Ziqi; Kavgic, Miroslava; Noël, Martin	11411 T09 Enhancing the durability of shipwreck wood for museums: nanoscale insights in... Carmeliet, JAN (1); Shomali, Ali (1); Zhang, Che (2); Derome, Dominique (3)
15:00-15:15	1424 T18 A Probabilistic-Mechanistic Framework for Assessing the Deterioration of Conc... Bhadra, Rituraj; Moghtadernejad, Saviz; Lounis, Zoubir; Zhang, Jieying	11592 T01 Embodied Carbon Reduction Potential of Typical Construction Solutions for Non... Bartels, Giovanna (1); Flores-Colen, Inês (1); Silvestre, José (1); Gomes, Ri...	11129 T03 Resistance Factors for Low-Carbon Concrete Derived from Probability-Based Lim... Chen, Ya-Ning (1); Liu, Liang (1); Lu, Zhao-Hui (1); Li, Chun-Qing (1,2)	11253 T10 Leveraging Artificial Intelligence to Evaluate Approaches in Reducing Waste i... Ogunbayo, Babatunde Fatai (1,2); Adekunle, Samuel Adeniyi (1,2); Ogundipe, Ku...	11193 T13 Eco-Revolution: Geosourced and Biosourced Materials for the Architecture of T... KABORE, Aguérata; Ouellet-Plamondon, Claudiane	11422 T09 Enhancing the Durability of Heritage Façades: An Analysis of Intervention Tec... Aledavood, Anitasadat; Monjo Carrió, Juan
15:15-15:30	11141 T18 A Probabilistic Framework for selection of carbon neutral Pipeline Material b... Li, Mu-Zi (1); Zhao, Zi-Tong (1); Li, Wen-Jie (1); Lu, Zhao-Hui (1); Li, Chun...	11594 T01 Multiple-life-cycle environmental impact analysis for mass timber and precast... Liu, Yulin; Kim, Joyce; Haas, Carl; Olumo, Adama; Hojjati, Aryan	11156 T03 Sulphate attack on mortars with metakaolin and ladle furnace slag as suppleme... Silva, Taysn (1); Silva, Rui (2); de Brito, Jorge (2); Ferreira, Gisleiva (1)	11276 T10 Artificial Intelligence for Enhancing Durability and Climate Resilience of Ze... Omar, Osama	11290 T13 Durable Hybrid Insulation Systems with Reflective Materials for Metal-Frame A... Saber, Hamed H.; Yarbrough, David W.	11449 T09 A non-invasive diagnostic protocol for moisture pathologies in historic mason... Vitiello, Veronica; Marmo, Rossella; De Santis, Francesco; Castelluccio, Roberto
15:30-15:45	11629 T18 Case Study on the Field Performance of Conventional and Nano-modified Coating... Salifu, Nasiru (1); Ahmed, Mohamed Elmustafa (1); Ariyadasa, Madhushani (1); ...	11603 T01 Thermal and Environmental Performance of Lime-Slag Stabilized and Fiber-Reinf... Bouteldja, Ines (1); Kenai, Saïd (1); Grine, Khaled (1); Farina, Ilenia (2)	11159 T03 Durability-related performance of alkali-activated concrete produced with was... Sabino, Afonso; Neves, Renato; de Brito, Jorge; Bravo, Miguel	11377 T10 Application of Machine Learning techniques for evaluating the service life of... Porcellini, Francesca; Zitiello, Enrico Pasquale; Basile, Eliana; Salzano, An...	11302 T13 Impact of Hurd Origin on Thermal and Mechanical Performance of Fixed-Mix Hemp... Fidan, Serhat; Ajoku, Chinedu; Kavgic, Miroslava	11451 T09 Hygrothermal properties of historic fired clay bricks: building an internatio... Vereecken, Evy; Roels, Staf; Xu, Bingyu; Walker, Rosanne; Artigas, David; Van...
15:45-16:00	11425 T18 Enhancing Durability of Concrete Highway Bridges in A Changing Climate Using ... Moghtadernejad, Saviz; Bhadra, Rituraj; Lounis, Zoubir; Zhang, Jieying	11611 T01 Limiting the carbon footprint of buildings in Finland and Europe Sirola, Tomi; Westermarck, Mikael; Vinha, Juha	11180 T03 Influence of Nano-Additives on the Behavior of Geopolymer Composites in Moist... Korniejenko, Kinga; Figliola, Beata	11428 T10 Parametric Energy Modeling of Canadian Residential Building types for Solar G... Gill, Kanwarpartap Singh; Singh, Prabhnoor; Grewal, Kuljeet Singh	11307 T13 CFD Analysis of Energy and Optical Performance in Transparent components of B... Arasteh, Hossein (1); Maref, Wahid (1); Saber, Hamed (2)	11492 T09 Green Facades in Historic Architecture: A Review of Vegetated Walls for Herit... ElKordy, khadiga
16:00-16:15		11730 T01 Evaluating Embodied Carbon in High-Performance Building Enclosures Chiu, Vincent	11184 T03 Improved Transport Properties and Strength Development in Concrete with Calci... BAHHOU, Abdelmoujib (1); Taha, Yassine (2); Hakkou, Rachid (3); Benzazoua, M...	11435 T10 From automated façade anomaly detection to BIM-integrated vulnerability asses... Marmo, Rossella; Di Matola, Mario; Vitiello, Veronica; Fraiese, Mariacarla; C...	11326 T13 Impact of Active Vacuum Insulation on Moisture Response of Exterior Building ... Khatibi, Meysam; Froese, Thomas; Mukhopadhyaya, Phalguni	11529 T09 Development and application of a platform for predicting the spatiotemporal d... Yu, Hui; Zhang, Huibo

Oral Presentation Schedule

Slot 3 - Tuesday, July 21, 2026 - 16:30-18:00

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)
Topic	Embodied Carbon & LCA	Low-Carbon Binders	Mixed: Additive Manufacturing + Digitalization & AI	Climate Resilience	Mixed: Additive Manufacturing + Digitalization & AI
16:30-16:45	11541 T01 Does building-integrated photovoltaics deliver environmental benefits in the ... Du, Wenhang (1); Ge, Hua (1); Siluvai Antony, Praveen (2)	11468 T03 Evaluating the effect of transitioning from General Use to General Use Limest... Medeiros, Rennan; Verros, Athanasios; Sanchez, Leandro; Shehata, Medhat	11615 T07 Performance Evaluation and Process Optimization of 3D Printing Lightweight Ag... Li, Fei; Liang, Xiaopan; Xu, Zhuozheng; Du, Mingxuan; Xiao, Yuandong	11342 T08 Combine a probabilistic approach and an accurate experimental tool to predict... SOUDANI, Lucile; ILLY, Hervé; MOULARAT, Stéphane; ZIBOUCHE, Kamel; RAKOTOMALA...	11518 T07 Anisotropic Deformation Mechanisms in 3D-Printed Mortar: Compaction, Delamina... Yawaka, Rintaro (1); Uematsu, Ren (1); Kamada, Hiroharu (2); Fukuyama, Tomoko...
16:45-17:00	11547 T01 The Adaptive Factory: Parametric LCA for Circular and Low-Carbon Biopolymer B... Tsui, Tanya; Cucurachi, Stefano; Thonemann, Nils; Hu, Mingming	11372 T03 Role of Si/Al ratio in synthetic zeolites from fly ash on the hygro-mechanica... Styczeń, Joanna	11732 T07 Interlayer Bond Strength as a Durability-Critical Parameter in Coarse Aggrega... Ghodke, Swapnil Balasaheb; Singh, Bhupinder; Chowdhury, Shubhankar Roy	11387 T08 EXISTING BUILDINGS AND THEIR ADAPTATION TO FUTURE CLIMATE SCENARIOS: THE CASE... Chronopoulou, Angeliki	11543 T07 Effect of Nozzle Size on Curved Full-Scale 3D Printed Concrete Cracking Behav... Abdelhalim, Maya; Soliman, Ahmed
17:00-17:15	11563 T01 A Specification-Based Approach for Validating Industry Foundation Classes Dat... Mahbod, Sarah; Azad Oshin, Shamanta; Poirier, Erik; Jalaei, Farzad; Hosseini ...	11407 T03 Assessing the creep evolution of cement pastes under high relative humidity c... Martin--Cavaillé, Camille (1,2,3); Giroudon, Marie (1,2); Turq, Viviane (1,3)...	11539 T10 Evaluating Carbon Emissions and Operational Energy Savings in a Prefabricated... AUNG, WAI PHYO (1); Hong, Zhang (1); Tjongnotoputera, Michael Anharlaintama (...)	11404 T08 Modeling Smoke Plume-Green Firebreak Interactions Using Computational Fluid D... Gu, Zhonglin; Qi, Dahai; Fellouah, Hachimi; Taha, Ahmed	11609 T07 3D Concrete Printing: A Path to Sustainable & Digitalized Construction Techno... Tan, Ming Jen (1); Paul, Suvash Chandra (1); Lee, Junghyun (1); Jhun, Jihye (...)
17:15-17:30	11568 T01 Study on the Life Cycle Assessment of Ceiling and Lightweight Partition Wall ... Jeffrey Lee, Meng-Chieh; Chang, Pi-Jan	11415 T03 Biomass Fly Ash as a sustainable filler in Precast low-carbon concrete with m... Dossa, Joëlla (1,2); Page, Jonathan (1); Vanhove, Yannick (1); Djelal, Chafik...	11748 T16 Alterations to Existing Commercial Roofs – Protocol Development Through Indus... Shyti, Flonja	11443 T08 Impact of Climate Change on Freeze-Thaw Risk Lee, Ivan; Merino Gordo, Felipe; Tam, Claire	11455 T10 A Probabilistic Framework for Risk Assessment of Alkali-Silica Reaction: Inte... Bergmann, Ana; F.M. Sanchez, Leandro
17:30-17:45	11571 T01 Durability assessment of SCC incorporating fully recycled concrete gravel and... SAFI, Obaidurrahman; GHORBEL, Elhem	"11184 T03 Improved Transport Properties and Strength Development in Concrete with Calci... BAHHOU, Abdelmoujib (1); Taha, Yassine (2); Hakkou, Rachid (3); Benzaazoua, M..."	11434 T14 Characterization of Load-Induced Voltage Response in CNT-Cement Composites fo... Fukuyama, Tomoko	11458 T08 Integrating retrofit and reinforcement learning control for climate-resilient... Nik, Vahid	11459 T10 Digital Twin-Enabled Strategies: A Replicable Model for Resilient Urban Trans... Azzalin, Maria (1); Lauria, Massimo (2)
17:45-18:00	11574 T01 Life Cycle Assessment of FA-GGBS Based Geopolymer Concrete Incorporating Recy... Manzoor, Tawzia (1); Shah, Asif Hussain (2); Bhat, Javed Ahmad (1)				11496 T10 Improving ISO wind-driven rain model using CFD-ML based reduced-order models Gholamalipour, Payam; Stathopoulos, Ted; Ge, Hua

Oral Presentation Schedule

Slot 4 - Wednesday, July 22, 2026 - 10:45-12:15

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)	Session F (3.285)
Topic	Bio-Based Materials	Embodied Carbon & LCA	Mixed: Service Life & Asset Mgmt + Monitoring & Diagnostics	Hygrothermal & HAM	Mixed: Solar Envelopes + Hygrothermal & HAM	Mixed: Service Life & Asset Mgmt + Mortars & Finishes
10:45-11:00	11350 T13 UV Durability and Mechanical Performance of Epoxy-Glass Fiber Composites for ... Fazli, Ali; Auty, Ken	11440 T01 The Impact of Building Component Service Life on Long-Term Environmental and ... Song, Mathew; Kim, Joyce; Haas, Carl; Ahn, Jun; Ghobadi, Mehdi; Hojjati, Aryan	11753 T02 Optimizing RCA Concrete for Cold-Climate Infrastructure through Durability-Ba... Mello Muller de Oliveira, Yuri; Medeiros, Rennan; Sanchez, Leandro; Dumeignil...	11351 T04 Hygrothermal Performance of Timber Exterior Walls in Different Climates of Tu... Ekşi Kılıçaslan, Ayşegül (1); Kus, Hülya (2)	11728 T04 Variability in Nail Withdrawal Resistance of Roof Sheathing and Irreversible ... Ishihara, Saori	11113 T17 Challenges Associated with the Practice of Prefabricated Roofing Assemblies Dabas, Maha
11:00-11:15	11362 T13 Cellulose-Based Foams for Thermal and Acoustic Insulation: Toward Sustainable... Myja, David; Bley, Julien	11453 T01 Economic Trade-offs of Concrete Reuse in Structural Applications Begeyev, Rustem; Haas, Carl; Kim, Joyce; Hojjati, Aryan	11513 T11 Prediction of residual service life - LCC implications of UK handback of buil... Bourke, Kathryn; Addyman, Simon; Broyd, Tim	11194 T04 Buildings of Tomorrow: Sustainable Solutions for Contrasting Climates KABORE, Aguérata; Ouellet-Plamondon, Claudiane	11605 T12 Evaluating the Impact of Sealant Materials and Installation Style on the HAM ... Salehi, Parisa; Khaleghi, Hamed; Karatas, Aslihan	1735 T11 Proposed Methodology for Estimating Stucco Service Life and Investigating Effective Factor Values Sadeghi, Sara (1,2); Riahinezhad, Marzieh (1); Esmizadeh, Elnaz (1)
11:15-11:30	11531 T13 Thermal Transfer and Storage Performance of a Heat Pipe-Phase Change Material... Huang, Haotian; Zhang, Xiaojing; Xie, Jingchao; Yao, Jiangxu; Wang, Yuxin	11464 T01 Guide for the Environmental Life Cycle Assessment (LCA) of housing rehabilita... Schor, Daniela; Silvestre, José; Saade, Marcella	11514 T11 Influence of different ageing parameters on the resistance to penetration of ... Boberach, Christina; Tremel, Sebastian	11418 T04 Post-Flood Envelope Prediction from Interstice Water Using Neutron Imaging an... de Cotret, Daniel (1); Trtik, Pavel (2); Boucher, Marie-Amélie (1); Derome, D...	11320 T15 Assessing Building Envelope Resilience to Heatwaves in Cold Climate Regions: ... Hassan, Ahmed Nouby Mohamed; Hachem-Vermette, Caroline	11285 T11 Simulation of Argon-Filled IGU and VIG Performance and Degradation in a Single-Family Home MacIntyre, Rebecca (1); Hayes, Alexander (2); Baldwin, Christopher (1); Cruckshank, Cynthia A. (1)
11:30-11:45	11559 T13 Durability Assessment of Biobased Insulation Materials Based on Recycled Whea... Alshndah, Zeyad; Becquart, Frederic; Belayachi, Naima	11471 T01 Designing Buildings to Last: Adaptability Criteria for a Circular and Resilie... Baienat, Saba (1); Midoune, Narimene (1); Bechara, Helal (2); Iordanova, Ivan...	11390 T14 Infrared thermography for defects detection – Systematic quantitative evaluat... Almeida, Ricardo (1,2); Barreira, Eva (2)	11433 T04 Hygrothermal Performance of Natural Thermal Insulating Lime-Based Mortars Bef... Cachão, Sofia (1); Juncais, Mariana (1); Bersch, Jéssica (1); Parracha, João ...	11385 T15 Evolution of the solar reflectance and thermal emittance of naturally exposed... McGarrell, Audrey (1); Destailats, Hugo (2); Levinson, Ronnen (2); Chen, Sha...	11305 T11 How maintenance shapes the durability, cost, and safety of building envelopes Dias, Ilídio; S. Bartels, Giovanna; Flores-Colen, Inês; Silva, Ana
11:45-12:00	11570 T13 Mechanical, Physical, and Durability Performance of Bio-Based Mortars with He... RIFFI, Somaya (1,3); GHORBEL, Elhem (1); SCHMIDT, Franziska (2); CUCCAGNA, Fi...	11474 T01 Bridging BIM and Life Cycle Assessment: A Comparative Evaluation of BIM-Integ... Midoune, Narimene; Iordanova, Ivanka	11382 T14 Comparison of natural and accelerated aging effects on cool paint exposed to ... Couto, Lorena (1); Pisello, Anna Laura (2); Dornelles, Kelen (1)	11446 T04 Maximum spreading of a droplet impacting on inclined porous substrates : expe... Dias, Maude (1); Carmeliet, Jan (2); Derome, Dominique (1)	11625 T15 Toward Integrated Durability Assessment of Building-Integrated Photovoltaic (... Sahyoun, Sahar; Zareie, Zahra; Ge, Hua	11380 T12 Extreme Value Distributions applied to the Failure of Organic Coatings in Service Croll, Stuart
12:00-12:15	11612 T13 Recommended Structural Solutions for Bio-Based Building Envelopes Tuominen, Eero; Tuurala, Ilkka; Westermarck, Mikael; Vinha, Juha	11478 T01 Architectural Glass Recycling as a Climate-Responsive Durability Strategy Yee, Stanley		11109 T04 The effect of micro-cracking on water uptake and absorption of plaster in ETICS Olak, Henri; Kalamees, Targo; Klößeiko, Paul; Mustjõgi, Erik	11103 T17 Forensic Insights into Durability Failures in Building Enclosures Hasan, Javeriya; Bjornson, Dana	11120 T11 A function-oriented assessment methodology (FOAM) for monitoring and predicting the functional condition index (FCI) of existing buildings Serrat, Carles (1); Royano, Veronica (1); Gibert, Vicente (1); Rapinski, Jacek (2)

Oral Presentation Schedule

Slot 5 - Wednesday, July 22, 2026 - 14:45-16:15

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)	Session F (3.285)
Topic	Timber Durability	Additive Manufacturing	Concrete Durability	Energy & Retrofit	Solar Envelopes	Mixed: Hygrothermal & HAM + Climate Resilience
14:45-15:00	11104 T06 Sensitivity Analysis of Moisture Performance in Wood-Frame Wall Assemblies Us... Xiao, Zhe; Wang, Lin; Defo, Maurice	11225 T07 VALORIZATION OF INDUSTRIAL MINING TAILING in 3D PRINTED CONCRETE BUILDINGS: A... Mehrez-Khalil, Rayene (1); Ben Azouz, Kaouther (2); Soliman, Ahmed (1)	11187 T02 IMPACT OF ASR-REACTIVE FILLERS ON ASR-INDUCED EXPANSION Coutinho, Yane (1); Medeiros, Rennan (1); Sanchez, Leandro (1); Carneiro, Arn...	11393 T05 Dynamic Wall Prototype for Overheating Prevention: Laboratory Evaluation of t... Barreira, Eva (1); M.S.F. Almeida, Ricardo (1,2); Ribas, Manuel (1)	11270 T15 Evaluating the long-term performance of 3D glass BIPV components Castro Morales, Kevin Aarón (1); Sanz Saiz, Carlos (2); Corrao, Rossella (1)	11310 T04 Hygrothermal risk factors in the performance of vented attic structures in the New Zealand context McNeil, Stephen
15:00-15:15	11308 T06 Literature Review of the Possibility of Bio-Based Preservatives for Mass Engi... Li, Peishan; Okuda, Shinya	11311 T07 A methodology for optimized ternary mortar formulation for 3D printing couple... Ouellet-Plamondon, Claudiane; Brial, Victor	11199 T02 Assessment of the thermo-mechanical properties of hybrid concrete-filled fibe... Chaabene, Yosr (1); Qi, Dahai (1); Masmoudi, Radhouane (1); Belem, Tikou (2)...	11381 T05 Investigating Indoor Environmental Quality in Homes on Musqueam Reserves: The... Shang, Yina (1); Li, Bo (1); Ghariai, Montekpal (2); Briant, Morgane (1); Tar...	11110 T15 Feasibility of Photovoltaic integration as a building material: Green buildin... Dehadani, Ashu (1); Matai, Khushal (2)	11522 T04 Coupling of transient simulation tools to extend their capabilities Fechner, Heiko
15:15-15:30	11177 T06 Moisture performance of cross-laminated timber construction details: Lab test... Blommaert, Anke; Van Den Bossche, Nathan; Steeman, Marijke	11312 T07 Study about the strength difference between mold mortar and additively constr... Tsuchiya, Naoko; Obara, Taku; Abe, Shota; Ogura, Hiroki; Sasano, Hiroshi	11203 T02 Study on the Residual Seismic Performance of Earthquake-Damaged Reinforced Co... LIAO, WEN-I; Chen, Xuan-Zhen; Lin, Fang-Fei; Liao, Chu-Tsen; Chiu, Chien-Kuo	11417 T05 Multi-Objective Optimization of Cost-Effective Retrofit Strategies for a Deta... Ziaemehr, Bahador (1); ghobadi, Mehdi (2); Ge, Hua (1); Lacasse, Michael (1)	11125 T15 A Comparative Evaluation of Natural vs. Accelerated Aging in TiO2-P25-Enhanced Thermochromic Coatings for Ceramic Roofing Hidalgo-Araujo, Ana Carolina (1,2); Salomão, Rafael (3); Berardi, Umberto (4); Dornelles, Kelen (1)	11525 T04 Influence of hygric property parameterization on moisture buffering simulation accuracy of gypsum-based inorganic mineral materials Xie, Yue; Xie, Jingchao; Zhang, Xiaojing
15:30-15:45	11211 T06 Data-Driven Hygrothermal Modelling of CLT: Linking Sensor Deployment and Nume... Vyas, Yash; Richman, Russell	11332 T07 Use of eggshell as supplementary binder in 3D concrete printing Castillo Sotelo, Silvia (1,2); Ouellet-Plamondon, Claudiane (1); Etxeberria L...	11238 T02 Environmental Corrosivity of Coastal Atmospheres: Is Chatham Island Different... Li, Zhengwei (1); de Raadt, Anna (1); Stewart, Carol (2); Johnston, David (2)	11500 T05 Building Energy Performance Classification Systems in Lithuania and Malta – a... Buhagiar, Vincent; Norvaišienė, Rosita	11154 T15 Solar photovoltaics integrated in the building envelope: Durability assessment from the construction perspective Santamaria Fernandez, Susana (1,2); Etxepare, Lauren (2); Roman, Eduardo (1)	11217 T08 Updating Scheffer's Climate Index Peer, Leslie; Sloat, Destynnee
15:45-16:00	11245 T06 Investigating the Hygrothermal Behaviour of CLT External Walls with Wood-Fibr... Kukk, Villu; Kalamees, Targo	11359 T07 Behaviour of multi-layer 3D printed reinforced concrete components under cont... Zohrabyan, Vahan	11292 T02 Seismic Damage Crack Characteristic of Reinforced Concrete Exterior Wall Tiles Liao, Chu-Tsen (1); Liao, Wen-I (2); Chiu, Chien-Kuo (1); Chang, Heui-Yung (3...	11510 T05 Profile of odorous VOCs from typical indoor sources in relation to olfactory ... XU, XIAO; Qu, Meinan; Pei, Jingjing	11265 T15 A Mixed-Method Analysis of the Drivers and Barriers to Building Integrated Photovoltaics (BIPV) Adoption Baril, Daniel (1); Sigounis, Anna-Maria (1); Ahn, Jun (2); Athienitis, Andreas (1); Ge, Hua (1)	11550 T08 Vernacular Architecture Reinvented for Climate Change and Environmental Resilience Pace, Alexei; Buhagiar, Vincent
16:00-16:15			11293 T02 Effect of climatic variables on carbonation of building and concrete structures Quattrone, Marco; De Brito Prado Vieira, Daniel; John, Vanderley M.	11523 T05 Cool materials across North America - An overview of technology, applications... Ziaemehr, Bahador (1); Schneider, Sarah (2); Ge, Hua (1); Lacasse, Michael (1)		11108 T14 An Experimental Setup for Monitoring Wood Durability and Moisture Dynamics: Preliminary Results Niklewski, Jonas

Oral Presentation Schedule

Slot 6 - Wednesday, July 22, 2026 - 16:30-18:00

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)
Topic	Service Life & Asset Mgmt	Policy & Decision Frameworks	Concrete Durability	Energy & Retrofit	Mixed: Climate Resilience + Monitoring & Diagnostics
16:30-16:45	1597 T11 Loss of Performance of Hydraulic Lime Mortars under the Action of Thermal Cyc... Mendes, Maria Paula (1); Romero-Gómez, María Isabel (2); Flores-Colen, Inês (3)	1598 T16 BIPV Market Potential Review: Drivers, Barriers, and Methods Du, Wenhang (1); Al-Shatnawi, Zahra (1); Zannah, Riazul (1); Baril, Daniel (1...)	11448 T02 Investigation of steel corrosion under natural and accelerated carbonation in... Joshi, Sarthak (1); Samson, Gabriel (1); Kamde, Deepak Kumar (2); Cyr, Martin...	11530 T05 A Two-Way Coupled Prognostic HVAC Model for Urban Physics Simulations Safdari, Mojtaba (1); Ashraf, M. Nauman (1); Al Janaideh, Mohammad (1); Siddi...	11553 T08 Assessment of the long-term durability of a retrofitted double-skin steel env... Assaf, Marwan; Brachelet, Franck; Tittlein, Pierre; Defer, Didier; Antczak, ...
16:45-17:00	11142 T11 Management of refurbishment projects throughout the building service life cycle Korentz, Jacek (1); Nowogońska, Beata (1); Kurowska, Aleksandra (2)	11112 T16 Hybrid-Agile Design of Experiments (HADOE): Lessons from Four Years of Applic... Gradeci, Klodian; Sletnes, Malin; Ruther, Petra	11450 T02 Carbonation-induced corrosion of metakaolin-based ettringitic binders with lo... Rigaud, Tom (1); Samson, Gabriel (1); Bucher, Raphaël (1); Djamai, Zakaria (1...)	11542 T05 Predicting HVAC Energy Use Intensity in U.S. Healthcare Facilities Using Mach... Pipim, Charles; Derrible, Sybil; Karatas, Aslihan	11621 T08 Future Weather Data for Hygrothermal Building Envelope Simulations: Implicati... Shang, Yina (1); Tariku, Fitsum (2)
17:00-17:15	11153 T11 Service Life Assessment of Buildings – a New Framework Model de Place Hansen, Ernst Jan (1); Rode, Carsten (2); Haugbølle, Kim (1); Ottose...	11519 T16 Barriers in the Building Regulations for Renovation of Buildings de Place Hansen, Ernst Jan (1); Rohde, Lasse (1); Hansen, Helene (2); Ørsager...	11499 T02 Freeze-thaw-resistance of concrete - Approach for a new sensitivity testing c... Spörel, Frank	11544 T05 Optimization-Based Screening of HVAC System Selection for Energy-Efficient an... Aeinfar, Sanam; Tutunchian, Omid	11622 T14 Flat Roof Ventilation: Airflow Field Measurement Abebe, Zelalem; Tariku, Fitsum; Mukhopadhyaya, Phalguni
17:15-17:30	11179 T11 Approaching robust and precise Life Cycle Costing (LCC) for wood products bas... Brischke, Christian (1); Acquah, Richard (2); Akkurt, Tolgay (3); Alfredsen, ...	11383 T16 Sustainability Best Practices in the Construction Industry: Current Trends an... Tambwe, Ornella; Aigbavboa, Clinton; Akanyawie, Gloria	11512 T02 Investigating the Impermeability of Various Products and Protocols of Crystal... Al-Jabari, Maher (1); Al-Rashed, Radi (2)	11746 T05 Hydro-Mechanical Performance of Thermally Treated Expansive Clay for Construc... Alsabhan, Abdullah; Hamid, Wagdi; Al-Mahbashi, Ahmed M.; Salem Binyahya, Abob...	11501 T14 Regulatory, Technological, and Human Resource Development for Drone-Based Bui... Miyouchi, Hiroyuki
17:30-17:45	11195 T11 User acceptance and aesthetic limit states for wooden cladding: A multi-count... Alfredsen, Gry (1); Gustavsen, Geir Wæhler (1); Ross, Lone (1); Grüll, Gerhar...	11394 T16 Toward High-performance and Durable Homes: Insights from Tiered Energy Code M... Kaluthantirige, Piyaruwan (1); Rico, Maeric (1); Jarri, Syed (1); Bello, Huss...	11515 T02 Relationship Between Concrete Paste Volume and Con-crete Transport Properties... González-Betancur, Daniela; Quattrone, Marco; M. John, Vanderley	11729 T05 Effects of Building Energy Efficiency under Future Climates on Space Heating ... Shehzad, Muhammad Faisal; Fung, Alan; Stopps, Helen	11751 T08 Enhancing building resilience and indoor comfort through La2Ce2O7 and Al2Ce2O... Lupis, Katia; Selicati, Valeria; Stasi, Roberto; Beraradi, Umberto
17:45-18:00	11222 T11 Parameter identification of epoxy adhesives via Bayesian inferenceand Markov ... Jan, Faizullah (1); Kujawa, Marcin (1); Smakosz, Łukasz (1); Paczos, Piotr (2...)		11572 T02 Analysis of Spatial Variations in Corrosion of Outdoor Iron Artifacts and the... Niu, Muran (1); Zhu, Hangyao (1); Xie, Huarong (1); Li, Yonghui (1,2); Hokoi,...		

Oral Presentation Schedule

Slot 7 - Thursday, July 23, 2026 - 10:45-12:15

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)	Session F (3.285)
Topic	Heritage & Masonry	Mortars & Finishes	Concrete Durability	Low-Carbon Binders	Climate Resilience	Mixed: Low-Carbon Binders + Additive Manufacturing
10:45-11:00	11548 T09 Degradation mechanisms and durability evaluation of heritage conglomerate und... Zhang, Huihui (1); Wang, Yanwu (2); Guo, Qinglin (2); Wang, Xuezhi (2); Li, J...	11278 T12 Developments of physical and mechanical properties of mortars under wetting a... Silva, Matheus; Souza, Ana Luiza; Rodrigues, Hellen; Bauer, Elton	11294 T02 Durability Assessment of Reinforced Concrete Bridge Components under Natural ... Khan, Asad-Ur-Rehman (1); Mahmood, Wajeeha (2); Kahlid, Fatima (1); Fareed, S...	11247 T03 Enhancing the Shrinkage Performance of Limestone Calcined Clay Cement (LC3) w... Abdelhalim, Radwa; Soliman, Ahmed	1473 T08 Durability and resilience to flooding when climate change makes buildings inc... Derome, Dominique (1); de Cotret, Daniel (1); Boucher, Marie-Amélie (1); Leva...	11548 T09 Degradation mechanisms and durability evaluation of heritage conglomerate und... Zhang, Huihui (1); Wang, Yanwu (2); Guo, Qinglin (2); Wang, Xuezhi (2); Li, J...
11:00-11:15	11549 T09 Energy renovation of historical buildings: Optimizing strategies for Haussman... Cheniti, Billel; Ouldboukhitine, Salah-Eddine; Bakkour, Amer; Pennec, Fabienne	11363 T12 STRUCTURE AND MECHANICAL PROPERTIES OF CEMENT-BASED POLYMER MEMBRANES AND MOR... SILVA, ANNA (1); BARCELOS, LETÍCIA (1); QUEIROZ, SAMUEL (1,2); VASCONCELOS, P...	11329 T02 The Influence of Potential Alkali Release from Aggregates on Alkali-Silica Re... Xia, Zichun (1); Medeiros, Renann (1); Sanchez, Leandro (1); Leemann, Andreas...	11249 T03 A Review on the Durability Characteristics of Limestone Calcined Clay Cement Abdelazim, Omar (1,2); Soliman, Ahmed (1)	11111 T08 Implementation of Climate Resilience Options – Canadian Insurance and Home Bu... Sandink, Dan (1); Lohmann, Frank (2); Winkelmann, Sonja (2); Mosqueda, Tamara...	11549 T09 Energy renovation of historical buildings: Optimizing strategies for Haussman... Cheniti, Billel; Ouldboukhitine, Salah-Eddine; Bakkour, Amer; Pennec, Fabienne
11:15-11:30	11579 T09 A Fuzzy Logic-Based Model for Conservation Prioritization of Grotto Temple Mu... Li, Shuyi (1); Zhu, Hangyao (1); Xie, Huarong (1); Hokoi, Shuichi (3); Li, Yo...	11406 T12 Eco-Efficient Materials: The Potential Use of Sheep Wool Fibers in Lime-Based... Damasceno, Madalena (1); Santos, Ana Rita (2); Gomes, Maria da Glória (3); Ma...	11335 T02 Durability Indicators for Sustainable Concrete: Challenges and Research Needs M Sanchez, Leandro F.	11341 T03 Long-term study of the natural carbonation of concretes containing supplement... Cascudo, Oswaldo (1); Melo, Sandra (2); Carasek, Helena (3)	11172 T08 Quantifying Climate Change Impacts on Hygrothermal Degradation: Evaluating th... CHEN, XIAOLIN (1); Termonia, Piet (2); Hamdi, Rafiq (3); Van Den Bossche, Nat...	11579 T09 A Fuzzy Logic-Based Model for Conservation Prioritization of Grotto Temple Mu... Li, Shuyi (1); Zhu, Hangyao (1); Xie, Huarong (1); Hokoi, Shuichi (3); Li, Yo...
11:30-11:45	11610 T09 Integrating Change Detection and Digital Material Passports for the Durabilit... Porcari, Vito Domenico; Porcari, Sara; Priore, Arcangelo; Guida, Antonella; B...	11583 T12 Bond failure between layers of ETICS: Accelerated aging methods equivalent to... Parracha, João Luís (1); Leonor, Diogo (2); Veiga, Rosário (1); Flores-Colen,...	11347 T02 Calibration and Implementation of a Web-Based Calculator for Pore Solution Co... Higuera-Flórez, Camilo; Barragán, Deyvid; Quintero, Alessandra; Lizarazo-Marr...	11346 T03 Calibration of Sodium and Potassium Release Factors to Improve Pore Solution ... Higuera-Flórez, Camilo; Lizarazo-Marriaga, Juan; Zea, Hugo	11191 T08 Cultural Construction Knowledge and Resilience to Climate Change in Indigenou... Anugwo, Iruka Chijindu; Appau, Williams Miller; Attakora-Amaniampong, Elvis	11610 T09 Integrating Change Detection and Digital Material Passports for the Durabilit... Porcari, Vito Domenico; Porcari, Sara; Priore, Arcangelo; Guida, Antonella; B...
11:45-12:00	11742 T09 Hygrothermal Examination of a Proposed Interior Insulation Retrofit of a Hist... J. Sperl, Brennan (2); A. Wells, John (2); Moore, Travis (1); A. Lacasse, Mic...	11502 T12 Long-Lasting Protection: Advancements in Waterborne Coatings Arca, Hale Cigdem	11348 T02 Durability and Heavy-Metal Leaching of Low-Clinker High-Performance Concrete ... Kanaan, Dima (1); Alam, M. Shahria (1); Clyde, Erin (2)	11216 T03 Advanced application of limestone calcined clay cement (LC3) in 3D concrete printing Zhang, Runxiao; Fares, Galal	11289 T08 Toward climate-resilient cities: a study on integrating AI, LCZs, and CFD to ... Huang, Jou-Man (1); Ku, Liang-Yun (2); Tsai, Hui-Ping (2)	11742 T09 Hygrothermal Examination of a Proposed Interior Insulation Retrofit of a Hist... J. Sperl, Brennan (2); A. Wells, John (2); Moore, Travis (1); A. Lacasse, Mic...
12:00-12:15			11427 T02 Verification of strength development and carbonation of concrete using binder... Kage, Tadatsugu (1,3); Nakada, Kiyofumi (1); Mishima, Naoki (2); Tsuchiya, Na...	11343 T03 Performance Assessment of Concrete Mixtures Incorporating Reclaimed Fly Ash Ahmed, Almotaseemillah (1); Ghasemalizadeh, Saeid (1); Khoshnazar, Rahil (1); Nassar, Nashaat N (2)	11333 T08 Challenges and approaches for the durability assessment of building materials... ILLY, Hervé (1); FARKH, Salem (1); COLIN, Xavier (2)	

Oral Presentation Schedule

Slot 8 - Thursday, July 23, 2026 - 13:30-15:00

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)
Topic	Mortars & Finishes	Monitoring & Diagnostics	Concrete Durability	Mixed: Hygrothermal & HAM + Airtightness & Water Control	Embodied Carbon & LCA
13:30-13:45	11106 T12 Advancing Sustainability in Silicone Sealants: Industry Innovations for Durab... Wolf, Andreas	11190 T14 Assessment of Layer Thickness and Compressive Strength of Existing Precast Co... Paalandi, Kristo; Talvik, Ivar; Tuisk, Tanel; Kalamees, Targo	1283 T02 Assessing Pyrrhotite in Concrete for Mitigation Strategies of Damaged Constru... Watson, Stephanie; Carey, Ashley; Dehwah, Osamah; Dixon, Patrick; Martys, Nic...	2538 T04 Impacts of the air opening size and air leakage path on the hygrothermal performance of wood-frame walls Junginger, Max; Ge, Hua	1119 T01 On decarbonisation, reduction of green house gas emissions and other environm... Sjöström, Christer
13:45-14:00	11116 T12 Comparison of Electrical Performance of Mortars Containing New and Recycled C... Kunz, Annika; Orlowsky, Jeanette	11257 T14 Ultrasonic Wave Propagation for Assessing Freeze-Thaw Damage in Partially Sat... Vilba, Kristina; Klößeiko, Paul; Olak, Henri; Ratassepp, Madis; Kalamees, Targo	1589 T02 An Investigation of Longitudinal Shear Transfer in Composite Steel Truss in C... Kumar, Shyamal; Singh, Bhupinder	11463 T04 Evaluating Condensation Risk and Durability in Window-Wall Spandrel Backup As... Kahsay, Meseret; Ramachandran, Sathya; Pushman, Paul	11114 T01 Advancing Sustainable Roof Restoration: Quantifying Embodied Carbon Reduction... Pugalendiran, Milirsan; Christopherson, Michelle; Priyono, Ivan
14:00-14:15	11152 T12 Study on prediction method for changes in floor slipperiness due to wear caus... Fukuda, Shintaro; Fujii, Yuutarou; Yu, Dongcheng; Minegishi, Yuma; Morita, Ayuka	11272 T14 Field Study to Evaluate the Durability of Thermal Insulation Materials based ... Tremel, Sebastian (1); Kamml, Michael (1); Cucchi, Chiara (1); Zirkelbach, Dan...	11127 T02 Concrete Gas Permeability: Implications for Hydrogen Storage Applications Abreu Araujo, Luana; Rebolledo Ramos, Nuria; Cucchi, Chiara (1); Torres Martin, Julio Emilio; Chi...	11117 T04 Consequences of Moisture Gradients in Glulam Joints – wetting and drying Møller, Eva Birgit (1); Flensburg, Emilie (2); Torres Martin, Julio Emilio (3); Larsen, Finn (2)	11122 T01 Long-Term Weathering Performance of Architectural Panels: Painted vs Vitreous... Rossi, Stefano; Benedetti, Luca; Lusenti, Cesare
14:15-14:30	11155 T12 Evaluation of Durability and Protective Performance of Coatings for Exterior ... Koga, Junko (1); Sakata, Kaito (2); Yano, Suzuha (3)	11379 T14 Using an Unknown Material When Known is Unavailable: Evaluating Long-term Per... Roth, Melissa; Brandt, Malia; Norwine, Emily; Snortum-Haney, Torii	11133 T02 Exploring mechanochemically activated local rocks as cementitious binder- its... Habermehl-Cwirzen, Karin	11144 T04 Moisture damage of the swimming pool's lightweight structures Kalamees, Targo (1); Idnurm, Maari (2); Tark, Teet (3); Liivrand, Herki (2)	11150 T01 A sustainable maintenance strategy based on risk and carbon emissions optimiz... Zhao, Zi-Tong (1); Li, Mu-Zi (1); Liu, Ze-Fan (1); Lu, Zhao-Hui (1); Li, Chun...
14:30-14:45	11252 T12 Long-Term Performance of Carbon Nanofiber-Enhanced Cement Mortars Incorporati... Teymouri, Ali (1); Guzmán, Héctor J. (2); Khoshnazar, Rahil (1)	11101 T18 THE STRESS CORROSION CRACKING SUSCEPTIBILITY OF STAINLESS STEEL BRIDGE BEARINGS Paglia, Christian	11165 T02 Review on the Durability Performance of Concrete made of Biochar: Mechanisms ... Coutinho, Yane; Tawadros, Verina; Sanchez, Leandro	11175 T04 Demonstration of moisture increase on upper part of the wall assemblies with drainage cavity Saito, Hiroaki (1); Miyamura, Masashi (2); Matsuoka, Daisuke (3); Osamura, Sadaharu (4); Mishima, Naoki (5)	11173 T01 Comparative Life-Cycle Assessment of an Institutional Glulam Building with an... Jamtsho, Tenzin (1); Braescu, Liliana (2,3)
14:45-15:00		11251 T14 Long-Term Durability of Asphalt Shingle Roof Covers: Laboratory Degradation Characteristics Abdelwahab, Karim (1,2); Brown-Giammanco, Tanya (3); Sung, Lipiin (1)	11167 T02 A Proposed Self-Healing Method for Concrete Cracks Using Scallop Shell Biowaste and CO ₂ ; Nanobubbles KUROHMAN, Novik; CHOI, Heesup; INOUE, Masumi	11470 T17 Blindside Waterproofing Systems in Bathtub Application under Hydrostatic Cond... Ramachandran, Sathya; Dell'Aquila, Domenic; Pushman, Paul	11185 T01 Comparative Analysis of Environmental Product Declaration for Roofing Membran... Chen, Sitong (1); Aggarwal, Chetan (2); Ge, Hua (1); Siluvai Antony, Praveen ...

Oral Presentation Schedule

Slot 9 - Thursday, July 23, 2026 - 15:30-17:00

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)
Topic	Energy & Retrofit	Timber Durability	Heritage & Masonry	Embodied Carbon & LCA	Hygrothermal & HAM
15:30-15:45	11157 T05 Perspectives on Policy, Economic, and Environmental Aspects of Building Retrofits in Canada Madadzadeh, Ali (1); Siddiqui, Kamran (2); Aliabadi, Amir A. (1)	11431 T06 Evaluating hybrid CLT for hygrothermal comfort and energy efficiency in community centers Kang, Yujin; Kang, Seong Taek; Park, Ji Hun; Kim, Sumin	1273 T09 Sampling-Based Modelling of Belgian Heritage Masonry: Key Brick Properties Governing Façade Degradation. Vanderschelden, Bruno (1,2); Hayen, Roald (3); De Kock, Tim (2); Cnudde, Veerle (1,4); Van Den Bossche, Nathan (1)	11261 T01 Climate change-induced reductions in frost depth: impacts on building design ... Lomp, Siim; Männik, Aarne; Hallik, Jaanus; Kalamees, Targo	11465 T04 Hygrothermal Performance of Internally Insulated Walls Under Future Climate S... Jensen, Nicolaj Feldt (1); Peuhkuri, Ruut H. (1); de Place Hansen, Ernst Jan...
15:45-16:00	11181 T05 Evaluating Real-World Durability and Thermal Performance of Exterior Retrofit Systems in a Mixed-Humid Climate Palani, Hevar; Iffa, Emishaw; Desjarlais, André	11551 T06 UV-Induced Discoloration in Small-Scale Glulam Specimens: Species Effects for Mass Timber Applications Kurzinski, Shaghayegh; Maines, Emily	11137 T09 Forgotten but effective: frost dilatometry in brick freeze-thaw analysis Wroe, John; Malomo, Daniele	11318 T01 Sustainable Eco-Cement Development Using Local Raw Materials and Industrial B... Boumahdi, Laila	11237 T04 Experimental Comparison of the Hygrothermal Performance of Magnesium Oxide Pa... Scharf, Nicholas (1); Hilbrecht, Robin (2); Baldwin, Christopher (1); Cruicks...
16:00-16:15	11213 T05 Energy Retrofitting of Existing Low-Rise Residential Buildings: A Systematic Review Hesarbani, Atefeh; Jalaei, Farzad; Hosseini Gourabpasi, Arash; Ge, Hua; Nik-Bakht, Mazdak	11585 T06 Hygrothermal Performance of a Cross-laminated Timber and Wood Fiber Insulation School Building in a Cold Climate O'Brien, Liam (1); Li, Ling (2); Herzog, Benjamin (3); Snow, Jacob (3)	11176 T09 Aging test for the evaluation of protective film degradation: a study using a... Ripamonti, Davide; Carangelo, Enrico; Frabasile, Emanuele; Gargano, Marco; Me...	11361 T01 Experimental Study on the Mechanical Performance of Bubble Deck Slabs Incorporo... Dadzie, Donald Kwabena (1); Dokyi, George Okyere (2); Ansah, Samuel K. (1); K...	11535 T04 The Link Between Indoor Air Quality and Material Durability in Energy-Efficie... Mwangi, Antony (1); Laszlo, Czetany (2)
16:15-16:30	11235 T05 Ventilation options for climate-resilient retrofits in historic wooden apartment buildings: energy use, cost-effectiveness, and carbon impacts Arumägi, Endrik; Hallik, Jaanus; Kalamees, Targo	11590 T06 Moisture-, Impact-, and Termite-Resistant Micro-Charring Layer for Tropical Fast-Growing Timber Species Okuda, Shinya (1); Kua, Harn Wei (2)	11266 T09 The natural protective effect of biofilm on stone surface in a urban context:... Ripamonti, Davide (1); Bertolin, Chiara (2); Villa, Federica (3); Chao, Gao (...)	11376 T01 Emerging Technologies for Sustainable Waste Management of Silicone Elastomers Wolf, Andreas	11540 T04 Hygrothermal performance of exterior walls in Canada: a field survey Bastien, Diane; Winther-Gaasvig, Martin; Ge, Hua; Aggarwal, Chetan; Vanhoutte...
16:30-16:45	11243 T05 Building Energy Performance of Cool Coatings for Urban Heat Island Mitigation in Canadian Climate Lefebvre, David (1); Cruickshank, Cynthia A (1); Jandaghian, Zahra (2)	11607 T06 Incorporating wooden components in non-ventilated flat and pitched roofs and their deterioration Juras, Peter; Jurasova, Daniela	11340 T09 Historic Façades as Overlooked Reservoirs of Urban Lead: Evidence from Antwer... Deboli, Sofia; De Kock, Tim	11403 T01 Durability assessment of mussel shell-based mortars for applications in const... Calà, Adriana; Saeli, Manfredi	11613 T04 Performance of Brick-Clad Timber-Framed Exterior Walls in Cooled Buildings in... Hyötyläinen, Maiju (1); Valovirta, Ilkka (2); Laukkarinen, Anssi (2); Vinha, ...
16:45-17:00	11256 T05 Thermal performance of conventional gray paints for facades in a dry tropical climate Costa, Karime; Andrade, Marcela; Dornelles, Kelen	11279 T06 Timber durability and moisture monitoring: Comparison of established moisture measurement techniques Lima, Daniel F. (1); Duarte, Sónia (2); Schweigler, Michael (3); Dorn, Michael (3); Branco, Jorge (1)		11405 T01 Life Cycle Assessment of Window Retrofit Strategies for Reducing Greenhouse G... Jeon, Jin-u; Heo, Eun-jeong; Lee, Jeong-hun	

Oral Presentation Schedule

Slot 10 - Friday, July 24, 2026 - 10:45-12:15

Presentation Time (Room)	Session A (3.210)	Session B (3.270)	Session C (3.430)	Session D (3.435)	Session E (3.445)
Topic	Low-Carbon Binders	Digitalization & AI	Service Life & Asset Mgmt	Mixed: Airtightness & Water Control + Hygrothermal & HAM	Energy & Retrofit
10:45-11:00	11189 T03 Durability and Dimensional Performance of Cementitious and Geopolymer Mortars... Olayinka, Rukayat; Jafari, Reza; Fiset, Mathieu; Darveau, Jean-Benoît; Collee...	1408 T10 Machine Learning-Based Prediction of In-situ Concrete Strength (36–120 N/mm ²)... Sato, Sachie (1); Isobe, Ryota (2); Yamada, Yoshitomo (3)	11282 T11 Methodology and Online Tool Development for Service Life Prediction of Polyme... Gu, Xiaohong (1); Sung, Lipiin (1); Jacobs, Debbie (1); Hong, Yili (2)	11178 T04 One-dimensional Homogenization in Hygrothermal Modeling of Historic Masonry: Evaluating a Generic Numerical Experiment Approach Dang, Xinyuan; Hofheinz, Anna; Vereecken, Evy; Janssen, Hans; Roels, Staf; Kinnane, Oliver	11281 T05 Testing and Analysis of Wood-Based Prefabricated Panel Concepts for Deep Ener... Dikeos, John; Cruickshank, Cynthia; Baldwin, Christopher
11:00-11:15	11192 T03 Evaluation of the External Sulfate behaviour of Portland Limestone Cement Sys... Kianpour, Kiarash; Xia, Zichun; F.M. Sanchez, Leandro	1438 T10 Towards Durable and Moisture-Safe Buildings: LLM-Powered Translation from BIM... Moshari, Amirhosein (1); Javanroodi, Kavan (2); Nik, Vahid (3)	11306 T11 Performance and Life Cycle of Public Educational Buildings: Durability through... Cignachi, Grasiela (1); Lima Gaspar, Pedro (2); Lopes Farias, Hugo (1)	11128 T17 Durable Airtightness with Tape Solutions in Building Envelopes – Findings fro... Rüther, Petra; Sletnes, Malin; Brozovsky, Johannes; Gradeci, Klodian	11317 T05 Residual Seismic Capacity and Low-Carbon Retrofitting of Steel Box-Shaped Col... Chang, Heui-Yung (1); Chi, Wei-Chieh (1); Liao, Chu-Tsen (2); Lai, Chi-Ming (3)
11:15-11:30	11227 T03 Data-Driven Analysis of Compressive Strength in Novel Low-Carbon Cement : Lim... Chaparro, Faber; Soliman, Ahmed	11107 T10 Physics-informed neural networks for inverse estimation of moisture diffusivi... Sghuri, Abderrahmane (1,2); Chen, Xuande (1,2); Wang, Xiaodong (1)	11321 T11 Service order analysis as a tool for maintenance operations: A case study Souza, Jéssica (1); Pires, Mariana (1); Pires, Lais (1); Silva, Ana (2)	11131 T17 Towards quantifying watertightness of walls Van Linden, Stéphanie; Van Den Bossche, Nathan	11323 T05 Climate Sensitivity of High-Reflectivity Building Envelopes: Energy Simulatio... Jandaghian, Zahra; Bartko, Michal; Ghobadi, Mehdi; Gaur, Abhishek
11:30-11:45	11239 T03 Shrinkage Reducing Admixtures for Slag and Calcined Dredged Clay One Part Alk... Ramadan, Mohamed; Soliman, Ahmed	11161 T10 Integrating Stereo Vision and Machine Learning for Autonomous Robotic Masonry... Plascencia Padilla, Artaban Lott (1); Chen, Yuxiang (1); Chairez Oria, Jorge ...	11322 T11 Assessment of Service Life of Outdoor Wooden Board-walks in Estonia – A Field... Rajasaar, Maarja Mirjam (1,2); Kalamees, Targo (1); Kers, Jaan (1); Kaubi, Ul...	11201 T17 Impact of Strapping Detailing on Exposed Air Barrier Assemblies During Constr... Holgate, Julia; Marston, Cole; Annam, Ebenezer; Lloyd, Alan	11370 T05 Reducing Heat Stress Exposure Through Retrofit Vertical Greening Systems in S... Manderson, Grant; Hugo, Jan; Botes, Karen
11:45-12:00	11240 T03 Superabsorbent Polymers for Shrinkage Mitigation in Slag and Calcined Dredged... Ramadan, Mohamed; Soliman, Ahmed	11166 T10 Automated BIM Model Generation from Natural Language Descriptions Using a T5-... Sui, Chuhao; Chen, Yuxiang; Mei, Qipei	11364 T11 Advanced Condition Assessment of Building Sealants Via Automated Crack Detect... Lopez-Carreón, Itzel; Rao, Sneha; Riahinezhad, Marzieh; Esmizadeh, Elnaz; Jah...	11391 T17 Case Study: Evaluating Causes and Remedial Strategies for Brick Cladding Dete... Ismaiel, Maysoun; Korneluk, Bob	11410 T05 Airtightness and Sound Insulation Improvements through Window Retrofit in an ... Jang, Ha-eun; Lee, Jeong-hun
12:00-12:15	11246 T03 Effect of Gypsum Content on the Performance of LC3 Mortar Abdelazim, Omar (1,2); Soliman, Ahmed (1)	11197 T10 Digital Infrastructure and Carbon Emissions in Commercial Real Estate: Eviden... Appau, Williams Miller; Attakora-Amaniampong, Elvis; Anugwo, Iruka Chijindu	11426 T11 Impact of material selection, design, and maintenance on the durability of mo... Kuk, Villu; Kalamees, Targo	11421 T17 Whole Building Airtightness Testing with Diagnostics for Durability of Compon... Richman, Russell (1); Todd, Austin (2); Labbe, Greg (1)	11388 T05 Sustainable HVAC Practices for Building Efficiency, Occupant Comfort, and Cli... Kumar, Rakesh (1); Girgis, Elisabeth (1); Dekin, Alex (1); Prince, Madelaine ...

Poster Presentation Schedule

Thursday, July 23, 2026 – 16:00-17:30

Article ID	Title	Author(s)	Topic ID	Topic
11413	Rapidly Developing Technologies in Construction -- - Durability and performance of 3D printed construction materials and components and off-site modular construction	Mehdaoui, Hsan Youssef (1,3); Ben Azouz, Kaouther (2,3)	T07	Additive manufacturing, 3D/4D printing & printable materials
11242	Experimental Study on Performance of Cross Laminated Timber and Reinforced Concrete Composite Floor System after Fire	Tsai, Meng-Ting; Yeh, Miao-Chen; Sato, Toshiaki	T06	Timber, wood, CLT & mass-timber durability
11356	Durability of concrete in sewerage networks with regard to biodeterioration	Pons, Tony; Ayoub, Janette; Guéguen-Minerbe, Marielle	T03	Low-carbon binders, cementitious materials & mix design
1552	A Simplified Thermal Modeling Methodology for Accurate Long-Term Performance Prediction of BIPV Systems	Zareie, Zahra; Ye, Kai; Baril, Danial; Ge, Hua	T15	BIPV, solar envelope systems & adaptive façade technologies
11375	Prediction of the Aging of Building Components	Nowogońska, Beata (1); Kurowska, Aleksandra (2); Korentz, Jacek (1)	T14	Monitoring, NDT, diagnostics & field/lab testing methods
11626	Pedagogical Strategies for Skilled Architecture and Building Engineering Undergraduates: Navigating the Generative Artificial Intelligence Era in a Fast-Evolving Industry 5.0 Landscape	Sourav, Md Sakib Ullah; Sahyoun, Sahar; Zeng, Yong; Ge, Hua	T10	Digitalization, AI/ML, BIM, sensing & robotics
11297	Green Pavement Solutions: Synergistic Zeolite–Silane Bifunctional Foaming Additives for Enhanced Asphalt Durability	Wozuk, Agnieszka; Malinowski, Szymon; Franus, Wojciech	T18	Infrastructure, bridges, pipelines & civil assets
11602	Impact of Treatments of Hemp Shives on the Hygrothermal Performance of Hempcrete: A Numerical Approach at the Building Envelope Scale	FERROUKHI, Yacine; Saleh, hayat; mesticou, zyed; Si Larbi, Amir	T04	Hygrothermal, moisture transport & HAM simulation
11623	Segment-Based Multi-Year Optimization for Scalable Infrastructure Maintenance Planning under Uncertainty	Chung, Frederick B. (1); Paik, Yejee (2); Baek, Minsoo (3); Ashuri, Baabak (4)	T11	Service life, maintenance, reliability & asset management

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11345	Proposal of a methodology for evaluating the 3D printability of mortars: sensitivity and repeatability analysis	Araujo, Renato (1); Carasek, Helena (2)	T07	Additive manufacturing, 3D/4D printing & printable materials
11132	Impact of thermal bridges on the energy consumption and carbon reduction of low-energy buildings in China	Xiong, Peng; Chen, Guojie; Liu, Xiangwei; Xie, Dong	T05	Energy performance, thermal comfort, HVAC & retrofit
11148	Prediction Method Wrinkle of Floor Covering Caused by Dynamic Load	Fujii, Yuutarou; Fukuda, Shintarou	T18	Other Construction Topics
11162	Degradation of Brick Masonry Due to Ineffective Damp-Proofing – A Case Study of the Golden Gate in Gdańsk	Hoła, Anna	T09	Heritage, masonry, stone & conservation
11164	Designing for Climate Resilience: Integrating Vulnerability Assessment into Durable Building Strategies	Conrad, Leanne; Stockfish, Braedyn; Armstrong, Scott	T08	Climate-change resilience, hazards & urban microclimate
11186	Lifting The Roof: An Analysis of the Moisture Barrier Performance of Large Low-Slope Roofs	Dakin, Joe; Teetaert, Jason	T17	Airtightness, water-control layers & enclosure detailing
11198	Assessing the Impact of Moisture Storage Profiles of Varied Wood Species on the Hygrothermal Behavior of CLT Using a Digitally Calibrated Simulink Model	Vyas, Yash; Richman, Russell	T06	Timber, wood, CLT & mass-timber durability
11229	Smart Structures, Stronger Futures: Global Research Trends on IoT and BIM Applications in Construction Materials Durability	Gyadu-Asiedu, Nana Akua Asabea; Aigbavboa, Clinton; Ametepey, Simon Ofori	T10	Digitalization, AI/ML, BIM, sensing & robotics
11254	Unearthing the Benefits of Implementing Proactive Safety Measures in the Construction Industry	Adekunle, Samuel; Aigbavboa, Clinton; Akinradewo, Opeoluwa; Aregbesola, Ganiu; Ogunbayo, Babatunde; Abiodun, Oluwapelumi	T18	Other Construction Topics
11255	Beyond 3D Printing: Making a Case for Enhancing Construction Site Safety Using 4D-Printed Personal Protective Equipment	Adekunle, Samuel; Aigbavboa, Clinton; Ejohwomu, Obuks; Awuzie, Bankole; Ebekoziem, Andrew	T07	Additive manufacturing, 3D/4D printing & printable materials
11384	Durability and Service Life of Nature-Based Construction Materials for Climate-Resilient Buildings: A Bibliometric Review	Akanyawie, Gloria A.; Aigbavboa, Clinton; Aghimien, Douglas; Aliu, John; Stephen, Seyi S.	T13	Bio-based, geosourced, insulation & novel functional materials
11460	Protection of Mass Timber During Construction – Moisture Monitoring Best Practices for Instrumentation	Richman, Russell; Johns, Dorothy; Lawrence, Cameron; Headrick, Iain	T06	Timber, wood, CLT & mass-timber durability
11475	Toward Contextual Benchmarking: Analyzing Canadian Case Studies from CLF WBLCA Dataset	Baienat, Saba; Iordanova, Ivanka	T01	LCA, embodied carbon, circular economy & decarbonization

Poster Presentation Schedule

11506	Optimization of Mechanical Properties of Recycled Steel Fiber Using Evolutionary Computation	Memon, Neelam; Larik, Asma; Nizam, Shahmir	T02	Concrete durability, degradation & structural performance
11545	Durability Performance of FA–GGBS Based Geopolymer Concrete Incorporating Recycled Aggregate and Glass Powder	Manzoor, Tawzia; Shah, Asif Hussain; Bhat, Javed Ahmad	T03	Low-carbon binders, cementitious materials & mix design
11734	Flexural Behavior of 3D Printed Concrete Reinforced with Sprayed SHCC Overlays	Zhou, Min; Guadagnini, Maurizio; Nematollahi, Behzad	T07	Additive manufacturing, 3D/4D printing & printable materials
11336	Durability and Mechanical Properties of Lightweight Aggregates from Coal Combustion By-Products	Franus, Małgorzata	T03	Low-carbon binders, cementitious materials & mix design
11241	Resistance of Lime-Wollastonite Mortars to Salt and Ice Crystallization	Vyšvařil, Martin; Žižlavský, Tomáš; Bayer, Patrik	T12	Mortars, plasters, renders, ETICS & surface finishes
11445	Degradation Assessment of Surface-Protected Thermal Mortars	Bersch, Jéssica; Riahinezhad, Marzieh; Esmizadeh, Elnaz; Masuero, Angela; Dal Molin, Denise; Lacasse, Michael; Flores-Colen, Inês	T12	Mortars, plasters, renders, ETICS & surface finishes
11296	Polymer Nanofibers as an Innovative Approach to Enhance the Durability of Asphalt Pavements	Malinowski, Szymon; Wozuk, Agnieszka; Franus, Wojciech	T18	Other Construction Topics
11479	Feasibility of Using Carbon-Rich Fly Ash as a Supplementary Cementitious Mate...	Janek, Martyna; Franus, Wojciech; Piechota, Zuzanna	T03	Low-carbon binders, cementitious materials & mix design