

LEARN FROM EXPERT PAPERS AND PRESENTATIONS

Twenty technical and general sessions are scheduled for this three-day symposium featuring over 50 presentations from world renowned researchers and practitioners. Featured speakers for general sessions include:



James Buizer is Science Policy Advisor to Arizona State University President Michael Crow. Mr. Buizer advances ASU by providing leadership, strategic advice and guidance on transforming ASU as a model for the "New American University." He served as founding director of the ASU Global Institute of Sustainability and its School of Sustainability, launched fall 2006 as the first of its kind in the world.



Mark Wilhelm is a founding Principal of Green Ideas Environmental Building Consultants and is responsible for project management, consulting services and technical development. He is a nationally recognized expert in energy efficient building design, solar energy technology and building energy simulation. Mark's team currently manages over 70 LEED green building projects.



Wayne Trusty is President of Athena Institute, a non-profit organization that helps architects, engineers and others evaluate the environmental impacts of new and existing structures through life cycle assessment (LCA), including pavements. Mr. Trusty holds several sustainability related board committee positions and is a frequent speaker at sustainable building conferences.



Dr. Franz-Josef Ulm is George Macomber Professor in the Department of Civil and Environmental Engineering at Massachusetts Institute of Technology. His research interests are in mechanics and structures of materials, including nano- and micromechanics of porous materials such as concrete, rocks and bones and in the durability mechanics of engineering materials and structures.

Additional featured speakers include: Dominique Luekenhoff, U.S. Environmental Protection Agency; Dr. Sia Ardekani, University of Texas at Arlington; Ivan Diaz, Louisiana Tech University; Dr. Edward Garboczi, National Institute of Standards and Technology; Dr. R. Doug Hooton, University of Toronto; Dr. Michael Thomas, University of New Brunswick; Dr. Prasad Rangaraju, Clemson University; Michael Hein, Auburn University; Dr. Baoshan Huang, University of Tennessee; Russell Gentry, Georgia Institute of Technology; Alex Loijos, Massachusetts Institute of Technology; Dr. Yixin Shao, McGill University.

CONFERENCE HOTEL



Tempe Mission Palms Hotel | 60 East Fifth Street | Tempe, AZ, 85281
P: (480) 894-1400 | F: (480)-968-7677 | www.missionpalms.com

Make reservations by phone at (800) 547-8705. Mention "NRMCA" to receive the conference rate of \$179 per night (on or before March 18, 2010). NRMCA is financially liable for unused sleeping rooms. The convention rate covers the cost of meeting space, upkeep and utilities of the hotel. Please help NRMCA avoid penalties and keep registration fees low by booking your sleeping room at the Tempe Mission Palms Hotel.

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GOVERNMENT SPONSORS



ORGANIZATIONAL PARTNERS

American Coal Ash Association | American Concrete Institute | American Society of Concrete Contractors | Arizona Cement Association | Arizona Chapter - ACI | Arizona Rock Products Association | Portland Cement Association | RMC Research & Education Foundation | Silica Fume Association | Slag Cement Association



REGISTRATION

Register using the attached registration form or online at www.SustainabilityConf.org.

CANCELLATION POLICY

NRMCA will refund registration fee less \$100.00 administration fee if cancelled on or before 3/18/10. All cancellations after 3/18/10 will not be refunded. Cancellations must be made in writing to NRMCA Meetings Dept., 900 Spring Street, Silver Spring, MD 20910 or by fax to (301) 565-8200. NRMCA reserves the right to cancel the conference. If that should occur, NRMCA will notify registrants by 3/18/10 and refund the entire registration fee but not unused airline tickets, hotel reservation fees or other travel related expenses.

QUESTIONS

For additional information, contact Jessica Moore, (240) 485-1152, jmoore@nrmca.org.

National Ready Mixed Concrete Association
900 Spring Street
Silver Spring, MD 20910

REGISTRATION FORM

Name _____ Badge Name _____
Title _____ Company _____
Address _____
City _____ State _____ Zip _____
Phone _____ Fax _____
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REGISTRATION FEE

- \$395 Early registration (on or before 3/18/10)
- \$495 Regular and on-site registration (after 3/18/10)
- \$295 Speakers/Government Employees
- \$95 Students

PAYMENT METHOD

- Check** (make check payable to NRMCA)
Mail registration form and check to:
SunTrust Bank, c/o NRMCA
P.O. Box 79433
Baltimore, MD 21279
- VISA** **MasterCard** **American Express**

For credit card payment, fax registration form to Jessica Moore, Meetings Dept., NRMCA, (301) 565-8200.

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ENHANCE YOUR KNOWLEDGE OF SUSTAINABLE DEVELOPMENT

Join the National Ready Mixed Concrete Association and the School of Sustainable Engineering and the Built Environment at Arizona State University for the 2010 Concrete Sustainability Conference, April 13-15, in Tempe, AZ. The fifth annual conference will provide the latest advances, technical knowledge, continuing research and solutions for sustainable concrete manufacturing and construction.

SESSION TOPICS

Experts will present on the latest developments related to design, specifying, manufacturing, testing, construction, maintenance and research of concrete as it relates to sustainable development. Topics include:

- Low Impact Development
- Urban Heat Island Reduction
- Carbon Footprint and Embodied Energy
- Sustainable Development Initiatives
- Recycled Materials
- Performance-based Concrete
- Government Initiatives
- Private Initiatives

PRODUCT EXPO

A product expo featuring companies that offer sustainable products and services will be open during the conference.

WHO SHOULD ATTEND?

Researchers, academics, students, engineers, architects, contractors, concrete producers, public works officials, material suppliers and concrete industry professionals are invited to attend the conference.

PROFESSIONAL DEVELOPMENT

Attendees of the 2010 Concrete Sustainability Conference are eligible to receive up to 19.5 professional development hours (PDH's), depending on the number of sessions attended.

WWW.SUSTAINABILITYCONF.ORG

This mailing is sponsored by:





CONCRETE SUSTAINABILITY CONFERENCE

APRIL 13-15, 2010 - TEMPE, AZ

CONFERENCE SCHEDULE *

APRIL 12, 2010

6:00 PM—7:00 PM: RECEPTION IN EXHIBIT HALL

APRIL 13, 2010

7:00 AM—8:00 AM: BREAKFAST IN EXHIBIT HALL

8:00 AM—10:00 AM: OPENING GENERAL SESSION

- Opening Remarks, Tim Becken, Chairman, NRMCA and Godwin Amekuedi, Chairman, NRMCA Research, Engineering, and Standards Committee
- Greening a University Campus: The ASU Story, Jim Buizer, Arizona State University
- LEED V3 and Beyond, Mark Wilhelm, Principal, Green Ideas Environmental Building Consultants
- Using LCA to Assess Environmental Performance, Wayne Trusty, President, Athena Institute

10:00 AM—10:30 AM: BREAK IN EXHIBIT HALL

10:30 AM—12:00 PM: CONCURRENT TECHNICAL SESSION 1

A. SUSTAINABLE CONCRETE PAVEMENTS

- Green Highways Partnership, Lueckenhoff, D.
- Sustainability and Concrete Pavements for Real Engineers, Van Dam, T. and Taylor, P.
- Full-depth Reclamation Using a Cement Slurry Spreader--Attached to a Ready Mixed Concrete Truck, Halsted, G. and Guthrie, W.

B. RECYCLED MATERIALS

- Challenges and Opportunities with using Recycled Materials in Ready Mixed Concrete, Lobo, C. and Obla, K.
- Construction and Demolition Waste used as Recycled Aggregates in Concrete: Solutions for Increasing the Marketability of Recycled Aggregates Concrete, Tempest, B., Cavalline, T., Gergely, J. and Weggel, D.
- Evaluation and Assessment of Concrete Produced by Utilizing Treated Wastewater, Alenezi, N.

12:00 PM—1:30 PM: LUNCH

1:30 PM—3:00 PM: CONCURRENT TECHNICAL SESSION 2

A. SUSTAINABLE CONCRETE PAVEMENTS

- The Influence of City Street Pavement Types on Fuel Consumption and Emissions, Ardekani, S. and Sumitsawan, P.
- Latest Strategic Advances in Green Concrete Pavement Technologies, Huffman, D.
- Innovative Sustainable Pavement Solutions, Abdo, F. and Shepherd, D.

B. GREEN CONCRETE

- The Development of a Geopolymer "Roadmap" Towards Making Geopolymer Concrete an Engineered Material, Diaz, I. and Allouche, E.
- The Virtual Cement and Concrete Testing Laboratory: Performance Prediction and Sustainability, Garboczi, E., Bullard, J., Martys, N. and Terrill, J.
- Impact of Green Cement Mandates, Szecsy, R.

3:00 PM—3:30 PM: BREAK IN EXHIBIT HALL

3:30 PM—5:00 PM: CONCURRENT TECHNICAL SESSION 3

A. CODES AND STANDARDS

- High Performance Building Requirements for Sustainability, Szoke, S. and Skalko, S.

- NAHB Green Building Standard, Dalrymple, M.
- International Green Construction Code, Floyd, A.

B. GREEN CONCRETE

- An Environmental Concrete for the Lehigh Cement Plant in Leeds, Alabama, Knight, G.
- Equivalent Performance with Half the Clinker Content Using PLC and SCM, Thomas, M., Cail, K., Blair, B. and Delagrave, A.
- An Investigation of Nano Silca in the Cement Hydration Process, Belkowitz, J.

5:00 PM—6:30 PM: PANEL DISCUSSION

Does Sustainability Belong in the Building Codes? Expert panelists will discuss current efforts to include sustainability in the building codes and present their views on whether this is in the best interest of general public and the building industry.

6:30 PM—7:30 PM: RECEPTION IN EXHIBIT HALL

APRIL 14, 2010

7:00 AM—8:00 AM: BREAKFAST IN EXHIBIT HALL

8:00 AM—10:00 AM: CONCURRENT TECHNICAL SESSION 4

A. CONCRETE INDUSTRY SUSTAINABILITY INITIATIVES

- NRMCA Sustainability Initiatives, Grogan, R.
- PCA Sustainability Initiatives, O'Hare, A.
- ACI Sustainability Initiatives, Barth, F.
- The Recycling and Reuse of Concrete, Stoeck, H.

B. GREEN CONCRETE

- Decreasing the Clinker Component in Cementing Materials: Performance of Portland-Limestone Cements in Concrete in Combination with SCMs, Hooton, D., Ramezaniapour, A. and Schutz, U.
- Insulating Light-Weight Cementitious Materials, Berke, N., Merritt, J. and Abelleira, A.
- Ultra High Strength Concrete using Local Materials, Allena, S. and Newton, C.
- Optimization of the use of Rice Husk Ash and Other Comparable SCMs in Cementitious Mortar, Harish, K. and Rangaraju, P.

10:00 AM—10:30 AM: BREAK IN EXHIBIT HALL

10:30 AM—12:00 PM: CONCURRENT TECHNICAL SESSION 5

A. ASU RESEARCH AND EDUCATION PROGRAMS

- Pavement Materials and the Urban Climate, Kaloush, K.
- Sustainability Projects and Activities in Construction and Civil Engineering Courses, Snell, L.
- Multi-Parameter Study of Sulfate Attack in Blended Cement Materials, Bonakdar, A. and Mombasher, B.

B. SUSTAINABLE CONCRETE PRODUCTION

- The NRMCA Sustainable Concrete Plant Guidelines: The Next Step Towards Industry Sustainability, Lemay, L.
- A New Approach to Managing Biodiversity/Ecosystem Services as part of RMX Companies' Sustainability Programs, Stoeck, H. and Carroll, D.
- Effect of Order Placement on Energy Efficiency in Ready-Mixed Concrete Plants in Japan, Fujimoto, S., Noguchi, T., Ohkubo, T. and Furui, H.

12:00 PM—1:30 PM: LUNCH

1:30 PM—3:00 PM: CONCURRENT TECHNICAL SESSION 6

A. PERVIOUS CONCRETE

- Measuring Stormwater Quality Improvement through Pervious Concrete Paving, Hein, M. and Dougherty, M.
- Sediment Capture in Pervious Concrete Pavement Systems: Effects on Hydrological Performance and Suspended Solids Discharge, Mata, L. and Leming, M.
- Pervious Concrete Filtration for Economic Removal of Metals from Various Waste Streams, Majersky, G.

B. GREEN CONCRETE

- Impact of Chemical Admixtures to Modify the Rheological Behavior of Cementitious Systems Containing Manufactured Aggregates, Jeknavorian, A. and Koehler, E.
- Advances in Chemical Admixture Technology and their Impact on Sustainable Concrete Construction, Bury, M. and Daczko, J.
- Optimizing Concrete's Sustainability Through the use of Lightweight Aggregate, Ries, J. Speck, J. and Harmon, K.

3:00 PM—3:30 PM: BREAK IN EXHIBIT HALL

3:30 PM—5:00 PM: CONCURRENT TECHNICAL SESSION 7

A. PERVIOUS CONCRETE

- Pervious Concrete Specifications: Technology, Testing and Trends, Offenberg, M.
- Laboratory Evaluation of Abrasion Resistance of Latex-Modified Pervious Concrete, Huang, B., Wu, H., Shu, X. and Dong, Q.
- Integrating Structural and Hydrological Design Considerations in Permeable Pavement, Smith, D.

B. APPLICATIONS AND CASE STUDIES

- LCA of Cement-based, Polymer-based, and Natural Stone Architectural Finish Materials, Gentry, R., Weaver, C., Joshi, S. and Gamble, M.
- LID Systems Integration into Transportation Systems, Kunkler, L.
- The New Indianapolis Airport Parking Garage - Sustainable Concrete used to Produce a 70-year Design Life, Kojundic, T.

5:00 PM—6:30 PM: ASU SUSTAINABILITY TOUR

Arizona State University has been named one of the nation's "greenest" universities by *The Princeton Review* in its second annual rating of environmentally friendly institutions, the second year in a row that ASU made the list. This tour of the ASU campus will stop at several of the key sustainability features, including pervious concrete and renewable energy facilities.

6:30 PM—7:30 PM: RECEPTION IN EXHIBIT HALL

APRIL 15, 2010

7:00 AM—8:00 AM: BREAKFAST IN EXHIBIT HALL

8:00 AM—10:00 AM: CONCURRENT TECHNICAL SESSION 8

A. LIFE CYCLE ASSESSMENT

- Sensitivity Analysis in the Life Cycle Assessment (LCA) of Concrete and Asphalt Pavements, Loijos, A. and Ochsendorf, J.
- Characterizing the Impact of Concrete in an Overall Building Framework: The Promise of Whole-Building LCA, Joshi, S., Gentry, R., Bayer, C. and Gamble, M.
- LCA of Concrete Pavements, Golden, J.
- The Use of LCA in LEED 2009, Ashley, E.

B. GREEN CONCRETE

- Recycling Carbon Dioxide into Concrete—A Feasibility Study, Shao, Y., Monkman, S. and Boyd, A.
- Development of Sustainable and Multi-Functional Inorganic Polymer Coating Material for Restoration and Protection of Constructed Concrete Infrastructure as well as New Structures, Achille, F., Arockiasamy, M., Carraher, C. and Neelakantaswamy, P.
- Carbon Efficient Construction - Why Carbon Accounting is Key to the Next Generation of the Built Environment, Williams, P. and Erickson, C.
- Cool Climate Concrete, Argeles, C.

10:00 AM—10:30 AM: BREAK IN EXHIBIT HALL

10:30 AM—12:00 AM: CLOSING GENERAL SESSION

- The Future of Fly Ash in The U.S., Ken Ladwig, Senior Research Manager, Electric Power Research Institute
- Nanoengineering Green Concrete, Dr. Franz-Josef Ulm, Massachusetts Institute of Technology
- Closing Remarks, Rodney Grogan, Chairman, NRMCA Sustainability Committee

* Schedule subject to change