



INTERNATIONAL CONCRETE SUSTAINABILITY CONFERENCE MIT CONCRETE SUSTAINABILITY HUB SHOWCASE

MAY 12-15, 2014 - BOSTON

CONFERENCE SCHEDULE

The 2014 International Concrete Sustainability Conference provides learning and networking opportunities on the latest advances, technical knowledge, continuing research, tools and solutions for sustainable concrete manufacturing, design and construction. The MIT Concrete Sustainability Hub Showcase is an opportunity to look back at the progress made over the first five years and explore the developments to come over the next five years.



MAY 12, 2014 - HYATT REGENCY CAMBRIDGE

6:00 PM – RECEPTION (Charles View Ballroom)
7:00 PM

MAY 13, 2014 - HYATT REGENCY CAMBRIDGE

7:00 AM – BREAKFAST (Courtyard Reception)
8:00 AM

8:00 AM – 10:00 AM **OPENING GENERAL SESSION (President's Ballroom CD)**
 Ric Suzio, President of The L. Suzio Concrete Co., Inc. and Chairman of NRMCA
 Jeremy Gregory, PhD, Executive Director, Concrete Sustainability Hub and Research Director, Massachusetts Institute of Technology
 John L. Knott, Jr., Executive Director, Health Product Declaration Collaborative
 Phillip Williams, PE, LEED AP, Vice President of Sustainability and Technical Systems, Webcor Builders/Webcor Consulting

10:00 AM – 10:30 AM **BREAK (Courtyard Reception)**

<p>10:30 AM – 12:00 PM</p>	<p>SESSION T1A (President's Ballroom CD) LIFE CYCLE ASSESSMENT <i>Streamlining Building LCAs in Residential Construction</i>, Joshua Hester, Massachusetts Institute of Technology <i>Embodied Energy and Carbon Impacts of Light Weight Concrete for Steel-framed Commercial Buildings</i>, Dirk Kestner, Walter P Moore <i>Using Probabilistic Underspecification for Streamlining Building Life Cycle Assessments</i>, Paolo Tecchio, Massachusetts Institute of Technology</p>	<p>SESSION T1B (Paul Revere) GREEN CONCRETE <i>A Sustainable Approach for Returned Concrete</i>, Godwin Amekuedi, Argos USA <i>Internal Curing with Lightweight Aggregate for Durable and Sustainable Concrete</i>, Mark Niemuth, Lafarge <i>Performance Evaluation of Municipal Concrete Sidewalks using Coarse and Fine Recycled Concrete Aggregate</i>, Bo Ni, Lafarge</p>	<p>SESSION T1C (Thomas Paine) FUNCTIONAL RESILIENCE <i>Concrete Industry Information Management Systems Innovative Concept for Construction and Infrastructure Maintenance</i>, Mohamed Mahgoub, New Jersey Institute of Technology <i>Analyzing Cost and Hazard Resistance Trade-offs in Residential Construction</i>, Arash Noshadravan, Massachusetts Institute of Technology <i>Making the Case for Enhanced Resiliency</i>, Stephen Szoke, Portland Cement Association</p>
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12:00 PM – 1:30 PM LUNCH (Riverside Pavilion)			
1:30 PM – 3:00 PM	<p>SESSION T2A (President's Ballroom CD) LIFE CYCLE ASSESSMENT</p> <p><i>Comparison of LCCA to Environmental LCA for Highway Pavement</i>, Rui Liu, Kent State University</p> <p><i>Full Building Life-cycle Assessment in Tally™</i>, Maggie Wildnauer, PE International</p> <p><i>Information Transparency: A Roadmap to Improving Health and Reducing Carbon in our Built Environment</i>, Kirsten Ritchie, Gensler</p>	<p>SESSION T2B (Paul Revere) GREEN CONCRETE</p> <p><i>Extending the Use of Fly Ash and Slag Cement in Concrete Through the Use of Portland-Limestone Cement</i>, Tim Cost, Holcim (US) Inc.</p> <p><i>Durable and Sustainable Concretes with Portland-limestone Cements and SCMs</i>, R. Douglas Hooton, University of Toronto</p> <p><i>The Effect of the Addition of Nanoparticles of Silica on the Strength and Microstructure of Blended Portland Cement Pastes</i>, Styliani Papatzani, University of Bath - BRE Centre for Innovative Construction Materials</p>	<p>SESSION T2C (Thomas Paine) NEW CONCRETE TECHNOLOGY</p> <p><i>Life Cycle Design of Polypropylene Fiber-reinforced Cement-based Composites</i>, Subhan Ali, Stanford University</p> <p><i>Investigation of Using Alkali Activation to Enhance the Pozzolanic Performance of Recycled Glass Powder</i>, Hamed Maraghechi, Pennsylvania State University</p> <p><i>Buildings Instead of Landfills: Recycled Plastic Waste in Concrete Structures</i>, Matthew Naugle, Thornton Tomasetti</p>
3:00 PM – 3:30 PM BREAK (Courtyard Reception)			
3:30 PM – 5:00 PM	<p>SESSION T3A (President's Ballroom CD) LIFE CYCLE ASSESSMENT</p> <p><i>LCA of Alternative Concrete: How Do We Do?</i>, Claudiane Ouellet-Plamondon, ETH Zurich</p> <p><i>Characterization of Principal Drivers of Variation in the Life-Cycle Cost Analysis of Pavements via a Scenario Space Analysis</i>, Omar Swei, Massachusetts Institute of Technology</p> <p><i>A Probabilistic Approach to Comparative Life-Cycle Assessment of Pavements: Sensitivity and Scenario Analysis</i>, Xin Xu, Massachusetts Institute of Technology</p>	<p>SESSION T3B (Paul Revere) GREEN CONCRETE</p> <p><i>Development and Standardization of Rapid Methods for Assessing the Fluid Penetration Resistance of Concrete</i>, R. Douglas Hooton, University of Toronto</p> <p><i>A Rational, Sustainable Approach to Pavement Concrete Mixture Design</i>, Md Siddiqui, University of Texas at Austin</p> <p><i>The Environmental Impact of Overly Restrictive Prescriptive Specifications</i>, James M. Shilstone, Command Alkon</p>	<p>SESSION T3C (Thomas Paine) NEW CONCRETE TECHNOLOGY</p> <p><i>"Smog-eating concrete": A New Technology for Better Cities</i>, Laurent Barcelo, Lafarge</p> <p><i>New Sustainable Technology to Recover Returned Concrete</i>, Giorgio Ferrari, Mapei S.p.A.</p> <p><i>Carbon Dioxide Utilization in Fresh Industrially Produced Ready Mixed Concrete</i>, Sean Monkman, CarbonCure Technologies</p>
6:00 PM – 7:00 PM RECEPTION (Empress Ballroom)			
MAY 14, 2014 – HYATT REGENCY CAMBRIDGE			
7:00 AM – 8:00 AM BREAKFAST (Courtyard Reception)			
8:00 AM – 10:00 AM	<p>SESSION T4A (President's Ballroom CD) SUSTAINABILITY INITIATIVES</p> <p><i>INVEST: The FHWA Sustainable Highways Self-Evaluation Tool</i>, Michael Culp, Federal Highway Administration</p> <p><i>FHWA Sustainable Pavements Program</i>, Gina Ahlstrom, Federal Highway Administration</p> <p><i>GreenLITES: A Transportation Environmental Sustainability Rating Program</i>, Paul Krekeler, New York State Department of Transportation</p> <p><i>Comparative Metrics of Two Sustainability Rating Systems Developed in Canada</i>, Tom Kazmierowski, Golder Associates Ltd.</p>	<p>SESSION T4B (Paul Revere) GREEN CONCRETE</p> <p><i>Seismic Performance of Recycled Concrete Shear Walls and Columns</i>, Hongying Dong and Wanlin Cao, Beijing University of Technology</p> <p><i>Use of Recycled Shredded Tires with Special Surface Treatment as Coarse and Fine Aggregate in Concrete</i>, Goli Nossoni, Manhattan College</p> <p><i>Long-Term Performance of Glass-Powder Concrete in Field Applications</i>, Ahmed Omran, University of Sherbrooke</p> <p><i>The Effect of Adding PAAm Crystals to the Strength Characteristics of Concrete</i>, Joseph Wright, University of Wisconsin - Stout</p>	<p>SESSION T4C (Thomas Paine) LOW IMPACT DEVELOPEMENT</p> <p><i>Removal of Nutrients in Pervious Concrete</i>, Haithem Aboujrad, Lawrence Technological University</p> <p><i>Pervious Concrete: Do Ready Mix Concrete Producers Love it or Hate it?</i>, Betiglu Jimma, Clemson University</p> <p><i>Frost Resistance of Pervious Concrete in Realistic Freezing and Thawing Cycles</i>, Luis Mata, Lawrence Technological University</p> <p><i>Optimization by Response Surface Methodology of Pervious Concrete Containing Fly Ash and Engineered Iron Oxide Nanoparticles</i>, Natalia Vázquez, University of Puerto Rico</p>

10:00 AM – 10:30 AM BREAK (Grand Ballroom Foyer)			
10:30 AM – 12:00 PM	SESSION T5A (President's Ballroom CD) SUSTAINABILITY INITIATIVES <i>A Journey "Under the Hood" of an Environmental Product Declaration (EPD)...The Meaning Behind the Label</i> , Cesar Constantino, Titan America <i>Local Specification Changes to Produce Statewide Impact</i> , Rich Szecsy, Texas Aggregates and Concrete Association <i>A Comparative Analysis of Prescriptive and Performance-Based Specifications for Sustainability</i> , Ezgi Yurdakul, National Concrete Pavement Technology Center	SESSION T5B (Paul Revere) GREEN CONCRETE <i>A High Volume Fly Ash Concrete Mixture for Tennessee Bridge Decks</i> , Aaron Crowley, Tennessee Technological University <i>Utilization of Unprocessed High-volume Coal Fly Ash Combined with Biomass Rice Husk Ash in Cost Effective Self-Consolidating Concrete</i> , Natt Makul, Phranakhon Rajabhat University <i>Sustainable Benefits of Ultra-High Performance Concrete</i> , Andrew Pinneke, Lafarge	SESSION T5C (Thomas Paine) LOW IMPACT DEVELOPMENT <i>The Impact of Pavement Properties on Vehicle Fuel Consumption within the Pavement Infrastructure</i> , Mehdi Akbarian, Massachusetts Institute of Technology <i>Comparison of Fuel Consumption on Rigid Versus Flexible Pavements in Florida</i> , Michael Bienvenu, Florida International University <i>Different Pavement Types and Rolling Resistance</i> , Carl Lenngren, Lund University
12:00 PM – 1:30 PM LUNCH (Riverside Pavilion)			
1:30 PM – 3:00 PM	SESSION T6A (President's Ballroom CD) SUSTAINABILITY INITIATIVES <i>Hazard, Exposure, and Risk – Why All Three Are Important for Material Ingredients Decisions</i> , Lisa Bradley, AECOM <i>Understanding Health Product Declarations and LEED</i> , Nicholas Santero, PE International <i>LEEDv4: Sorting out HPDs vs EPDs</i> , Frances Yang, Arup	SESSION T6B (Paul Revere) GREEN CONCRETE <i>A Holistic Perspective on the Role of Concrete Admixtures for Sustainable Concrete Construction</i> , Ara Jeknavorian, Jeknavorian Consulting Services <i>The Future of Fly Ash is Under Our Feet</i> , Hank Keiper, The SEFA Group <i>Fly Ash Sustainability: How is the Industry Responding to Regulatory and Other Shifts Affecting Ash Resources?</i> , Rafic Minkara, Headwaters Resources	SESSION T6C (Thomas Paine) LOW IMPACT DEVELOPMENT <i>Net Zero Energy Precast Concrete Home</i> , Matt Dalkie, Lafarge <i>Recycling End-of-Life Concrete: The C2CA Project</i> , Francesco Di Maio, Delft University of Technology <i>Suprastructures: New Opportunities for Prestressed Concrete Technology in Architecture and Urban Planning</i> , Debora Mesa, POPlab at MIT / Ensemble Studio
3:00 PM – 3:30 PM BREAK (Courtyard Reception)			
3:30 PM – 5:00 PM	CLOSING GENERAL SESSION (President's Ballroom CD) PANEL DISCUSSION <i>Does Transparent Reporting Add Value to Green Buildings?</i> Are we taking the right approach to reporting material impacts, corporate social responsibility and material health effects? This session will feature expert panelists who will discuss the merits of the new transparency requirements in LEED v4 and other green building standards including Environmental Product Declarations, Corporate Social Responsibility Reports and Health Product Declarations. Michael Lepech, PhD, Assistant Professor, Department of Civil and Environmental Engineering, Stanford University Mark Webster, Structural Engineer, Simpson, Gumpertz & Heger Jennifer Atlee, HPD Technical Liaison, Health Product Declaration Collaborative Lisa Bradley, Ph.D. Vice President and Senior Toxicologist/Risk Assessor, AECOM Kirsten Ritchie, Director of Sustainable Design, Gensler Godwin Amekuedi, Director of Quality Assurance, Argos, USA		
MAY 14, 2014 – MIT MEDIA LAB (75 Amherst Street, Cambridge, MA)			
6:00 PM – 8:00 PM RECEPTION AND POSTER SESSION (MIT Media Lab – Winter Garden Room and Silverman Room)			
MAY 15, 2014 – HYATT REGENCY CAMBRIDGE			
6:30 AM – 7:30 AM RMC RESEARCH & EDUCATION FOUNDATION – WALK FOR SUSTAINABILITY (Courtyard Reception) (Additional fee required)			

7:00 AM – 9:00 AM				BREAKFAST (Courtyard Reception)			
9:00 AM – 12:00 PM		GENERAL SESSION (President’s Ballroom CD)					
		<p>Key members of the MIT Concrete Sustainability Hub research team will present findings from the first phase of research at the MIT Concrete Sustainability Hub encompassing environmental life cycle assessment and life cycle cost analysis of concrete buildings and research along with new discoveries in the area of concrete science. They will also outline proposed research for the second phase of the research. Keynote speakers include:</p> <p>Jeremy Gregory, PhD, Executive Director, Concrete Sustainability Hub and Research Director, Massachusetts Institute of Technology Randolph E. Kirchain, PhD, Principal Research Scientist, Materials Systems Laboratory, Massachusetts Institute of Technology Franz-Josef Ulm, PhD, Professor, Civil and Environmental Engineering, Massachusetts Institute of Technology Roland J.-M. Pellenq, PhD, Senior Research Scientist, Massachusetts Institute of Technology Hamlin Jennings, PhD, Adjunct Professor, Principal Investigator, Concrete Sustainability Hub, Massachusetts Institute of Technology Krystyn J. Van Vliet, PhD, Associate Professor of Materials Science and Engineering, Massachusetts Institute of Technology</p>					
12:00 PM – 1:30 PM				LUNCH (Riverside Pavilion)			
1:30 PM – 3:30 PM		BUILDINGS RESEARCH WORKSHOP (President’s Ballroom CD)		PAVEMENTS RESEARCH WORKSHOP (Paul Revere)		CONCRETE SCIENCE RESEARCH WORKSHOP (Thomas Paine)	
		<p>An opportunity for stakeholders, including researchers, design professionals and industry professionals to see first-hand the progress being made at MIT on building environmental life cycle assessment and life cycle cost analysis and interact with researchers to help shape future work.</p>		<p>An opportunity for stakeholders, including researchers, design professionals and industry professionals to see first-hand the progress being made at MIT on pavements environmental life cycle assessment and life cycle cost analysis and LCCA and interact with researchers to help shape future work.</p>		<p>An opportunity for stakeholders, including researchers, design professionals and industry professionals to see first-hand the progress being made at MIT on concrete science and interact with researchers to help shape future work.</p>	
END OF CONFERENCE							