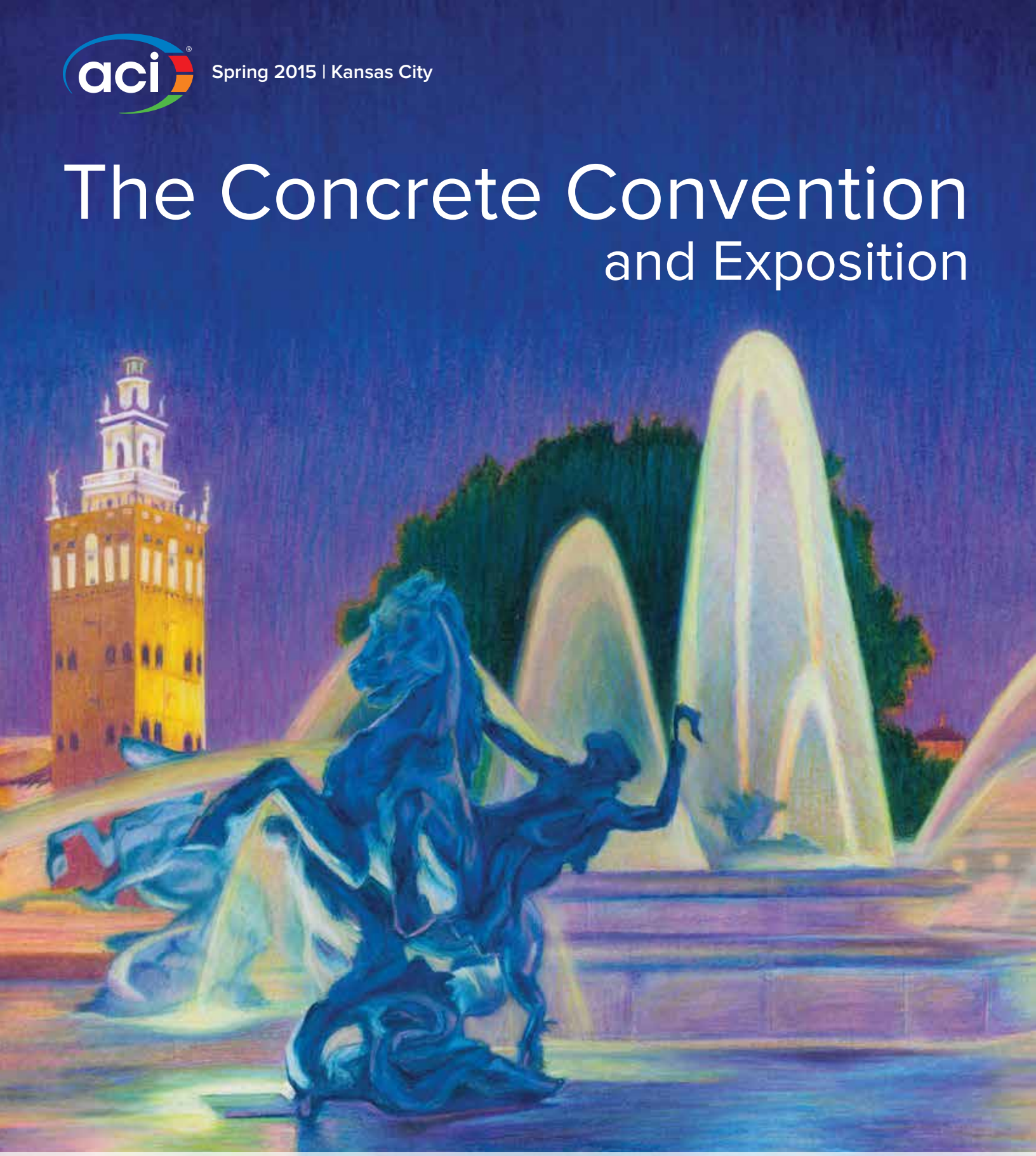
Spring 2015 | Kansas City

The Concrete Convention and Exposition



Program Book

April 12-16, 2015 • Marriott and Kansas City Convention Center

Convention Sponsors

Sponsors are listed as of 3/13/15.

Cement Sponsor

BAKER CONCRETE CONSTRUCTION expect more

Admixture Sponsors

BASF We create chemistry

EUCLID CHEMICAL

GRACE

structural

Fine Aggregate Sponsors

AMSYSCO

Northern California and Western Nevada Chapter

aci CAROLINAS CHAPTER

aci Iowa Chapter – ACI

LAFARGE

Water Sponsors

Arizona Chapter – ACI
Arkansas Chapter – ACI
British Columbia Chapter – ACI
Eastern Pennsylvania and Delaware Chapter – ACI
Georgia Chapter – ACI
Greater Miami Valley Chapter – ACI
Greater Michigan Chapter – ACI
Houston Chapter – ACI
Illinois Chapter – ACI
Intermountain Chapter – ACI
Kansas Chapter – ACI
Kentucky Chapter – ACI
Las Vegas Chapter – ACI
Maryland Chapter – ACI
Middle Tennessee Chapter – ACI
Nebraska Chapter – ACI
New Jersey Chapter – ACI
New Mexico Chapter – ACI
Northeast Texas Chapter – ACI
Ontario Chapter – ACI
Pittsburgh Area Chapter – ACI
Rocky Mountain Chapter – ACI
San Antonio Chapter – ACI
San Diego International Chapter – ACI
Southern California Chapter – ACI

Lanyards

ADAPT Structural Concrete Software

S-FRAME SOFTWARE

ACI Kansas City Convention Committee

Host Chapters
Kansas Chapter – ACI
Missouri Chapter – ACI

Committee Co-Chairs
Mario Brontoli, Black & Veatch
Larry Taber, Black & Veatch

Secretary
Joe Hug, Monarch Cement

Contractors' Day
Mike Murray, Decorative Concrete
Rusty Ownings, Geiger Ready Mix Co., Inc.
Kameron Williams, Central Plains Cement Plant

Publicity
Christy Martin, CPG

Technical Program
Darin Cielocha, McGill Restoration
John Kevern, University of Missouri – KC
Tom Rewerts, Thomas Rewerts & Co.
Kyle Riding, Kansas State University

Student Program
Randy Timi, Pittsburg State University
Dane Shaw, Jacobs
Patrick Earney, THH, Inc.

Volunteer Coordinator
Todd LaTorella, MO/KS American Concrete Pavement Association
Ganesh Thiagarajan, University of Missouri – KC

Committee Volunteers
Oliver Coulson, Tarlton Corp.
Dave Suchorski, Ash Grove Cement, Co.

Table of Contents

About the Cover

Vanessa Lacy, local Kansas City artist, creates portraits about vulnerability and unconventional beauty. She is an artist and full-time art teacher living and working in the Kansas City area. Her Landmark series is a testament to her love for downtown Kansas City and its impressive architecture. The bright colors express the energy she feels when in the heart of the city. Vanessa will have a table at The Concrete Convention with more information on her artwork and the opportunity for attendees and guests to purchase her work. Cover Art © Vanessa Lacy **www.vanessajadelacy.com**

American Concrete Institute Board of Direction

President
William E. Rushing Jr.

Vice President
Sharon L. Wood
Michael J. Schneider

Directors
Roger J. Becker
Dean A. Browning
Jeffrey W. Coleman
Alejandro Durán-Herrera
Robert J. Frosch
Augusto H. Holmberg
Cary Kopczynski
Steven H. Kosmatka
Kevin A. MacDonald
Fred Meyer
Michael M. Sprinkel
David M. Suchorski

Past Presidents
Anne M. Ellis
James K. Wight
Kenneth C. Hover

Executive Vice President
Ron Burg

ACI President's Welcome

ACI Members and Guests:

Welcome to Kansas City and The Concrete Convention and Exposition!

The Concrete Convention and Exposition provides the industry with a professional environment where individuals from across the globe come together to share new ideas and discover innovative ways to use concrete. The ACI Convention offers educational opportunities for personal growth, committee opportunities for technical advancement, and networking opportunities for professional enrichment. The opportunities are numerous, with over 300 committee meetings; 40+ technical sessions; an exciting student competition; and numerous networking events, culminating with the Concrete Mixer on Tuesday night. In addition, the industry exposition showcases the products and services of more than 40 companies from around the world!

I would like to thank the ACI staff and the Kansas and Missouri chapters for their dedication in planning this convention. The effort that has been put forth in developing a memorable and productive convention program is extraordinary. If you have a good time this week, be sure to stop by the host chapter desk to let them know.

On behalf of Sheila and myself, we are honored and excited to be able to share this week with you, and we hope you will enjoy all that Kansas City has to offer. Thank you for attending the convention and for your continued involvement with ACI.

Kind regards,

Bill

William E. Rushing Jr.
ACI President

ACI Sustaining Members

ACS Manufacturing Corporation

Advanced Construction Technology Service

American Society of Concrete Contractors

Ash Grove Cement Company

Ashford Formula

Baker Concrete Construction, Inc.

Barrier-1 Inc.

BASF Corporation

BCS

Braun Intertec Corporation

Buzzi Unicem USA

Cantera Concrete Company

CECO Concrete Construction

CHRYSO, Inc.

Concrete Reinforcing Steel Institute

Construction Forms Inc.

CTLGroup

Dayton Superior

Ductilcrete Slab Systems, LLC

The Euclid Chemical Co.

Fibercon International, Inc.

Future Tech Consultants

W.R. Grace & Co.

Headwaters Resources, Inc.

Holcim (US) Inc.

Keystone Structural Concrete, LLC

Kleinfelder

Kretetek

Lafarge North America

Lithko Contracting, Inc.

Mapei

Mason Construction, Ltd.

Meadow Burke

W. R. Meadows, Inc.

Metromont Corporation

MTL

Multiquip

Municipal Testing

North S.Tarr Concrete Consulting PC

Oztec Industries, Inc.

Pacific Structures

Penetron International Ltd.

PGESCo

Portland Cement Association

Precast/Prestressed Concrete Institute

Sika Corp.

S.K. Ghosh Associates, Inc.

STRUCTURAL

Structural Services, Inc.

Tekna Chem

Triad Engineering, Inc.

TWC Concrete Services

Wacker Neuson

General Information

C = Convention Center M = Marriott

ACI Registration—C-2103

ACI staff is available to answer your convention questions at the ACI Registration Desk during the following hours:

Saturday	2:00 pm - 6:00 pm
Sunday - Tuesday	7:30 am - 5:00 pm
Wednesday	8:00 am - 12:00 pm

Name Badges

ACI uses color-coded name badges to identify attendees. Name badges are as follows:

Member	Blue
Attendee	Black
Fellow	Green
Honorary Member	Red
Staff	Orange
Guest	Tan
Student	Green ribbon

Attention, ACI Attendees!

First-time convention attendees have a "Convention #1" ribbon on their name badge. Please welcome them to the convention!

Convention App

Download the ACI Convention App and have all the information you need for the week ahead at your fingertips. Updated schedules, speaker handouts, exhibitor and sponsor information, and more are all available through the app. Search "ACI Conv" on your Apple or Android device. This app will be used again for the convention this fall in Denver, CO. No need to download another app!

Schedule Changes

Cancellations, additions, and location changes to the convention schedule will be posted daily on a monitor in the exhibit area, as well as in the convention app. Printed Program Book erratas will be available at ACI Registration.

Emergencies

In the event of an emergency, we kindly request that you do NOT dial 9-1-1. Please go to the nearest house phone at the Convention Center or Marriott to contact the operator by dialing "0" and security will be dispatched.

Photographs/Videos

ACI will take photographs and video during the ACI Convention and reproduce them in ACI educational, news, or promotional material—whether in print, electronic, or other media, including the ACI website. By participating in the ACI Convention, you grant ACI the right to use your name, photograph, and biography for such purposes. Please note: Photographing, audio-recording, and videotaping a presentation or speaker is prohibited without the presenter's prior written consent.

Exhibit Hall Refreshments—C-2103

Beverages are available courtesy of ACI during the following hours:

Saturday	Soda	2:00 pm - 6:00 pm
Sunday - Wednesday	Coffee	7:00 am - 10:00 am
Sunday - Tuesday	Soda	1:00 pm - 4:00 pm

Lunch concessions are available for purchase in the exhibit hall, C-2103, during the following hours:

Sunday & Monday	11:00 am – 2:00 pm

Water Stations

In an attempt to lessen the amount of bottled water thrown away during each convention, ACI has chosen not to provide bottled water to attendees. As a replacement, water stations will be placed throughout the meeting space for you to enjoy.

Alcohol Policy

Nonalcoholic beer and soft drinks are available at all ACI-sponsored receptions. The legal drinking age in Kansas City, MO, is 21.

ACI Bookstore—C-2103

Visit the ACI Bookstore to receive 10% off ACI publications and learn how to win the *Manual of Concrete Practice* on CD-ROM. The ACI Bookstore is open during the following hours:

Saturday	2:00 pm - 6:00 pm
Sunday - Tuesday	8:00 am - 5:00 pm
Wednesday	8:00 am - 12:00 pm

ACI Resource Pavilion—C-2103

ACI has many resources to offer convention attendees, and now they are all available in one central location! The ACI Resource Pavilion will feature the Cyber Café as well as an information center for ACI services such as ACI Continuing Education and the ACI Foundation. Stop by the pavilion in the exhibit area to learn about all that ACI has to offer during the following hours:

Saturday	2:00 pm - 6:00 pm
Sunday - Tuesday	8:00 am - 5:00 pm
Wednesday	8:00 am - 12:00 pm

ACI Continuing Education—With the tagline "Always Advancing," ACI is committed to the education of its members and customers. Stop by to learn about the current initiatives and programs offered to continue the growth and expertise of the industry, including ACI University.
ACI Foundation—The ACI Foundation receives, administers, and expends funds for educational, research, and scientific purposes to increase knowledge and understanding of concrete materials and to support programs that improve concrete design and construction.
Cyber Café—Several laptop computers will be available for attendees to use to browse the web, print on-demand, and catch up on e-mail. A charging station will also be available.
Meeting Spot—Convention attendees are encouraged to visit the meeting spot for coffee or lunch and to meet first-time and other convention attendees Monday and Tuesday, 8:00 am - 8:30 am and 12:00 pm - 1:00 pm.

Career Center—C-2103

ACI's online job search engine is specifically designed to target jobs in the concrete industry. Browse the job postings or post a new job right at the convention! Companies will also have a place to drop off flyers about current job openings.

Membership Information—C-2103

To learn MORE about the new ACI membership benefits and how to become a member, visit the ACI Bookstore.

Session Handouts on Demand

Handouts will be available from speakers who have elected to provide and post them to the ACI website. If you do not find a handout for a particular session, please contact the speaker for more information. All collected handouts will be posted to the ACI website after the convention.

General Information

C = Convention Center M = Marriott

Local Information—C-2103 Foyer

VisitKC representatives and the Kansas City Chapter Convention Committee members will be happy to answer general convention questions and provide information about the local area. Stop by their information desks during the following hours:

Kansas City Convention Committee Desk

Saturday	2:00 pm - 5:00 pm
Sunday - Tuesday	8:00 am - 5:00 pm

VisitKC Information Desk:

Sunday - Tuesday	8:00 am - 5:00 pm

Show Your Badge Program

Several museums, restaurants, and attractions participate in the "Show Your Badge" Program. Exclusive discounts and VIP treatments are given to individuals who show their badge to a current convention taking place in Kansas City. Visit **www.visitkc.com** to view the participating partners.

Kansas City Marriott Restaurants

MetropolitanKC

This casual outlet in the Marriott lobby is open for breakfast, lunch, and dinner, offering a menu with American cuisine. Breakfast buffet and carryout are available. Hours of operation: 6:30 am - 11:00 pm daily.

BarCentral

Open for lunch and dinner, this lobby bar and restaurant offers cocktails and light dinner fare in a casual environment. Hours of operation: 10:00 am - 1:30 am daily.

CoffeeCentral

Located in the Marriott Lobby, CoffeeCentral offers a selection of local Roasterie Coffee, house-made pastries, and grab-'n'-go lunch and dinner selections. There is also a limited selection of convenience items. This outlet is open daily 6:00 am - 10:00 pm.

Room Service

Room service is available at the Kansas City Marriott 6:00 am - 11:00 pm daily.

Shuttle Service

SuperShuttle offers ground transportation to the Kansas City International Airport. This shared van ride service is a cost-efficient door-to-door transportation option, and a safe way of getting to and from the Marriott. To reserve a shuttle or to learn more about the services offered by SuperShuttle, visit **www.supershuttle.com**. Group rates available when you mention the ACI Convention.

Rental Cars

Hertz is the official car rental agency for the ACI Convention. Receive discounts on upgrades, weekly rentals, and weekend rentals. To make advanced reservations, call +1.800.654.3131 or visit **www.hertz.com**. Provide group code 0077289 when making your reservation. Additionally, all major car rental companies have offices at the three major airports.

Taxis

There are several taxi services available in Kansas City to help get you to and from the airport, as well as the many attractions, restaurants, and other destinations in the area. Taxis are stationed outside of the Marriott and the valet and bellhop are available to assist in calling a taxi for you.

Public Transportation

Kansas City offers several bus systems. There is a public bus system as well as the new bus rapid transit line, which connects several major neighborhoods. Visit **www.visitkc.com/meetings/plan/travel-information** for more details on bus lines and schedules. The MAX bus system runs up and down Main Street as an easy, convenient way to visit the many different districts in Kansas City. MAX bus rides are $1.25 per ride.

Parking

Self-parking is available at the Marriott for $16 U.S. per day. Valet parking is also available for $22 U.S. per day.

Continuing Education

All sessions approved by the American Institute of Architects (AIA) are noted with AIA/CES and the number of hours. ACI is an AIA/CES Registered Provider.

Session Attendance Tracking Form

The Session Attendance Tracking Form found at the back of the program book can be submitted to state boards that allow self-reporting of continuing education activities as evidence of participation. In most cases, one contact hour is equal to one Professional Development Hour (PDH). Check with your state board for acceptance criteria. Codes will be given out during each session to track your attendance.

Please note: ACI does not track and cannot provide documentation confirming attendee participation or attendance at any ACI session held during the convention.

Speaker Ready Room—C-2200

The Speaker Ready Room is available to moderators, speakers, and committee Chairs during the following hours:

Saturday	2:00 pm - 6:00 pm
Sunday - Tuesday	7:00 am - 6:00 pm
Wednesday	7:00 am - 2:00 pm

All speakers are requested to check in at the Speaker Ready Room 1 day prior to their session to ensure that ACI has downloaded their presentation on the network in the session rooms and speakers' session handouts are uploaded onto the ACI website.

The Concrete Convention and Exposition Fall 2015 | Denver, CO—C-2103 Lobby

Mark your calendars for The Concrete Convention and Exposition in Denver, CO, November 8-12, 2015, at the Denver Sheraton Hotel. Stop by the Denver Chapter Convention Committee Desk Saturday through Tuesday to learn more about the convention!

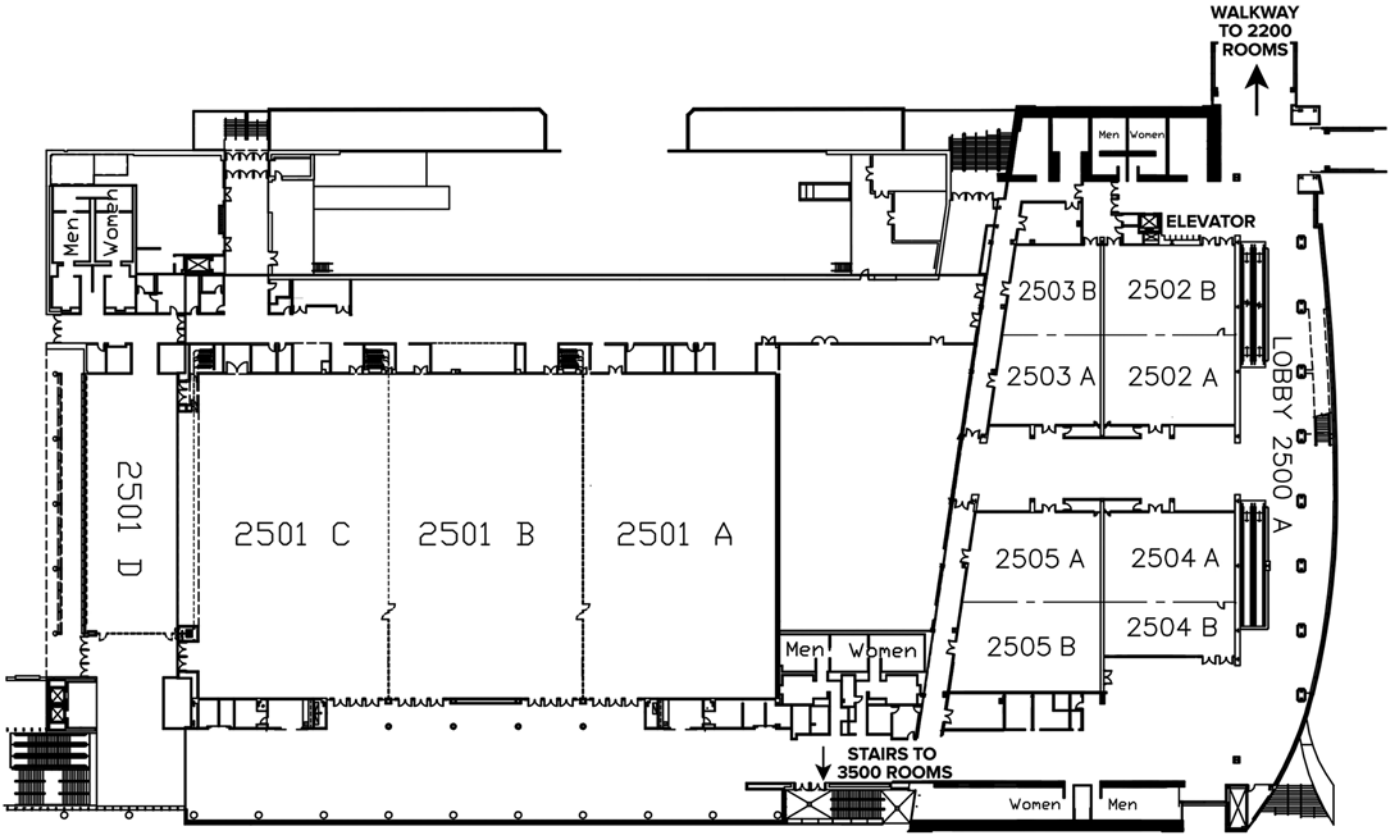
Where's That Meeting Room?

C = Convention Center M = Marriott

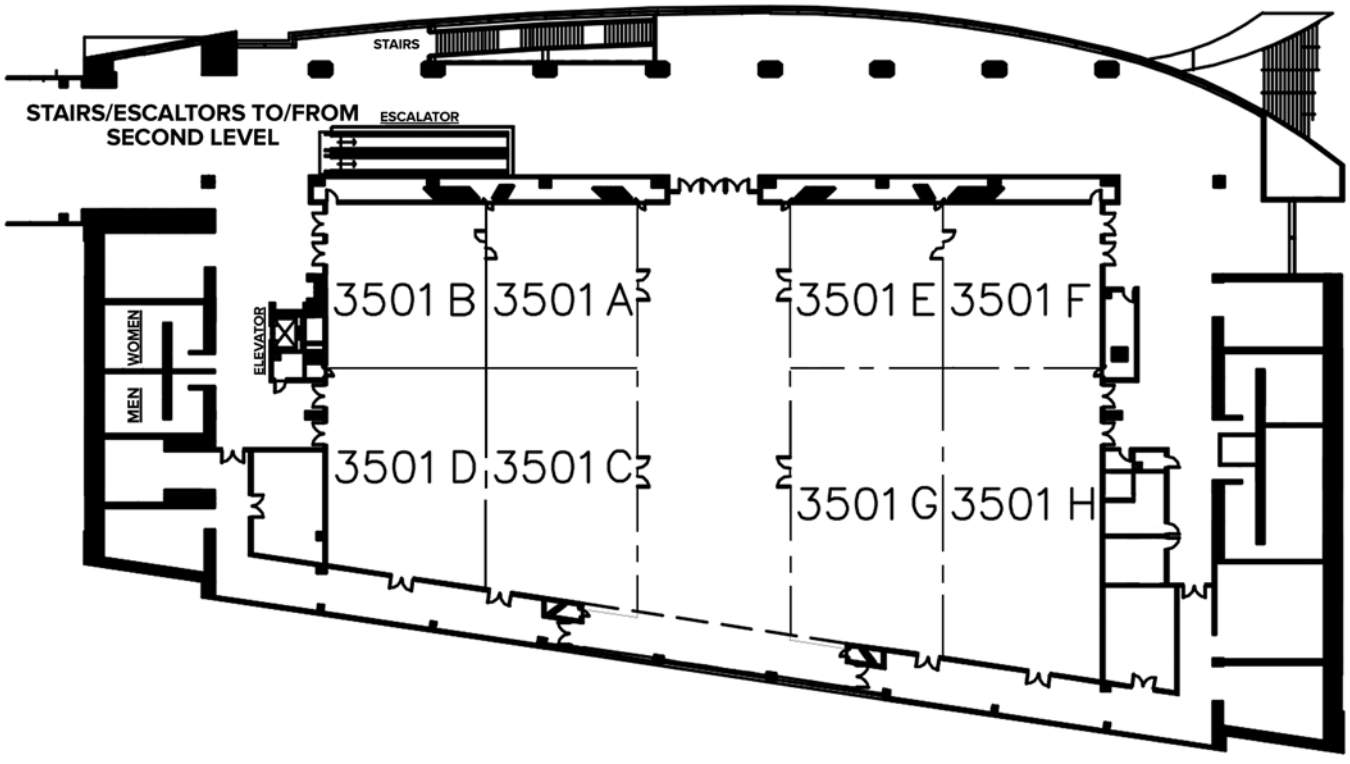
Room Name	Location
C-2101	Street Level
C-2102 A, B	Street Level
C-2103	Street Level
C-2104 A, B	Street Level
C-2105	Street Level
C-2200	Street Level
C-2201	Street Level
C-2202	Street Level
C-2203	Street Level
C-2204	Street Level
C-2205	Street Level
C-2207	Street Level
C-2208	Street Level
C-2209	Street Level
C-2210	Street Level
C-2211	Street Level
C-2212	Street Level
C-2213	Street Level
C-2215 A, B, C	Street Level
C-2502 A, B	Level Two
C-2503 A, B	Level Two
C-3501 A - H	Level Three
M-13th STREET ROOM	Main Lobby Level
M-ANDY KIRK A & B	Third Level, Marriott Tower
M-BASIE A, A1, B, B1, C, C1	Second Level, Marriott Tower
M-BASIE BALLROOM FOYER	Second Level, Marriott Tower
M-BENNIE MOTEN A& B	Third Level, Marriott Tower
M-BIG JOE TURNER A & B	Third Level, Marriott Tower
M-HISTORIC MUEHLEBACH LOBBY	Lower Level, Muehlebach Tower
M-JAY MCSHANN A & B	Third Level, Marriott Tower
M-JULIA LEE A & B	Third Level, Marriott Tower
M-LESTER YOUNG A & B	Third Level, Marriott Tower
M-MARY LOU WILLIAMS A & B	Third Level, Marriott Tower
M-TRUMAN A & B	Main Level, Muehlebach Tower
M-YOGA STUDIO	Tenth Floor Fitness Center

KANSAS CITY CONVENTION CENTER
Street Level Meeting Rooms

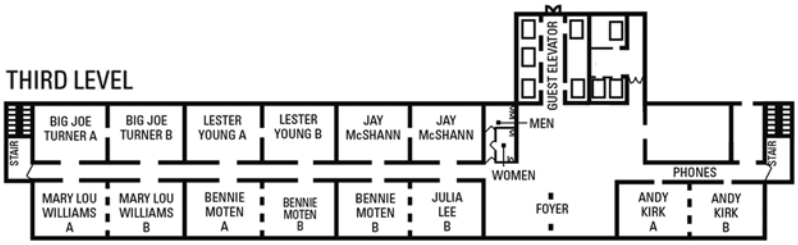
KANSAS CITY CONVENTION CENTER
Second Level Meeting Rooms

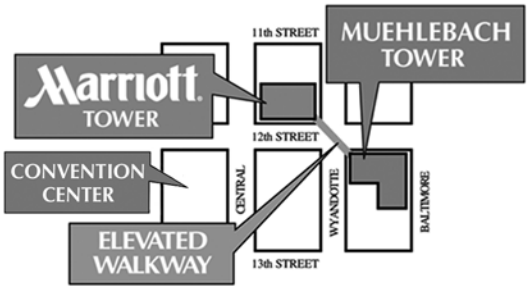


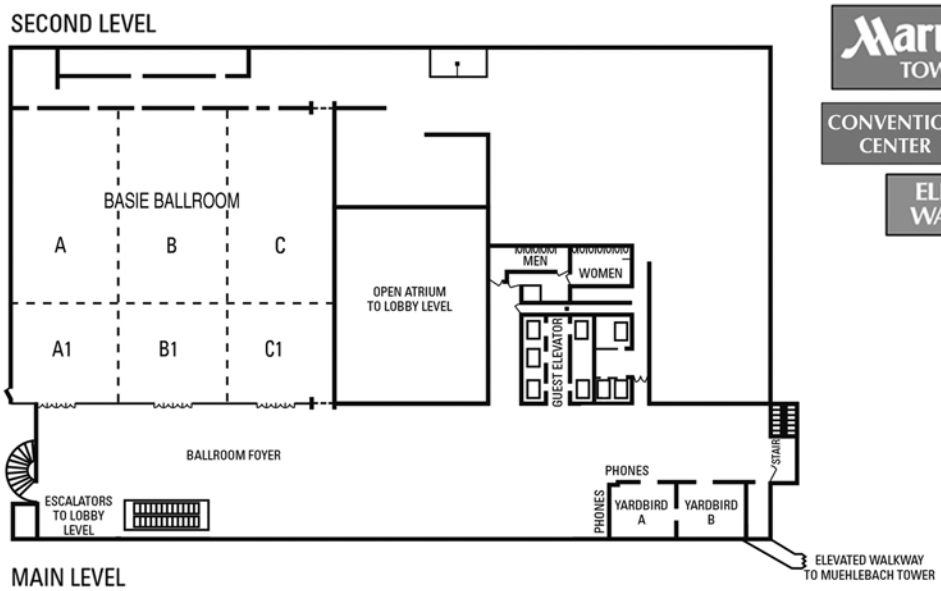
Third Level Meeting Rooms

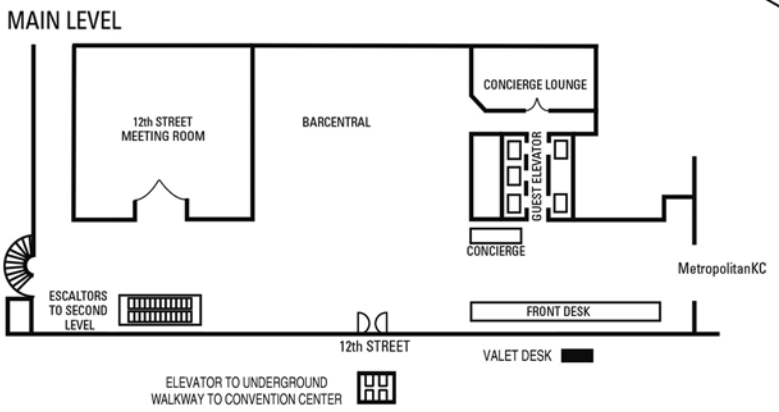


MARRIOTT TOWER

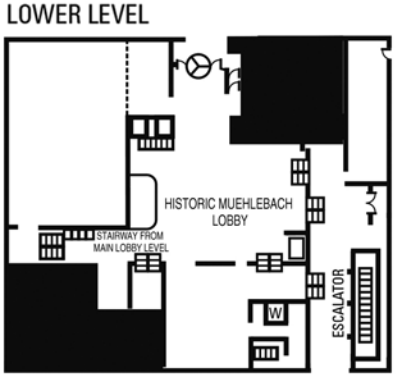


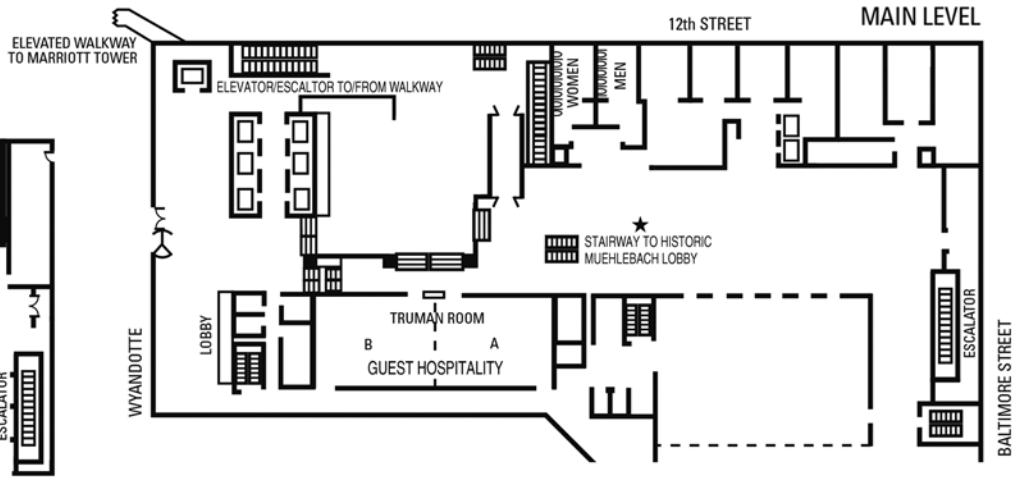




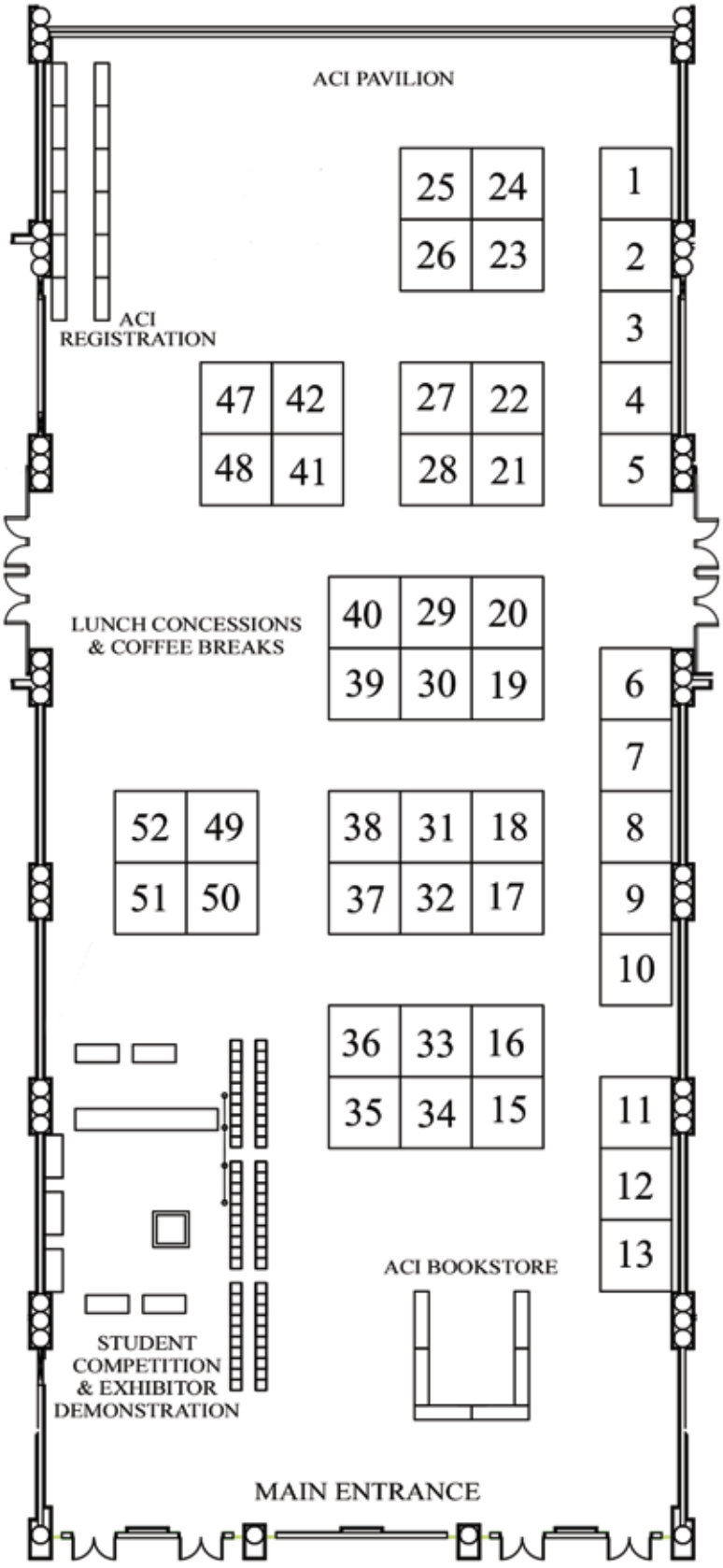


MUEHLEBACH TOWER





Kansas City Convention Center
Exhibit Hall C-2103



Listing as of 3/13/15

Booth	Exhibitor
41	ACI Education
48	ACI Foundation
23	AST/Adhesive Systems Technology Corp.
3	Axieom LLC
38	BarSplice Products Inc.
13	BASF Corporation
29	Buildex/Redhead/Ramset
32	BuildingHow Team
4	Burgess Pigment Company
18	Buzzi Unicem USA
37	Composite Rebar Technologies
30	Concrete Sealants, Inc.
11	CRC Press
27	Decon USA
5	Euclid Chemical Company
49	FORTA Corporation
50/51	Germann Instruments
36	Giatec Scientific
15	Grace Construction Products
16	Hughes Brothers, Inc.
2	Kansas State University
28	Kryton International, Inc.
10	Myers Associates Inc.
39	Premier CPG
22	Proceq USA, Inc.
6	QuakeWrap, Inc.
40	Radarview/Universal Construction Testing
33	Raven Industries
34/35	Sika Corporation
12	Silica Fume Association
19	SpecChem
20	Structural Group
31	Technical Consultants
52	Tekla
8	TNO DIANA BV
9	Universal Calibrations LLC
17	Vector Corrosion Technologies
42/47	VISIT Milwaukee
21	Wacker Neuson
7	Zircon Corporation

Exhibitors

Exhibitors are listed as of 3/13/15.

Exhibits **C-2103**
ACI would like to thank all exhibitors for their participation in and support of The Concrete Convention and Exposition.

Exhibit Hours
Sunday – Tuesday 8:00 am – 5:00 pm

Axieom LLC **Booth #3**
Axieom LLC provides strategic guidance to owners and managers of reinforced concrete and masonry structures regarding corrosion and associated durability issues, including how to build, maintain, and rehabilitate facilities to achieve performance and financial goals. The company offers expert consulting services in the fields of corrosion science, condition evaluation, repair design, cathodic protection, and asset management. Axieom's staff prides itself in understanding the unique needs of owners and developing creative and cost-effective solutions for long-term durability. For additional information, visit **www.axieom.com**.

Adhesive Systems Technology **Booth #23**
Adhesive Systems Technology is a manufacturer of equipment used for doweling, injection, saw, and expansion joint sealing used for applications of epoxies, urethanes, polyureas, silicones, and other single- and two-part fluid materials. For additional information, visit **www.ast-corp.net**.

BarSplice Products, Inc. **Booth #38**
BarSplice Products, Inc., is a manufacturer of engineered mechanical splice and headed bar systems for reinforced concrete construction and ACI 318 Type 1/Type 2 strength applications. BarSplice offers customer-focused solutions, highest-quality results, and cost-effective installations. To learn more, visit **www.barsplice.com**.

BASF Corporation **Booth #13**
BASF Corporation is a worldwide supplier of chemical systems and formulations for the construction industry. Through its Master Builders Solutions brand, BASF offers a comprehensive portfolio of concrete admixtures, cement additives, chemical solutions for underground construction, waterproofing solutions, sealants, concrete repair and protection solutions, performance grouts, and performance flooring solutions. To learn more, visit **www.master-builders-solutions.basf.us**.

Buildex/Redhead/Ramset **Booth #29**
ITW Commercial Construction encompasses the brands Buildex, Red Head, and Ramset with an overall history dating back to 1910. Within this history was the invention of the first powder-actuated tool in 1947 and the original self-drill anchor in 1967. Together, Red Head, Ramset, and Buildex work to find innovative, quality products for the construction industry in areas of concrete; drywall; metal building; fire protection; plumbing; electrical; and heating, ventilation, and air-conditioning. Since inventing the concrete anchor in 1910, the ITW Red Head family of concrete anchoring solutions continues to offer premium products to commercial and residential builders around the world. In addition to the Epcon® line of adhesives, Red Head offers the Trubolt® line of mechanical anchors and the Tapcon® line of screw anchors. In January 2014, the newest product offering was unveiled at World of Concrete with the debut of the new Epcon C6+, a pure epoxy that works in all weather conditions without losing strength. For more information, visit **www.itwredhead.com**.

BuildingHow Team **Booth #32**
BuildingHow Team integrates all earthquake-resistant building technologies with expertise in BIM software used for educational purposes, books, and industrial applications. For more information, visit **www.buildinghow.com**.

Burgess Pigment Company **Booth #4**
Burgess produces OPTIPOZZ highly reactive metakaolin, a white supplementary cementitious material which contributes to strength development and durability in concrete. The use of a small percentage of OPTIPOZZ in a mixture design will decrease ingress of harmful chemicals, improve finishability, reduce efflorescence, mitigate alkali-silica reaction, and assist in shrinkage resistance. For additional information, visit **www.OPTIPOZZ.com**.

Buzzi Unicem USA **Booth #18**
Buzzi Unicem USA, headquartered in Bethlehem, PA, is a worldwide cement company. The company produces portland, oil-well-blended, masonry cements, and calcium sulfoaluminate cement. The companies' cement plants can produce 8 million tons of cement annually. Buzzi Unicem USA operates 29 terminals across the United States, distributing its various cements to over 3800 concrete producers, highway and airport paving firms, concrete block companies, and concrete product firms in 29 states. Learn more at **www.buzziunicemusa.com**.

Composite Rebar Technologies **Booth #37**
Composite Rebar Technologies (CRT) is committed to Building a Stronger America through innovation of concrete infrastructure products that will not corrode. Their products include Long Life™ Dowel Bars—high-load-transfer efficiency and UV-resistant—and Fiber-Reinforced Polymer (FRP) Composite Rebar—functional hollow-core, stronger-than-solid FRP reinforcing bar, and UV-resistant. All CRT products are noncorroding and engineered for a minimum service life of 100+ years. To learn more, visit **www.hollowbar.com**.

Concrete Sealants, Inc. **Booth #30**
Concrete Sealants is widely recognized as a first-line extruder/compounder of sealants, wraps, coatings, primers, mastics, and lubricants. Our ongoing commitment to the development of new products, coupled with our excellent technical and customer service support, have made us the one company users look to for reliable, first-rate solutions to their sealant problems. Our ConBlock family of products is designed to protect concrete, making it last longer. ConBlock MIC is a unique product that inhibits the bacteria that leads to Microbially Induced Corrosion of Concrete (MICC). Visit **www.conseal.com** for more information.

CRC Press **Booth #11**
CRC Press–Taylor & Francis Group is a premier publisher of books and electronic databases in the field of Civil and Structural Engineering. We invite you to peruse our latest offerings, pick up a free sample journal, and take advantage of special show discounts ranging from 20-50% off. For more information, visit **www.crcpress.com**.

Decon USA **Booth #27**
Decon® is presenting Studrails® and Jordahl Anchor Channels. Decon manufactures the genuine punching shear reinforcement, commonly used in post-tensioned concrete slabs with direct loading on columns. Decon is the exclusive representative of Jordahl for North America. Anchor Channels are embedded in concrete slabs and used to securely transfer high loads. To learn more, visit **www.deconusa.com**.

Exhibitors

Exhibitors are listed as of 3/13/15.

The Euclid Chemical Company **Booth #5**

For over 100 years, The Euclid Chemical Company has served as a leading supplier to the concrete and masonry industry, offering a full line of engineered concrete admixture and construction products. These products include chemical admixtures, block and masonry additives, fibers, curing and sealing compounds, epoxy adhesives, floor and wall coatings, structural grouts for columns, equipment and machinery, joint fillers, and repair products. Euclid Chemical strives to bring innovative technologies and products to the concrete market with industry-leading customer service. They understand the critical impact that sustainable design and green building has on the world. They have made it part of their company's vision to provide sustainable product systems that achieve social and environmental objectives while providing economic balance. They offer a full line of low-VOC (volatile organic compound) sealers, coatings, and products based on renewable water-based technology, along with grouts and mortars that use recycled raw materials. Visit **www.euclidchemical.com** for more information.

FORTA Corporation **Booth #49**

FORTA Corporation, the oldest synthetic fiber reinforcement company for concrete in the world, is now celebrating 35 years of fiber research, development, and successful projects. The latest innovation is the FORTA-FERRO® macrofiber, which mixes uniformly without balling and provides a superior surface finish, even at high dosages. For project references and testing, visit **www.forta-ferro.com**.

Germann Instruments, Inc. **Booths #50&51**

Germann Instruments, Inc., is the leader in nondestructive testing (NDT) of concrete structures. Their cutting-edge, innovative product line includes advanced NDT equipment for concrete testing. For structural integrity, they provide impact-echo, mash, and MIRA/Eyecon three-dimensional (3-D) shear wave systems. For durability, they provide service life, rheometer, PROOVE'it, chloride, and profile equipment. For freezing-and-thawing, they provide the EVA Analyzer and RapidAir. For fast-track construction, they produce the LOK-TEST and Coma-Meter. For corrosion surveys, they provide GalvaPulse and RapiCor. They also produce the Bond-Test and CorroEye for repair quality. For more information, visit **www.germann.org**.

Giatec Scientific Inc. **Booth #36**

Giatec is a knowledge-based company offering leading-edge smart and innovative concrete testing solutions in the construction industry. Using the recent smart technologies, Giatec is continuously developing novel testing methods for the effective quality control of concrete and accurate condition assessment of infrastructure. Giatec has developed advanced and efficient tools for evaluating concrete permeability, measuring electrical resistivity, and assessing reinforcing bar corrosion. These devices are combined with user-friendly software and mobile applications for accurate data analysis and management. Giatec devices include RCON™, bulk electrical resistivity measurement; Surf™, surface electrical resistivity measurement; XCell™, smart half-cell corrosion mapping; Perma2™, rapid chloride permeability test; and iCOR™, noncontact and fast corrosion rate measurement. Visit **www.giatec.ca** for more information.

Grace Construction Products **Booth #15**

Headquartered in Cambridge, MA, Grace Construction Products is a worldwide leading manufacturer of concrete admixtures and fibers; liquid pigments for colored concrete; cement processing additives; concrete masonry products; air and vapor barriers; roofing underlayments; self-adhered window, door, and deck flashings; structural waterproofing systems; and fire protection products. Visit **https://grace.com/construction/en-us** to learn more.

Hughes Brothers, Inc. **Booth #16**

Hughes Brothers manufactures fiber-reinforced polymer (FRP) reinforcing under the trade name Aslan FRP and licenses and supports precast producers using the THiN-Wall™ composite action insulated sandwich wall panel system. Aslan FRP products include FRP reinforcing bar for reinforcing concrete in corrosive or electrically sensitive environments, glass FRP dowel bars, and structural strengthening existing structures. To learn more, visit **www.aslanfrp.com**.

Kansas State University Global Campus **Booth #2**

Whether you want to learn online or develop professionally, Kansas State University Global Campus is your connection to education that reaches you no matter where you are. Come explore our 26 different online master degree programs, including a Master of Science in civil engineering and a variety of graduate certificate programs, including a certificate in Transportation Engineering. Enhance your degree and make higher education work on your schedule at **www.global.k-state.edu**.

Kryton International Inc. **Booth #28**

Kryton International Inc. takes the risk out of concrete waterproofing. Waterproofing concrete structures since 1973, Kryton has the most complete system, which has undergone more testing and received more approvals than any other of its kind. Kryton is the leader in products for waterproofing, repairing, and protecting concrete and, most notably, the inventor of the crystalline waterproofing admixture. For more information, visit **www.kryton.com**.

Myers Associates, Inc. **Booth #10**

Myers Associates, Inc., has been providing quality products and services throughout the United States since 1994. They specialize in the reselling of construction material testing equipment from all of the major manufacturers. Myers offers the opportunity to make one call to find the equipment you want at the right price. Count on Myers Associates for all of your construction materials testing equipment needs. To learn more, visit **www.myerstest.com**.

Premier Construction Products Group **Booth #39**

Premier CPG is the manufacturer of PREVent-C®, the most effective method to mitigate drying and autogenous shrinkage cracks in concrete. Based on a dual mechanism, PREVent-C® concrete admixture has been proven to reduce shrinkage cracks by up to 90 to 100%. To learn more, visit **www.premiercpg.com**.

Exhibitors

Exhibitors are listed as of 3/13/15.

Proceq USA, Inc. **Booth #22**
Proceq, founded in 1954, is a leading manufacturer of high-quality portable instruments for nondestructive testing of materials such as concrete, metal, composites, or paper. The company's strong research and development team continues to create products that set industry standards. Proceq invented the original Schmidt concrete test hammer—the world's first and most widely used instrument for concrete strength properties. Proceq's other brands include the Profometer and Profoscope cover meters, the Pundit ultrasonic instruments, the Resipod resistivity meter, the Hygropin moisture meter, and the Canin corrosion analyzing instrument. Proceq distributes and services these quality instruments worldwide through their own subsidiaries and extensive partner network. Visit **www.proceq.com** to learn more.

QuakeWrap, Inc. **Booth #6**
QuakeWrap, Inc., is a leading designer and supplier of innovative fiber-reinforced polymer (FRP) products for repair and strengthening of infrastructures. QuakeWrap® FRP products are exceptionally strong, versatile, noncorrosive, very economical, and the solution of choice in a growing number of applications including walls, beams, columns, slabs, chimneys, silos, tanks, pipes, culverts, tunnels, piles, utility poles, and blast protection. QuakeWrap products are very flexible prior to curing, allowing them to be easily applied to surfaces of varying shapes and sizes. Carbon and glass FRPs can be used on a wide range of materials, including concrete, steel, wood, timber, and masonry. Visit **www.quakewrap.com** for more information.

Radarview / Universal Construction Testing **Booth #40**
Radarview LLC and its subsidiary, Universal Construction Testing (UCT), are a full-service Materials Evaluation/Engineering company. Our specialty services include specialty NDT (GPR, Impulse Response, Deep Foundation Sonics) and laboratory analysis (Petrography, Chemistry, environmental) to support volumetric as-built and condition survey testing, DOT and airport pavement surveys, core drilling, geophysical investigation, quality control, and testing of embedded structural components. The company provides clients with a single source for inspection and testing of their physical assets. To learn more, visit **www.uctgroup.com**.

Raven Industries **Booth #33**
Raven Industries Engineered Films is an innovative manufacturer producing high-quality flexible films and sheeting to major global markets. Raven services the construction industry with superior underslab Vapor Barriers (VaporBlock®), Gas and Moisture Barriers for Radon, Methane, and VOCs (VaporBlock® Plus™), and a wide spectrum of sizes in Reinforced and Fire Retardant films (DuraSkrim®). At Raven, we believe by thoroughly listening to our customers we can develop a product solution that does precisely what they require. Raven is an approved AIA/CES course provider and offers continuing education to learn the critical elements of specifying underslab barriers. Visit **www.ravenefd.com** to contact one of our construction specialists today to discuss the specific details of your next project.

Sika Corporation **Booths #34/35**
Sika Corporation, Lyndhurst, NJ, is a global technology leader with over 100 years of experience in concrete materials and restoration technology. Sika's innovative product line includes high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, and industrial flooring, as well as roofing and waterproofing systems. Owners, architects, and engineers count on them to be a single-source supplier. For Sika's customers, that means new relationships, new markets, and new opportunities. They are committed to customer satisfaction, innovation, and teamwork. Full-service sales and technical offices support their customers nationwide. Please visit the Sika Corporation website at **usa.sika.com** for more information.

Silica Fume Association **Booth #12**
The Silica Fume Association provides high-performance concrete information to the construction industry. Silica fume is a valuable waste material used in today's sustainable concrete mixtures. To learn more, visit **www.silicafume.org**.

SpecChem **Booth #19**
Your solution to service…SpecChem. With over 250 years of team experience, SpecChem is unrivalled in our energy and drive to keep our customers in the forefront of product innovation to meet the specific needs of the concrete construction industry. Our product offerings include construction chemicals, epoxies, cementitious products, and fiber expansion joint. SpecChem is at the forefront of product development and manufacturing excellence. You demand superior products, service, and profitability and we deliver it. To learn more, visit **www.specchem.com**.

STRUCTURAL TECHNOLOGIES **Booth #20**
STRUCTURAL TECHNOLOGIES was created in the early 1980s as part of STRUCTURAL Group to develop proprietary products, processes, and systems. STRUCTURAL TECHNOLOGIES comprises product development, engineering, and technical service experts supporting specialized solutions groups such as strengthening, post-tensioning, cathodic protection, force protection, concrete repair, and waterproofing. For more information, visit **www.structural.net**.

Technical Consultants, Inc. **Booth #31**
Measure strength of concrete, nondestructive method tests concrete without delays. No dust, waste, noise, or damage to exposed surfaces are created. No cutting or drilling required.

Tekla, Inc. **Booth #52**
Tekla provides model-based software for customers in the construction industry. From design to build, our Building Information Modeling (BIM) software enables the creation and management of accurately detailed, highly constructible 3D structural models regardless of material or structural complexity. The models can cover the entire building process from conceptual design to fabrication, erection, and construction management. Learn how Tekla's engineering portfolio is growing! Come by our booth to see our brand-new products! We're revolutionizing analysis and design—that's a concrete promise. For more information, visit **www.tekla.com**.

Exhibitors

Exhibitors are listed as of 3/13/15.

TNO DIANA BV **Booth #8**

DIANA (DIsplacement ANAlyzer) is an extensive multi-purpose finite element software package that is dedicated, but not exclusive, to a wide range of problems arising in civil engineering including structural, geotechnical, tunnelling, earthquake disciplines, and oil and gas engineering. DIANA is a well-proven and tested software package that has been used on various landmark projects all over the world. The program's robust functionality includes extensive material models, element libraries, and analysis procedures, which are based on the latest and most advanced finite element analysis techniques. To learn more, visit **www.tnodiana.com**.

Universal Calibrations LLC / Toni Technik **Booth #9**

Universal Calibrations is a veteran-owned company founded in 1999. We are accredited by the American Association of Laboratory Accreditation (A2LA). We calibrate and service most everything found in today's laboratory with an emphasis on force, temperature, and scales/balances. We are also the only authorized North American sales, service and calibration representatives for Toni Technik, a world leader in building materials testing equipment. These days we are traveling worldwide to support our customers and currently have offices in Maine and New York; new offices will be opening this year in the mid-Atlantic region and the southern United States. To learn more, visit **www.universalcalibrations.com**.

Vector Corrosion Technologies **Booth #17**

Vector Corrosion Technologies offers a portfolio of solutions for concrete corrosion repair and protection. Innovative solutions include electrochemical chloride extraction, cathodic protection, and an array of galvanic protection systems, including embedded galvanic anodes, galvanic jackets, and activated arc-spray zinc metalizing. Vector also provides evaluation, repair, and mitigation services for post-tensioned corrosion and temperature-resistant composite-strengthening systems. For more information, call +1.813.830.7566 or visit **www.vector-corrosion.com**.

VISIT Milwaukee **Booths #42/47**

Come learn about all there is to do in Milwaukee, WI, the location for The Concrete Convention next spring. Representatives from the city will be available to answer questions about things to do in this great city.

Wacker Neuson **Booth #21**

Select Wacker Neuson products for your site preparation, reinforcement, placement, consolidation, curing, and finishing needs. Products include trowels, compaction equipment, hydronic and air heaters, vibrators, wet screeds, saws, skid steer loaders and compact track loaders, excavators, and dumpers. All you need is the concrete. Wacker Neuson products will handle the rest. Visit **www.wackerneuson.com** to learn more.

Zircon Corporation **Booth #7**

Zircon Corporation, the leading company in electronic stud finders, also makes concrete scanners to locate embedded metal, such as reinforcing bar, before your drill or saw blade does! These easy-to-use, inexpensive metal detectors are also very good for nondestructive inspection (NDI). To learn more, visit **www.zircon.com**.

Exhibitor Demonstration Schedule

Monday, April 13, 2015

Time	Company/Organization	Presentation/Demo Title
9:00 am – 9:30 am	Concrete Sealants, Inc.	M.I.C. Explained
9:45 am – 10:15 am	Tekla, Inc.	Tekla Structural Designer – Analysis, Design, and Drawings of Complete Concrete Buildings
10:30 am – 11:00 am	Germann Instruments, Inc.	LOK-TEST & CAPO-TEST: Pull-put Test for In-place Strength & Durability
11:15 am – 11:45 am	Tekla, Inc.	3D Modeling for Concrete Contractors and Rebar Detailers
12:00 pm – 12:30 pm	BuildingHow Team	The BIM Technology and Its Influence on the Construction Industry
1:30 pm – 2:00 pm	QuakeWrap, Inc.	New Advances in Repair and Strengthening of Structures with FRP Products
2:00 pm – 2:30 pm	ACI University Presentation	

Tuesday, April 14, 2015

Time	Company/Organization	Presentation/Demo Title
11:15 am – 11:45 am	Zircon Corporation	Easy to Use Metal Detectors for Locating Rebar
12:00 pm – 12:30 pm	Giatec Scientific Inc.	Giatec Smart Box™ - A Novel Wireless Sensor for Testing the Properties of Fresh Concrete

Demonstration schedule listed as of 3/13/15. For the most up-to-date list of exhibitor demonstrations, please stop by the ACI Registration Desk or check the digital monitor in the exhibit hall.

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Friday, April 10, 2015		
6:30 pm - 9:00 pm		
TAC	Technical Activities M1	M-JULIA LEE A&B
Saturday, April 11, 2015		
7:00 am - 6:00 pm		
TAC	Technical Activities M2	M-JULIA LEE A&B
8:00 am - 5:30 pm		
131-TG	MVD Task Group	M-BENNIE MOTEN A&B
10:00 am - 12:00 pm		
562-D	Design M1	M-BIG JOE TURNER A
12:00 pm - 7:00 pm		
347	Formwork M1	M-JAY MCSHANN B
1:00 pm - 2:00 pm		
562-D	Design M2	M-BIG JOE TURNER A
1:00 pm - 4:00 pm		
562-A	General	M-BIG JOE TURNER B
1:00 pm - 5:00 pm		
EAC	Educational Activities M1	M-JAY MCSHANN A
301	Specifications M1	M-BASIE A
2:00 pm - 6:00 pm		
	ACI Registration	C-2103
	ACI Bookstore & Resource Pavilion	C-2103
	ACI Speaker Ready Room	C-2200
	Afternoon Soda Break	C-2103
4:00 pm - 5:00 pm		
562-C	Evaluation M1	M-BIG JOE TURNER B
6:00 pm - 8:00 pm		
562-C	Evaluation M2	M-BIG JOE TURNER B
6:00 pm - 9:00 pm		
562-F	Durability	M-JAY MCSHANN A
Sunday, April 12, 2015		
5:00 am and 6:00 am		
	Run/Walk Meet-Up	MARRIOTT MAIN LOBBY
7:00 am - 8:15 am		
301-SC	Spec-Steering Committee	C-2212
7:00 am - 10:00 am		
	*Guest Hospitality	M-TRUMAN
	Coffee Break	C-2103
7:00 am - 2:00 pm		
TAC	Technical Activities M3	M-JULIA LEE A&B
7:00 am - 6:00 pm		
	Speaker Ready Room	C-2200
7:30 am - 5:00 pm		
	ACI Registration	C-2103

8:00 am - 8:30 am		
408-A	Mechanical Splices and Headed Bars	C-2211
8:00 am - 9:00 am		
	Convention Orientation Breakfast	C-2215 C
	*Guest Overview	M-TRUMAN
8:00 am - 9:30 am		
341-C	Equake Res Brdgs-Retrofit	C-2215 A
8:00 am - 10:00 am		
E706	Concrete Repair Education	M-ANDY KIRK B
S801	Student Activities	M-MARY LOU WILLIAMS A&B
130-H	Climate Change Impacts on the Sustainability of Concrete	C-2503 A
562-B	Loads	M-ANDY KIRK A
8:00 am - 10:30 am		
CLC	Construction Liaison	C-2502 B
8:00 am - 11:00 am		
TAC-RG1	TAC Review Group 1	M-LESTER YOUNG A
TAC-RG2	TAC Review Group 2	M-LESTER YOUNG B
TAC-RG3	TAC Review Group 3	M-JAY MCSHANN A
TAC-RG4	TAC Review Group 4	M-JAY MCSHANN B
8:00 am - 5:00 pm		
	ACI Bookstore & Resource Pavilion	C-2103
	Exhibits	C-2103
8:30 am - 10:00 am		
C601-I	Shotcrete Inspector	C-2212
314	Simplified Design Buildings	M-BENNIE MOTEN A&B
342	Bridge Evaluation	C-2208
440-M	FRP - Repair of Masonry Str	M-BASIE A1
8:30 am - 11:30 am		
MEMC	Membership	M-BIG JOE TURNER B
301	Specifications M2	C-2105
350-C	Env Str-Reinf & Devel	M-BIG JOE TURNER A
408	Bond and Development of Steel Reinforcement	C-2211
8:30 am - 12:30 pm		
347	Formwork M2	M-BASIE C1
9:00 am - 10:00 am		
	Student Competition Check-In	C-2103
9:00 am - 10:30 am		
E701	Materials for Concrete Construction	C-2502 A

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Sunday, April 12, 2015		
9:00 am - 11:00 am		
551	Tilt-Up	C-2215 B
9:30 am - 11:00 am		
341-B	Equake Res Brdgs-Pier Walls	C-2215 A
9:30 am - 11:30 am		
445-B	Shear & Torsion-Seismic Shear	C-2209
9:30 am - 12:30 pm		
228	Nondestructive Testing	M-BASIE B1
445-A	Shear & Torsion-Strut & Tie	C-2104 B
10:00 am - 11:00 am		
343-G	Editorial	C-2212
546-D	Bagged Materials	C-2104 A
10:00 am - 11:30 am		
C601-D	Decorative Concrete Finisher	C-2208
Intl-Frm	ACI International Forum	C-2202
10:00 am - 12:00 pm		
C660	Shotcrete Nozzleman Cert	M-ANDY KIRK A
369	Seismic Rehab M1	M-MARY LOU WILLIAMS A&B
10:00 am - 1:00 pm		
421	Reinf Slabs	M-BENNIE MOTEN A&B
10:00 am - 5:00 pm		
	*Guest Lounge	M-TRUMAN
10:30 am - 12:00 pm		
376-01	Steering Subcommittee	C-2503 A
440-I	FRP-Prestressed Concrete	M-BASIE A1
10:30 am - 1:30 pm		
ITG-10	ITG-10 Alternative Cementitious Materials	M-ANDY KIRK B
10:30 am - 4:00 pm		
	Student FRP Composites Competition	C-2103
11:00 am - 12:00 pm		
343-A	Design	C-2212
546-E	Corrosion Studies	C-2104 A
11:00 am - 12:30 pm		
C650	Tilt-Up Constructor Cert	M-LESTER YOUNG A
341-A	Equake Res Brdgs- Columns	C-2215 A
11:00 am - 1:00 pm		
C640	Craftsman Cert	C-2215 B
549	Thin Reinforced	C-2210
11:00 am - 2:00 pm		
	Lunch Concessions	C-2103
11:30 am - 12:30 pm		
201-TG2	Physical Salt Attack	C-2208
209-C	Models Applicability and Uncertainty	M-BIG JOE TURNER A
11:30 am - 1:00 pm		
221	Aggregates	M-BIG JOE TURNER B
335	Composite and Hybrid Structures	C-2209
350-SC	Env Str-Steering Comm	C-2207
441-E	Columns with Multi Spiral Reinforcements	C-2213
11:30 am - 1:30 pm		
	✓International Lunch	C-2215 C
12:00 pm - 2:00 pm		
201-TG3	Alkali-Aggregate Reactivity	M-MARY LOU WILLIAMS A&B
201-TG4	Impact of Natural and Other Pozzolans on Durability	C-2211
12:00 pm - 4:30 pm		
237-TG1	Self-Consolidating Concrete Task Group	M-JAY MCSHANN A
12:30 pm - 2:00 pm		
130-F	Social Issues	C-2208
445-E	Shear & Torsion-SOA Torsion	M-JAY MCSHANN B
12:30 pm - 4:30 pm		
301-B	Spec-Formwork & Reinforcement	M-BIG JOE TURNER A
12:30 pm - 5:30 pm		
301	Specifications M3	C-2105
1:00 pm - 2:00 pm		
301-H	Spec-Tilt-Up Constr & Arch Conc	C-2213
1:00 pm - 3:00 pm		
228-B	Visual Inspection	C-2210
239-A	Emerging Technology Report	C-3501 E
376-B	Materials Subcommittee	M-BIG JOE TURNER B
423-F	Sustainable Prestressed Concrete	C-2212
445-C	Shear & Torsion-Punching Shear	C-2102 A

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

1:00 pm - 3:00 pm—*Sessions*		
	Form Pressure of Self-Consolidating Concrete—Hydrostatic or Not?	C-2203
	Heavy-Duty Concrete Pavements, Part 1 of 2	C-2202
	International Cooperation between ACI Technical Committees, Part 1 of 3	C-2204
1:00 pm - 4:00 pm		
	Afternoon Soda Break	C-2103
362-A	Updating Guide to Structural Maintenance of Parking Structures Documents	C-2215 B
369	Seismic Rehab M2	M-BENNIE MOTEN A&B
1:00 pm - 5:00 pm		
301-C	Spec-Placing Consolidating & Curing	M-LESTER YOUNG B
301-D	Spec-Lightweight & Massive Concrete	C-2502 A
301-G	Spec-Shrink Comp Conc & Ind Floor Slabs	M-LESTER YOUNG A
336	Footings	C-2209
350-E	Env Str-Precast/Pre-stressed	C-2207
562	Eval, Repair & Rehab	M-BASIE B1
1:30 pm - 3:00 pm		
IC-Cert	International Certification	C-2206
341-D	Perf Based Seismic Design	M-ANDY KIRK B
1:30 pm - 3:30 pm		
345	Bridge Construction	C-2502 B
1:30 pm - 5:00 pm		
355	Anchorage	C-2215 A
2:00 pm - 3:00 pm		
236-TG1	Advanced Analysis Techniques for Concrete	C-2104 A
310/ 308-TG2	Curing Decorative Concrete Joint TG	C-2101
2:00 pm - 4:00 pm		
215	Fatigue	C-2104 B
305	Hot Weather	M-MARY LOU WILLIAMS A&B

2:00 pm - 5:00 pm		
	✓KU Structural Testing Laboratories Tour	M-DEPART MARRIOTT MAIN LOBBY
132	Responsibility	M-JULIA LEE A&B
133	Disaster Reconnaissance	M-ANDY KIRK A
315	Detailing	C-2211
352	Joints	C-2503 B
445-D	Shear & Torsion - Shear Databases	M-JAY MCSHANN B
2:30 pm - 4:00 pm		
HTC	Hot Topic	C-2102 B
2:30 pm - 5:00 pm		
224	Cracking	C-3501 F
363	High-Strength	C-2208
3:00 pm - 4:30 pm		
309	Consolidation	C-2212
3:00 pm - 5:00 pm		
121	Quality Assurance	M-BIG JOE TURNER B
301-E	Spec-Post-Tensioned Concrete	C-2104 A
341	Earthquake-Resistant Bridges	M-BASIE C1
370	Dynamic & Vibratory Effects	C-2206
376-C	Analysis Subcommittee	M-ANDY KIRK B
423-E	Prestressed Losses	C-3501 E
440-K	FRP Material Characteristics	M-BASIE A1
550	Precast Structures	C-2210
3:00 pm - 5:30 pm		
310	Decorative Concrete	C-2101
3:30 pm - 5:00 pm		
241	Nanotechnology of Concrete M1	C-2502 B
318-W	International Workshop Planning	C-2213
439-A	Steel Reinf-Wire	C-2102 A
3:30 pm - 5:30 pm		
423/445	Adhoc Grp on Shear in Prestress Conc	C-2503 A
3:30 pm - 5:30 pm—*Sessions*		
	Heavy-Duty Concrete Pavements, Part 2 of 2	C-2202
	International Cooperation between ACI Technical Committees, Part 2 of 3	C-2204
	Rational Approaches for Fire Resistance Design of Concrete Structures	C-2203

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Sunday, April 12, 2015

4:00 pm - 5:00 pm		
423-D	Bond and Dev Pretens Membrs	C-2104 B
4:00 pm - 5:30 pm		
123	Research	M-BENNIE MOTEN A&B
S805	Collegiate Concrete Council	M-MARY LOU WILLIAMS A&B
5:45 pm - 7:00 pm		
	Opening Session and Awards Program	C-3501 A-D
7:00 pm - 8:00 pm		
	Opening Reception	C-2103
8:00 pm - 10:00 pm—*Sessions*		
	Hot Topic Session: Building Resiliency	C-2202
9:00 pm - 10:30 pm		
	Student and Young Professional Networking Event	M-BARCENTRAL

Monday, April 13, 2015

5:00 am and 6:00 am		
	Run/Walk Meet-Up	MARRIOTT MAIN LOBBY
6:00 am - 6:45 am		
	Morning Yoga Class	MARRIOTT YOGA STUDIO
6:30 am - 8:00 am		
	Workshop for Technical Committee Chairs (Invitation Only)	C-3501 G&H
7:00 am - 8:30 am		
ITG-9	ITG-9 Concrete Wind Turbine Towers	C-2208
	Speaker Development Breakfast	C-3501 F
7:00 am - 10:00 am		
	*Guest Hospitality	M-TRUMAN
	Coffee Break	C-2103
7:00 am - 6:00 pm		
	Speaker Ready Room	C-2200
7:15 am - 8:30 am		
IC-Conf	International Conferences	C-2213
7:30 am - 5:00 pm		
	ACI Registration	C-2103
8:00 am - 9:00 am		
441-A	High-Strength Conc	M-ANDY KIRK B
8:00 am - 10:00 am		
303	Architectural CIP	C-2502 A
376-D	Design & Construction Subcommittee	M-ANDY KIRK A
562-E	Education	M-BIG JOE TURNER A
8:00 am - 11:00 am		
349-C	Nuclear Str-Anchorage	M-JULIA LEE A&B
8:00 am - 5:00 pm		
	ACI Bookstore & Resource Pavilion	C-2103
	Exhibits	C-2103
8:15 am - 9:00 am		
343-B	Bridge Deck	C-2209
8:15 am - 11:00 am		
237	Self-Consolidating Concrete	C-2503 B
548-A	Polymers - Overlays	M-LESTER YOUNG A
8:30 am - 9:30 am		
S802	Teaching Methods and Educational Materials	C-2210
8:30 am - 10:00 am		
130-A	Materials	C-2105
446	Fracture Mechanics	C-2104 A
524	Plastering	M-JAY MCSHANN B
533	Precast Panels	M-BIG JOE TURNER B
544-SC	FRC - Steering Committee	C-2102 B
8:30 am - 10:30 am		
439	Steel Reinforcement	M-MARY LOU WILLIAMS A&B
506-C	Shotcreting-Guide	C-2215 A
546	Repair	M-BENNIE MOTEN A&B
8:30 am - 10:30 am—*Sessions*		
	Is Global Climate Change Killing Our Concrete Structures?	C-2203
	Research in Progress, Part 1 of 2	C-2202
	Toward Sustainable Infrastructure with Fiber-Reinforced Polymer Composites, Part 1 of 2	C-2205
	UHPC Innovation in Material and Structural Design, Part 1 of 2	C-2204
8:30 am - 11:00 am		
C610	Field Technician Cert	C-3501 F
8:30 am - 11:30 am		
543	Piles	C-2213

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

8:30 am - 12:00 pm		
301-A	Spec-Gen Req, Definitions, & Tolerances	M-JAY MCSHANN A
374	Seismic Design	M-BASIE C
8:30 am - 12:30 pm		
423	Prestressed	C-2503 A
440-F	FRP-Repair-Strengthening	M-BASIE A1
8:30 am - 1:00 pm		
302	Floor Construction	M-BASIE B
350-B	Env Str-Durability	C-2502 B
8:30 am - 5:00 pm		
313	Bins and Silos	C-2207
8:30 am - 6:30 pm		
350-D	Env Str-Structural	C-2208
9:00 am - 9:30 am		
	Concrete Sealants, Inc. Demonstration	C-2103
9:00 am - 10:00 am		
441-B	Lateral Reinforcement	C-2209
9:00 am - 11:00 am		
365	Service Life	C-3501 E
445	445 Ad Hoc-PC	M-ANDY KIRK B
9:00 am - 12:00 pm		
301-F	Spec-Precast Concrete Panels	C-2104 B
9:30 am - 11:00 am		
318-L	International Liaison	C-2215 B
364-A	Editorial Subcommittee	C-2212
9:45 am - 10:15 am		
	Tekla, Inc. Demonstration	C-2103
10:00 am - 12:00 pm		
216	Fire Resistance	C-2209
343	Bridge Design	C-2502 A
376-A	Code, Education & Publication Subcommittee	M-BIG JOE TURNER A
10:00 am - 12:30 pm		
207	Mass Concrete	C-2104 A
377	Performance Based Structural Integrity & Resilience of Concrete Structures	M-BIG JOE TURNER B
10:00 am - 1:00 pm		
209	Creep & Shrinkage	M-JAY MCSHANN B
240	Natural Pozzolans	M-ANDY KIRK A
544-A	FRC-Production & Applications	C-2105

10:00 am - 5:00 pm		
	*Guest Lounge	M-TRUMAN A
10:30 am - 11:00 am—*Session*		
	Research in Progress Poster Session	C-2200 FOYER
10:30 am - 11:00 am		
	Germann Instruments, Inc. Demonstration	C-2103
10:30 am - 12:30 pm		
239-C	Structural Design on UHPC	C-2102 A
437	Strength Evaluation	C-2210
506-E	Shotcreting-Specifications	C-2215 A
11:00 am - 12:00 pm		
364-TG1	Rehab Guide	M-ANDY KIRK B
11:00 am - 12:30 pm		
318-S	Spanish Translation	C-2215 B
548-C	Structural Polymer Design	M-LESTER YOUNG B
11:00 am - 1:00 pm—*Sessions*		
	Introduction to ISO 16311	C-2203
	Research in Progress, Part 2 of 2	C-2202
	Toward Sustainable Infrastructure with Fiber-Reinforced Polymer Composites, Part 2 of 2	C-2205
	UHPC Innovation in Material and Structural Design, Part 2 of 2	C-2204
11:00 am - 1:30 pm		
447	Finite Element Analysis	C-2102 B
11:00 am - 2:00 pm		
	Lunch Concessions	C-2103
11:15 am - 11:45 am		
	Tekla, Inc. Demonstration	C-2103
11:30 am - 1:00 pm		
201-D	Durability-Oversight Committee	C-2212
304	Measuring/Mix/Trans/Placing	M-BENNIE MOTEN A&B
346	CIP Pipe	M-LESTER YOUNG A
C655	Foundation Constructor Certification	C-2213
11:30 am - 1:30 pm		
	✓Student Lunch	C-3501 G&H
11:30 am - 2:00 pm		
441	Columns	M-JULIA LEE A&B

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Monday, April 13, 2015		
12:00 pm - 12:30 pm		
	BuildingHow Team Demonstration	C-2103
12:00 pm - 2:00 pm		
214	Strength Tests M1	M-ANDY KIRK B
12:30 pm - 2:00 pm		
124	Aesthetics	M-BIG JOE TURNER B
350-H	Env Str-Editorial	M-LESTER YOUNG B
12:30 pm - 6:00 pm		
301	Specifications M4	M-BASIE C
1:00 pm - 2:00 pm		
237	237 Subcommittee	C-2213
1:00 pm - 2:30 pm		
C630	Construction Inspector Cert	C-2105
1:00 pm - 3:00 pm		
122	Energy Efficiency	C-2210
350-J	Env Str-Education	C-2211
C601-F	Nondestructive Testing Technician	C-2101
1:00 pm - 3:30 pm		
375	Design for Wind Loads	M-JAY MCSHANN A
1:00 pm - 4:00 pm		
	Afternoon Soda Break	C-2103
232	Fly Ash in Concrete	C-3501 F
364	Rehabilitation	M-BENNIE MOTEN A&B
376	RLG Containment Structures	M-JAY MCSHANN B
1:00 pm - 4:30 pm		
349-AB	Nuclear Structure-Design & Materials	C-2104 A
1:00 pm - 5:00 pm		
225	Hydraulic Cements	C-3501 E
307	Chimneys	C-2212
362	Parking Structures	M-MARY LOU WILLIAMS A&B
1:30 pm - 2:00 pm		
	QuakeWrap, Inc. Demonstration	C-2103
1:30 pm - 3:00 pm		
352-TG2	Beam-Column Joints & Connections	C-2102 B
440-G	FRP-Student	M-BASIE A1
506-A	Shotcreting-Evaluation	C-2215 A
1:30 pm - 3:30 pm—*Sessions*		
	D-Cracking of Concrete Pavements	C-2202
	Impact of Chemical Deicers on Durability	C-2204
	Undergraduate Research in Concrete Materials, Structural Design, and Construction	C-2203
2:00 pm - 2:30 pm		
	ACI University Presentation	C-2103
2:00 pm - 3:30 pm		
S806	Young Professional Activities	M-BIG JOE TURNER B
348	Safety	M-LESTER YOUNG B
2:00 pm - 4:00 pm		
231	Early Age	C-2502 A
351-D	Design Provisions for Heavy Industrial Equipment and Machinery Concrete Support Structures	C-2502 B
2:00 pm - 5:00 pm		
CAC	Chapter Activities	C-2215 B
MKTC	Marketing	M-ANDY KIRK B
130	Sustainability M1	M-JULIA LEE A&B
212	Chemical Admixtures	C-2104 B
2:00 pm - 6:00 pm		
369	Seismic Rehab M3	C-2209
445	Shear & Torsion	C-2102 A
2:00 pm - 6:30 pm		
360	Slabs-on-Ground	M-BASIE B
3:00 pm - 4:00 pm		
201-TG1	Aggressive Chemicals	C-2211
3:00 pm - 4:30 pm		
C601	New Certification Program	C-2503 A
352-TG1	Slab-Column Joints & Connections	C-2102 B
506-G	Qualifications for Projects	M-BIG JOE TURNER A
3:00 pm - 5:00 pm		
371	Elevated Tanks with Concrete Pedestals	C-2210
548-B	Polymers-Adhesives	M-LESTER YOUNG A
3:00 pm - 6:00 pm		
435	Deflection	M-ANDY KIRK A
440-H	FRP-Reinforced Concrete	M-BASIE A1

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

3:30 pm - 5:00 pm		
211-P	Guide for Selecting Proportions for Pumpable Concrete	M-BIG JOE TURNER B
214	Strength Tests M2	C-2101
	*Guest Social (by invitation only)	M-HISTORIC MUEHLEBACH LOBBY
3:30 pm - 5:30 pm		
239	Ultra-High-Performance Concrete	C-2105
4:00 pm - 5:30 pm		
235	Electronic Data Exchange	M-JAY MCSHANN B
4:00 pm - 6:00 pm		
117-TG	Tolerances Task Group	M-BENNIE MOTEN A&B
351-C	Equip Fdns-Dynamic Fdns	C-2502 A
4:00 pm - 6:00 pm—*Sessions*		
	Artifacts for Better Presentations	C-2205
	International Cooperation between ACI Technical Committees, Part 3 of 3	C-2203
	Pumpability of Self-Consolidating Concrete	C-2202
	Repair Guides and Standards around the World	C-2204
4:30 pm - 5:30 pm		
C601-J	Adhesive Anchor Installation Inspector	C-2102 B
236	Material Science	C-3501 F
506-F	Shotcreting-Underground	M-BIG JOE TURNER A
4:30 pm - 6:00 pm		
TDSC	TAC Design Standards Committee	M-LESTER YOUNG B
4:30 pm - 6:30 pm		
221-TG	Task Group on AAR	C-2503 A
5:00 pm - 6:30 pm		
E702	Designing Concrete Structures	C-2215 B
209-D	Numerical Methods and 3-D Analyses	M-JULIA LEE A&B
447-TG	Finite Element Analysis Task Group	C-2215 A
544-E	FRC-Mechanical Properties	M-ANDY KIRK B
555	Recycled	M-MARY LOU WILLIAMS A&B

5:00 pm - 7:00 pm		
E703	Concrete Construction Practices	C-3501 E
334	Shells	C-2212
5:30 pm - 6:30 pm		
506-B	Shotcreting-Fiber-Reinforced	M-BIG JOE TURNER A
6:00 pm - 7:00 pm		
	Women in ACI Reception	M-BASIE BALLROOM FOYER
6:30 pm - 8:30 pm—*Sessions*		
	123 Forum: Are Nano-Materials and Nano-Technologies Ready for Full-Scale Concrete Construction Applications?	C-2202
Tuesday, April 14, 2015		
5:00 am and 6:00 am		
	Run/Walk Meet-Up	MARRIOTT MAIN LOBBY
6:00 am - 6:45 am		
	Morning Yoga Class	MARRIOTT YOGA STUDIO
6:30 am - 8:00 am		
TTAG	Technology Transfer Advisory Group	C-2102 A
7:00 am - 8:30 am		
IPAC	International Project Awards Committee	C-2503 A
TRRC	TAC Repair & Rehab	C-2211
359-B	Working Group on Matls, Fabrication & Examination	C-2215 B
7:00 am - 10:00 am		
	*Guest Hospitality	M-TRUMAN
	Coffee Break	C-2103
7:00 am - 6:00 pm		
	Speaker Ready Room	C-2200
7:30 am - 9:00 am		
130-G	Education/Certification	C-2503 B
C601-E	Concrete Construction Sustainability Assessor	C-2212
7:30 am - 12:00 pm		
350	Environmental Structures M1	M-BASIE B
7:30 am - 5:00 pm		
	ACI Registration	C-2103
8:00 am - 9:00 am		
IJBRC	Joints & Bearings Research	M-BIG JOE TURNER A

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Tuesday, April 14, 2015		
8:00 am - 9:30 am		
C620	Laboratory Tech Cert	M-MARY LOU WILLIAMS A&B
230	Soil Cement	M-LESTER YOUNG A
8:00 am - 10:00 am		
238	Workability of Fresh Concrete	M-LESTER YOUNG B
444	Structural Health Monitoring and Instrumentation	M-BIG JOE TURNER B
8:00 am - 11:00 am		
201	Durability	C-2104 B
440	Fiber-Reinforced Polymer	M-BASIE A
522	Pervious Concrete	M-BASIE C
8:00 am - 12:30 pm		
318-B	Anchorage and Reinforcement	C-2101
318-C	Serviceability/Safety	C-2206
318-E	Section and Member Strength	C-2207
318-F	Foundations	C-2209
318-G	Precast and Prestressed Concrete	C-2208
8:00 am - 5:00 pm		
	ACI Bookstore & Resource Pavilion	C-2103
	Exhibits	C-2103
8:30 am - 10:30 am		
	Concrete Flatwork Finisher and Technician Exam Review-English	M-JULIA LEE A&B
	Concrete Flatwork Finisher and Technician Exam Review-Spanish	M-BENNIE MOTEN A&B
359-C	Working Group on Modernization	C-2215 B
523	Cellular Concrete	C-2211
560	Design & Constr ICFs	C-2104 A
8:30 am - 10:30 am—*Sessions*		
	3-D Time Dependent Numerical Analyses of Concrete Structures, Part 1 of 2	C-2204
	BIM for Cast-in-Place Concrete	C-2203
	Recent Updates to Blast Design Guidance	C-2202
8:30 am - 11:30 am		
117	Tolerances	C-2502 A
306	Cold Weather	M-ANDY KIRK B
506	Shotcreting	C-2502 B
548	Polymers	C-2215 A
9:00 am - 10:00 am		
325-A	Pavements-Design	C-2102 B
9:00 am - 10:30 am		
332-B	Conc Mtrls and Plcmnt	C-2213
332-D	Residential Concrete-Footings & Foundation Walls	C-2212
9:00 am - 11:00 am		
515	Protective Systems	C-2210
9:00 am - 11:30 am		
IAC	International Advisory Committee	M-JAY MCSHANN A
9:30 am - 11:00 am		
PUBC	Publications	M-ANDY KIRK A
130-E	Design/Specifications/ Codes/Regulations	M-MARY LOU WILLIAMS A&B
9:30 am - 11:30 am		
357	Offshore & Marine	M-JAY MCSHANN B
9:30 am - 12:00 pm		
EAC	Educational Activities M2	C-2102 A
10:00 am - 11:30 am		
C631	Conc Transportation Const Insp	M-LESTER YOUNG A
238-A	Student Workability	M-LESTER YOUNG B
310-J	Polished Finishes	C-2503 B
10:00 am - 12:00 pm		
211-A	Proportioning-Editorial	M-BIG JOE TURNER B
10:00 am - 5:00 pm		
	*Guest Lounge	M-TRUMAN
10:30 am - 12:00 pm		
325-C	Pavements-Prestressed and Precast	C-2104 A
332-E	Residential Concrete-Above Grade Walls	C-2213
332-F	Residential Concrete-Slabs	C-2212
544-F	FRC-Durability	C-2105
10:30 am - 12:30 pm		
	✓Concrete Flatwork Finisher and Technician Exam-Spanish	M-BENNIE MOTEN A&B
349/359/ 370-TG	ACI 349 and ACI 359 and ACI 370 Joint Committee TG	C-2215 B

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

10:30 am - 1:00 pm		
526	Autoclaved Aerated Concrete	C-2211
11:00 am - 12:30 pm		
213-TG	Lightweight-Editorial TG	M-BIG JOE TURNER A
11:00 am - 1:00 pm		
CRC	Concrete Research Council	C-2104 B
130	Sustainability M2	M-MARY LOU WILLIAMS A&B
327	RCC Pavements	C-2210
11:00 am - 1:00 pm—*Sessions*		
	3-D Time Dependent Numerical Analyses of Concrete Structures, Part 2 of 2	C-2204
	Decorative Concrete and Aesthetic Innovations	C-2205
	In-Transit Quality Control	C-2202
	Influence of Admixtures on Early-Age Properties	C-2203
11:15 am - 11:45 am		
	Zircon Corporation Demonstration	C-2103
11:30 am - 1:00 pm		
E707	Specification Education	C-2503 B
211-TG2	Developing & Using a Three-Point Curve Task Group	M-LESTER YOUNG A
544-D	FRC-Structural Uses	M-JAY MCSHANN A
11:30 am - 1:30 pm		
	✓Contractors' Day Lunch	C-2215 C
12:00 pm - 12:30 pm		
	Giatec Scientific Inc. Demonstration	C-2103
12:00 pm - 1:00 pm		
325-F	Concrete Pavement Overlays	C-2213
12:30 pm - 2:00 pm		
C680	Adhesive Anchor Installer	M-JULIA LEE A&B
12:30 pm - 2:30 pm		
311	Inspection	M-ANDY KIRK B
12:30 pm - 3:30 pm		
350-F	Env Str-Seismic	C-2503 A
1:00 pm - 2:00 pm		
223-C	Design Considerations	M-LESTER YOUNG B

1:00 pm - 3:00 pm		
211-I	Assessing Aggregate Gradation	M-BIG JOE TURNER A
211-TG1	Proportioning Concrete with Non-Clinker-Based Cement	C-2215 B
241	Nanotechnology of Concrete M2	M-JAY MCSHANN B
325-D	Proportioning for Pavements	M-JAY MCSHANN A
1:00 pm - 4:00 pm		
	Afternoon Soda Break	C-2103
1:00 pm - 5:00 pm		
350-A	Env Str-General & Concrete	M-BIG JOE TURNER B
563	Specs for Repair of Struct Concrete in Bldgs	C-2211
1:30 pm - 3:00 pm		
120	History	C-2102 A
544-C	FRC-Testing	M-BASIE A
1:30 pm - 3:30 pm		
	✓Kansas City Fountains Tour	DEPART MARRIOTT MAIN LOBBY
213	Lightweight	M-MARY LOU WILLIAMS A&B
1:30 pm - 3:30 pm—*Sessions*		
	Advancement in Modeling Bond of Deformed Bars in Concrete, Part 1 of 2	C-2205
	Contractors' Day Session: Building a Better Tomorrow	C-2203
	Open Topic Session, Part 1 of 2	C-2202
	Use of High-Strength Concrete in Tall Buildings, Part 1 of 2	C-2204
1:30 pm - 5:00 pm		
332	Residential Concrete	C-2502 B
349	Nuclear Structures	M-BASIE B
1:30 pm - 6:00 pm		
318-A	General Concrete Construction	C-2101
318-D	Members	C-2206
318-H	Seismic Provision	C-2207
318-J	Joints and Connections	C-2208
318-R	High Strength Reinforcement	C-2209

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Tuesday, April 14, 2015		
2:00 pm - 3:30 pm		
118	Use of Digital Technology	M-LESTER YOUNG B
325-E	Accelerated Paving	M-ANDY KIRK A
2:00 pm - 4:00 pm		
130-D	Rating Systems/ Sustainabilty Tools	C-2102 B
2:00 pm - 4:30 pm		
234	Silica Fume	C-2104 A
2:00 pm - 5:00 pm		
CPC	Certification Programs	C-2104 B
222	Corrosion	C-2503 B
223	Shrinkage Compensating	M-JULIA LEE A&B
229	Controlled Low Strength	C-2215 A
233	Slag Cement	C-2105
3:00 pm - 5:00 pm		
POW	Convention Committee Pow Wow M2	C-2210
131	BIM	M-BENNIE MOTEN A&B
211-N	Proportioning-Limestone	C-2102 A
372	Tanks Wrapped Wire/ Strand	M-BIG JOE TURNER A
3:00 pm - 5:30 pm		
544	Fiber-Reinforced Concrete	M-BASIE A
3:30 pm - 5:00 pm		
363-A	High-Strength Light-weight Concrete	C-2213
3:30 pm - 5:30 pm		
325	Pavements	M-MARY LOU WILLIAMS A&B
4:00 pm - 5:30 pm		
308-B	Curing-Specifications	M-ANDY KIRK A
552	Cementitious Grouting	M-LESTER YOUNG B
4:00 pm - 6:00 pm		
	✓Concrete Flatwork Finisher and Technician Exam-English	M-BASIE C
350-L	Env Str-Specification	C-2212
351	Equip Foundations	C-2502 A
4:00 pm - 6:00 pm—*Sessions*		
	Advancement in Modeling Bond of Deformed Bars in Concrete, Part 2 of 2	C-2205
	Open Topic Session, Part 2 of 2	C-2202
	Troubleshooting Specifications	C-2203
	Use of High-Strength Concrete in Tall Buildings, Part 2 of 2	C-2204
5:30 pm - 6:30 pm		
	Faculty Network Reception	M-12TH STREET ROOM
6:30 pm - 8:00 pm		
	Concrete Mixer	C-3501 A-H

Wednesday, April 15, 2015		
5:00 am and 6:00 am		
	Run/Walk Meet-Up	MARRIOTT MAIN LOBBY
6:00 am - 6:45 am		
	Morning Yoga Class	MARRIOTT YOGA STUDIO
7:00 am - 8:30 am		
C601-H	Cement Testing	C-2101
7:00 am - 9:00 am		
SYPAC	Student and Young Professional Activities	C-2210
7:00 am - 10:00 am		
	*Guest Hospitality	M-TRUMAN
	Coffee Break	C-2103
7:30 am - 9:30 am		
359-A	Working Group on Design	C-2502 A
7:30 am - 10:00 am		
TCSC	TAC Construction Stnds	C-2209
7:00 am - 2:00 pm		
	Speaker Ready Room	C-2200
7:30 am - 4:00 pm		
350	Environmental Structures M2	C-2104 A&B
8:00 am - 9:30 am		
C670	Masonry Technician Certification	C-2212
8:00 am - 10:00 am		
308-A	Curing-Guide	C-2215 B
8:00 am - 11:00 am		
211	Proportioning	C-2215 A

Daily Program

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

8:00 am - 12:00 pm		
	ACI Bookstore & Resource Pavilion	C-2103
	ACI Registration	C-2103
	✓Tilt-Up Seminar and Exam	C-2211
8:00 am - 4:30 pm		
330	Parking Lots & Site Paving	C-2208
8:00 am - 6:00 pm		
318	Building Code	C-2102 A&B
8:30 am - 10:30 am—*Sessions*		
	How to Make an iPad App	C-2205
	Pervious Concrete: Let the Knowledge Flow	C-2202
	Resilient Housing: Making the Case for Sustainable Residential Concrete, Part 1 of 2	C-2203
	Ternary Blends and More, Part 1 of 2	C-2204
9:00 am - 12:00 pm		
ACI-Fdn	ACI Foundation	C-2210
9:30 am - 11:30 am		
329	Perf Ready Mixed	C-2105
9:30 am - 12:00 pm		
C601-B	Concrete Quality Technical Mgr	C-2212
9:30 am - 3:00 pm		
359	Nuclear Reactors	C-2502 A
10:00 am - 1:00 pm		
308	Curing	C-2215 B
10:00 am - 5:00 pm		
	*Guest Lounge	M-TRUMAN
11:00 am - 1:00 pm—*Sessions*		
	Resilient Housing: Concrete Solutions for Hazard-Resistant Housing, Part 2 of 2	C-2203
	Ternary Blends and More, Part 2 of 2	C-2204
6:30 pm - 8:00 pm		
	President's Reception (invitation only)	M-BASIE C

Thursday, April 16, 2015		
8:00 am - 5:00 pm		
	✓ACI 318-14: Building Code Seminar	M-BASIE C
10:00 am - 5:00 pm		
BOD	Board of Direction	M-BASIE A

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
ACI-Fdn	ACI Foundation	Wed	9:00 am - 12:00 pm	C-2210
BOD	Board of Direction	Thu	10:00 am - 5:00 pm	M-BASIE A
CAC	Chapter Activities	Mon	2:00 pm - 5:00 pm	C-2215 B
CLC	Construction Liaison	Sun	8:00 am - 10:30 am	C-2502 B
CPC	Certification Programs	Tue	2:00 pm - 5:00 pm	C-2104 B
CRC	Concrete Reserch Council	Tue	11:00 am - 1:00 pm	C-2104 B
C601	New Certification Program	Mon	3:00 pm - 4:30 pm	C-2503 A
C601-B	Concrete Quality Technical Mgr	Wed	9:30 am - 12:00 pm	C-2212
C601-D	Decorative Concrete Finisher	Sun	10:00 am - 11:30 am	C-2208
C601-E	Concrete Construction Sustainability Assessor	Tue	7:30 am - 9:00 am	C-2212
C601-F	Nondestructive Testing Technician	Mon	1:00 pm - 3:00 pm	C-2101
C601-H	Cement Testing	Wed	7:00 am - 8:30 am	C-2101
C601-I	Shotcrete Inspector	Sun	8:30 am - 10:00 am	C-2212
C601-J	Adhesive Anchor Installation Inspector	Mon	4:30 pm - 5:30 pm	C-2102 B
C610	Field Technician Cert	Mon	8:30 am - 11:00 am	C-3501 F
C620	Laboratory Tech Cert	Tue	8:00 am - 9:30 am	M-MARY LOU WILLIAMS A&B
C630	Construction Inspector Cert	Mon	1:00 pm - 2:30 pm	C-2105
C631	Conc Transportation Const Insp	Tue	10:00 am - 11:30 am	M-LESTER YOUNG A
C640	Craftsman Cert	Sun	11:00 am - 1:00 pm	C-2215 B
C650	Tilt-Up Constructor Cert	Sun	11:00 am - 12:30 pm	M-LESTER YOUNG A
C655	Foundation Constructor Certification	Mon	11:30 am - 1:00 pm	C-2213
C660	Shotcrete Nozzleman Cert	Sun	10:00 am - 12:00 pm	M-ANDY KIRK A
C670	Masonry Technician Certification	Wed	8:00 am - 9:30 am	C-2212
C680	Adhesive Anchor Installer	Tue	12:30 pm - 2:00 pm	M-JULIA LEE A&B
EAC	Educational Activities M1	Sat	1:00 pm - 5:00 pm	M-JAY MCSHANN A
EAC	Educational Activities M2	Tue	9:30 am - 12:00 pm	C-2102 A
E701	Materials for Concrete Construction	Sun	9:00 am - 10:30 am	C-2502 A
E702	Designing Concrete Structures	Mon	5:00 pm - 6:30 pm	C-2215 B
E703	Concrete Construction Practices	Mon	5:00 pm - 7:00 pm	C-3501 E
E706	Concrete Repair Education	Sun	8:00 am - 10:00 am	M-ANDY KIRK B
E707	Specification Education	Tue	11:30 am - 1:00 pm	C-2503 B
HTC	Hot Topic	Sun	2:30 pm - 4:00 pm	C-2102 B
IAC	International Advisory Committee	Tue	9:00 am - 11:30 am	M-JAY MCSHANN A
IC-Cert	International Certification	Sun	1:30 pm - 3:00 pm	C-2206
IC-Conf	International Conferences	Mon	7:15 am - 8:30 am	C-2213
IJBRC	Joints & Bearings Research	Tue	8:00 am - 9:00 am	M-BIG JOE TURNER A

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
Intl-Frm	ACI International Forum	Sun	10:00 am - 11:30 am	C-2202
IPAC	International Project Awards Committee	Tue	7:00 am - 8:30 am	C-2503 A
ITG-9	ITG-9 Concrete Wind Turbine Towers	Mon	7:00 am - 8:30 am	C-2208
ITG-10	ITG-10 Alternative Cementitious Materials	Sun	10:30 am - 1:30 pm	M-ANDY KIRK B
MEMC	Membership	Sun	8:30 am - 11:30 am	M-BIG JOE TURNER B
MKTC	Marketing	Mon	2:00 pm - 5:00 pm	M-ANDY KIRK B
POW	Convention Committee Pow Wow M2	Tue	3:00 pm - 5:00 pm	C-2210
PUBC	Publications	Tue	9:30 am - 11:00 am	M-ANDY KIRK A
SYPAC	Student and Young Professional Activities	Wed	7:00 am - 9:00 am	C-2210
S801	Student Activities	Sun	8:00 am - 10:00 am	M-MARY LOU WILLIAMS A&B
S802	Teaching Methods and Educational Materials	Mon	8:30 am - 9:30 am	C-2210
S805	Collegiate Concrete Council	Sun	4:00 pm - 5:30 pm	M-MARY LOU WILLIAMS A&B
S806	Young Professional Activities	Mon	2:00 pm - 3:30 pm	M-BIG JOE TURNER B
TAC	Technical Activities M1	Fri	6:30 pm - 9:00 pm	M-JULIA LEE A&B
TAC	Technical Activities M2	Sat	7:00 am - 6:00 pm	M-JULIA LEE A&B
TAC	Technical Activities M3	Sun	7:00 am - 2:00 pm	M-JULIA LEE A&B
TAC-RG1	TAC Review Group 1	Sun	8:00 am - 11:00 am	M-LESTER YOUNG A
TAC-RG2	TAC Review Group 2	Sun	8:00 am - 11:00 am	M-LESTER YOUNG B
TAC-RG3	TAC Review Group 3	Sun	8:00 am - 11:00 am	M-JAY MCSHANN A
TAC-RG4	TAC Review Group 4	Sun	8:00 am - 11:00 am	M-JAY MCSHANN B
TCSC	TAC Construction Stnds	Wed	7:30 am - 10:00 am	C-2209
TDSC	TAC Design Standards Committee	Mon	4:30 pm - 6:00 pm	M-LESTER YOUNG B
TRRC	TAC Repair & Rehab	Tue	7:00 am - 8:30 am	C-2211
TTAG	Technology Transfer Advisory Group	Tue	6:30 am - 8:00 am	C-2102 A
117	Tolerances	Tue	8:30 am - 11:30 am	C-2502 A
117-TG	Tolerances Task Group	Mon	4:00 pm - 6:00 pm	M-BENNIE MOTEN A&B
118	Use of Digital Technology	Tue	2:00 pm - 3:30 pm	M-LESTER YOUNG B
120	History	Tue	1:30 pm - 3:00 pm	C-2102 A
121	Quality Assurance	Sun	3:00 pm - 5:00 pm	M-BIG JOE TURNER B
122	Energy Efficiency	Mon	1:00 pm - 3:00 pm	C-2210
123	Research	Sun	4:00 pm - 5:30 pm	M-BENNIE MOTEN A&B
124	Aesthetics	Mon	12:30 pm - 2:00 pm	M-BIG JOE TURNER B
130	Sustainability M1	Mon	2:00 pm - 5:00 pm	M-JULIA LEE A&B
130	Sustainability M2	Tue	11:00 am - 1:00 pm	M-MARY LOU WILLIAMS A&B
130-A	Materials	Mon	8:30 am - 10:00 am	C-2105
130-D	Rating Systems/Sustainability Tools	Tue	2:00 pm - 4:00 pm	C-2102 B
130-E	Design/Specifications/Codes/Regulations	Tue	9:30 am - 11:00 am	M-MARY LOU WILLIAMS A&B

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
130-F	Social Issues	Sun	12:30 pm - 2:00 pm	C-2208
130-G	Education/Certification	Tue	7:30 am - 9:00 am	C-2503 B
130-H	Climate Change Impacts on the Sustainability of Concrete	Sun	8:00 am - 10:00 am	C-2503 A
131	BIM	Tue	3:00 pm - 5:00 pm	M-BENNIE MOTEN A&B
131-TG	MVD Task Group	Sat	8:00 am - 5:30 pm	M-BENNIE MOTEN A&B
132	Responsibility	Sun	2:00 pm - 5:00 pm	M-JULIA LEE A&B
133	Disaster Reconnaissance	Sun	2:00 pm - 5:00 pm	M-ANDY KIRK A
201	Durability	Tue	8:00 am - 11:00 am	C-2104 B
201-D	Durability-Oversight Committee	Mon	11:30 am - 1:00 pm	C-2212
201-TG1	Aggressive Chemicals	Mon	3:00 pm - 4:00 pm	C-2211
201-TG2	Physical Salt Attack	Sun	11:30 am - 12:30 pm	C-2208
201-TG3	Alkali-Aggregate Reactivity	Sun	12:00 pm - 2:00 pm	M-MARY LOU WILLIAMS A&B
201-TG4	Impact of Natural and Other Pozzolans on Durability	Sun	12:00 pm - 2:00 pm	C-2211
207	Mass Concrete	Mon	10:00 am - 12:30 pm	C-2104 A
209	Creep & Shrinkage	Mon	10:00 am - 1:00 pm	M-JAY MCSHANN B
209-C	Models Applicability and Uncertainty	Sun	11:30 am - 12:30 pm	M-BIG JOE TURNER A
209-D	Numerical Methods and 3-D Analyses	Mon	5:00 pm - 6:30 pm	M-JULIA LEE A&B
211	Proportioning	Wed	8:00 am - 11:00 am	C-2215 A
211-A	Proportioning-Editorial	Tue	10:00 am - 12:00 pm	M-BIG JOE TURNER B
211-I	Assessing Aggregate Gradation	Tue	1:00 pm - 3:00 pm	M-BIG JOE TURNER A
211-N	Proportioning-Limestone	Tue	3:00 pm - 5:00 pm	C-2102 A
211-P	Guide for Selecting Proportions for Pumpable Concrete	Mon	3:30 pm - 5:00 pm	M-BIG JOE TURNER B
211-TG	Proportioning Concrete with Non-Clinker-Based Cement	Tue	1:00 pm - 3:00 pm	C-2215 B
211-TG2	Developing & Using a Three-Point Curve Task Group	Tue	11:30 am - 1:00 pm	M-LESTER YOUNG A
212	Chemical Admixtures	Mon	2:00 pm - 5:00 pm	C-2104 B
213	Lightweight	Tue	1:30 pm - 3:30 pm	M-MARY LOU WILLIAMS A&B
213-TG	Lightweight - Editorial TG	Tue	11:00 am - 12:30 pm	M-BIG JOE TURNER A
214	Strength Tests M1	Mon	12:00 pm - 2:00 pm	M-ANDY KIRK B
214	Strength Tests M2	Mon	3:30 pm - 5:00 pm	C-2101
215	Fatigue	Sun	2:00 pm - 4:00 pm	C-2104 B
216	Fire Resistance	Mon	10:00 am - 12:00 pm	C-2209
221	Aggregates	Sun	11:30 am - 1:00 pm	M-BIG JOE TURNER B
221-TG	Task Group on AAR	Mon	4:30 pm - 6:30 pm	C-2503 A
222	Corrosion	Tue	2:00 pm - 5:00 pm	C-2503 B
223	Shrinkage Compensating	Tue	2:00 pm - 5:00 pm	M-JULIA LEE A&B
223-C	Design Considerations	Tue	1:00 pm - 2:00 pm	M-LESTER YOUNG B

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
224	Cracking	Sun	2:30 pm - 5:00 pm	C-3501 F
225	Hydraulic Cements	Mon	1:00 pm - 5:00 pm	C-3501 E
228	Nondestructive Testing	Sun	9:30 am - 12:30 pm	M-BASIE B1
228-B	Visual Inspection	Sun	1:00 pm - 3:00 pm	C-2210
229	Controlled Low Strength	Tue	2:00 pm - 5:00 pm	C-2215 A
230	Soil Cement	Tue	8:00 am - 9:30 am	M-LESTER YOUNG A
231	Early Age	Mon	2:00 pm - 4:00 pm	C-2502 A
232	Fly Ash in Concrete	Mon	1:00 pm - 4:00 pm	C-3501 F
233	Slag Cement	Tue	2:00 pm - 5:00 pm	C-2105
234	Silica Fume	Tue	2:00 pm - 4:30 pm	C-2104 A
235	Electronic Data Exchange	Mon	4:00 pm - 5:30 pm	M-JAY MCSHANN B
236	Material Science	Mon	4:30 pm - 5:30 pm	C-3501 F
236-TG1	Advanced Analysis Techniques for Concrete	Sun	2:00 pm - 3:00 pm	C-2104 A
237	Self-Consolidating Concrete	Mon	8:15 am -11:00 am	C-2503 B
237	237 Subcommittee	Mon	1:00 pm - 2:00 pm	C-2213
237-TG1	Self-Consolidating Concrete Task Group	Sun	12:00 pm - 4:30 pm	M-JAY MCSHANN A
238	Workability of Fresh Concrete	Tue	8:00 am - 10:00 am	M-LESTER YOUNG B
238-A	Student Workability	Tue	10:00 am - 11:30 am	M-LESTER YOUNG B
239	Ultra-High-Performance Concrete	Mon	3:30 pm - 5:30 pm	C-2105
239-A	Emerging Technology Report	Sun	1:00 pm - 3:00 pm	C-3501 E
239-C	Structural Design on UHPC	Mon	10:30 am - 12:30 pm	C-2102 A
240	Natural Pozzolans	Mon	10:00 am - 1:00 pm	M-ANDY KIRK A
241	Nanotechnology of Concrete M1	Sun	3:30 pm - 5:00 pm	C-2502 B
241	Nanotechnology of Concrete M2	Tue	1:00 pm - 3:00 pm	M-JAY MCSHANN B
301	Specifications M1	Sat	1:00 pm - 5:00 pm	M-BASIE A
301	Specifications M2	Sun	8:30 am - 11:30 am	C-2105
301	Specifications M3	Sun	12:30 pm - 5:30 pm	C-2105
301	Specifications M4	Mon	12:30 pm - 6:00 pm	M-BASIE C
301-A	Spec-Gen Req, Definitions, & Tolerances	Mon	8:30 am - 12:00 pm	M-JAY MCSHANN A
301-B	Spec-Formwork & Reinforcement	Sun	12:30 pm - 4:30 pm	M-BIG JOE TURNER A
301-C	Spec-Placing Consolidating & Curing	Sun	1:00 pm - 5:00 pm	M-LESTER YOUNG B
301-D	Spec-Lightweight & Massive Concrete	Sun	1:00 pm - 5:00 pm	C-2502 A
301-E	Spec-Post-Tensioned Concrete	Sun	3:00 pm - 5:00 pm	C-2104 A
301-F	Spec-Precast Concrete Panels	Mon	9:00 am - 12:00 pm	C-2104 B
301-G	Spec-Shrink Comp Conc & Ind Floor Slabs	Sun	1:00 pm - 5:00 pm	M-LESTER YOUNG A
301-H	Spec-Tilt-Up Constr & Arch Conc	Sun	1:00 pm - 2:00 pm	C-2213
301-SC	Spec-Steering Committee	Sun	7:00 am - 8:15 am	C-2212

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
302	Floor Construction	Mon	8:30 am - 1:00 pm	M-BASIE B
303	Architectural CIP	Mon	8:00 am - 10:00 am	C-2502 A
304	Measuring/Mix/Trans/Placing	Mon	11:30 am - 1:00 pm	M-BENNIE MOTEN A&B
305	Hot Weather	Sun	2:00 pm - 4:00 pm	M-MARY LOU WILLIAMS A&B
306	Cold Weather	Tue	8:30 am - 11:30 am	M-ANDY KIRK B
307	Chimneys	Mon	1:00 pm - 5:00 pm	C-2212
308	Curing	Wed	10:00 am - 1:00 pm	C-2215 B
308-A	Curing-Guide	Wed	8:00 am - 10:00 am	C-2215 B
308-B	Curing-Specifications	Tue	4:00 pm - 5:30 pm	M-ANDY KIRK A
309	Consolidation	Sun	3:00 pm - 4:30 pm	C-2212
310	Decorative Concrete	Sun	3:00 pm - 5:30 pm	C-2101
310/308-TG2	Curing Decorative Concrete Joint TG	Sun	2:00 pm - 3:00 pm	C-2101
310-J	Polished Finishes	Tue	10:00 am - 11:30 am	C-2503 B
311	Inspection	Tue	12:30 pm - 2:30 pm	M-ANDY KIRK B
313	Bins & Silos	Mon	8:30 am - 5:00 pm	C-2207
314	Simplified Design Buildings	Sun	8:30 am - 10:00 am	M-BENNIE MOTEN A&B
315	Detailing	Sun	2:00 pm - 5:00 pm	C-2211
318	Building Code	Wed	8:00 am - 6:00 pm	C-2102 A&B
318-A	General Concrete Construction	Tue	1:30 pm - 6:00 pm	C-2101
318-B	Anchorage and Reinforcement	Tue	8:00 am - 12:30 pm	C-2101
318-C	Serviceability/Safety	Tue	8:00 am - 12:30 pm	C-2206
318-D	Members	Tue	1:30 pm - 6:00 pm	C-2206
318-E	Section and Member Strength	Tue	8:00 am - 12:30 pm	C-2207
318-F	Foundations	Tue	8:00 am - 12:30 pm	C-2209
318-G	Precast and Prestressed Concrete	Tue	8:00 am - 12:30 pm	C-2208
318-H	Seismic Provisions	Tue	1:30 pm - 6:00 pm	C-2207
318-J	Joints and Connections	Tue	1:30 pm - 6:00 pm	C-2208
318-L	International Liaison	Mon	9:30 am - 11:00 am	C-2215 B
318-R	High Strength Reinforcement	Tue	1:30 pm - 6:00 pm	C-2209
318-S	Spanish Translation	Mon	11:00 am - 12:30 pm	C-2215 B
318-W	International Workshop Planning	Sun	3:30 pm - 5:00 pm	C-2213
325	Pavements	Tue	3:30 pm - 5:30 pm	M-MARY LOU WILLIAMS A&B
325-A	Pavements-Design	Tue	9:00 am - 10:00 am	C-2102 B
325-C	Pavements-Prestressed and Precast	Tue	10:30 am - 12:00 pm	C-2104 A
325-D	Proportioning for Pavements	Tue	1:00 pm - 3:00 pm	M-JAY MCSHANN A
325-E	Accelerated Paving	Tue	2:00 pm - 3:30 pm	M-ANDY KIRK A
325-F	Concrete Pavement Overlays	Tue	12:00 pm - 1:00 pm	C-2213

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
327	RCC Pavements	Tue	11:00 am - 1:00 pm	C-2210
329	Perf Ready Mixed	Wed	9:30 am - 11:30 am	C-2105
330	Parking Lots & Site Paving	Wed	8:00 am - 4:30 pm	C-2208
332	Residential Concrete	Tue	1:30 pm - 5:00 pm	C-2502 B
332-B	Conc Mtrls and Plcmnt	Tue	9:00 am - 10:30 am	C-2213
332-D	Residential Concrete-Footings & Foundation Walls	Tue	9:00 am - 10:30 am	C-2212
332-E	Residential Concrete-Above Grade Walls	Tue	10:30 am - 12:00 pm	C-2213
332-F	Residential Concrete-Slabs	Tue	10:30 am - 12:00 pm	C-2212
334	Shells	Mon	5:00 pm - 7:00 pm	C-2212
335	Composite and Hybrid Structures	Sun	11:30 am - 1:00 pm	C-2209
336	Footings	Sun	1:00 pm - 5:00 pm	C-2209
341	Earthquake-Resistant Bridges	Sun	3:00 pm - 5:00 pm	M-BASIE C1
341-A	Equake Res Brdgs-Columns	Sun	11:00 am - 12:30 pm	C-2215 A
341-B	Equake Res Brdgs-Pier Walls	Sun	9:30 am - 11:00 am	C-2215 A
341-C	Equake Res Brdgs-Retrofit	Sun	8:00 am - 9:30 am	C-2215 A
341-D	Perf Based Seismic Design	Sun	1:30 pm - 3:00 pm	M-ANDY KIRK B
342	Bridge Evaluation	Sun	8:30 am - 10:00 am	C-2208
343	Bridge Design	Mon	10:00 am - 12:00 pm	C-2502 A
343-A	Design	Sun	11:00 am - 12:00 pm	C-2212
343-B	Bridge Deck	Mon	8:15 am - 9:00 am	C-2209
343-G	Editorial	Sun	10:00 am - 11:00 am	C-2212
345	Bridge Construction	Sun	1:30 pm - 3:30 pm	C-2502 B
346	CIP Pipe	Mon	11:30 am - 1:00 pm	M-LESTER YOUNG A
347	Formwork M1	Sat	12:00 pm - 7:00 pm	M-JAY MCSHANN B
347	Formwork M2	Sun	8:30 am - 12:30 pm	M-BASIE C1
348	Safety	Mon	2:00 pm - 3:30 pm	M-LESTER YOUNG B
349	Nuclear Structures	Tue	1:30 pm - 5:00 pm	M-BASIE B
349/359/ 370-TG	ACI 349 and ACI 359 and ACI 370 Joint Committee TG	Tue	10:30 am - 12:30 pm	C-2215 B
349-AB	Nuclear Structures-Design & Materials	Mon	1:00 pm - 4:30 pm	C-2104 A
349-C	Nuclear Str-Anchorage	Mon	8:00 am - 11:00 am	M-JULIA LEE A&B
350	Environmental Structures M1	Tue	7:30 am - 12:00 pm	M-BASIE B
350	Environmental Structures M2	Wed	7:30 am - 4:00 pm	C-2104 A&B
350-A	Env Str-General & Concrete	Tue	1:00 pm - 5:00 pm	M-BIG JOE TURNER B
350-B	Env Str-Durability	Mon	8:30 am - 1:00 pm	C-2502 B
350-C	Env Str-Reinf & Devel	Sun	8:30 am - 11:30 am	M-BIG JOE TURNER A
350-D	Env Str-Structural	Mon	8:30 am - 6:30 pm	C-2208

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
350-E	Env Str-Precast/Prestressed	Sun	1:00 pm - 5:00 pm	C-2207
350-F	Env Str-Seismic	Tue	12:30 pm - 3:30 pm	C-2503 A
350-H	Env Str-Editorial	Mon	12:30 pm - 2:00 pm	M-LESTER YOUNG B
350-J	Env Str-Education	Mon	1:00 pm - 3:00 pm	C-2211
350-L	Env Str-Specification	Tue	4:00 pm - 6:00 pm	C-2212
350-SC	Env Str-Steering Comm	Sun	11:30 am - 1:00 pm	C-2207
351	Equip Foundations	Tue	4:00 pm - 6:00 pm	C-2502 A
351-C	Equip Fdns-Dynamic Fdns	Mon	4:00 pm - 6:00 pm	C-2502 A
351-D	Design Provisions for Heavy Industrial Equipment and Machinery Concrete Support Structures	Mon	2:00 pm - 4:00 pm	C-2502 B
352	Joints	Sun	2:00 pm - 5:00 pm	C-2503 B
352-TG1	Slab-Column Joints & Connections	Mon	3:00 pm - 4:30 pm	C-2102 B
352-TG2	Beam-Column Joints & Connections	Mon	1:30 pm - 3:00 pm	C-2102 B
355	Anchorage	Sun	1:30 pm - 5:00 pm	C-2215 A
357	Offshore & Marine	Tue	9:30 am - 11:30 am	M-JAY MCSHANN B
359	Nuclear Reactors	Wed	9:30 am - 3:00 pm	C-2502 A
359-A	Working Group on Design	Wed	7:30 am - 9:30 am	C-2502 A
359-B	Working Group on Matls, Fabrication & Examination	Tue	7:00 am - 8:30 am	C-2215 B
359-C	Working Group on Modernization	Tue	8:30 am - 10:30 am	C-2215 B
360	Slabs-on-Ground	Mon	2:00 pm - 6:30 pm	M-BASIE B
362	Parking Structures	Mon	1:00 pm - 5:00 pm	M-MARY LOU WILLIAMS A&B
362-A	Updating Guide to Structural Maintenance of Parking Structures Documents	Sun	1:00 pm - 4:00 pm	C-2215 B
363	High-Strength	Sun	2:30 pm - 5:00 pm	C-2208
363-A	High-Strength Lightweight Concrete	Tue	3:30 pm - 5:00 pm	C-2213
364	Rehabilitation	Mon	1:00 pm - 4:00 pm	M-BENNIE MOTEN A&B
364-A	Editorial Subcommittee	Mon	9:30 am - 11:00 am	C-2212
364-TG1	Rehab Guide	Mon	11:00 am - 12:00 pm	M-ANDY KIRK B
365	Service Life	Mon	9:00 am - 11:00 am	C-3501 E
369	Seismic Rehab M1	Sun	10:00 am - 12:00 pm	M-MARY LOU WILLIAMS A&B
369	Seismic Rehab M2	Sun	1:00 pm - 4:00 pm	M-BENNIE MOTEN A&B
369	Seismic Rehab M3	Mon	2:00 pm - 6:00 pm	C-2209
370	Dynamic & Vibratory Effects	Sun	3:00 pm - 5:00 pm	C-2206
371	Elevated Tanks with Concrete Pedestals	Mon	3:00 pm - 5:00 pm	C-2210
372	Tanks Wrapped Wire/Strand	Tue	3:00 pm - 5:00 pm	M-BIG JOE TURNER A
374	Seismic Design	Mon	8:30 am - 12:00 pm	M-BASIE C
375	Design for Wind Loads	Mon	1:00 pm - 3:30 pm	M-JAY MCSHANN A

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
376	RLG Containment Structures	Mon	1:00 pm - 4:00 pm	M-JAY MCSHANN B
376-01	Steering Subcommittee	Sun	10:30 am - 12:00 pm	C-2503 A
376-A	Code, Education & Publication Subcommittee	Mon	10:00 am - 12:00 pm	M-BIG JOE TURNER A
376-B	Materials Subcommittee	Sun	1:00 pm - 3:00 pm	M-BIG JOE TURNER B
376-C	Analysis Subcommittee	Sun	3:00 pm - 5:00 pm	M-ANDY KIRK B
376-D	Design & Construction Subcommittee	Mon	8:00 am - 10:00 am	M-ANDY KIRK A
377	Performance-Based Structural Integrity & Resilience of Concrete Structures	Mon	10:00 am - 12:30 pm	M-BIG JOE TURNER B
408	Bond and Development of Steel Reinforcement	Sun	8:30 am - 11:30 am	C-2211
408-A	Mech Splices	Sun	8:00 am - 8:30 am	C-2211
421	Reinf Slabs	Sun	10:00 am - 1:00 pm	M-BENNIE MOTEN A&B
423	Prestressed	Mon	8:30 am - 12:30 pm	C-2503 A
423/445	Adhoc Grp on Shear in Prestress Conc	Sun	3:30 pm - 5:30 pm	C-2503 A
423-D	Bond & Dev Pretnsn Membrs	Sun	4:00 pm - 5:00 pm	C-2104 B
423-E	Prestress Losses	Sun	3:00 pm - 5:00 pm	C-3501 E
423-F	Sustainable Prestressed Concrete	Sun	1:00 pm - 3:00 pm	C-2212
435	Deflection	Mon	3:00 pm - 6:00 pm	M-ANDY KIRK A
437	Strength Evaluation	Mon	10:30 am - 12:30 pm	C-2210
439	Steel Reinforcement	Mon	8:30 am - 10:30 am	M-MARY LOU WILLIAMS A&B
439-A	Steel Reinf-Wire	Sun	3:30 pm - 5:00 pm	C-2102 A
440	Fiber-Reinforced Polymer	Tue	8:00 am - 11:00 am	M-BASIE A
440-F	FRP-Repair-Strengthening	Mon	8:30 am - 12:30 pm	M-BASIE A1
440-G	FRP-Student	Mon	1:30 pm - 3:00 pm	M-BASIE A1
440-H	FRP-Reinforced Concrete	Mon	3:00 pm - 6:00 pm	M-BASIE A1
440-I	FRP-Prestressed Concrete	Sun	10:30 am - 12:00 pm	M-BASIE A1
440-K	FRP-Material Characteristics	Sun	3:00 pm - 5:00 pm	M-BASIE A1
440-M	FRP-Repair of Masonry Str	Sun	8:30 am - 10:00 am	M-BASIE A1
441	Columns	Mon	11:30 am - 2:00 pm	M-JULIA LEE A&B
441-A	High-Strength Conc	Mon	8:00 am - 9:00 am	M-ANDY KIRK B
441-B	Lateral Reinf	Mon	9:00 am - 10:00 am	C-2209
441-E	Columns Multi-Spiral Reinf	Sun	11:30 am - 1:00 pm	C-2213
444	Structural Health Monitoring and Instrumentation	Tue	8:00 am - 10:00 am	M-BIG JOE TURNER B
445	Shear & Torsion	Mon	2:00 pm - 6:00 pm	C-2102 A
445	445 Ad Hoc-PC	Mon	9:00 am - 11:00 am	M-ANDY KIRK B
445-A	Shear & Torsion-Strut & Tie	Sun	9:30 am - 12:30 pm	C-2104 B
445-B	Shear & Torsion-Seismic Shear	Sun	9:30 am - 11:30 am	C-2209
445-C	Shear & Torsion-Punching Shear	Sun	1:00 pm - 3:00 pm	C-2102 A

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
445-D	Shear & Torsion-Shear Databases	Sun	2:00 pm - 5:00 pm	M-JAY MCSHANN B
445-E	Shear & Torsion-SOA Torsion	Sun	12:30 pm - 2:00 pm	M-JAY MCSHANN B
446	Fracture Mechanics	Mon	8:30 am - 10:00 am	C-2104 A
447	Finite Element Analysis	Mon	11:00 am - 1:30 pm	C-2102 B
447-TG	Finite Element Analysis Task Group	Mon	5:00 pm - 6:30 pm	C-2215 A
506	Shotcreting	Tue	8:30 am - 11:30 am	C-2502 B
506-A	Shotcreting-Evaluation	Mon	1:30 pm - 3:00 pm	C-2215 A
506-B	Shotcreting-Fiber-Reinforced	Mon	5:30 pm - 6:30 pm	M-BIG JOE TURNER A
506-C	Shotcreting-Guide	Mon	8:30 am - 10:30 am	C-2215 A
506-E	Shotcreting-Specifications	Mon	10:30 am - 12:30 pm	C-2215 A
506-F	Shotcreting-Underground	Mon	4:30 pm - 5:30 pm	M-BIG JOE TURNER A
506-G	Qualifications for Projects	Mon	3:00 pm - 4:30 pm	M-BIG JOE TURNER A
515	Protective Systems	Tue	9:00 am - 11:00 am	C-2210
522	Pervious Concrete	Tue	8:00 am - 11:00 am	M-BASIE C
523	Cellular Concrete	Tue	8:30 am - 10:30 am	C-2211
524	Plastering	Mon	8:30 am - 10:00 am	M-JAY MCSHANN B
526	Autoclaved Aerated Concrete	Tue	10:30 am - 1:00 pm	C-2211
533	Precast Panels	Mon	8:30 am - 10:00 am	M-BIG JOE TURNER B
543	Piles	Mon	8:30 am - 11:30 am	C-2213
544	Fiber-Reinforced Concrete	Tue	3:00 pm - 5:30 pm	M-BASIE A
544-A	FRC-Production & Applications	Mon	10:00 am - 1:00 pm	C-2105
544-C	FRC-Testing	Tue	1:30 pm - 3:00 pm	M-BASIE A
544-D	FRC-Structural Uses	Tue	11:30 am - 1:00 pm	M-JAY MCSHANN A
544-E	FRC-Mechanical Properties	Mon	5:00 pm - 6:30 pm	M-ANDY KIRK B
544-F	FRC-Durability	Tue	10:30 am - 12:00 pm	C-2105
544-SC	FRC-Steering Committee	Mon	8:30 am - 10:00 am	C-2102 B
546	Repair	Mon	8:30 am - 10:30 am	M-BENNIE MOTEN A&B
546-D	Bagged Materials	Sun	10:00 am - 11:00 am	C-2104 A
546-E	Corrosion Studies	Sun	11:00 am - 12:00 pm	C-2104 A
548	Polymers	Tue	8:30 am - 11:30 am	C-2215 A
548-A	Polymers-Overlays	Mon	8:15 am - 11:00 am	M-LESTER YOUNG A
548-B	Polymers-Adhesives	Mon	3:00 pm - 5:00 pm	M-LESTER YOUNG A
548-C	Structural Polymer Design	Mon	11:00 am - 12:30 pm	M-LESTER YOUNG B
549	Thin Reinforced	Sun	11:00 am - 1:00 pm	C-2210
550	Precast Structures	Sun	3:00 pm - 5:00 pm	C-2210
551	Tilt-Up	Sun	9:00 am - 11:00 am	C-2215 B
552	Cementitious Grouting	Tue	4:00 pm - 5:30 pm	M-LESTER YOUNG B

Numerical Committee Meeting Listing

C = Convention Center M = Marriott

Code	Committee	Day	Time	Room Name
555	Recycled	Mon	5:00 pm - 6:30 pm	M-MARY LOU WILLIAMS A&B
560	Design & Constr ICFs	Tue	8:30 am - 10:30 am	C-2104 A
562	Eval, Repair & Rehab	Sun	1:00 pm - 5:00 pm	M-BASIE B1
562-A	General	Sat	1:00 pm - 4:00 pm	M-BIG JOE TURNER B
562-B	Loads	Sun	8:00 am - 10:00 am	M-ANDY KIRK A
562-C	Evaluation M1	Sat	4:00 pm - 5:00 pm	M-BIG JOE TURNER B
562-C	Evaluation M2	Sat	6:00 pm - 8:00 pm	M-BIG JOE TURNER B
562-D	Design M1	Sat	10:00 am - 12:00 pm	M-BIG JOE TURNER A
562-D	Design M2	Sat	1:00 pm - 2:00 pm	M-BIG JOE TURNER A
562-E	Education	Mon	8:00 am - 10:00 am	M-BIG JOE TURNER A
562-F	Durability	Sat	6:00 pm - 9:00 pm	M-JAY MCSHANN A
563	Specs for Repair of Struct Conc in Bldgs	Tue	1:00 pm - 5:00 pm	C-2211

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Sunday, April 12, 2015

5:00 am and 6:00 am

Run/Walk Meet-Up—MARRIOTT MAIN LOBBY

Looking for a running or walking partner? This is a great opportunity to meet up with other ACI attendees before heading out for your morning run or walk. Local area maps are available at the hotel concierge desk. All are welcome!
**Please consult your physician to determine if you are fit for this type of activity. Run/walk at your own risk.*

7:00 am – 10:00 am

****Guest Hospitality—M-TRUMAN***

Coffee and tea will be available for guests each morning (Sunday-Wednesday). You must be a registered guest to attend. In your name badge, there will be a $5 breakfast voucher for each day of the convention (Sunday-Wednesday). These vouchers may be redeemed between 7:00 am and 10:00 am at Metropolitan KC and Coffee Central, located in the Marriott Lobby. Vouchers may only be used on the day specified, cannot be redeemed for cash, and may only be used by ACI Convention guests.

8:00 am – 9:00 am

****Guest Overview—M-TRUMAN***

Acquaint yourself with the week ahead and get a preview of things to do in Denver, CO, and Milwaukee, WI—the next two locations for The Concrete Convention and Exposition.

10:00 am – 5:00 pm

****Guest Lounge—M-TRUMAN***

Stop by the Guest Lounge to relax and meet other ACI guests. Guests can enjoy the Guest Lounge Sunday-Wednesday. Coffee and tea will be available from 7:00 am – 10:00 am (Sunday-Wednesday).

8:00 am – 9:00 am

Convention Orientation Breakfast—C-2215 C

Speaker: William J. Lyons III
National Business Development Manager
The Euclid Chemical Company
East Brunswick, NJ

First-time convention attendees are invited to join William J. Lyons III, Chair of the ACI Convention Committee, for a continental breakfast and brief session to orient you to the week ahead. Attendees will have the opportunity to meet other first-time convention attendees, connect with convention mentors, and learn about what the ACI Convention has to offer.

10:00 am – 11:30 am

ACI International Forum—C-2202

Chaired by ACI Vice President Sharon L. Wood

The ACI International Forum provides an opportunity for convention attendees to meet and learn from ACI international partners, ACI chapter representatives, and ACI leadership about worldwide events, activities, initiatives, and common themes of interest to the concrete materials, design, and construction industry. Presentations will be given by the following individuals from around the globe: David Millar, Concrete Institute of Australia (CIA); Xiomara Sapon, Guatemala Chapter – ACI; Alejandro Durán-Herrera and Francisco Anguiano, Northeast Mexico Chapter – ACI; Ishita Manjrekar and Dr. Surendra K. Manjrekar, India Chapter – ACI; Prof. Maria Kaszynska, Civil Engineering Committee of the Polish Academy of Science; Dr. Asad-ur-Rehman Khan, Pakistan Chapter – ACI; Prof. Li Zongjin, China Chapter – ACI; Dr. Hitoshi Shiohara, Japan Concrete Institute (JCI); and Dr. Kamal H. Khayat, RILEM.

10:30 am – 4:00 pm

Student FRP Composites Competition—C-2103

Sponsored by ACI Committee S801, Student Activities; and ACI Subcommittee 544-B, FRC-Education

Competition Moderator: Walter H. Flood IV
Manager – Engineer
Flood Testing Labs, Inc.
Chicago, IL

During this exciting competition, students design, construct, and test a concrete structure reinforced with fiber-reinforced polymer (FRP) bars to achieve the optimal load-to-cost ratio, predict the ultimate load, and predict the load that will result in a piston deflection of 3.5 mm (0.14 in.). The winners will be announced during the Student Lunch on Monday, April 13, and the top three entries will receive prizes. Check-in for this competition begins at 9:00 am.

Event Details

Program Changes are available at ACI Registration in C-2103

* = Guest only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

11:30 am – 1:30 pm

✓International Lunch—C-2215 C

$30 U.S. per person

Sponsored by the ACI International Advisory Committee

Speaker: Yilmaz Akkaya
Professor
Istanbul Technical University
Istanbul, Turkey

Topic: Crossing the Bosphorus in Istanbul: Bridges, Tunnels, and a lot of Concrete

Convention attendees are invited to add the International Lunch to their convention schedule. Special guest speaker Yilmaz Akkaya will give a presentation titled "Crossing the Bosphorus in Istanbul: Bridges, Tunnels, and a lot of Concrete." Prof. Dr. Yilmaz Akkaya received his BSc in 1995 from Istanbul Technical University (ITU). After receiving his PhD from Northwestern University in 2000, he worked at the Center for Advanced Cement-Based Materials in Evanston, IL, as a Research Associate. He is the Director of the Marmaray Laboratory at ITU, a project-dedicated laboratory for testing property development at early ages for crack risk calculations, durability, and concrete petrography. He has also been the Academic Coordinator of the International Dual Diploma Programs at ITU since 2010. His research interests include supplementary cementitious materials, fiber-reinforced concrete, early-age properties, fracture and durability of concrete, nondestructive testing, and service life of structures. Connecting Europe and Asia, Istanbul is the only city in the world stretching across two continents. Since ancient times, crossing the Bosphorus Strait has been a challenging subject of engineering. Today, far from fulfilling the transportation need of thousands of daily commuters, there are only two bridges spanning the Bosphorus. To promote public transportation, construction of the Marmaray Project started in 2004. The Marmaray Project includes the world's deepest immerse tube tunnel with a maximum immersion depth of 60 m (197 ft). A pretesting period for testing of concrete for early-age cracking risk preceded the construction phase. Another tunnel boring machine (TBM) project to connect both sides of Istanbul started in 2011: the Avrasya Tunnel, with its 5.4 km (3.4 mile) length, will comprise a two-story highway tunnel for light vehicles. A high-performance concrete was developed to meet the requirements of precast segment production.

PREREGISTRATION IS REQUIRED TO ATTEND. *Tickets may be purchased at the ACI Registration Desk up to 24 hours prior to the event, based on availability. Please notify the ACI Registration Desk if you have any dietary restrictions.*

1:00 pm – 3:00 pm

Form Pressure of Self-Consolidating Concrete—Hydrostatic or Not?—C-2203

Sponsored by ACI Committees 237, Self-Consolidating Concrete, and 347, Formwork for Concrete

Session Co-Moderators: Peter H. Billberg
Product Developer
Consolis
Stockholm, Sweden

Kamal H. Khayat
Director
Center for Infrastructure Engineering Studies, Missouri S&T
Rolla, MO

While the use of self-consolidating concrete (SCC) has become more widely used, the most common design practice has been to assume that the material exerts full liquid head pressure on the formwork when preparing the formwork design. Research into the properties of the material has shown that this practice leads to overly conservative designs. This technical session will highlight recent advances carried out to understand key factors affecting formwork pressure of SCC, including concrete thixotropy, casting rate, and formwork characteristics. The session will highlight various models that have been developed to estimate form pressure characteristics of SCC. A number of field-related projects targeting the calibration of various models are discussed. The session should be of interest to designers and construction professionals dealing with SCC technology, as well as researchers and educators interested in the science behind the control of form pressure.

By attending this session, attendees will be able to:

1. Recognize ongoing research projects related to concrete thixotropy and mixture design factors affecting thixotropy of SCC;
2. Discuss recent procedures related to test methods that can be used to evaluate thixotropy of concrete;
3. Discuss various models that can be used to evaluate form pressure characteristics of flowable concrete and SCC; and
4. Learn about recent case studies involving field measurements of form pressure measurements for SCC.

Formwork Design Challenges Using SCC—1:00 pm
George Charitou, Chief Engineer, EllisDon Construction, Mississauga, ON, Canada; and **Lloyd J. Keller, Stacia Van Zetten,** and **Adam N. Makino,** EllisDon Corporation

Mixture Design and Materials Aspects Affecting Form Pressure Exerted by SCC—1:20 pm
Kamal H. Khayat, Director, Center for Infrastructure Engineering Studies, Missouri S&T, Rolla, MO

Review of Various Models and Standards to Evaluate Form Pressure of SCC—1:40 pm
David A. Lange, Professor, University of Illinois, Urbana, IL

Activities Within and Outcome from RILEM TC 233FPC, Including Results from a Field Study on Form Pressure Measurements when Casting with SCC—2:00 pm
Peter H. Billberg, Product Developer, Consolis, Stockholm, Sweden

SCC under Pressure—2:20 pm
Lloyd J. Keller, Director, EllisDon Corporation, Mississauga, ON, Canada; **Robert Quattrociocchi** and **Stacia Van Zetten,** EllisDon Corporation; and **Philip S. Zacarias,** Canada Building Materials CBM

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Characterizing the Bleeding Effect on Form Pressure—Pore Water Pressure is Revealed—2:40 pm
Jae Hong Kim, Assistant Professor, Ulsan National Institute of Science & Tech, Ulsan, South Korea; and **Seong Ho Han** and **Dong Jin Jeong,** Ulsan National Institute of Science and Technology

2 AIA/CES LU

Sunday, April 12, 2015

1:00 pm and 3:00 pm

Heavy-Duty Concrete Pavements, Part 1 of 2—C-2202

Sponsored by ACI Committees 325, Concrete Pavements, 327, Roller-Compacted Concrete Pavements, and 330, Concrete Parking Lots and Site Paving

Session Co-Moderators:
Jan R. Prusinski
Executive Director
Cement Council of Texas
Hurst, TX

Frank Lennox
Manager of Marketing Services
Buzzi Unicem USA
Chattanooga, TN

Heavy-duty pavements span a wide variety of uses, from truck distribution facilities, to intermodal yards, to military equipment hardstands, to high-volume interstates. These pavements can be subjected to extremely high axle loadings, millions of heavy vehicle load repetitions, high-speed truck traffic, or all of these. Designers and contractors must understand the unique requirements of these pavements, and use appropriate design tools, specification provisions, and construction techniques to properly design and build the pavements for their expected service lives. Concrete pavements are ideally suited for these applications because of their rigidity, strength, and durability. However, different types of concrete pavements, including conventional jointed pavements, roller-compacted concrete (RCC), and precast, may be optimal choices depending on the circumstances.
By attending this session, attendees will be able to understand:
1. How conventional jointed concrete pavement, RCC, and precast concrete can each provide an optimum heavy-duty pavement, depending on circumstances;
2. What documents for design and specification are available (or being developed) through ACI and the American Concrete Pavement Association, and how these will be useful for owners, designers, and contractors;
3. How value engineering can provide a more effective and less-expensive pavement; and
4. How construction time can be minimized—particularly with RCC and precast pavements.

U.S. Army Corps of Engineers Experience with Heavy-Duty Pavements—1:00 pm
David W. Pittman, Director, Geotechnical and Structural Laboratory, U.S. Army Corps of Engineers, Clinton, MS

Case Studies: Unusual Heavy-Duty Pavements—1:30 pm
Bryan M. Birdwell, Slab & Paving Consultant, Structural Services Inc., Lakeland, FL; and **Jerry A. Holland**, Structural Services Inc.

Internally Cured Concrete Pavement for Intermodal Facility—2:00 pm
Chetana Rao, Senior Research Engineer, Rao Research and Consulting, LLC, Champaign, IL

Fast-Track Precast Concrete Pavements for High-Volume Roadways—2:30 pm
Shiraz D. Tayabji, Senior Principal Engineer, Applied Research Associates, Inc., Ellicott City, MD

2 AIA/CES LU

1:00 pm and 3:00 pm

International Cooperation between ACI Technical Committees, Part 1 of 3—C-2204

Sponsored by ACI Committee 544, Fiber-Reinforced Concrete

Session Moderator:
Barzin Mobasher
Professor
Arizona State University
Tempe, AZ

The use of fiber-reinforced concrete (FRC) and ultra-high-performance fiber-reinforced concrete (UHPFRC) for designing structural members in bending and shear has recently developed significant attention. For example, FRC has been used structurally in several building and bridge projects worldwide. Alternative design procedures have been addressed in the *fib* Model Code 2010 as well as ACI 544 documents. Members of ACI Committee 544, *fib* TG-8.3, the Japan Concrete Institute, and other associations have been involved in code development and design of FRC structural members. The aim of this session is to bring together researchers that collaborate with ACI and *fib* together to further proceed with the developmental collaborations of the two organizations. The state of the art on the recent design guides as well as code specification and applications of FRC structures in beams, elevated floors, tunnel linings, slabs, pavements, precast elements, bridges, and other applications are addressed.
By attending this session, attendees will be able to:
1. Understand the sustainability benefits of designing with FRC, economical sections, and lighterweight sections;
2. Understand the role of material mechanical properties in design with FRC;
3. Understand design guides which correlate with the durability, serviceability, and ductility criteria; and
4. Understand designing for durability using maximum crack width or maximum curvature as an integral set of specifications.

Fiber-Reinforced Concrete for Elevated Slabs: Searching for an Optimized Solution—1:00 pm
Marco Di Prisco, Professor, Polytechnic University of Milan, Milan, Italy; and **Matteo Colombo**, **Giulio Zani**, and **Marco Rampini**, Polytechnic University of Milan

Design of Steel Fiber-Reinforced Self-Compacting Concrete in Elevated Slabs—1:25 pm
Joaquim Oliveira Barros, Associate Professor, University of Minho, Guimaraes, Portugal; and **Hamidreza Salehian**, University of Minho

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Modeling the Load-Deformation Response of FRC Members using the Principle of Work Balance—1:50 pm
Gregor D. Fischer, Assistant Professor, Technical University of Denmark, Kongens Lyngby, Denmark

Implementing Steel Fiber-Reinforced Concrete Structural Engineering: A Company Perspective—2:15 pm
Jeffrey L. Novak, Technical Manager - Dramix Steel Fibers, Helix Steel, Kennesaw, GA

Design Guide and Specifications for Fiber-Reinforced Concrete Slabs-on-Ground—2:40 pm
Amir Bonakdar, Fiber Product Manager, Euclid Chemical, Cleveland, OH

2 AIA/CES LU

2:00 pm – 5:00 pm

✓*KU Structural Testing Laboratories Tour—DEPART MARRIOTT MAIN LOBBY*

$5 U.S. per person
Sponsored by the University of Kansas Department of Civil, Environmental, and Architectural Engineering

In the fall of 2014, a new 10,000 square foot West Campus Structural Testing Laboratory opened at the University of Kansas in Lawrence. The new high-bay laboratory houses 6,800 square feet of strong floor space and a 40 ft tall L-shaped strong wall designed for testing of large-scale structural components and systems, as well as a shake table for conducting small-scale dynamic tests. The facility also houses a student project space and machine shop. The tour will highlight laboratory capabilities and provide information on ongoing research. Closed-toed shoes are required for this tour.

Tickets are available for purchase at ACI Registration. ***Tours are nonrefundable.*** *All tours depart from the Marriott Main Lobby.*

3:30 pm – 5:30 pm

Heavy-Duty Concrete Pavements, Part 2 of 2—C-2202

Sponsored by ACI Committees 325, Concrete Pavements; 327, Roller-Compacted Concrete Pavements; and 330, Concrete Parking Lots and Site Paving

Session Co-Moderators:
Jan R. Prusinski
Executive Director
Cement Council of Texas
Hurst, TX

Frank Lennox
Manager of Marketing Services
Buzzi Unicem USA
Chattanooga, TN

The session description and learning objectives for this session may be found in the Part 1 listing; see page 38.

Development of ACI 327R-14, "Guide to Roller-Compacted Concrete Pavements"—3:30 pm
Norbert J. Delatte, Assistant Professor, Cleveland State University, Broadview Heights, OH

ACPA Guide Specification for Roller-Compacted Concrete Pavements—4:00 pm
Corey J. Zollinger, Director Market Development & Paving Solutions, CEMEX, Bryan, TX

Value-Engineered Heavy-Duty RCC—4:30 pm
Fares Y. Abdo, Director of Technical Services, Morgan Corp, Vestavia, AL

Development of ACI 330's Industrial Pavement Guide—5:00 pm
Tim Cost, Senior Technical Service Engineer, Holcim (US) Inc., Canton, MS

2 AIA/CES LU

3:30 pm – 5:30 pm

International Cooperation between ACI Technical Committees, Part 2 of 3—C-2204

Sponsored by ACI Committee 544, Fiber-Reinforced Concrete

Session Moderator:
Barzin Mobasher
Professor
Arizona State University
Tempe, AZ

The session description and learning objectives for this session may be found in the Part 1 listing; see page 38.

Structural Design with FRC based on Serviceability Curvature or Crack Width Criteria—3:30 pm
Barzin Mobasher, Professor, Arizona State University, Tempe, AZ; and **Vikram Dey**, **Yiming Yao**, and **Xinmeng Wang**, Arizona State University

Reinforcement Optimization or FRC Structural Elements—4:00 pm
Giovanni A. Plizzari, Associate Professor, University of Brescia, Brescia, Italy; and **Fausto Minelli**, University of Brescia

The Suspended Pile-Supported Industrial Slab of Steel Fiber-Reinforced Concrete with Zero Shrinkage: Full-Scale Test Results and Structural Design Approach—4:30 pm
Janis Kamars, Consultant, Structural Engineer, Primekss, Riga, Latvia; and **Xavier Destree**, ArcelorMittal

Blast Response of Fiber-Reinforced Concrete Structural Members Tested under Shock-Tube Loading—5:00 pm
Hassan Aoude, Assistant Professor, University of Ottawa, Ottawa, ON, Canada; and **Steve Castonguay**, University of Ottawa

2 AIA/CES LU

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Sunday, April 12, 2015

3:30 pm – 5:30 pm

Rational Approaches for Fire Resistance Design of Concrete Structures—C-2203

Sponsored by Joint ACI-TMS Committee 216, Fire Resistance and Fire Protection of Structures

Session Moderator: Elin A. Jensen
Assistant Professor
Lawrence Technological University
Southfield, MI

This session provides an opportunity for researchers, architectural/civil/structural engineers, and students to exchange recent advances in applied research and to share information, experiences, and knowledge in the implementation of rational design approaches for determining the fire resistance of a range of concrete structures.
By attending this session, attendees will be able to:
1. Learn about tools and techniques to determine the fire resistance of reinforced concrete and externally strengthened concrete structures subjected to different fire loads;
2. Understand the rational design approaches based on available experimental and numerical validations on various concrete subassemblies;
3. Demonstrate an understanding of concrete's behavior during fire as affected by tributary loads, fire loads, and pre-fire environmental conditions; and
4. Recognize when rational design approaches can be applied to explore the benefits of nontraditional structural shapes and advanced materials.

A Rational Design Approach for Evaluating Fire Resistance of Prestressed Concrete Hollow-Core Slabs—3:30 pm
Venkatesh Kumar R. Kodur, Professor, Michigan State University, East Lansing, MI; and **Anuj M. Shakya**, Michigan State University

Effective Fire Protection of Concrete Beams with FRP Strengthening Systems—3:50 pm
Mena R.E. Bebawy, Assistant Professor, Lawrence Technological University, Southfield, MI; and **Nabil F. Grace**, Lawrence Technological University

Out-of-Plane Behavior and Failure of Full-Scale RC Bearing Walls during and after One-Sided Fire Exposure—4:10 pm
Kevin Mueller, Structural Fire Engineer/Physical Security Consultant, Hinman Consulting Engineers, San Francisco, CA; and **Yahya C. Kurama**, University of Notre Dame

Rational Design for FRP-Strengthened Reinforced Concrete Structures in Fire—4:30 pm
Mark F. Green, Associate Professor, Queen's University, Kingston, ON, Canada; and **Luke A. Bisby**, University of Edinburgh

Effect of Rapid and Slow Heating Rate History on High-Strength Concrete Deformation and Failure Behavior—4:50 pm
Elin A. Jensen, Assistant Professor, Lawrence Technological University, Southfield, MI; and **Brittany Schuel**, IBI Group

Tools for Performance-Based Design of Reinforced Concrete Structures—5:10 pm
Maged A. Youssef, Associate Professor, University of Western Ontario, London, ON, Canada

2 AIA/CES LU

5:45 pm – 7:00 pm

Opening Session and Awards Program—C-3501 A-D

The ACI Concrete Convention & Exposition officially begins during the Opening Session and Awards Program on Sunday evening. ACI President William Rushing will welcome attendees, and over 100 groups and individuals will be recognized for their contributions to the concrete industry.

7:00 pm – 8:00 pm

Opening Reception—C-2103

Sponsored by ACI

Immediately following the Opening Session, attendees are invited to the exhibit hall for this evening reception. Reunite with colleagues, network with new acquaintances, and learn about the products and services offered by the exhibitors. A cash bar and light refreshments will be available.

8:00 pm – 10:00 pm

Hot Topic Session: Building Resiliency—C-2202

Sponsored by the Hot Topics Committee

Session Moderator: William J. Lyons III
National Business Development Manager
The Euclid Chemical Company
East Brunswick, NJ

The Road to Resilience lies in adapting. Cities, towns, and communities, working with the construction industry, continue to rebuild and prevent against the challenges that face our buildings—both from natural disasters and aging structures. These presentations offer knowledge that stricter standards and design elements can go a long way to reaching our goal of being "resilient."
By attending this session, attendees will be able to:
1. Recognize two approaches to disaster mitigation: voluntary community-based enhancement strategy and a mandatory adoption of stricter construction standards;
2. Explain why resiliency is a priority for the nation;
3. Describe the metrics of resilience including time to recovery, percent functional, casualties (collapse prevention), cost, and social and environmental impacts; and
4. Understand the concept of "resilience."

Resilience: What Role Will Concrete Play in Making Our Communities Safer?—8:00 pm
Lionel A. Lemay, Senior Vice President, Sustainability, National Ready Mixed Concrete Association (NRMCA), Libertyville, IL

Enhancements in Building Design and Construction: Prerequisites for Resilient Communities—8:30 pm
Stephen S. Szoke, Director Codes and Standards, Portland Cement Association, Skokie, IL

Building Resilience as a Design Objective—9:00 pm
Mehrdad Sasani, Professor, Northeastern University, Boston, MA

2 AIA/CES LU

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

9:00 pm – 10:30 pm

Student and Young Professional Networking Event—M-BARCENTRAL

Sponsored by the ACI Collegiate Concrete Council and the ACI Student and Young Professional Activities Committee

The ACI Student and Young Professional Activities Committee and ACI Collegiate Concrete Council invite all convention attendees to the Student and Young Professional Networking Event. Meet fellow students and young professionals while networking with ACI members in a fun and casual environment. Attendees to the event will be entered into a drawing for door prizes. In addition, attendees will be able to purchase food and beverages.

Monday, April 13, 2015

5:00 am and 6:00 am

Run/Walk Meet-Up—MARRIOTT MAIN LOBBY

Looking for a running or walking partner? This is a great opportunity to meet up with other ACI attendees before heading out for your morning run or walk. Local area maps are available at the hotel concierge desk. All are welcome!
**Please consult your physician to determine if you are fit for this type of activity. Run/walk at your own risk.*

6:00 am – 6:45 am

Morning Yoga Class—MARRIOTT YOGA STUDIO

Interested in putting a little balance into your hectic week? Whether you have regularly practiced yoga or have never tried it, this session will help you get your body and mind grounded for the day and week ahead. Led by ACI Marketing Committee Chair and yoga teacher Kimberly Kayler, this intro to yoga class requires no experience. You don't have to be able to twist into a pretzel or even touch your toes! Registration is not required and yoga mats will be provided.
**Please consult with your physician to determine if you are fit for this type of activity.*

6:30 am – 8:00 am

Workshop for Technical Committee Chairs—C-3501 G&H

Sponsored by the ACI Technical Activities Committee (TAC)

Session Moderator: Ronald J. Janowiak
Senior Engineer
Exelon Generation
Warrenville, IL

ACI technical committee Chairs are expected to attend this breakfast workshop to meet with fellow Chairs, TAC members, and ACI staff to hear updates on important recent developments of interest to ACI technical committee Chairs. There will be table discussions and short presentations. If you are unable to attend, please ask the Secretary of your committee or another committee member to represent you in your absence. **Attendance is by invitation only.**

2 AIA/CES LU

7:00 am – 8:30 am

Speaker Development Breakfast—C-3501 F

Sponsored by ACI Committee S802, Teaching Methods and Educational Materials

Session Co-Moderators: Colonel Fred Meyer
Deputy Head, Department of Civil Mechanical Engineering
United States Military Academy
West Point, NY

Arsenio Caceres-Fernandez
Associate Professor
University of Puerto Rico
Mayaguez, PR

Speaker: Jeff W. Coleman
Attorney
The Coleman Law Firm LLC
Minneapolis, MN

Topic: How to be an Effective Expert Witness
This session provides an informal venue for attendees to learn how to become better presenters. The breakfast format promotes interaction among attendees and with the speaker, who models the skills he is teaching in the presentation.

This breakfast presentation will provide attendees with an overview and examples of how to serve effectively as an expert witness. Based on the speaker's extensive experience, he will discuss methods of effectively communicating technical aspects of a project in a manner that can be understood by non-engineers. If you have served as an expert witness previously and wish to improve or anticipate serving as an expert witness in the future, this presentation is for you.

2 AIA/CES LU

8:30 am – 10:30 am

Is Global Climate Change Killing Our Concrete Structures?—C-2203

Sponsored by ACI Committee 130, Sustainability of Concrete

Session Co-Moderators: Sudip Talukdar
Sessional Instructor
British Columbia Institute of Technology
Burnaby, BC, Canada

Nemkumar Banthia
Professor
University of British Columbia
Vancouver, BC, Canada

There is near-unanimous scientific consensus that the world's climate is undergoing significant change, and the effects of these changes are expected to be quite profound over the course of this century. The Earth's average temperature has increased by 0.9°F since the 1970s and is expected to increase by 2.5 to 10.4°F by the end of the century. Many of the effects of climate change, including temperature rise, increase in pollutant concentrations,

changes in relative humidity, precipitation, wind patterns, frequency of severe events, and rising water levels (causing increased scour) will have a significant impact on infrastructure life. In practice, the time scale of climate change is similar to the service life cycle of buildings and infrastructure, which can be 30 to more than 200 years. Therefore, decisions and relevant investments associated with their design, maintenance, replacement, and refurbishment should take into account future climatic conditions. Climate change is exposing our concrete infrastructure to impacts it was not originally designed to withstand. Assessing the impacts are difficult, as the relationship between degradation and climate is complex. Overall, the impacts may reduce infrastructure lifespan and expose users to disruptions in their lives and daily routines.
By attending this session, attendees will be able to:
1. Discuss the interactions between climate change and concrete infrastructure;
2. Summarize the main mechanisms by which climate change induced deterioration of concrete infrastructure may occur;
3. Appreciate the potential impacts of climate change on concrete infrastructure; and
4. Theorize potential mitigation mechanisms for the problem in question.

Climate Change-Induced Carbonation of Concrete Infrastructure—8:30 am
Sudip Talukdar, Sessional Instructor, British Columbia Institute of Technology, Burnaby, BC, Canada; and **Nemkumar Banthia**, **John Grace**, and **Stewart Cohen**, University of British Columbia

Climate Change Impacts and Adaptation for Reinforced Concrete Structures Subjected to Chloride Ingress—8:50 am
Emilio Bastidas-Arteaga, Associate Professor, University of Nantes, Nantes, France

Climate Change and Concrete Chloride Profiles in the Yucatan Peninsula—9:10 am
Pedro Castro-Borges, Civil Engineer, CINVESTAV, Merida, YC, Mexico

Durability Properties of Existing Concrete Façades and Balconies—9:30 am
Jukka Lahdensivu, Research Manager, Tampere University of Technology, Tampere, Pirkanmaa, Finland

Urban Scale Mapping of Concrete Degradation from Projected Climate Change—9:50 am
Matthew Eckelman, Assistant Professor, Northeastern University, Boston, MA

2 AIA/CES LU

Monday, April 13, 2015

8:30 am – 10:30 am

Research in Progress, Part 1 of 2—C-2202

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators:
Chris Carroll
Assistant Professor
University of Louisiana at Lafayette
Lafayette, LA

Jacob Henschen
Visiting Instructor
Valparaiso University
Valparaiso, IN

This session will feature presentations of original, unpublished results from ongoing research projects and leading-edge concrete technology and research throughout the world.
By attending this session, attendees will be able to:
1. Recognize ongoing concrete research projects from a wide range of research topics;
2. Discuss recent techniques, research methods, and procedures related to structural and material aspects of concrete research;
3. Describe emerging ideas in concrete research; and
4. Summarize recent technical information related to concrete structures and material research.

Determining Optimum Mixture Design Parameters for Calcium Sulfoaluminate Cement Concrete—8:30 am
Lisa E. Burris, Postdoctoral Researcher, Georgia Institute of Technology, Atlanta, GA; and **Prasanth Alpati** and **Kimberly E. Kurtis**, Georgia Institute of Technology

Evaluation of the Autoclaved Concrete Prism Test in Determining Aggregate Reactivity—8:45 am
Stephanie G. Wood, PhD Candidate, The University of Alabama, Tuscaloosa AL; and **Ashley V. Sutton** and **Eric R. Giannini**, The University of Alabama

Use of Fluorescence Spectroscopy for the Analysis of Lignosulfates in Hardened Concrete—9:00 am
Durga V. Subramanian, Senior Principal Scientist, WR Grace, Cambridge, MA

Double Punch Test of Fiber-Reinforced Concrete—9:15 am
Carlos Aire, Assistant Researcher, National Autonomous University of Mexico, Mexico City, Mexico; and **Gabriela Zarate**, National Autonomous University of Mexico

Natural Carbonation of Concrete Mixtures Using Supplementary Cementitious Materials in Austin, TX—9:30 am
Federico M. Aguayo, PhD Candidate, The University of Texas at Austin, Austin, TX; and **Thano Drimalas** and **Kevin J. Folliard**, The University of Texas at Austin

Blended Cements with High-Volume Interground Limestone—9:45 am
Ash Kotwal, Doctoral Research Assistant, Texas State University, San Marcos, TX; **A. T. Winters**, Capitol Aggregates; and **J. J. Schemmel**, Texas State University

Influence of Agricultural Residue Ash on Early Cement Hydration and Chemical Admixture Adsorption—10:00 am
Feraidon F. Ataie, Assistant Professor, California State University, Chico, CA; and **Kyle A. Riding**, Kansas State University

Study on the Long-Term Durability and Environment-Assisted Debond between UHPC Overlay and Concrete Substrate—10:15 am
Shahrooz Amidi, Research Assistant, The University of Alabama, Tuscaloosa, AL; and **Jialai Wang** and **Sriram Aaleti**, The University of Alabama

2 AIA/CES LU

8:30 am – 10:30 am

Toward Sustainable Infrastructure with Fiber-Reinforced Polymer Composites, Part 1 of 2—C-2205

Sponsored by ACI Committee 440, Fiber-Reinforced Polymer Reinforcement, and ACI Subcommittees 440-F, FRP-Repair-Strengthening, and 440-H, FRP-Reinforced Concrete

Session Moderator: Raafat El-Hacha
Associate Professor
University of Calgary
Calgary, AB, Canada

The use of fiber-reinforced polymer (FRP) in new construction and repair of concrete structures has been growing rapidly in recent years. FRP provides options and benefits not available using traditional materials. The promise of FRP materials lies in their high strength, light weight, and noncorrosive properties. ACI Committee 440, Fiber-Reinforced Polymer Reinforcement, has published several guides providing recommendations for the use of FRP materials based on available test data, technical reports, and field applications. Sponsored by ACI Committee 440, this session provides a worldwide forum for researchers, civil/structural engineers, contractors, consultants, practitioners, and regulatory authorities to exchange recent advances in both research and practice and to share information, experience, and knowledge in the implementation of FRP technology.
By attending this session, attendees will be able to:
1. Learn about the wide use of FRP in new construction and repair of concrete structures;
2. Understand the design philosophies and process available in several design guidelines that provides recommendations for the use of FRP materials based on available test data, technical reports, and field applications;
3. Demonstrate how to evaluate existing structures prior to strengthen/rehabilitation using FRP, and recognize examples of the types of evaluation that can be performed; and
4. Exchange recent advances in research and practice and share information, experience, and knowledge in the implementation of FRP technology, and specify emerging technologies in civil infrastructures.

Utilizing FRP Systems for Retrofitting Existing Reinforced Concrete Buildings to Mitigate Against Progressive Collapse—8:30 am
Khaled A. El-Domiaty, Associate Principal/Vice President, Director of DC Office Operations, Stone Security Engineering, Arlington, VA

Shear Behavior of Concrete Masonry Beams Reinforced with FRP Reinforcing Bars—8:45 am
Ted Sherwood, Associate Professor, Carleton University, Ottawa, ON, Canada

A Study of Recovery Stresses Generated by NiTi Shape Memory Alloy Wires in CFRP/SMA Patches—9:00 am
Riadh Al-Mahaidi, Academic Vice President and Professor, Swinburne University of Technology, Hawthorn, Australia; and **Abdul Jabbar Abdy**, Swinburne University of Technology

Testing of Beams with GFRP Flexural and Shear Reinforcements—9:15 am
Maria A. Polak, Professor, University of Waterloo, Waterloo, ON, Canada; and **Martin D. Krall**, University of Waterloo

Life-Cycle-Based Environmental Assessment of Different Shear Strengthening Options for RC Bridge Piers—9:30 am
Andrea Prota, Assistant Professor, University of Naples, Naples, Italy; and **Costantino Menna**, **Loredana Napolano**, and **Domenico Asprone**, University of Naples

New High-Performance Rectangular FRP-Tube Beams Partially Filled with Concrete—9:45 am
Radhouane Masmoudi, Professor, University of Sherbrooke, Sherbrooke, QC, Canada; and **Ahmad Abouzied**, University of Sherbrooke

Effects of Concrete Steam-Curing on the Mechanical Behavior of CFRP Bars—10:00 am
Jonathon D. Tanks, Graduate Research Assistant, Virginia Center for Transportation Innovation & Research, Charlottesville, VA; and **Stephen R. Sharp**, Virginia Center for Transportation Innovation and Research

Coupled EB-NSM Strengthening for Concrete T and Rectangular Beams with Corrosion Exposure—10:15 am
Hayder A. Rasheed, Professor, Kansas State University, Manhattan, KS; **Abdelbaset Traplsi**, Kansas State University; and **Augustine F. Wuertz**, White Engineering Associates

2 AIA/CES LU

8:30 am – 10:30 am

UHPC Innovation in Material and Structural Design, Part 1 of 2—C-2204

Sponsored by ACI Committees 236, Material Science of Concrete, 239, Ultra-High Performance Concrete, 241, Nanotechnology of Concrete, and 544, Fiber-Reinforced Concrete

Session Moderator: Kay Wille
Assistant Professor
University of Connecticut
Storrs, CT

Innovations in cement-based materials have been continuously progressed over the last decades. Ultra-high-performance concrete (UHPC) is one of the most promising material innovations in the construction industry in the twenty-first century. A variety of mixture compositions within the UHPC family have been evolved, characterized, and tested. Further investigations have been followed on the structural level to gain knowledge on the structural performance of elements fully or partially made out of UHPC. Excellent material and structural performance has been recognized and will potentially address the urgent need for strengthening and retrofitting the aging U.S. infrastructure. It is critical to conduct research and to share information in this field to facilitate the application of the material. The session will invite research groups to share their knowledge in UHPC material and structural design. This session has been chosen for Kansas City to spread the knowledge of advanced concrete material and structural design, thus contributing to the "Fountain of Concrete Knowledge."

Sharing academic knowledge and practical experiences about UHPC and spreading the information will facilitate the acceptance and application of the material in U.S. construction. Speakers have been selected to cover innovations in UHPC material and structural design.

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

By attending this session, attendees will be able to:
1. Learn about UHPC mixture proportions;
2. Notice the enhanced material properties in comparison to conventional concrete;
3. Recognize the advanced structural performance of UHPC elements; and
4. Realize the importance of UHPC material and structural design for the nation's infrastructure.

From HPFRCC to UHPC: 10 Years of Joint Research between Tohoku University and Politecnico di Torino—8:30 am
Alessandro P. Fantilli, Assistant Professor, Polytechnic University of Turin, Torino, Italy

Effect of Alkali Content of Cement on Properties of Ultra-High-Performance Cementitious Mortars—8:50 am
Prasad R. Rangaraju, Assistant Professor, Clemson University, Clemson, SC; and **Kaveh Afshinnia** and **Zhengqi Li**, Clemson University

Bond of Reinforcing Steel in Ultra-High-Performance Concrete—9:10 am
Jiqiu Yuan, Research Structural Engineer, PSI, Turner-Fairbank Highway Research Center, FHWA, McLean, VA; and **Benjamin Graybeal**, Federal Highway Administration

Multi-Scale Penetration Resistance of UHPC—9:30 am
Christopher H. Conley, Associate Professor, United States Military Academy, West Point, NY; and **CPT Lorintz Gleich**, United States Military Academy

Development of Cost-Effective UHPC for Use in the Highway Bridge Sector—9:50 am
Kay Wille, Assistant Professor, University of Connecticut, Storrs, CT; and **Christopher Boisvert-Cotulio**, University of Connecticut

Micro-mechanical Modeling of Fiber-Reinforced Ultra-High-Performance Concrete: A Paradigm for Material Design—10:10 am
Gianluca Cusatis, Associate Professor, Northwestern University, Evanston, IL

2 AIA/CES LU

Monday, April 13, 2015

10:30 am – 11:00 am

Research in Progress Poster Session—C-2200 Foyer

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators:
Chris Carroll
Assistant Professor
University of Louisiana at Lafayette
Lafayette, LA

Jacob Henschen
Visiting Instructor
Valparaiso University
Valparaiso, IN

The Research in Progress Poster Session compliments the existing Research in Progress Session and provides further opportunity for the presentation of original, unpublished results from ongoing research projects and leading-edge concrete technology throughout the world.
By attending this session, attendees will be able to:
1. Recognize ongoing concrete research projects from a wide range of research topics;
2. Discuss recent techniques, research methods, and procedures related to structural and material aspects of concrete research one-on-one with the authors;
3. Describe emerging ideas in concrete research; and
4. Summarize recent technical information related to concrete structures and materials research.

Injection of Post-Tensioning Tendons with Flexible Filler Materials
Natassia R. Brenkus, PhD Candidate, University of Florida, Gainesville, FL; and **H. R. Hamilton**, University of Florida

Serviceability Behavior of Reinforced Concrete Discontinuity Regions
Jessica Kettelkamp, MS Candidate, Northern Arizona University, Flagstaff, AZ; and **Robin Tuchscherer**, Northern Arizona University

Shake-Table Tests of High-Strength Steel-Reinforced Concrete Frames
Lucas Laughery, Graduate Research Assistant, Purdue University, West Lafayette, IN; and **Santiago Pujol**, Purdue University

Use of High-Strength Steel Reinforcement in Reinforced Concrete Elements for Gravity Applications
Aishwarya Puranam, Graduate Research Assistant, Purdue University, West Lafayette, IN; and **Santiago Pujol**, Purdue University

Stud Rail Systems as One-Way Shear Reinforcement in Beams and Slabs
Mahmoodreza Soltani, PhD Candidate, Clemson University, Clemson, SC; and **Shreyas Indurkar** and **Brandon E. Ross**, Clemson University

Collapse Assessment of Vulnerable Reinforced Concrete Structures under Earthquakes
Cheng Song, Graduate Research Assistant, Purdue University, West Lafayette, IN; and **Santiago Pujol**, Purdue University

2 AIA/CES LU

11:00 am – 1:00 pm

Introduction to ISO 16311—C-2203

Sponsored by ACI Committees 562, Evaluation, Repair, and Rehabilitation of Concrete Buildings; 563, Specifications for Repair of Structural Concrete in Buildings; the TAC Repair and Rehabilitation Committee; and ACI Subcommittee 562-E, Education

Session Co-Moderators:
Tamon Ueda
Professor
Hokkaido University
Sapporo, Japan

Antonio Nanni
Professor and Chair
University of Miami
Coral Gables, FL

This new ISO document is a comprehensive guide that can provide an excellent insight to ACI convention attendees of what is being proposed at the international level in this four-volume report, covering:
- Part 1—General Principles;
- Part 2—Assessment of Existing Concrete Structures;
- Part 3—Design of Repairs and Prevention; and
- Part 4—Execution of Repairs and Prevention.

By attending this session, attendees will be able to:
1. Learn about the principles at the foundation of recently developed repair codes;
2. Recognize the importance and scope of provisions related to concrete repair;
3. Learn about assessment, evaluation, and means and methods for concrete repair; and
4. Discuss future developments and challenges from national and international perspectives.

Introduction to the Two Tech Sessions—11:00 am
Antonio Nanni, Professor and Chair, University of Miami, Coral Gables, FL

General Principles—Part 1 of ISO 16311—11:25 am
Koji Takewaka, Professor, Kagoshima University, Kagoshima, Japan

Assessment of Existing Concrete Structures—Part 2 of ISO 16311—11:50 am
Tamon Ueda, Professor, Hokkaido University, Sapporo, Japan

Design of Repairs and Prevention—Part 3 of ISO 16311—12:15 pm
Magne Maage, Skanska Norge AS, Trondheim, Norway

Execution of Repairs and Prevention—Part 4 of ISO 16311—12:40 pm
Tracy D. Marcotte, Associate, CVM, King Of Prussia, PA

2 AIA/CES LU

11:00 am – 1:00 pm

Research in Progress, Part 2 of 2—C-2202

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators:
Chris Carroll
Assistant Professor
University of Louisiana at Lafayette
Lafayette, LA

Jacob Henschen
Visiting Instructor
Valparaiso University
Valparaiso, IN

The session description and learning objectives for this session may be found in the Part 1 listing; see page 42.

Experimental Study on the Interaction between Rocking Walls and Surrounding Structural Systems—11:00 am
Qingzhi Liu, PhD Candidate, University of Minnesota, Minneapolis, MN; and **Catherine French**, University of Minnesota

Structural Testing and Dissection of CFRP-Wrapped Bridge Girders Taken Out of Service—11:15 am
Jovan Tatar, PhD Candidate, University of Florida, Gainesville, FL; and **H. R. Hamilton**, University of Florida

Testing to Failure of the Ruytenschildt Bridge: Comparison between Predicted Capacity and Test Results—11:30 am
Eva O. L. Lantsoght, Assistant Professor, Universidad San Francisco de Quito, Quito, Ecuador; and **Cor van der Veen**, Delft University of Technology

Monitoring Live-Load Response of Precast-Prestressed Self-Consolidating Concrete (SCC) Bridge A7957—11:45 am
E. S. Hernandez, PhD Candidate, Missouri S&T, Rolla, MO; and **J. J. Myers**, Missouri S&T

Performance under High Shear Stresses of Concrete Columns Reinforced with High-Strength Steel—12:00 pm
Drit Sokoli, Graduate Research Assistant, The University of Texas at Austin, Austin, TX; and **Wassim M. Ghannoum**, The University of Texas at Austin

Shear Behavior of Reinforced Concrete T-Beams Strengthened Bi-Directionally with CFRP Strips and CFRP Anchors—12:15 pm
Nawaf K. Alotaibi, PhD Candidate, The University of Texas at Austin, Austin, TX; and **William A. Shekarchi**, **Wassim M. Ghannoum**, and **James O. Jirsa**, The University of Texas at Austin

Elastic Shear Distribution in a Full-Scale Prestressed Girder Laboratory Bridge—12:30 pm
Ben Dymond, PhD Candidate, University of Minnesota, Minneapolis, MN; and **Catherine French** and **Carol Shield**, University of Minnesota

A Non-Linear Finite Element Study of Effect of Openings on In-Plane Trilinear Moment Curvature Characteristics of Reinforced Concrete Slab Elements Subjected to In-Plane and Out-of-Plane Loads—12:45 pm
R. Khajehdehi, Graduate Research Assistant, The University of Kansas, Lawrence, KS; and **N. Panahshahi**, Southern Illinois University Edwardsville

11:00 am – 1:00 pm

Toward Sustainable Infrastructure with Fiber-Reinforced Polymer Composites, Part 2 of 2—C-2205

Sponsored by ACI Committees 440, Fiber-Reinforced Polymer Reinforcement, and ACI Subcommittees 440-F, FRP-Repair-Strengthening and 440-H, FRP-Reinforced Concrete

Session Moderator:
Raafat El-Hacha
Associate Professor
University of Calgary
Calgary, AB, Canada

The session description and learning objectives for this session may be found in the Part 1 listing; see page 43.

Punching Shear Behavior of GFR-PRC Edge Slab-Column Connections—11:00 am
Ehab F. El-Salakawy, Professor, University of Manitoba, Winnipeg, MB, Canada; and **Mohammad El-Gendy**, University of Manitoba

Advances in FRP Products for Infrastructure Renovation—11:15 am
Mohammad R. Ehsani, President, QuakeWrap Inc., Tucson, AZ

Ductile Shear Connections for FRP-UHPFRC Composite Girders—11:30 am
Wael A. Zatar, Dean and Professor, College of Information Technology and Engineering, Marshall University, Huntington, WV; **Hiroshi Mutsuyoshi**, Saitama University; and **Hai Nguyen**, **Nick J. Rahall II**, Appalachian Transportation Institute

Shear Strengthening of Hollow-Core Slabs Using FRP Composite Sheets —11:45 am
Amr ElRagaby, Assistant Professor, University of Windsor, Windsor, ON, Canada; and **Yuanli Wu** and **Shaohong Cheng**, University of Windsor

Behavior of FRP-Concrete-Steel Double-Skin Tubular Columns under Lateral Loads—12:00 pm
Mohamed A. ElGawady, Associate Professor, Missouri S&T, Rolla, MO; and **Omar I. Abdelkarim**, Missouri S&T

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Improving the Durability of Coastal Bridges with Carbon FRP Prestressed Cored Slabs—12:15 pm
Rudolf Seracino, Associate Professor, North Carolina State University, Raleigh, NC; and **Griffith L. Shapack**, **Zachary Van Brunt**, **Gregory Lucier**, **Sami Rizkalla**, and **Mohammad Pour-Ghaz**, North Carolina State University

FRP-Strengthened Reinforced Concrete Beams with Basalt Composite Sheets—12:30 pm
Rami A. Hawileh, Associate Professor, American University of Sharjah, Sharjah, United Arab Emirates

Numerical Comparison between TRM and FRP in Strengthening Corroded Reinforced Concrete Beams—12:45 pm
Ahmad A. Rteil, Assistant Professor, University of British Columbia, Kelowna, BC, Canada; and **PKM Moniruzzaman**, University of British Columbia

2 AIA/CES LU

Monday, April 13, 2015

11:00 am – 1:00 pm

UHPC Innovation in Material and Structural Design, Part 2 of 2—C-2204

Sponsored by ACI Committees 236, Material Science of Concrete, 239, Ultra-High-Performance Concrete, 241, Nanotechnology of Concrete, and 544, Fiber-Reinforced Concrete

Session Moderator: Kay Wille
Assistant Professor
University of Connecticut
Storrs, CT

The session description and learning objectives for this session may be found in the Part 1 listing; see page 43.

Citius, Altius, Fortius/Faster, Higher, Tougher: Pushing Ahead the Boundaries of Structural Concrete through HPFRCCs—11:00 am
Liberato Ferrara, Associate Professor, Polytechnic University of Milan, Milan, Italy

Simulation-Based Design Example of an Ultra-High-Performance Concrete Beam—11:20 am
Rafic El-Helou, Graduate Research Assistant, Virginia Polytechnic Institute and State University, Blacksburg, VA; **Cristopher D. Moen**, Virginia Polytechnic Institute and State University; and **Gianluca Cusatis**, Northwestern University

UHPC H-Pile: An Alternative to a Steel H-Pile for Bridge Foundations—11:40 am
Sriram R. Aaleti, Assistant Professor, University of Alabama, Tuscaloosa, Tuscaloosa, AL; and **Sri Sritharan**, Iowa State University

UHPC Waffle Deck System Reinforced with HSS or CFRP—12:00 pm
Amir Mirmiran, Professor and Dean, Florida International University, Miami, FL

Analysis of the Ductility and Damage Behavior of UHPFRC Beams and Plates by Means of Digital Image Correlation (DIC)—12:20 pm
Luca Sorelli, Professor, Laval University, Quebec, QC, Canada

Seismic Design of Ultra-High-Performance Fiber-Reinforced Concrete (UHP-FRC) Moment Frame Members—12:40 pm
ShihHo Chao, Associate Professor, University of Texas Arlington, Arlington, TX; and **Jinsup Kim**, **Venkatesh Kaka**, and **Guillermo Palacios**, University of Texas-Arlington

2 AIA/CES LU

11:30 am – 1:30 pm

✓Student Lunch—C-3501 G&H

$32 U.S. per person
FREE to students who preregister by 3/15/15
Sponsored by Baker Concrete Construction Company, Inc.

BAKER CONCRETE CONSTRUCTION expect more

Coordinated by the Kansas and Missouri Chapters – ACI and ACI Committee S801, Student Activities

Speaker: Mark Luther
Senior Technical Service Engineer
Holcim (US), Inc.
Bridgeton, MO

Topic: Well, Did You Know That...?

Join students and other ACI attendees for the Student Lunch. Speaker Mark Luther will give a presentation discussing things students may not yet know, bringing in real-life experiences from his career and explaining how students can relate. Following the lecture, the results of the student competition will be announced.

PREREGISTRATION IS REQUIRED TO ATTEND. *Tickets may be purchased at the ACI Registration Desk up to 24 hours prior to the event, based on availability. Please notify the ACI Registration Desk if you have any dietary restrictions.*

2 AIA/CES LU

1:30 pm – 3:30 pm

D-Cracking of Concrete Pavements—C-2202

Sponsored by the Kansas and Missouri Chapters – ACI

Session Co-Moderators: Darin Cielocha
Vice President
McGill Restoration
Omaha, NE

Thomas L. Rewerts
Owner/Structural Engineer
Thos Rewerts & Co LLC
Kansas City, MO

The session will cover various aspects of D-cracking of concrete pavements. This is both a contentious and unfortunately common issue in the Kansas City area, as well as nationally. Some aspects of the issue which are reviewed include: petrographic evaluations, actions being taken by local DOTs to reduce the occurrence, the role of moisture in causing the issue, and some responses to the issue by the industry and public sector. If

you are involved with pavements, this session is one you do not want to miss!
By attending this session, attendees will be able to:
1. Summarize the current industry thinking on what are the causes of D-cracking in pavement;
2. Understand the presentation of field and petrographic methods for evaluating D-cracking;
3. Discuss the methods to mitigate or prevent D-cracking; and
4. Summarize the role that moisture and critical saturation of concrete plays in the formation of D-cracking.

Petrographic Evaluations of D-Cracked Concrete—1:30 pm
Randall Billinger, Professional Geologist, Kansas Department of Transportation, Topeka, KS

Examining the Role of Moisture in D-Cracking of Concrete Pavements—1:55 pm
Thomas L. Rewerts, Owner - Structural Engineer, Thos. Rewerts & Co. LLC, Kansas City, MO

Evaluation of the Effectiveness of D-Cracking Prevention Strategies/Observations from the Field—2:20 pm
Heather A. McLeod, Research Assistant, James Madison University, Harrisonburg, VA

Iowa's Approach to Reducing the Risk of D-Cracking—2:45 pm
Peter C. Taylor, Associate Director, CP Tech Center, Ames, IA

Industry and Public-Sector Responses to D-Cracking of Concrete Pavements—3:10 pm
Todd LaTorella, Executive Director, American Concrete Pavement Association, Overland Park, KS

2 AIA/CES LU

1:30 pm – 3:30 pm

Impact of Chemical Deicers on Durability—C-2204

Sponsored by ACI Committee 201, Durability of Concrete

Session Moderator: David A. Rothstein
Petrographer
DRP Consulting Inc.
Boulder, CO

This session will focus on recent advances in our understanding of how chemical deicers impact the durability of concrete pavements. Designers, engineers, contractors, and owners should have an interest in this session. Recent changes in the use of chemicals for deicing and anti-icing have led to noticeable diminution in the durability of concrete pavements and exterior flatwork. New research focused on understanding the nature of the mechanisms associated with this deterioration may help develop new strategies for mitigation in the future.
By attending this session, attendees will be able to:
1. Summarize recent technical information related to concrete durability and deicers;
2. Discuss how deicers present challenges to existing standardized test methodologies for scaling resistance;
3. Describe deterioration mechanisms associated with deicers; and
4. Describe how deicers affect the durability of joints in pavements.

Overview of Problems with Deicer Scaling and Test Methods—1:30 pm
R. Doug Hooton, Professor, University of Toronto, Toronto, ON, Canada

A New Look at an Old Problem: Reexamining the Saltwater Phase Diagrams to Better Describe Concrete Durability—1:55 pm
Yaghoob Farnam, Graduate Research Assistant, Purdue University, West Lafayette, IN; and **W. Jason Weiss** and **Heather Todak**, Purdue University

Potential Impact of Chloride-Based Deicers on the Deterioration of Joints in Concrete Pavement—2:20 pm
Jan Olek, Associate Professor, Purdue University, West Lafayette, IN; and **Nancy M. Whiting**, **Parth Panchmatia**, and **Hyung Kim**, Purdue University

Measuring the Air Void Size Distribution in Fresh Concrete—2:45 pm
Tyler Ley, Assistant Professor, Oklahoma State University, Stillwater, OK

Effectiveness of Early Application of Penetrating Sealants—3:10 pm
Lawrence L. Sutter, Professor, Michigan Technological University, Houghton, MI; and **Daniel M. Vruno**, American Engineering & Testing

2 AIA/CES LU

1:30 pm – 3:30 pm

Undergraduate Research in Concrete Materials, Structural Design, and Construction—C-2203

Sponsored by ACI Committee S805, Collegiate Concrete Council-CLGE

Session Co-Moderators: John J. Schemmel
Professor, Department of Civil Engineering
Texas State University
San Marcos, TX

Aura Lee Harper-Smith
Student
Valparaiso University
Evanston, IL

The objective of this session is to provide undergraduate students with an opportunity to present their own research at a national conference. It is anticipated that this session will draw new students to ACI and The Concrete Convention and Exposition. The session will also allow students to hear a wide variety of presentations of a nature that that is in keeping with their current level of knowledge regarding concrete.
By attending this session, attendees will be able to:
1. Gain exposure to the high-quality research conducted by undergraduate students;
2. Provide feedback on research topics, research methodologies, and presentation skills to young engineers;
3. Network with other researchers to discuss research needs and possible research collaborations; and
4. Meet with potential graduate students.

Condition Assessment of Concrete Bridge Elements Using Active Infrared Thermography—1:30 pm
Jason Cattelino, Student, Michigan Technological University, Houghton, MI; **Theresa M. Ahlborn**, Michigan Technological University; and **Khatereh Vaghefi**, Parsons Brinckerhoff

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Strength Activity Index Assessment for Pozzolans Based on a Constant Volume Approach—1:47 pm
Daniel Galvez Moreno, Student, Autonomous University of Nuevo León, Los Mochis, Mexico; **Dale P. Bentz**, National Institute of Standards and Technology; and **Alejandro Durán Herrera**, Autonomous University of Nuevo León

Effect of Aggregate Type and Gradation on Compressive Strength, F-T Durability, and Flow Rate for Pervious Concrete—2:07 pm
Bryce R. Hansen, Student, University of Minnesota - Duluth (UMD), Hanley Falls, MN; and **Mary U. Christiansen**, University of Minnesota - Duluth (UMD)

Influence of Mixing Procedure on Robustness of Self-Consolidating Cement Pastes—2:24 pm
Aida M. Ley Hernandez, Student, Autonomous University of Sinaloa, Sinaloa, Mexico; and **Dimitri Feys**, Missouri S&T

Go-to-Market Strategy for Construction Products Used in Sports Venues—2:40 pm
Jaymi L. Hill, Student, California State University, Chico, Yuba City, CA; and **Christopher J. Perego**, BASF Construction Systems

Development of Sustainable Concrete Sidewalks for the University of Minnesota Duluth Campus—2:58 pm
Robert Larsen, Student, University of Minnesota - Duluth (UMD), Duluth, MN; and **Mary U. Christiansen**, University of Minnesota - Duluth (UMD)

Eco-SCC with Recycled Concrete Aggregate—3:15 pm
Brian J. Ledsinger, Student, Texas State University, San Marcos, TX; and **Jiong Hu**, Texas State University

2 AIA/CES LU

Monday, April 13, 2015

3:30 pm – 5:00 pm

***Guest Social—M-HISTORIC MUEHLEBACH LOBBY**

Sheila Rushing invites all registered convention guests to join her for the Guest Social. You don't want to miss an opportunity to catch up with old friends, get to know other convention guests, and enjoy light refreshments. All guests must have a guest name badge to participate in this event. A map to the Guest Social can be found on the back of your invitation.

4:00 pm – 6:00 pm

Artifacts for Better Presentations—C-2205

Sponsored by ACI Committees S802, Teaching Methods and Educational Materials, and 120, History of Concrete

Session Moderator: Luke M. Snell
Senior Materials Engineer
Western Technologies Inc.
Phoenix, AZ

To provide photos and write-ups of artifacts that ACI members have collected in their professional careers. These will be made available to professors or speakers to use in classroom presentations and/or seminars.
By attending this session, attendees will be able to:
1. Learn how to spruce up their presentation;
2. Investigate the history of concrete;
3. Talk directly to people who collected the artifacts; and
4. Learn new presentation techniques for the classroom and presentations.

Learning Never Exhausts the Mind—4:00 pm
Aleksandra Radlinska, Assistant Professor, The Pennsylvania State University, University Park, PA

Concrete from the Dollarway Road—4:40 pm
Frances T. Griffith, Administrator, University of Arkansas, Fayetteville, AR

Adhesive Anchor Hole Cleaning: The Good and the Bad—4:45 pm
Anthony J. Lamanna, Consulting Engineer, Eastern Kentucky University, Richmond, KY

Development of the Schmidt Hammer—4:50 pm
Nestor E. Chonillo, Vice President, Proceq USA, Gurnee, IL

Starlug Load Transfer Device—4:55 pm
Kurt D. Smith, Program Director, Applied Pavement Technology, Inc., Urbana, IL; and **David Peshkin**, Applied Pavement Technology Inc.

JELL-O Bench Marks: Using JELL-O to Introduce Fatigue Crack Growth—5:00 pm
Matthew D. Lovell, Assistant Professor of Civil Engineering, Rose Hulman Institute, Terre Haute, IN

Kansas State University Memorial Stadium: A Look at Historical Aspects of Engineering, Planning, and Design Methods—5:05 pm
Mathew Alford, Student, Kansas State University, Manhattan, KS; and **Kimberly Waggle Kramer**, Kansas State University

Square Deformed Reinforcement from 1930 Dam Construction—5:10 pm
Lawrence Homer Taber, Structural Engineer, Black & Veatch, Overland Park, KS

Concrete "Superhero"—5:15 pm
Luke M. Snell, Senior Materials Engineer, Western Technologies Inc., Phoenix, AZ

Examination of Artifacts and Discussion with Presenters—5:20 pm
Luke M. Snell, Senior Materials Engineer, Western Technologies Inc., Phoenix, AZ

2 AIA/CES LU

4:00 pm – 6:00 pm

International Cooperation between ACI Technical Committees, Part 3 of 3—C-2203

Sponsored by ACI Committee 544, Fiber-Reinforced Concrete

Session Moderator: Barzin Mobasher
Professor
Arizona State University
Tempe, AZ

The session description and learning objectives for this session may be found in the Part 1 listing; see page 38.

Design of Precast Fiber-Reinforced Tunnel Segments—4:00 pm
Mehdi Bakhshi, Senior Tunnel Engineer, AECOM, New York, NY; and **Verya Nasri**, DMJM & Harris

Modeling of Crack Width in the Design of Fiber-Reinforced Concrete Slabs—4:30 pm
Yiming Yao, Student, Arizona State University, Tempe, AZ; **Xavier Destree**, ArcelorMittal; and **Barzin Mobasher**, Arizona State University

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Shear Strength of Macrosynthetic Fiber-Reinforced Concrete Beams: Assessment and Applicability of Existing SFRC Models—5:00 pm
Salah Ahmed Altoubat, Assistant Professor of Civil Engineering, University of Sharjah, Sharjah, United Arab Emirates; **Klaus Alexander Rieder**, Grace Construction Products; and **Ardavan Yazdanbakhsh**, City College

Reducing Crack Widths of Structural Slab Bridge Decks by Using Fiber-Reinforced Concrete—5:30 pm
Anil K. Patnaik, Associate Professor, University of Akron, Akron, OH

2 AIA/CES LU

4:00 pm – 6:00 pm

Pumpability of Self-Consolidating Concrete—C-2202

Sponsored by ACI Committees 237, Self-Consolidating Concrete, and 238, Workability of Fresh Concrete

Session Co-Moderators:

George Morcous
Associate Professor
University of Nebraska-Lincoln
Omaha, NE

Dimitri Feys
Assistant Professor
Missouri S&T
Rolla, MO

This session intends to inform concrete producers, contractors, academics, and students on the latest developments, common practices, and problems associated with pumping of self-consolidating concrete (SCC). The session focuses on selecting materials and optimizing mixture design to ensure adequate pumping of SCC. Practical experiences on the quality control of SCC for the construction of the Burj Khalifa, as well as the influence of SCC fresh properties on changes in the air void system due to pumping are discussed. The latest theoretical developments on prediction of pumping pressure, influence of constituent elements, and the changes in fresh concrete properties are also presented.
By attending this session, attendees will be able to:
1. Analyze critical mixture design parameters that affect pumping of SCC;
2. Understand the importance of quality control on fresh SCC properties to ensure proper pumping;
3. Recognize how the properties of SCC change during pumping; and
4. Identify the future challenges of pumping of SCC.

Burj Khalifa—A New High for High-Performance SCC—4:00 pm
James M. Aldred, Principal Professional, AECOM, Sydney, NSW Australia

Effect of Coarse Aggregate Size on SCC Pumpability—4:20 pm
Seung Hee Kwon, Researcher, Myongji University, Seoul, South Korea; **Jae Hong Kim**, Ulsan National Institute of Science & Technology; and **Choi Myoungsung**, Princeton University

Practical Experiences on Pumping of SCC—4:40 pm
Matt Kaminsky, Postdoctoral Research Associate, ACI Concrete Placement, Spring Hill, KS

Influence of Pumping on Fresh Concrete Properties for SCC—5:00 pm
Thomas A. Bier, Professor, TU Bergakademie Freiberg-Lehrstuhl Baust, Freiberg, Germany; and **Keisuke Takahashi**, UBE Industries, Ltd.

The Effect of Pumping on the Air Void System of Pumped SCC Mixtures and Methods to Maintain Quality—5:20 pm
Philip S. Zacarias, Technical Services Manager, Canada Building Materials CBM, Mississauga, ON, Canada; **Lloyd J. Keller**, EllisDon Corporation; and **Dimitri Feys**, Missouri S&T

Pumping of Self-Consolidating Concrete: Latest Developments and Future Challenges—5:40 pm
Dimitri Feys, Assistant Professor, Missouri S&T, Rolla, MO

2 AIA/CES LU

4:00 pm – 6:00 pm

Repair Guides and Standards around the World—C-2204

Sponsored by ACI Committees 562, Evaluation, Repair, and Rehabilitation of Concrete Buildings; 563, Specifications for Repair of Structural Concrete in Buildings; the TAC Repair and Rehabilitation Committee; and ACI Subcommittee 562-E, Education

Session Co-Moderators:

Tracy D. Marcotte
Associate
CVM
King of Prussia, PA

Antonio Nanni
Professor and Chair
University of Miami
Coral Gables, FL

By attending this session, attendees will be able to:
1. Learn about the principles at the foundation of recently developed repair codes;
2. Recognize the importance and scope of provisions related to concrete repair;
3. Learn about assessment, evaluation, and means and methods for concrete repair; and
4. Discuss future developments and challenges from national and international perspectives.

JCI Guidelines for Performance Assessment of Existing Concrete Structures—4:00 pm
Hirozo Mihashi, Professor Emeritus, Tohoku University, Sendai, Japan

Korean Structural Concrete Design Code 2012—Safety Evaluation of Existing Structures—4:25 pm
Soobong Shin, Associate Professor, INHA University, Incheon, South Korea

European Standardization of Protection and Repair of Concrete Structures—4:50 pm
Magne Maage, Skanska Norge AS, Trondheim, Norway

ACI Repair Code—5:15 pm
Keith E. Kesner, Project Director, CVM Engineers, Wayne, PA

Panel Discussion—5:40 pm
Antonio Nanni, Professor and Chair, University of Miami, Coral Gables, FL

2 AIA/CES LU

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Monday, April 13, 2015

6:00 pm – 7:00 pm

Women in ACI Reception—M-BASIE BALLROOM FOYER

All registered convention attendees are invited to attend the Women in ACI Reception. This long-standing ACI tradition is a great opportunity to get to know other women in the concrete industry. In addition to networking, attendees of this reception will have the opportunity to participate in a Silent Auction. This auction will feature concrete artwork, beautifully crafted by students. All are welcome at this reception! A cash bar and light hors d'oeuvres will be served.

6:30 pm – 8:30 pm

123 Forum: Are Nano-Materials and Nano-Technologies Ready for Full-Scale Concrete Construction Applications?—C-2202

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators:

Tengfei Fu
Oregon BEST Postdoctoral Scholar
Oregon State Unversity
Corvallis, OR

Kerry S. Hall
Assistant Professor
University of Southern Indiana
Evansville, IN

Recent advancements in nanotechnology show that many of the primary properties of cement and concrete materials can be significantly improved, including strength, durability, and sustainability. New and emerging opportunities are promising in leading to advanced cement-based composites with unique properties, which can overcome many deficiencies in conventional cement-based materials. However, transferring laboratory success to field application faces many challenges.

This Forum will discuss:

- What is nanotechnology?
- What nanomaterials are used in concrete construction?
- How to characterize material properties in nanoscale.
- What are the benefits and challenges of using nano-materials?
- What are some of the research needs?
- Successful applications in concrete construction.
- What does the future hold for nano-modified concrete in construction industry?

A panel of experts will debate these questions, and more, to provide the audience information regarding the latest development in nanomaterials and nanotechnology. The forum will start with short presentations by each panelist followed by an interactive discussion with the audience.
By attending this session, attendees will be able to:
1. List nanomaterial products used in construction materials;
2. Understand the benefit of using nanotechnology to improve properties of concrete;
3. Recognize the current challenge in applications; and
4. Identify emerging opportunities and further research areas of nanotechnology in construction.

Nano-Technology and Nano-Materials Impact on Concrete Performance—6:30 pm
Konstantin Sobolev, Associated Professor, University of Wisconsin-Milwaukee, Milwaukee, WI

Materials Characterization in Nanoscale—6:45 pm
Paramita Mondal, Assistant Professor, University of Illinois at Urbana-Champaign, Urbana, IL

Colloidal Silica, Paving the Way for a More Durable Concrete—7:00 pm
Jon Belkowitz, Head of Research and Development, Intelligent Concrete, Elbert, CO

Nano-Engineering UHPC—7:15 pm
Kay Wille, Assistant Professor, University of Connecticut, Storrs, CT

2 AIA/CES LU

Tuesday, April 14, 2015

5:00 am and 6:00 am

Run/Walk Meet-Up—MARRIOTT MAIN LOBBY

Looking for a running or walking partner? This is a great opportunity to meet up with other ACI attendees before heading out for your morning run or walk. Local area maps are available at the hotel concierge desk. All are welcome!
**Please consult your physician to determine if you are fit for this type of activity. Run/walk at your own risk.*

6:00 am – 6:45 am

Morning Yoga Class—MARRIOTT YOGA STUDIO

Interested in putting a little balance into your hectic week? Whether you have regularly practiced yoga or have never tried it, this session will help you get your body and mind grounded for the day and week ahead. Led by ACI Marketing Committee Chair and yoga teacher Kimberly Kayler, this intro to yoga class requires no experience. You don't have to be able to twist into a pretzel or even touch your toes! Registration is not required and yoga mats will be provided.
**Please consult with your physician to determine if you are fit for this type of activity.*

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Tuesday, April 14, 2015

✓*Concrete Flatwork Finisher and Technician Certification*

$175 U.S. per person

Attend this review session to prepare for the written examination in the afternoon. Certification will be granted to those candidates who obtain a passing grade on the written exam in addition to on-the-job experience. Please review the certification details, study guides, and experience requirements found at **www.concrete.org/Certification/CertificationPrograms.aspx**. To register, please contact Bonnie Bender at +1.913.634.1163 or bbender.techpro@gmail.com.

Concrete Flatwork Finisher and Technician Exam Review-English—M-JULIA LEE A&B
8:30 am – 10:30 am

Concrete Flatwork Finisher and Technician Exam Review-Spanish—M-BENNIE MOTEN A&B
8:30 am – 10:30 am

Concrete Flatwork Finisher and Technician Exam-Spanish—M-BENNIE MOTEN A&B
10:30 am – 12:30 pm

Concrete Flatwork Finisher and Technician Exam-English—M-BASIE C
4:00 pm – 6:00 pm

8:30 am – 10:30 am

3-D Time Dependent Numerical Analyses of Concrete Structures, Part 1 of 2—C-2204

Sponsored by ACI Committee 209, Creep and Shrinkage in Concrete

Session Co-Moderators: Roman Wendner
Director Christian Doppler Laboratory
BOKU Vienna
Vienna, Austria

Mija H. Hubler
Assistant Professor
University of Colorado, Boulder
Cambridge, MA

This special session aims at convening the world's experts in the field of three-dimensional (3-D) numerical analysis of concrete creep and shrinkage, inside but also outside ACI, with the goal to collect the most advanced formulations, models, and numerical methods. The assembled contributions will represent the state of science and will provide guidance for the future use of rate-type models in both structural design and detailed analyses tasks.
By attending this session, attendees will be able to:
1. Understand different methods to model long-term deformations of concrete structures;
2. Understand the principles of rate-type computational formulations; and
3. Discuss the future use of rate-type models in both structural design and detailed analysis tasks.

Numerical Simulation of Long-Term Behavior of Long-Span Prestressed Concrete Bridges—8:30 am
Lukas Vrablik, Associate Professor, Czech Technical University, Prague, Czech Republic

A Software Tool for the Analysis of Time-Dependent Effects in High-Rise Buildings: Development, Validation, and Application to a Real Case Study—8:50 am
Carlo Casalegno, Research Assistant, IUAV University of Venice, Italy; **Mario Alberto Chiorino**, Polytechnic University of Turin; and **Taehun Ha**, Daewoo E&C

On the Influence of Creep on Shear Lag of Thin-Walled Box Segmental Bridges: A Rate Type Approach—9:10 am
Mario Sassone, Professor, Polytechnic University of Turin, Italy; and **Mario Alberto Chiorino**, Polytechnic University of Turin

Long-Term Performance of Rigid-Frame Prestressed Concrete Box Girder: Effects of Coupled Concrete Creep and Cracking—9:30 am
Qiang Yu, Assistant Professor, University of Pittsburgh, Pittsburgh, PA; **Teng Tong** and **Jie Zhang**, University of Pittsburgh; and **Kaiqi Zheng** and **Zhao Liu**, Southeast University

Time-Dependent Prestressing Losses Affected by Nonlinear Structural Performance—9:50 am
Lukas Vrablik, Associate Professor, Czech Technical University, Prague, Czech Republic

Evolution of Time-Dependent Poisson's Ratio of Concrete during Creep—10:10 am
Matthieu Vandamme, Professor, University of Paris, Champs Sur Marne, France; **Jean-Michel Torrenti**, University of Paris; **Abudushalamu Aili**, IFSTTAR; and Benoit Masson, EDF/DIN/SEPTEN

2 AIA/CES LU

8:30 am – 10:30 am

BIM for Cast-in-Place Concrete—C-2203

Sponsored by ACI Committee 131, Building Information Modeling of Concrete Structures

Session Co-Moderators: Peter J. Carrato
BIM Manager
Bechtel Corporation
Frederick, MD

Allan P. Bommer
Chief Design Engineer – Structural Concrete Products
Bentley Systems Inc.
Seattle, WA

The object of the session is to inform ACI members of the progress made by ACI Committee 131 on developing open information exchange between various software products used in the concrete supply chain. The information delivery manual (IDM) and model view definitions (MVD) developed by the committee will be presented and explained. A presentation will also be made of state-of-the-art applications of BIM in the concrete supply chain.
By attending this session, attendees will be able to:
1. Understand the steps involved in developing and enhancing data exchange protocols for cast-in-place concrete;
2. Recognize the work process diagram that is part of the cast-in-place concrete information delivery manual;
3. Describe recent application of Building Information Modeling to major concrete project; and
4. Appreciate the need for new work processes that embrace information-enabled project delivery.

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Introduction to Industry Foundation Classes (IFC) and the Role of Information Delivery Manuals (IDM) and Model View Definitions (MVD) —8:30 am
Charles M. Eastman, Professor, Georgia Institute of Technology, Atlanta, GA

An Overview of ACI 131.1 IDM for Cast-in-Place Concrete—8:50 am
Allan P. Bommer, Chief Design Engineer – Structural Concrete Products, Bentley Systems Inc., Seattle, WA

A Model-Based Process for the Reinforced Concrete Value Chain—9:10 am
Peter J. Carrato, BIM Manager, Bechtel Corporation, Frederick, MD

BIM Implementation by the Concrete Contractor—9:30 am
William M. Klorman, President/CEO, W. M. Klorman Construction Corp, Woodland Hills, CA

BIM in Formwork Applications: A Case Study—9:50 am
Andrew R. Lloyd, Engineering Manager, MEVA Formwork Systems, Inc., Wake Forest, NC

Panel Discussion: The Future of BIM in Cast-in-Place Concrete—10:10 am
Julian Kang, Associate Professor, Texas A&M University, College Station, TX

2 AIA/CES LU

Tuesday, April 14, 2015

8:30 am – 10:30 am

Recent Updates to Blast Design Guidance—C-2202

Sponsored by ACI Committee 370, Blast and Impact Load Effects

Session Co-Moderators:

Ganesh Thiagarajan
Professor
University of Missouri-Kansas City
Kansas City, MO

William H. Zehrt, Jr.
Safety (Structural) Engineer
DoD Explosives Safety Board
Alexandria, VA

In this session, recent updates to blast design guidance will be presented. The session will focus on new criteria incorporated in "Structures to Resist the Effects of Accidental Explosions," UFC 3-340-02, Change 1 (2014). These criteria include a major revision to the UFC's analysis and design procedures for reinforced and unreinforced masonry walls and a new testing protocol and performance requirements for mechanical splices that will, for the first time, permit their use on certain explosives safety applications. In addition, recent research will be presented on the performance of concrete elements under blast loading. By attending this session, attendees will be able to:
1. Recognize commonly used approaches for designing structures to withstand blast effects;
2. Understand new blast analysis and design procedures for masonry walls;
3. Learn the technical basis of new mechanical splice criteria in UFC 3-340-02; and
4. Increase awareness of recent and ongoing research into structural response under blast loading.

Overview of UFC 3-340-02, Change 1—8:30 am
William H. Zehrt, Jr., Safety (Structural) Engineer, DoD Explosives Safety Board, Alexandria, VA

Updates to UFC 3-340-02, Chapter 6: Masonry Design—8:50 am
Charles J. Oswald, Senior Principal, Protection Engineering Consultants, San Antonio, TX

Performance of Reinforcement Bar Mechanical Couplers at Low, Medium, and High Strain Rates—9:15 am
Stephen P. Rowell, Research General Engineer, Engineer Research and Development Center, U.S. Army Corps of Engineers, Vicksburg, MS

DoD Research in Support of Future UFC 3-340-02 Updates—9:40 am
Robert T. Conway, Research Structural Engineer, NAVFAC Engineering and Expeditionary Warfare Center, Port Hueneme, CA

Blast Design Guidelines for Precast and Prestressed Concrete—10:05 am
Clay J. Naito, Associate Professor, Lehigh University, Bethlehem, PA

2 AIA/CES LU

11:00 am – 1:00 pm

3-D Time Dependent Numerical Analyses of Concrete Structures, Part 2 of 2—C-2204

Sponsored by ACI Committee 209, Creep and Shrinkage in Concrete

Session Co-Moderators:

Roman Wendner
Director Christian Doppler Laboratory
BOKU Vienna
Vienna, Austria

Mija H. Hubler
Assistant Professor
University of Colorado, Boulder
Cambridge, MA

The session description and learning objectives for this session may be found in the Part 1 listing; see page 51.

Nonlinear Hereditary Creep Theory—11:00 am
R. S. Sanzharovskiy, Professor, Saint-Petersburg State University of Architecture and Civil Engineering (SPSUACE), Russia

Problems with Recent Statistics of Errors of Creep and Shrinkage Models in the Light of 3-D FE Creep Analysis of Palau and Other Bridges—11:15 am
Zdeněk P. Bažant, Professor, Northwestern University, Evanston, IL; and **Roman Wendner**, BOKU VIENNA; **Mija H. Hubler**, University of Colorado, Boulder; and **Qiang Yu**, University of Pittsburgh

Instantaneous Nonlinearity of Concrete in the Calculation of Long Durability and Deformation of Reinforced Concrete—11:30 am
Elistratov Vladimir Nikolaevich, PhD Candidate, Saint-Petersburg State University of Architecture and Civil Engineering (SPSUACE), Russia; and **Rudolf Sergeevich Sanzharovskiy**, Saint-Petersburg State University of Architecture and Civil Engineering (SPSUACE)

Solidification Microprestress Microplane (SMM) Theory to Study a High-Performance Concrete for Prestressed Continuous Box-Girder Bridges—11:45 am
Giovanni Di Luzio, Assistant Professor, Polytechnic University of Milan, Italy; and **Luigi Cedolin**, Polytechnic University of Milan

Explicit Implementation of the Solidification-Microprestress Theory Within the Lattice Discrete Particle Model—12:00 pm
Mohammed Alnaggar, Assistant Professor, Rensselaer Polytechnic Institute, Troy, NY; **Mohammed Abdellatef**, Rensselaer Polytechnic Institute; and **Gianluca Cusatis**, Northwestern University

Utilization of Creep Test Data at Different Stages to Determine Creep Parameters of Rate-Type Constitutive Models—12:15 pm
Yunping Xi, Professor, University of Colorado, Boulder, CO

Short-Term Creep Testing of Hydrating Cement Pastes and Mortars—12:30 pm
Bernhard Pichler, Associate Professor, Technical University Vienna, Austria; and **Mohammad Irfan-ul-Hassan**, **Roland Reihsner**, and **Christian Hellmich**, Technical University Vienna

2 AIA/CES LU

11:00 am – 1:00 pm

Decorative Concrete and Aesthetic Innovations—C-2205

Sponsored by ACI Committees 124, Concrete Aesthetics, and 310, Decorative Concrete

Session Co-Moderators:
Larry Rowland
Manager-Marketing Technical Services
Lehigh Cement Company
Allentown, PA

Anne M. Werner
Civil Engineer
Southern Illinois University Edwardsville
Edwardsville, IL

Decorative concrete is the fastest-growing and most dynamic segment to the concrete market. It can deliver spectacular looking, sustainable finishes that are durable and long-lasting to commercial and residential construction projects.
This session will give an overview of ACI 310R-13, "Guide to Decorative Concrete," and highlight key practices for achieving beautiful decorative concrete flatwork. Nationally recognized decorative concrete experts will outline specialized materials and methods and their role in successful placement and maintenance of polished concrete, concrete colorants, and specialty decorative finishes. Attendees will learn the advantages of various applications and discover how to specify quality decorative concrete projects.
By attending this session, attendees will be able to:
1. Explain the most popular methods for producing decorative concrete;
2. Describe the proper selection and maintenance of polished concrete floor finishes;
3. Examine multiple ways of imparting color into decorative concrete; and
4. Discover specialty applications for achieving high-performance concrete finishes.

An Overview of ACI 310R-13 Guide to Decorative Concrete—11:00 am
Larry Rowland, Manager-Marketing Technical Services, Lehigh Cement Company, Allentown, PA; and **Cori E. Sutton**, Diamond Designer Concrete Inc.

Selection and Maintenance of Polished Concrete Floors—11:30 am
Kevin Sigourney, Consolideck Product Manager, PROSOCO, Inc., Napa, CA

Post-Placement Concrete Coloring—Acid Stains, Dyes, and Colorants—12:00 pm
Rich Cofoid, National Sales Manager, Increte Systems Inc., Odessa, FL

Effective Use of White Cement for Decorative Applications—12:30 pm
James A. Farny, Market Manager, Buildings, Portland Cement Association, Skokie, IL

2 AIA/CES LU

11:00 am – 1:00 pm

In-Transit Quality Control—C-2202

Sponsored by ACI Committee 238, Workability of Fresh Concrete

Session Co-Moderators:
Nathan A. Tregger
Senior R&D Engineer
WR Grace
Cambridge, MA

Berthold Berman
Chief Technical Officer
SensoCrete
St. Lazare, QC, Canada

During the last decade, new technologies that measure concrete workability during transit have finally emerged. The need to monitor and control the properties of the concrete up to the pouring point has become both evident and possible. Although the available technologies may use different methods, they all share the same vision: the concrete trucks must no longer be considered delivery trucks per se, but rather mobile production units, and consequently be addressed as such, with production control tools. The goal of this session is to identify the marriage between these tools and the industry's needs.
By attending this session, attendees will be able to:
1. Recognize the different options for automated quality control during transit;
2. Describe how an in-transit quality control system can impact the concrete production and delivery process;
3. Discuss the difference between the available technologies; and
4. Summarize how these technologies should be applied and used.

Automated Slump Management Technology for Consistent Quality Concrete—11:00 am
Nathan A. Tregger, Senior R&D Engineer, WR Grace, Cambridge, MA

Automated Measurement and Control of Concrete Properties in a Ready Mix Truck—11:25 am
Kamal H. Khayat, Director, Center for Infrastructure Engineering Studies, Missouri S&T, Rolla, MO; and **Nicolas Ali Libre**, Missouri S&T

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Automated in Truck Quality Control for a Ready Mix Truck—11:50 am
Berthold Berman, Chief Technical Officer, SensoCrete, St. Lazare, QC, Canada; and **Dully Katzeff**, SensoCrete

Control of Concrete Quality with an In-Drum Rheometer in Ready Mix Concrete Trucks—12:15 pm
Philip S. Zacarias, Technical Services Manager, Canada Building Materials CBM, Mississauga, ON, Canada

Question & Answers—12:40 pm
Berthold Berman, Chief Technical Officer, SensoCrete, St. Lazare, QC, Canada

2 AIA/CES LU

Tuesday, April 14, 2015

11:00 am – 1:00 pm

Influence of Admixtures on Early-Age Properties—C-2203

Sponsored by ACI Committee 231, Properties of Concrete at Early Ages

Session Co-Moderators:
Alana G. Guzzetta
National Research Laboratory Manager
US Concrete
San Jose, CA

Akthem A. Al-Manaseer
Professor
San Jose State University
San Jose, CA

The objective of this session will be to address the influence of chemical and mineral admixtures on the early-age properties of concrete, mortar, and grout. The session will educate practitioners on methods to measure early shrinkage, and to examine the effect of admixtures on early-age properties.
By attending this session, attendees will be able to:
1. Understand the use of crack-reducing admixture with a new chemical-bond polypropylene macrofiber on early-age behavior;
2. Learn a new measurement technique to determine early-age shrinkage and setting time;
3. Quantify the efficacy of using superabsorbent polymers as an internal curing agent and its effect on early shrinkage; and
4. Describe the effects of chloride-based accelerator on early-age properties.

A New Method to Measure Setting Time of Paste, Mortar, and Concrete with Admixtures—11:00 am
Akthem A. Al-Manaseer, Professor, San Jose State University, San Jose, CA; and **Alana G. Guzzetta**, US Concrete

Crack Width Control with Crack-Reducing Admixture and Polypropylene Macrofiber—11:20 am
Steve Schaef, Engineering Manager, BASF Corporation, Beachwood, OH; and **Emmanuel K. Attiogbe** and **Chiara Villani**, BASF Corporation

Mitigating Shrinkage and Cracking with Superabsorbent Polymers—11:40 am
Albert E. Miller, Student, Purdue University, West Lafayette, IN; and **W. Jason Weiss**, **Timothy Barrett**, and **Kendra Erk**, Purdue University

Effect of Chloride-Based Accelerator on Early-Age Concrete Properties—12:00 pm
Natallia Shanahan, Student, University of South Florida, Tampa, FL; **Kyle Austin Riding**, Kansas State University; and **Abla Zayed**, University of South Florida

EarlyAge Stiffening and Air Voids Stability Problems due to Incompatible Combinations of Cements, Fly Ashes, and Chemical Admixtures—12:20 pm
Jan Olek, Associate Professor, Purdue University, West Lafayette, IN; and **Chaitanya Paleti**, CDM Smith

Use of Chemical Admixtures to Enable Successful Manufacture of Concrete with Low Portland Cement Content—12:40 pm
Ara A. Jeknavorian, Jeknavorian Consulting Services, Chelmsford, MA; **Eric P. Koehler**, Titan America; and **Josephine Cheung**, WR Grace

2 AIA/CES LU

11:30 am – 1:30 pm

✓Contractors' Day Lunch—C-2215 C

$35 U.S. per person
Coordinated by the Kansas and Missouri Chapters – ACI and the Construction Liaison Committee

Speaker: Jeff W. Coleman
Attorney
The Coleman Law Firm LLC
Minneapolis, MN

Topic: When Does Cracking of Concrete Become a Construction Defect?

Join other ACI attendees and contractors for the Contractors' Day Lunch. Enjoy a special presentation by Jeff Coleman, The Coleman Law Firm LLC.

PREREGISTRATION IS REQUIRED TO ATTEND. *Tickets may be purchased at the ACI Registration Desk up to 24 hours prior to the event, based on availability. Please notify the ACI Registration Desk if you have any dietary restrictions.*

1:30 pm – 3:30 pm

✓Kansas City Fountains Tour—DEPART MARRIOTT MAIN LOBBY

$29 U.S. per person

Discover how the City of Fountains got its name as this tour takes you around the landmark fountains of Kansas City. This tour will highlight the technical and architectural aspects of the fountains, as well as celebrate the beauty and wonder that they bring to the city.

Tickets are available for purchase at ACI Registration. ***Tours are nonrefundable****. All tours depart from the Marriott Main Lobby.*

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

1:30 pm – 3:30 pm

Advancement in Modeling Bond of Deformed Bars in Concrete, Part 1 of 2—C-2205

Sponsored by Joint ACI-ASCE Committees 408, Bond and Development of Steel Reinforcement, and 447, Finite Element Analysis of Reinforced Concrete Structures

Session Co-Moderators:

Jian Zhao
Associate Professor
University of Wisconsin-Milwaukee
Milwaukee, WI

Genda Chen
Professor of Civil Engineering
Missouri S&T
Rolla, MO

This session is organized to bring engineers and researchers the latest development in techniques and models for capturing bond-slip-related behavior in reinforced concrete structures. Advancement will be presented on bond slip of deformed bars in concrete, including local bond-slip models, bond behavior in flexural members, bond modeling in behavior of structures under extreme loads, cracking in concrete members, and bond modeling in the development of bars.
By attending this session, attendees will be able to:
1. Understand the bond between deformed bars and concrete;
2. Understand the related slips and the impact on the member-level and structure-level behavior;
3. Learn the background of future code development; and
4. Learn the modeling techniques for capturing the bond-slip behavior.

Development of Bond Strength Expression Using Failure Mechanism of Lap Splices—1:30 pm
Gangolu Appa Rao, Associate Professor, Indian Institute of Technology Madras, Chennai, India; **Rolf Eligehausen**, University of Stuttgart; and **S. Priyanka Reddy**, Indian Institute of Technology Madras

Information-Based Parallel Multi-Scale Analysis for Bond-Slip Behavior of General RC Structures—2:00 pm
In Ho Cho, Assistant Professor, Iowa State University, Ames, IA

Provisions for Lap Splices with those of the *fib* Model Code 2010: A Comparison with ACI 318—2:30 pm
Giovanni A. Plizzari, Associate Professor, University of Brescia, Brescia, Italy; **Rolf Eligehausen**, University of Stuttgart; and **John Cairns**, Heriot-Watt University

Development Length of Headed Bars Based on Bond Analyses—3:00 pm
Jian Zhao, Associate Professor, University of Wisconsin Milwaukee, Milwaukee, WI; and **Jan Erich Hofmann**, University of Stuttgart

2 AIA/CES LU

1:30 pm – 3:30 pm

Contractors' Day Session: Building a Better Tomorrow—C-2203

Sponsored by the Kansas and Missouri Chapters – ACI

Session Co-Moderators:

Mike Murray
Technical Support and Sales
Decorative Concrete Supply
Shawnee, KS

Rusty Owings
Quality Control General Manager
Geiger Ready Mix Co. Inc.
Kansas City, KS

This power-packed session features four experienced speakers addressing hot issues that affect you, the contractor, on a daily basis. These speakers will reveal how to use experience to your advantage and use the "experience crystal ball" to stop a problem before it happens! On the other hand, if it's too late and you own a problem, now what do you do? Use experience to find the answer! Speak the "language" of the industry; sometimes we shoot ourselves in the foot by poorly choosing words when others do much better. Say what you mean and mean what you say! Four great speakers will share their "Fountains of Knowledge" with you!
By attending this session, attendees will be able to:
1. Learn that communication is king. Keep it clear and use the right lingo. The same words mean different things to different people within the industry;
2. Learn that always growing with new ideas and education can improve you, your company, and your service/product;
3. Learn how to use your experience to troubleshoot; and
4. Learn how to prevent some cracks in concrete before they happen.

Preventing Plastic Skrinkage Cracks—1:30 pm
Luke M. Snell, Senior Materials Engineer, Western Technologies Inc., Phoenix, AZ

When a 6-inch Slump Isn't a 6-inch Slump: How to Translate between Contractor and Supplier—2:00 pm
Kevin A. MacDonald, Principal, Beton Consulting Engineers LLC, Mendota Heights, MN

Don't Pour the Cement, Place the Concrete—2:30 pm
Jeremie Montgomery, Executive Director, NE Concrete & Aggregates Associates, Lincoln, NE

Persevere—3:00 pm
Mark D. Luther, Senior Technical Service Engineer, Holcim (US) Inc., Bridgeton, MO

2 AIA/CES LU

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Tuesday, April 14, 2015

1:30 pm – 3:30 pm

Open Topic Session, Part 1 of 2—C-2202

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators:

Lisa E. Burris
Postdoctoral Researcher
Georgia Institute of Technology
Atlanta, GA

Aaron K. Larosche
Staff Engineer
Pivot Engineers
Austin, TX

The Open Topic Sessions are forums for presenting recent technical information that could not be scheduled into other convention sessions.
By attending this session, attendees will be able to:
1. Recognize new and emerging materials for civil infrastructures;
2. Demonstrate the various methods to assess the current conditions of structures and how to repair them;
3. Identify recent techniques, research methods, and procedures related to the structural material aspects of concrete; and
4. Explain the behavior of various high-performance cementitious composites.

Structural Damage Detection Using Ambient Vibrations—1:30 pm
Nader Tadros, Graduate Research Assistant, Kansas State University, Manhattan, KS; and **Hani Melhem** and **Asad Esamaeily**, Kansas State University

Axial Stress-Strain Behavior of Reinforced Concrete in Square Columns Confined with Lateral Steel and FRP Jackets—1:50 pm
Ahmed Abd El Fattah, Assistant Professor, King Fahd University, Dhahran, Saudi Arabia

Swedish Design Guide for Steel Fiber Concrete Structures—2:10 pm
Johan Silfwerbrand, Professor, Department Head, KTH Royal Institute of Technology, Stockholm, Sweden

Finite Element Analysis of Concrete Beams with GFRP Flexural and Shear Reinforcement—2:30 pm
Joseph Stoner, MAS. Candidate, University of Waterloo, Corunna, ON, Canada; and **Maria Anna Polak**, University of Waterloo

Comparing Shear Load Ratings of Prestressed Girder Bridges Using AASHTO Standard and AASHTO LRFD V_{ci} and V_{cw} Methodologies for Capacity—2:50 pm
Ben Dymond, PhD Candidate, University of Minnesota, Twin Cities, Minneapolis, MN; and **Catherine French** and **Carol Shield**, University of Minnesota

A Comparison of the Bond Behavior of PBO-FRCM Composites Determined by Single-Lap and Double-Lap Shear Tests—3:10 pm
Lesley H. Sneed, Assistant Professor, Missouri S&T, Rolla, MO; **Christian Carloni**, University of Bologna; **Tommaso D'Antino**, University of Patras; and **Carlo Pellegrino**, University of Padova

2 AIA/CES LU

1:30 pm – 3:30 pm

Use of High-Strength Concrete in Tall Buildings, Part 1 of 2—C-2204

Sponsored by ACI Committees 239, Ultra-High Performance Concrete, and 363, High-Strength Concrete

Session Co-Moderators:

William M. Hale
Professor
University of Arkansas
Fayetteville, AR

Seamus F. Freyne
Assistant Professor of Civil and Environmental Engineering
Mississippi State University
Mississippi State, MS

The objective of the session is to inform practitioners and engineers on the use of high-strength concrete (HSC) in tall buildings. There has been a significant amount of research regarding the development of HSC, but the learning outcomes of this session include topics related to the delivery, placement, testing (including in-place), and case studies of HSC in tall buildings.
By attending this session, attendees will be able to:
1. Identify potential uses and benefits of HSC in tall buildings;
2. Recommend methods for measuring the properties of HSC;
3. Examine methods of producing and delivering HSC to the jobsite; and
4. Determine the appropriate concrete properties necessary for the design of tall buildings.

High-Strength Concrete Considerations for the 3280 ft Tall Kingdom Tower, Saudi Arabia—1:30 pm
Robert C. Sinn, Principal, Thornton Tomasetti Inc., Chicago, IL

Successful High-Strength Concrete in Tall Buildings in North America—2:00 pm
William S. Phelan, Senior Vice President of Marketing & Technical Services, The Euclid Chemical Co., East Brunswick, NJ

Testing High-Strength Concrete in Chicago—2:30 pm
Walter H. Flood IV, Manager Engineer, Flood Testing Labs Inc., Chicago, IL

The Successful Use of High-Strength Concrete in United States High-Rise Buildings—3:00 pm
Cary S. Kopczynski, President/Senior Principal, Cary Kopczynski & Co Inc., Bellevue, WA; and **Joe Ferzli**, Cary Kopczynski & Co Inc.

2 AIA/CES LU

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

4:00 pm – 6:00 pm

Advancement in Modeling Bond of Deformed Bars in Concrete, Part 2 of 2—C-2205

Sponsored by Joint ACI-ASCE Committees 408, Bond and Development of Steel Reinforcement, and 447, Finite Element Analysis of Reinforced Concrete Structures

Session Co-Moderators:

Jian Zhao
Associate Professor
University of Wisconsin-Milwaukee
Milwaukee, WI

Genda Chen
Professor of Civil Engineering
Missouri S&T
Rolla, MO

The session description and learning objectives for this session may be found in the Part 1 listing; see page 55.

A Unified Model of Local Bond between Deformed Rebar and Concrete—4:00 pm
Genda Chen, Professor of Civil Engineering, Missouri S&T, Rolla, MO; and **Chenglin Wu**, Missouri S&T

Bond-Slip Behavior of Reinforcing Bars Subjected to Inelastic Strains—4:30 pm
Sri Sritharan, Wilson Engineering Professor, Iowa State University, Ames, IA; and **Xiao Liang**, Iowa State University

Modeling of Bond Behavior Incorported in *fib* Model Code 2010—5:00 pm
Rolf Eligehausen, Professor, University of Stuttgart, Stuttgart, Germany

Discrete-Like Crack Simulation by Smeared Crack-Based Finite Element Model/Fiber-Reinforced Cementitious Composite Member Subjected to Shrinkage—5:30 pm
Yuichi Sato, Research Associate, Kyoto University, Kyoto, Japan

2 AIA/CES LU

4:00 pm – 6:00 pm

Open Topic Session, Part 2 of 2—C-2202

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators:

Lisa E. Burris
Postdoctoral Researcher
Georgia Institute of Technology
Atlanta, GA

Aaron K. Larosche
Staff Engineer
Pivot Engineers
Austin, TX

The session description and learning objectives for this session may be found in the Part 1 listing; see page 56.

Direct Three-Dimensional Observations of the Microstructure and Chemistry of the Hydration of C_3S—4:00 pm
Qinang Hu, Graduate Student, Oklahoma State University, Stillwater, OK; and **Tyler Ley**, **Mahammad Aboustait**, and **Jay Hanan**, Oklahoma State University

Mechanisms of Dimensional Instability Caused by Drying in Wet-Cured Cement and Concrete Elements—4:20 pm
Amir Hajibabaee, PhD Student, Oklahoma State University, Stillwater, OK; **Tyler Ley**, Oklahoma State University; and **Zachary Grasley**, Texas A&M University

Microbial Concrete: Mitigating Delay in Hydration Kinetics Through Optimization of *Sporosarcina Pasteurii* Growth Medium—4:40 pm
Sarah L. Williams, Graduate Research Assistant, University of Texas at Austin, Austin, TX; and **Mary Jo Kirisits** and **Raissa Douglass Ferron**, University of Texas at Austin

Impact of Aggregate Mineralogy on Converted Strength and Hydration in Calcium Aluminate Cement Concrete—5:00 pm
Matthew P. Adams, PhD Candidate, Oregon State University, Corvallis, OR; and **Jason H. Ideker**, Oregon State University

Material Properties Overview of Fiber-Reinforced Rubber Concrete—5:20 pm
Chris Carroll, Assistant Professor, University of Louisiana at Lafayette, Lafayette, LA; and **Nick Helminger**, University of Louisiana at Lafayette

Continuously Galvanized Reinforcing Steel—5:40 pm
Martin Gagne, Manager Technology and Market Development, International Zinc Association, Durham, NC

2 AIA/CES LU

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Tuesday, April 14, 2015

4:00 pm – 6:00 pm

Troubleshooting Specifications—C-2203

Sponsored by ACI Committee E707, Specification Education

Session Co-Moderators:

Michelle L. Wilson
Director, Education
Portland Cement Association
Skokie, IL

Aimee Pergalsky
Manager, National Business Development
Euclid Chemical
Richfield, OH

The program will focus on avoiding confusion in ACI concrete specifications.
By attending this session, attendees will be able to:
1. Understand ACI specification language;
2. Be aware of default language in ACI specifications;
3. Troubleshoot misleading specification language, and
4. Gain tools for handling conflicts within specifications.

Unless Otherwise Specified—4:00 pm
Nicholas J. Carino, Consultant, Chagrin Falls, OH

What Did I Just Promise You?—4:25 pm
Michelle L. Wilson, Director, Education, Portland Cement Association, Skokie, IL

The Good, the Bad, and the Ugly—4:50 pm
Ward R. Malisch, Technical Director, ASCC, Lebanon, TN

Helpful Specifications—5:15 pm
W. Calvin McCall, Partner, Concrete Engineering Consultants, Inc., Charlotte, NC

2 AIA/CES LU

4:00 pm – 6:00 pm

Use of High-Strength Concrete in Tall Buildings, Part 2 of 2—C-2204

Sponsored by ACI Committees 239, Ultra-High Performance Concrete, and 363, High-Strength Concrete

Session Co-Moderators:

William M. Hale
Professor
University of Arkansas
Fayetteville, AR

Seamus F. Freyne
Assistant Professor of Civil and Environmental Engineering
Mississippi State University
Mississippi State, MS

The session description and learning objectives for this session may be found in the Part 1 listing; see page 56.

History and Development of HSC in Tall Buildings—4:00 pm
Lawrence C. Novak, Manager - Building Structures, Portland Cement Association, Skokie, IL

The Use of High-Strength Concrete in Tower One of the World Trade Center—4:30 pm
Casimir J. Bognacki, Chief of Materials, The Port Authority of New York & New Jersey, New Hyde Park, NY

Concrete Challenges for High Seismic High Rises—5:00 pm
Robert C. Sinn, Principal, Thornton Tomasetti Inc., Chicago, IL

High-Strength, High-Performance Iconic Supertall Towers: Trump Tower, Chicago, USA; Cayan Tower, Dubai, UAE; Burj Khalifa, Dubai, UAE—5:30 pm
Bradley S. Young, Associate Director, Skidmore, Owings & Merrill LLP, Naperville, IL; and **Dane Rankin** and **James J. Pawlikowski**, Skidmore, Owings & Merrill LLP

2 AIA/CES LU

5:30 pm – 6:30 pm

Faculty Network Reception—M-12TH STREET ROOM

Faculty members and students are invited to attend this informal reception for an opportunity to exchange ideas and network. Light hors d'oeuvres and a cash bar will be available.

6:30 pm – 8:00 pm

Concrete Mixer—C-3501 A-H

Join ACI attendees and guests for an evening of networking, entertainment, and great food during the Concrete Mixer, held at the Kansas City Convention Center. An assortment of food and beverages will be available.

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Wednesday, April 15, 2015

5:00 am and 6:00 am

Run/Walk Meet-Up—MARRIOTT MAIN LOBBY

Looking for a running or walking partner? This is a great opportunity to meet up with other ACI attendees before heading out for your morning run or walk. Local area maps are available at the hotel concierge desk. All are welcome!
**Please consult your physician to determine if you are fit for this type of activity. Run/walk at your own risk.*

6:00 am – 6:45 am

Morning Yoga Class—MARRIOTT YOGA STUDIO

Interested in putting a little balance into your hectic week? Whether you have regularly practiced yoga or have never tried it, this session will help you get your body and mind grounded for the day and week ahead. Led by ACI Marketing Committee Chair and yoga teacher Kimberly Kayler, this intro to yoga class requires no experience. You don't have to be able to twist into a pretzel or even touch your toes! Registration is not required and yoga mats will be provided.
**Please consult with your physician to determine if you are fit for this type of activity.*

8:30 am – 10:30 am

How to Make an iPad App—C-2205

Sponsored by ACI Committee 118, Use of Digital Technology

Session Moderator: Ronald L. O'Kane
Partner
Leigh & O'Kane LLC
Kansas City, MO

We live in an age where everything we do is tied to our devices. This session will show attendees how they can expand the use of their devices in their personal, professional, and committee work by demonstrating the step-by-step procedures to develop an iPad/iPhone App. This will include an overview of hardware, development software, and how to become a registered developer.

There will be a live demonstration of writing code, building, and testing and using iPad/iPhone simulators. The demonstration will include examples of apps that were developed for concrete, including the New ACI University App, Concrete Column App, Retaining Wall App, Pile Caps, and other apps that could be useful to members. Additionally we will cover how to add buttons, text, tables, and drawings to an App. Resources from the Internet, online help, and user meetings and clubs will be touched on. Finally, deployment to the App Store will be discussed.
By attending this session, attendees will be able to:
1. Understand the need for members and/or committees to develop apps;
2. Recognize the tools needed (equipment and software) to become a developer;
3. Discuss software tips and tricks, and new software languages; and
4. Explain how easy it is to get started as an app developer for both personal and professional use, and possibly make a profit.

How to Become an iPad/iPhone Developer—8:30 am
Ronald L. O'Kane, Partner, Leigh & O'Kane LLC, Kansas City, MO

Developing the App—9:05 am
Ronald L. O'Kane, Partner, Leigh & O'Kane LLC, Kansas City, MO

How to Deploy to the App Store—9:40 am
Ronald L. O'Kane, Partner, Leigh & O'Kane LLC, Kansas City, MO

2 AIA/CES LU

8:30 am – 10:30 am

Pervious Concrete: Let the Knowledge Flow—C-2202

Sponsored by the Kansas and Missouri Chapters – ACI

Session Co-Moderators: John T. Kevern
Assistant Professor of Civil Engineering
University of Missouri-Kansas City
Kansas City, MO

Narayanan Neithalath
Associate Professor
Arizona State University
Tempe, AZ

Pervious concrete use is increasing and new research is being performed all the time. Come and learn about several case studies and new research. Topics range from cement binder additives for recycled concrete to a case study on Maryland DOTs first use of pervious concrete.
By attending this session, attendees will be able to:
1. Recognize ongoing pervious concrete research projects related to fracture mechanisms and incorporation of recycled materials;
2. Discuss successes and challenges of current pervious concrete field installations;
3. Describe nontraditional pervious concrete applications of tennis courts and green walls; and
4. Summarize recent technical information related permeable pavement use in North Carolina's BMP manual.

Fracture Response of Pervious Concrete—8:30 am
Narayanan Neithalath, Associate Professor, Arizona State University, Tempe, AZ

Case Study of Maryland DOT's First Pervious Concrete Experience—8:50 am
Thomas F. Evans, Executive Director, Maryland Ready Mixed Concrete Association, Frederick, MD

Green Walls with Pervious Concrete—9:10 am
Anne M. Werner, Civil Engineer, Southern Illinois University Edwardsville, Edwardsville, IL

Béton Poreux: The Pervious Concrete Tennis Court Market in France—9:30 am
Dale Fisher, Executive Director, NPCPA, St John, VI

Overview of North Carolina's BMP Manual—9:50 am
Jason D. Wimberly, Regional Technical Services Manager - SE, WR Grace, Anderson, SC

Improving the Performance of Recycled-Aggregate Pervious Concrete via Cement-Binder Additives—10:10 am
Patrick W. Barnhouse, Student, University of Colorado Boulder, Boulder, CO

2 AIA/CES LU

Event Details

Program changes are available at ACI Registration in C-2103

* = Guest-only event ✓ = Separate fee required TG = Task Group C = Convention Center M = Marriott

Wednesday, April 15, 2015

8:30 am – 10:30 am

Resilient Housing: Making the Case for Sustainable Residential Concrete, Part 1 of 2—C-2203

Sponsored by ACI Committee 332, Residential Concrete Work

Session Moderator: James A. Farny
Market Manager, Buildings
Portland Cement Association
Skokie, IL

Part 1 of the ACI 332 session will explore the topic of resilience as it pertains to the homes we live in and the communities they create. Attendees will come away with a greater understanding of economic and societal impacts of less durable housing, what it means to be resilient, and ways to create better buildings with concrete systems. New research into measuring the resilience of a home will link the use of concrete materials and systems to sustainable, longerlasting structures.
By attending this session, attendees will be able to:
1. Understand why resilience is becoming increasingly necessary for residential construction;
2. Name at least two things that make a home sustainable;
3. Describe several ways in which concrete housing systems are considered to be high performing; and
4. Understand economic implications of incorporating resilience into home building.

Enhanced Resilience: Why We Need It—8:30 am
Stephen S. Szoke, Director Codes and Standards, Portland Cement Association, Skokie, IL

Concrete Housing and Sustainability—8:55 am
Julie K. Buffenbarger, Construction Specialist, Lafarge, Medina, OH

HighPerformance Concrete Housing—9:20 am
Brent Douglas Anderson, President, BDA Associates, LLC, Edina, MN

Incorporating Hazard Resistance into Building Life-Cycle Costs—9:45 am
Reed Miller, Research Specialist, MIT, Cambridge, MA

2 AIA/CES LU

8:30 am – 10:30 am

Ternary Blends and More, Part 1 of 2—C-2204

Sponsored by ACI Committees 130, Sustainability of Concrete, and 234, Silica Fume in Concrete

Session Co-Moderators: Robert C. Lewis
Technical Marketing Manager
Elkem Silicon Materials
Reading, Berkshire, United Kingdom

Fouad Yazbeck
Chief Technical Officer
Ready Mix Abu Dhabi
Abu Dhabi, United Arab Emirates

This session looks at the use of multiple blends of cementitious materials used for designing durable and ultradurable concretes. The use of ternary and quaternary blends to achieve long-term lifetimes, and thus lower environmental impact, will be discussed.
Outcomes are that technical personnel will see that such blends are achievable and are currently being used in many major projects across the globe, despite the lack of such blends being found in relevant Standards.
By attending this session, attendees will be able to:
1. Understand that the use of supplementary cementitious materials is widespread for obtaining high-performance concrete;
2. These materials are not solitary in use, and should not be considered “either/or” but as to “best combination”;
3. High-performance and high-strength concretes can be achieved despite environmental restrictions on portland cement; and
4. User-friendly workability and rheology can be easily obtained despite multiple cementitious materials.

The Morphing of Silica Fume from Mineral Admixture to Rheological Design Tool—8:30 am
Eckart R. Buhler, Manager Engineering, Norchem, Inc., Jupiter, FL

Development of Ternary OPC/FA/SF Binder System for Bridge Decks Concrete—9:00 am
Jan Olek, Associate Professor, Purdue University, West Lafayette, IN; and **Mateusz Radlinski**, Exponent

The Durability of Concrete Produced with Multi-Component Cement Blends Including Supplementary Cementing Materials and Interground Limestone—9:30 am
Michael Thomas, Professor, University of New Brunswick, Frederickton, NB, Canada

Advantages of Silica Fume-Slag Ternary Binders for Production of Durable Concrete—10:00 am
R. Doug Hooton, Professor, University of Toronto, Toronto, ON, Canada

2 AIA/CES LU

11:00 am – 1:00 pm

Resilient Housing: Concrete Solutions for Hazard-Resistant Housing, Part 2 of 2—C-2203

Sponsored by ACI Committee 332, Residential Concrete Work

Session Moderator: Tarek S. Khan
Area Manager – Northern California
BASF Admixtures Inc.
Granite Bay, CA

This session goes into greater detail about the ways in which specific weather events such as high winds and storm surge can affect the built environment. Attendees will hear about protective measures for creating hazard-resistant housing using concrete building solutions. Case studies of real-world concrete homes subjected to severe weather will examine their design, construction, and performance to demonstrate that current technology exists to prevent this type of damage.
By attending this session, attendees will be able to:
1. Understand the magnitude of forces present in high wind events;
2. Describe key elements of homes intended to resist high winds;
3. Describe existing design and construction methods to resist storm surge; and
4. Describe the pros and cons of total concrete building envelopes.

Tornadoes and Storm Shelters: Update on FEMA Design Guides—11:00 am
Lionel A. Lemay, Senior Vice President, Sustainability, National Ready Mixed Concrete Association (NRMCA), Libertyville, IL

Coastal Housing—11:25 am
J. Edward Sauter, Executive Director, Tilt-Up Concrete Association, Mount Vernon, IA

Case Study: State-of-the-Art Cast-in-Place Concrete Practices are Storm-Resistant—11:50 am
Dennis R. Purinton, President and Treasurer, Purinton Builders Inc., East Granby, CT

Case Study: Disaster-Resistant Guam Housing—12:15 pm
Kenneth A. Luttrell, Vice President, CYS Structural Engineers Inc., Sacramento, CA

2 AIA/CES LU

11:00 am – 1:00 pm

Ternary Blends and More, Part 2 of 2—C-2204

Sponsored by ACI Committees 130, Sustainability of Concrete, and 234, Silica Fume in Concrete

Session Co-Moderators: Robert C. Lewis
Technical Marketing Manager
Elkem Silicon Materials
Reading, Berkshire, United Kingdom

Fouad Yazbeck
Chief Technical Officer
Ready Mix Abu Dhabi
Abu Dhabi, United Arab Emirates

The session description and learning objectives for this session may be found in the Part 1 listing; see page 60.

Durability and Performance of Self-Consolidating Concrete Made with Various Ternary Cements—11:00 am
Kamal H. Khayat, Director, Center for Infrastructure Engineering Studies, Missouri S&T, Rolla, MO

Long-Term Durability of Ternary Blends in Outdoor Field Exposures—11:30 am
Thano Drimalas, Research Associate, University of Texas at Austin, Austin, TX; and **Kevin J. Folliard**, University of Texas at Austin

Exploring the Use of Higher Fractions of Metakaolin with Portland Limestone Cement—12:00 pm
Kimberly E. Kurtis, Professor, Georgia Institute of Technology, Atlanta, GA; **Burak Uzal**, Abdullah Gul University; and **Ahmad Shalan** and **Behnaz Zaribaf**, Georgia Institute of Technology

Durability for 100 Years on the Shanghai East Sea Bridge: Ternary and Quaternary Blends—12:30 pm
Robert C. Lewis, Technical Marketing Manager, Elkem Silicon Materials, Reading, Berkshire, United Kingdom

2 AIA/CES LU

Thursday, April 16, 2015

8:00 am – 5:00 pm

✓ACI 318-14: Building Code Seminar—M-BASIE C

7:45 am Registration; coffee and pastries available
$557 U.S. per person, ACI member registration fee
$697 U.S. per person, Nonmember registration fee
$150 U.S. per person, Full-time students (with proof of enrollment)

Speakers:

Andrew W. Taylor
Project Engineer
KPFF Consulting Engineers
Seattle, WA

Jerzy Z. Zemajtis
Senior Engineer
American Concrete Institute
Farmington Hills, MI

ACI has recently published the newest edition of ACI 318, "Building Code Requirements for Structural Concrete (ACI 318-14)." This edition represents the first major change in Code organization in over 40 years and has been completely reorganized from a designer's perspective. This seminar will help you get acquainted with the new organization and various technical changes to the code as quickly as possible and demonstrate how you can ensure that your design fully complies with the new code.

2 AIA/CES LU

Session Attendance Tracking Form for The Concrete Convention and Exposition

Kansas City, MO
April 12-16, 2015

Use this form to track your attendance at ACI sessions. This form may be accepted by state boards that allow self-reporting of continuing education activities as evidence of participation. In most cases, 1 contact hour is equal to 1 Professional Development Hour (PDH). Check with your state board for acceptance criteria.

Instructions: Fill in your name, e-mail address, and telephone number below. Check off each session you attend. If a state where you are licensed requires a certificate of attendance, please record the three PDH codes given throughout each session in the boxes provided. You must attend the entire session and sign this form to receive your certificate(s). After you have attended your final session, submit this form to the registration desk located in the Exhibit Hall at the Kansas City Convention Center. You may also fax this form to ACI at +1.248.848.3792, or e-mail it to Eva Korzeniewski (emk@concrete.org). You must attend the entire session and sign this form to receive your certificate(s). Total the number of PDH credits you earned for each day at the end of this form.

Name (please print): _____

By my signature, I attest that I have attended the entire duration of each of the sessions indicated on this form:

_____
(Signature)

Email address (please print):_____

Telephone number: _____

If you are a licensed Professional Engineer in Florida and would like ACI to report your hours to the Florida state board or you are an Architect and would like ACI to report your hours to AIA, please provide your license number below.

Florida PE No.:_____

Architecture license No.:_____

Sunday, April 12, 2015

Three PDH Codes for the selected session:

1:00 PM - 3:00 PM (Select one session) 2 PDH
- ❑ Form Pressure of Self-Consolidating Concrete—Hydrostatic or Not? (237/347) _____ _____ _____
- ❑ Heavy-Duty Concrete Pavements, Part 1 of 2 (325/327/330)
- ❑ International Cooperation between ACI Technical Committees, Part 1 of 3 (544)

3:30 PM - 5:30 PM (Select one session) 2 PDH
- ❑ Heavy-Duty Concrete Pavements, Part 2 of 2 (325/327/330) _____ _____ _____
- ❑ International Cooperation between ACI Technical Committees, Part 2 of 3 (544)
- ❑ Rational Approaches for Fire Resistance Design of Concrete Structures (216)

8:00 PM - 10:00 PM 2 PDH
- ❑ Hot Topic Session: Building Resiliency (HTC) _____ _____ _____

Monday, April 13, 2015

8:30 AM - 10:30 AM (Select one session) 2 PDH
- ❑ Is Global Climate Change Killing Our Concrete Structures? (130) _____ _____ _____
- ❑ Research in Progress, Part 1 of 2 (123)
- ❑ Toward Sustainable Infrastructure with Fiber-Reinforced Polymer Composites, Part 1 of 2 (440/440-F/440-H)
- ❑ UHPC Innovation in Material and Structural Design, Part 1 of 2 (236/239/241/544)

11:00 AM - 1:00 PM (Select one session) 2 PDH
- ❑ Introduction to ISO 16311 (562/563/TRRC/562-E) _____ _____ _____
- ❑ Research in Progress, Part 2 of 2 (123)
- ❑ Toward Sustainable Infrastructure with Fiber-Reinforced Polymer Composites, Part 2 of 2 (440/440-F/440-H)
- ❑ UHPC Innovation in Material and Structural Design, Part 2 of 2 (236/239/241/544)

1:30 PM - 3:30 PM (Select one session) 2 PDH
- ❑ D-Cracking of Concrete Pavements (Kansas and Missouri Chapters – ACI) _____ _____ _____
- ❑ Impact of Chemical Deicers on Durability (201)
- ❑ Undergraduate Research in Concrete Materials, Structural Design, and Construction (S805)

Monday, April 13, 2015 (cont.)

Three PDH Codes for the selected session:

4:00 PM - 6:00 PM (Select one session) 2 PDH

- ❑ Artifacts for Better Presentations (S802/120)
- ❑ International Cooperation between ACI Technical Committees, Part 3 of 3 (544)
- ❑ Pumpability of Self-Consolidating Concrete (237/238)
- ❑ Repair Guides and Standards around the World (562/563/TRRC/562-E)

6:30 PM - 8:30 PM 2 PDH

- ❑ 123 Forum: Are Nano-Materials and Nano-Technologies Ready for Full-Scale Concrete Construction Applications? (123)

Tuesday, April 14, 2015

8:30 AM - 10:30 AM (Select one session) 2 PDH

- ❑ 3-D Time Dependent Numerical Analyses of Concrete Structures, Part 1 of 2 (209)
- ❑ BIM for Cast-in-Place Concrete (131)
- ❑ Recent Updates to Blast Design Guidance (370)

11:00 AM - 1:00 PM (Select one session) 2 PDH

- ❑ 3-D Time Dependent Numerical Analyses of Concrete Structures, Part 2 of 2 (209)
- ❑ Decorative Concrete and Aesthetic Innovations (124/310)
- ❑ In-Transit Quality Control (238)
- ❑ Influence of Admixtures on Early-Age Properties (231)

1:30 PM - 3:30 PM (Select one session) 2 PDH

- ❑ Advancement in Modeling Bond of Deformed Bars in Concete, Part 1 of 2 (408/447)
- ❑ Contractors' Day Session: Building a Better Tomorrow (Kansas and Missouri Chapters – ACI)
- ❑ Open Topic Session, Part 1 of 2 (123)
- ❑ Use of High-Strength Concrete in Tall Buildings, Part 1 of 2 (239/363)

4:00 PM - 6:00 PM (Select one session) 2 PDH

- ❑ Advancement in Modeling Bond of Deformed Bars in Concrete, Part 2 of 2 (408/447)
- ❑ Open Topic Session, Part 2 of 2 (123)
- ❑ Troubleshooting Specifications (E707)
- ❑ Use of High-Strength Concrete in Tall Buildings, Part 2 of 2 (239/363)

Wednesday, April 15, 2015

8:30 AM - 10:30 AM (Select one session) 2 PDH

- ❑ How to Make an iPad App (118)
- ❑ Pervious Concrete: Let the Knowledge Flow (Kansas and Missouri Chapters – ACI)
- ❑ Resilient Housing: Making the Case for Sustainable Residential Concrete, Part 1 of 2 (332)
- ❑ Ternary Blends and More, Part 1 of 2 (130/234)

11:00 AM - 1:00 PM (Select one session) 2 PDH

- ❑ Resilient Housing: Concrete Solutions for Hazard-Resistant Housing, Part 2 of 2 (332)
- ❑ Ternary Blends and More, Part 2 of 2 (130/234)

Daily PDH Totals:

Total Completed on Sunday, 4/12/15 _____

Total Completed on Monday, 4/13/15 _____

Total Completed on Tuesday, 4/14/15 _____

Total Completed on Wednesday, 4/15/15 _____

Total Number of PDHs Completed _____

Please submit this form to the registration desk, located in the Exhibit Hall at the Kansas City Convention Center, at the conclusion of the final session you attend. You may also fax this form to ACI at +1.248.848.3792, or e-mail to Eva Korzeniewski (emk@concrete.org).

The deadline to submit this form to ACI is May 4, 2015. You will receive your certificate(s) by May 18, 2015. Please ensure you have filled out the correct e-mail address on this form, as that is where your certificate(s) will be sent.

Fall 2015 | Denver

The Concrete Convention and Exposition

Photo courtesey VISIT DENVER

Photo courtesey Ron Ruhoff VISIT DENVER

The Concrete Convention and Exposition

Photo courtesey Steve Crecelius VISIT DENVER

Save the Date

Photo courtesey Bruce Boyer VISIT DENVER

November 8-12, 2015

Sheraton Denver Downtown Hotel

CONSTRUCTABILITY DENVER FALL 2015

Be sure to visit the Denver Information Desk in the exhibit hall

Thank you for attending

The Concrete Convention

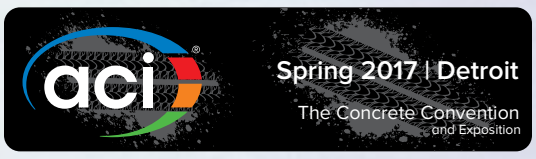
and Exposition

Save the Date for future Conventions

November 8-12, 2015
Sheraton
Denver, CO

April 17-21, 2016
Hyatt & Wisconsin Center
Milwaukee, WI

October 23-27, 2016
Philadelphia Marriott
Philadelphia, PA



March 26-30, 2017
Renaissance Center and GM Learning Center
Detroit, MI

American Concrete Institute

38800 Country Club Drive | Farmington Hills, MI 48331
Phone: +1.248.848.3700 | Fax: +1.248.848.3701 | www.concrete.org