

Spring 2016 | Milwaukee

The Concrete Convention and Exposition

Program Book

April 17-21, 2016 | Hyatt Regency & Wisconsin Center

Convention Sponsors

Sponsors are listed as of 3/24/16

Cement Sponsor



Admixture Sponsors



EUCLID CHEMICAL

THE BRAND YOU KNOW AND TRUST HAS A NEW NAME

GRACE



WACKER
NEUSON

Fine Aggregate Sponsors



American Concrete Institute



Water Sponsors

Alberta Chapter – ACI
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Colorado Ready Mixed Concrete Association
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CRC Press – Taylor & Francis
Eastern Pennsylvania and Delaware Chapter – ACI
Georgia Chapter – ACI
Greater Michigan Chapter – ACI
Houston Chapter – ACI
Illinois Chapter – ACI
Intermountain Chapter – ACI
Kansas Chapter – ACI
Las Vegas Chapter – ACI
Louisiana Chapter – ACI
Maryland Chapter – ACI
National Capital Chapter – ACI
New Mexico Chapter – ACI
Northeast Texas Chapter – ACI
Pittsburgh Area Chapter – ACI
Portland Cement Association
Rocky Mountain Chapter – ACI
San Diego Chapter – ACI
Southern California Chapter – ACI
Wisconsin Ready Mixed Concrete Association

Registration Bags

ATC – American Transmission Company
CG Schmidt
CSD – Computerized Structural Design
FESCO Direct
GeoTest, Inc.
Gestra Engineering
HGA – Hammel, Green, and Abrahamson
Mortenson Construction
We Energies

Wisconsin Chapter Convention Committee

Committee Co-Chairs

Jeff Anderson, GeoTest, Inc.
Laura Powers, WJE

Treasurer

Adam Tamme, ATC

Publicity

Ryan Olson, AC Business Media

Guest Program

Greg Schmidt, GeoTest, Inc.

Contractors' Day

Josh Skogman, Mortenson Construction

Technical Program

Jeff Anderson, GeoTest, Inc.

Student Program

Laura Powers, WJE

Social Events

Adam Ramme, ATC

CC Liaison

Alain Belanger

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Download the
Convention
App!



Search "ACI Convention" on
your Apple or Android device.

Detailed program information and program changes can be found in the
Convention App!

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ACI President's Welcome

ACI Members and Guests:

Welcome to Milwaukee 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 and committee opportunities for professional enrichment. The opportunities are abundant, 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 30 companies from around the world!

The Wisconsin Chapter Convention Committee has put a great deal of effort into developing a convention program that is both memorable and productive. Please join me in thanking them by stopping by the host chapter desk during your time at the ACI Convention.

It is an honor to be here and to share this week with you. I hope you enjoy the ACI Convention and all that Milwaukee has to offer. Thank you for attending and for your continued involvement with ACI!













Kind regards,



Sharon L. Wood
ACI President



ACI Sustaining Members

 ACS MANUFACTURING CORPORATION
ACS Manufacturing Corporation
 ADVANCED CONSTRUCTION TECHNOLOGY SERVICES
Advanced Construction Technology Service

American Society of Concrete Contractors
 ASH GROVE
Ash Grove Cement Co.
 ASHFORD FORMULA THE FINAL TREATMENT FOR YOUR CONCRETE
Ashford Formula
 BAKER CONCRETE CONSTRUCTION EXPECT MORE
Baker Concrete Construction, Inc.
 BARRIER ONE INCORPORATED HIGH PERFORMANCE CONCRETE ADMIXTURE
Barrier-1 Inc.
 THE CHEMICAL COMPANY
BASF Corporation
 BAUMAN LANDSCAPE CONSTRUCTION GENERAL SITEWORK
Bauman Landscape & Construction
 Concrete Solutions
BCS
 BRAUN INTERTEC The Science You Build On.
Braun Intertec Corporation

Buzzi Unicem USA
 CANTERA CONCRETE COMPANY Unmatched Quality
Cantera Concrete Company

 CHRYSO
CHRYSO, Inc.
 CONCRETE REINFORCING STEEL INSTITUTE
Concrete Reinforcing Steel Institute

Construction Forms Inc.
 QUALITY. INNOVATION. DELIVERING RESULTS.
CTLGroup
 DAYTON SUPERIOR
Dayton Superior Corporation
 DUCTILCRETE SLAB SYSTEMS LLC
Ductilcrete Slab Systems, LLC
 EUCLID CHEMICAL
The Euclid Chemical Co.

Fibercon International, Inc.
 FUTURE TECH CONSULTANTS CONSTRUCTION MATERIALS ENGINEERING, INSPECTION & TESTING SERVICES
Future Tech Consultants
 GRACE grace applied technologies
W.R. Grace & Co.
 HEADWATERS RESOURCES
Headwaters Resources, Inc.

Holcim (US) Inc.
 KEYSTONE STRUCTURAL CONCRETE LLC
Keystone Structural Concrete, LLC

 BRIGHT PEOPLE. RIGHT SOLUTIONS.
Kleinfelder
 BE SURE. BE KRYTON.
Kryton
 LAFARGE
Lafarge North America
 LITHKO CONTRACTING, INC.
Lithko Contracting, Inc.
 MAPEI
Mapei
 MASON CONSTRUCTION, LTD. MEMBER SINCE 1998
Mason Construction, Ltd
 MEADOWBURKE
Meadow Burke
 W. R. MEADOWS, INC. SEALIGHT
W. R. Meadows, Inc.
 METROMONT™
Metromont Corporation
 MODERN TECHNOLOGY LABORATORIES
MTL
 MULTIQUIP
Multiquip
 MUNICIPAL TESTING
Municipal Testing
 NORTH S. TARR CONCRETE CONSULTING PC
North S. Tarr Concrete Consulting PC

 OZTEC
Oztec Industries, Inc.
 PACIFIC STRUCTURES EXCELLENCE. PLANNED AND DELIVERED.
Pacific Structures
 PENETRON
Penetron International Ltd.
 PCA
Portland Cement Association
 PCI PRECAST/PRESTRESSED CONCRETE INSTITUTE
Precast/Prestressed Concrete Institute

S. K. Ghosh Associates, Inc.
 SAUDI BUILDING CODE NATIONAL COMMITTEE
Saudi Building Code National Committee
 SIKA
Sika Corp.
 STRUCTURAL
STRUCTURAL
 STRUCTURAL SERVICES, INC.
Structural Services, Inc.
 TEKNA CHEM
Tekna Chem
 TRIAD ENGINEERING, INC.
Triad Engineering, Inc.
 TWC CONCRETE SERVICES, LLC
TWC Concrete Services
 WACKER NEUSON
Wacker Neuson

General Information

For detailed program information and program changes, download the Convention App.

Convention App

Download the ACI Convention App and have all the information you need for the week ahead at your fingertips. Updated schedules, exhibitor and sponsor information, and more are all available through the app. Search “**ACI Convention**” on your Apple or Android device. This app will be used again for the convention this fall in Philadelphia, PA.

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, and ACI website.

Exhibit Hall Refreshments—**C-BALLROOM AB & FOYER**

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

Breakfast & Lunch Concessions—**C-BALLROOM AB & FOYER**

ACI attendees may purchase breakfast and lunch in the Exhibit Hall during the following hours:

Sunday – Monday	8:00 am – 2:00 pm
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ACI Bookstore—**C-BALLROOM AB & FOYER**

Visit the ACI Bookstore to receive 10% off ACI publications. To learn more about the new ACI membership benefits and how to become a member, visit the ACI Bookstore. The ACI Bookstore is open during the following hours:

Saturday	2:00 pm – 6:00 pm
Sunday	8:00 am – 5:00 pm & 7:00 pm – 8:00 pm
Monday – Tuesday	8:00 am – 5:00 pm
Wednesday	8:00 am – 12:00 pm

ACI Resource Pavilion—**C-BALLROOM AB & FOYER**

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. 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. 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

Looking for Exercise?—**HYATT LOBBY**

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.*

Sunday – Wednesday	5:00 am and 6:00 am
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Session Handouts On Demand

Handouts are available from speakers who have elected to provide and post them to the ACI website. Stop by the Cyber Café or go to www.aciconvention/handouts to download or print a copy of the handouts for the sessions you plan to attend. If you do not find a handout for a particular session, please contact the speaker for more information.

Suitcasing

Attendees, sponsors, or exhibitors found to be “suitcasing” (soliciting business in session and committee meeting rooms, aisles, or booth of another exhibitor) will be asked by staff to cease this practice. Should this continue, they will be asked to leave immediately.

Local Information—**C-BALLROOM AB & FOYER**

The Wisconsin Chapter Convention Committee members will be happy to answer general convention questions and provide information about the local area. Stop by the information desk during the following hours:

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

Hyatt Regency Dining

Bistro 333

Hours: Open daily: 6:30 am – 5:00 pm

Bar 333

Hours: Sunday – Thursday: 3:00 pm – 12:00 am; Friday: 3:00 pm – 1:30 am; Saturday: 12:00 pm – 1:30 am

Sarah’s Pantry

Hours: Sunday: 6:00 am – 9:00 pm; Monday – Saturday: 6:00 am – 10:00 pm

Room Service

Hours: Sunday: 6:30 am – 12:00 pm and 5:00 pm – 12:00 am; Monday – Saturday: 6:30 am – 11:00 am and 5:00 pm – 12:00 am

Hilton Milwaukee Dining

Starbucks

Hours: Monday – Thursday: 6:00 am – 9:00 pm; Friday: 6:00 am – 7:00 pm; Saturday: 6:00 am – 2:00 pm; Sunday: 6:00 am – 6:00 pm

Miller Time Pub & Grill

Hours: Open daily: 11:00 am – 12:00 am

Milwaukee Chophouse

Hours: Monday – Saturday: 5:00 pm – 10:00 pm

Monarch Lounge

Hours: Monday – Thursday: 4:00 pm – 11:00 pm; Friday – Saturday: 4:00 pm – 12:00 am

The Café

Hours: Monday – Friday: 6:30 am – 11:00 am; Saturday – Sunday: 6:30 am – 12:00 pm

Room Service

Hours: 6:00 am – 12:00 am

General Information

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.

Earn CEUs/PDHs for Session Attendance

Attend the entire duration of a session and record the codes given out during the session using the spaces provided next to the session details in the program book. In most cases, one contact hour is equal to one Professional Development Hour (PDH). Check with your state board for acceptance criteria. **Please note: ACI does not track and cannot provide documentation confirming attendee participation or attendance at any ACI session held during the convention.**

For attendance certificates:

1. Visit concrete.org and sign in.
2. Hover over **My ACI** and click on **My ACI CEU/PDH**.
3. Select the convention/day and locate the title of the session for which you are submitting PDH codes.
4. After successfully submitting the PDH codes, your certificate will be available under the session title.

If you earned a certificate for a session and would like ACI to report your CEUs/PDHs to the Florida Board of Professional Engineers or AIA, e-mail your Professional Engineer's or Architecture license number to Eva Korzeniewski at emk@concrete.org.

Speaker Ready Room—C-201 D

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 – 12:00 pm

All speakers are requested to check in at the Speaker Ready Room 1 day prior to their session to ensure that their presentations have been uploaded and work properly on the ACI computers.

The Concrete Convention and Exposition

Fall 2016 | Philadelphia, PA—C-BALLROOM AB & FOYER



Mark your calendars for The Concrete Convention and Exposition in Philadelphia, PA, October 23-27, 2016, at the Marriott Philadelphia. Stop by the Eastern Pennsylvania and Delaware Chapter Convention Committee Desk Saturday through Tuesday to learn more about the convention!

CONCRETE 2029



A STRATEGY FOR THE IMPROVEMENT OF THE CONCRETE CONSTRUCTION INDUSTRY

May 10, 2016 – San Antonio, TX – Hilton Palacio del Rio

What will in-place concrete construction look like in 2029?

Join moderator Peter Emmons for a one-day workshop that will explore these issues:

- Defining and improving in-place quality
- Improving workplace productivity
- Improving industry promotion and perception



Stay for the SDC Technology Forum #39, May 11-12, 2016

Hear about new technologies to improve the quality, efficiency, sustainability, and resiliency in concrete construction as well as presentations and breakouts on crack reduction and BIM.



Visit www.concretesdc.org to register & learn more about each event.

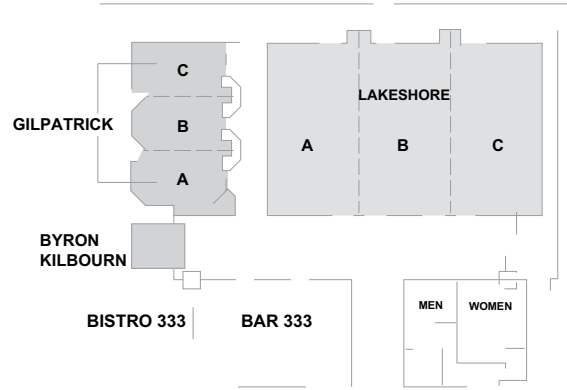
Where's That Meeting Room?

C = Wisconsin Center H = Hyatt Regency

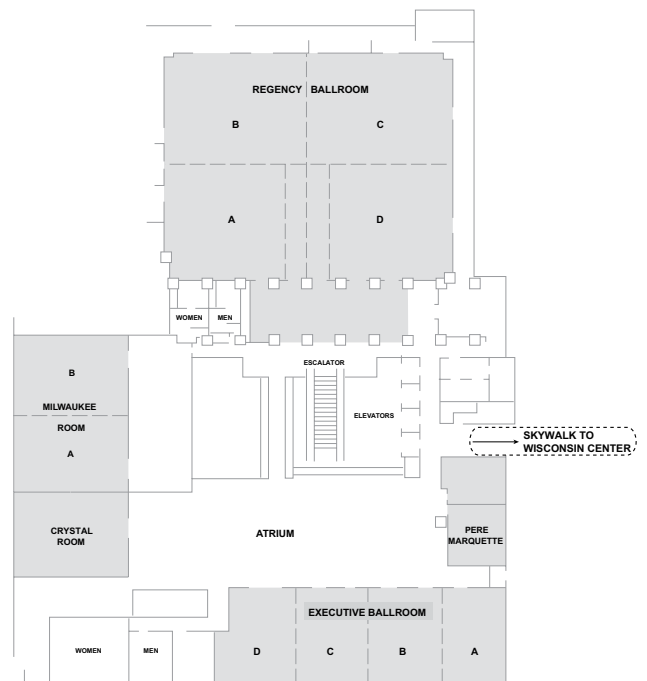
Room Name	Location
C-101 A&B	Street Level
C-101 C	Street Level
C-101 D	Street Level
C-102 A	Street Level
C-102 B	Street Level
C-102 C	Street Level
C-102 D	Street Level
C-102 E	Street Level
C-103 A	Street Level
C-103 B	Street Level
C-103 C	Street Level
C-103 D	Street Level
C-103 E	Street Level
C-201 A	Second Level
C-201 B	Second Level
C-201 C	Second Level
C-201 D	Second Level
C-202 A	Second Level
C-202 B	Second Level
C-202 C	Second Level
C-202 D	Second Level
C-202 E	Second Level
C-203 A	Second Level
C-203 B	Second Level
C-203 C	Second Level
C-203 D	Second Level
C-203 E	Second Level
C-BALLROOM AB & FOYER	Street Level
C-BALLROOM C	Street Level
C-EXHIBIT HALL B	Third Level
H-ATRIUM	Second Floor
H-BISTRO BAR	Lobby Level
H-CRYSTAL ROOM	Second Floor
H-EXECUTIVE A	Second Floor
H-EXECUTIVE B	Second Floor
H-EXECUTIVE C	Second Floor
H-EXECUTIVE D	Second Floor
H-GILPATRICK	Lobby Level
H-LAKESHORE A	Lobby Level
H-LAKESHORE B	Lobby Level
H-LAKESHORE C	Lobby Level
H-MANAGERS SUITE	Third Floor
H-MILWAUKEE ROOM	Second Floor
H-PERE MARQUETTE	Second Floor
H-REGENCY A	Second Floor
H-REGENCY B	Second Floor
H-REGENCY C	Second Floor
H-REGENCY D	Second Floor

Hyatt Regency Maps

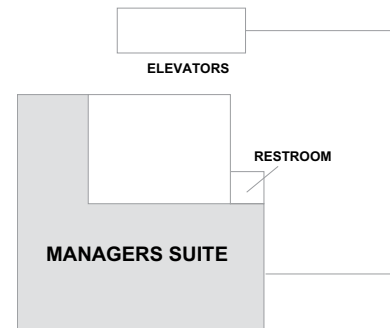
FIRST FLOOR Lobby Level



SECOND FLOOR

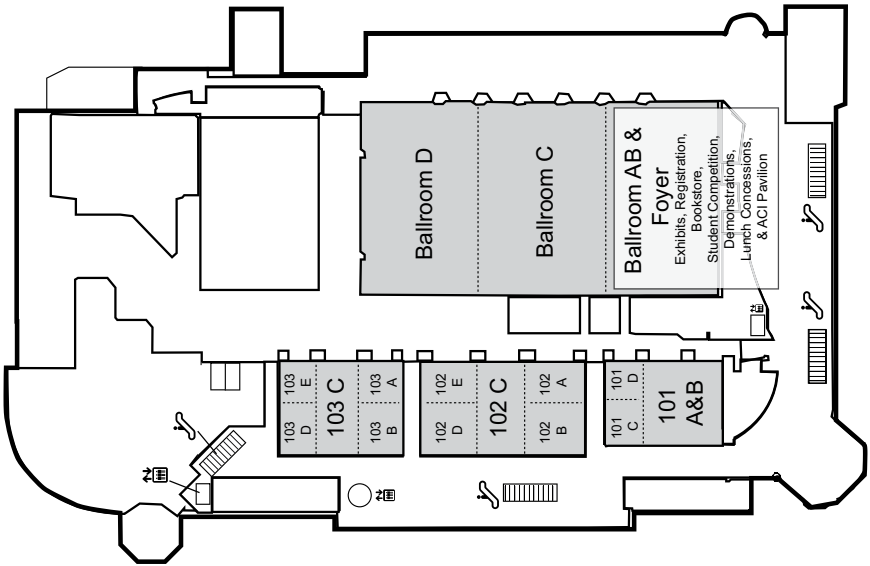


THIRD FLOOR

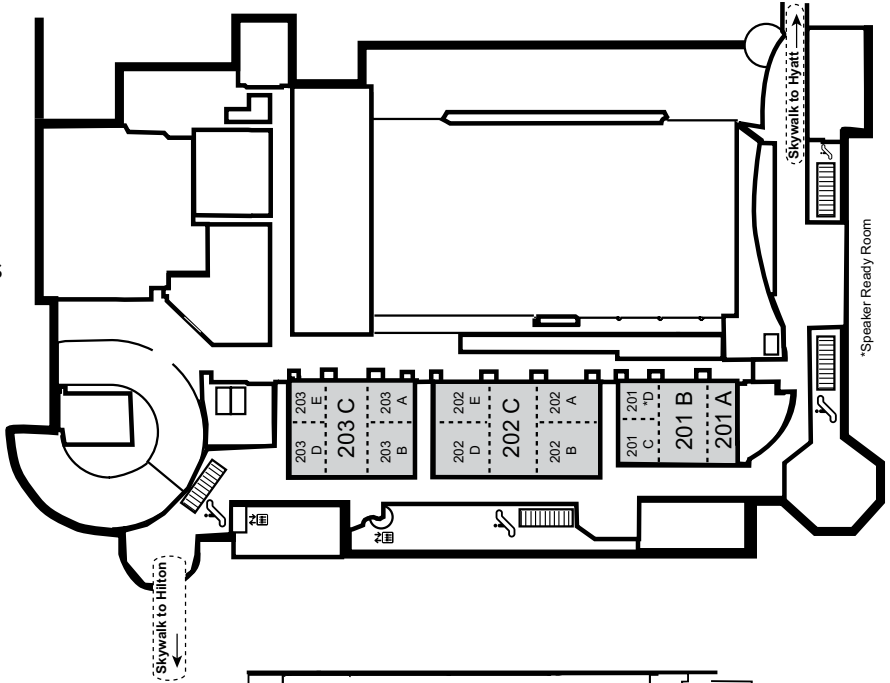


Wisconsin Center Maps

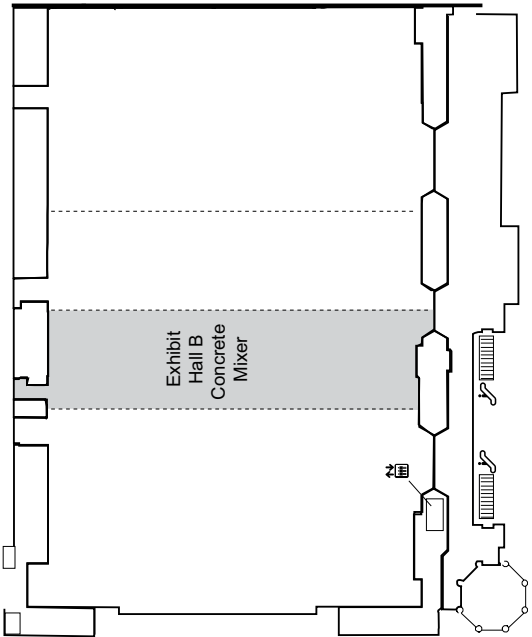
Street Level Meeting Rooms



Second Level Meeting Rooms



Third Level



Exhibitors

C-BALLROOM AB & FOYER

ACI would like to thank all exhibitors for their participation in and support of The Concrete Convention and Exposition. To learn more about each of these exhibitors, stop by their booth or visit the convention app.

Exhibit Hours

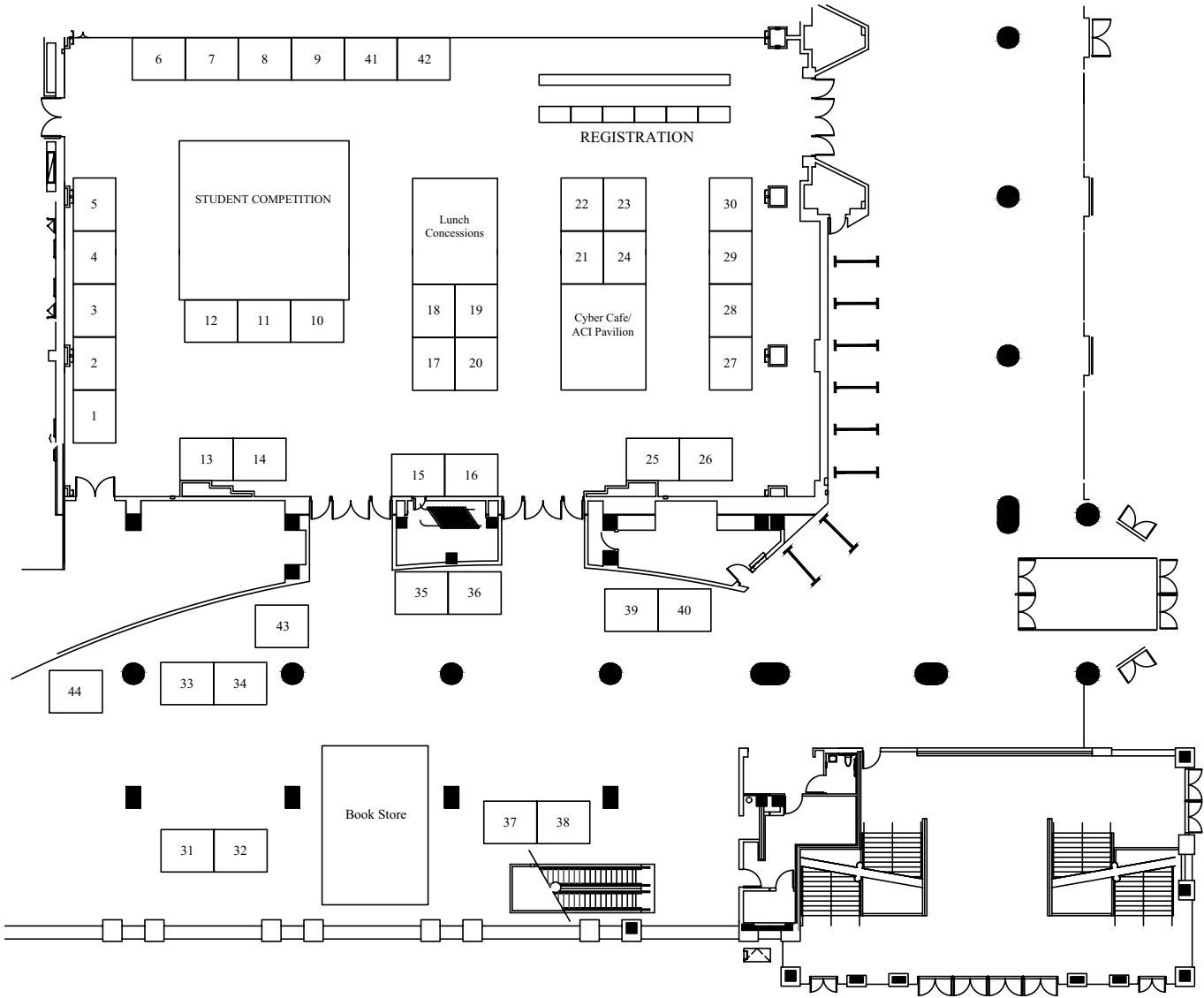
Sunday – Tuesday 8:00 am – 5:00 pm

American Engineering Testing, Inc. www.amengtest.com	Booth #30	GCP Applied Technologies www.grace.com/construction/en-us	Booth #19
Aquafin, Inc. www.aquafin.net	Booth #2	Headed Reinforcement Corp. (HRC) www.hrc-usa.com	Booth #12
BarSplice Products www.barsplice.com	Booth #26	James Instruments, Inc. www.ndtjames.com	Booth #39
BASF Corporation www.master-builders-solutions.basf.us	Booth #10	Kryton International Inc. www.kryton.com	Booth #35
Burgess Pigment Company www.optipozz.com	Booth #36	Laser FF, LLC www.laserff.com	Booth #40
Buzzi Unicem USA www.buzziunicemusa.com	Booth #13	MTS Systems Corporation www.mts.com	Booth #42
Cervenka Consulting www.cervenka.cz	Booth #8	Premier CPG www.premiercpg.com	Booth #3
CMEC www.cmec.org	Booth #28	Primekss www.primekss.com	Booth #6
COMMAND Center - A division of the Transtec Group www.maturitycentral.com	Booth #41	Proceq USA, Inc. www.proceq.com	Booth #27
Composite Rebar Technologies www.hollowrebar.com	Booth #43	QuakeWrap, Inc. www.quakewrap.com	Booth #20
Concrete Cares www.concretecares.com	Booth #33	Radarview/UCT www.radarviewllc.com	Booth #11
Concrete Sealants, Inc. www.conseal.com	Booth #31	Sika Corporation www.usa.sika.com	Booth #15 & 16
Corro-Shield International, Inc. www.corroshield.com	Booth #24	Silica Fume Association www.silicafume.org	Booth #18
Decon USA Inc. www.deconusa.com	Booth #21	Skyway Cement Company www.skywaycement.com	Booth #37
ELE International www.ele.com	Booth #1	STRUCTURAL TECHNOLOGIES www.structuraltechnologies.com	Booth #29
The Euclid Chemical Company www.euclidchemical.com	Booth #22	The Fischer Group - Cure Right Curing Covers www.the-fischer-group.com	Booth #32
FlackTek, Inc. www.speedmixer.com	Booth #7	Trinity Lightweight www.trinitylightweight.com	Booth #34
Forney LP www.forneyonline.com	Booth #9	Vector Corrosion Technologies www.vector-corrosion.com	Booth #23
FORTA Corporation www.forta-ferro.com	Booth #14	Wacker Neuson www.wackerneuson.com	Booth #38
Germann Instruments, Inc. www.germann.org	Booth #4 & 5	Zircon Corporation www.zircon.com	Booth #25
Giatec Scientific Inc. www.giatec.ca	Booth #17		

Exhibitors are listed as of 3/28/16.

Exhibitor Floor Plan

WISCONSIN CENTER
Ballroom AB & Foyer



Daily Program

For detailed program information and program changes, download the Convention App.
 ✓= Separate fee required ★ = Guest-only event C = Wisconsin Center H = Hyatt Regency

Friday, April 15, 2016	
6:30 pm - 9:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
Saturday, April 16, 2016	
7:00 am - 9:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
2:00 pm - 6:00 pm	
ACI Registration	C-BALLROOM AB & FOYER
ACI Bookstore & Resource Pavilion	C-BALLROOM AB & FOYER
Afternoon Soda Break	C-BALLROOM AB & FOYER
Speaker Ready Room	C-201 D
Sunday, April 17, 2016	
5:00 am and 6:00 am	
Run/Walk Meet-Up	HYATT LOBBY
7:00 am - 10:00 am	
★Guest Hospitality	H-LAKESHORE A&B
Coffee Break	C-BALLROOM AB & FOYER
7:00 am - 6:00 pm	
Speaker Ready Room	C-201 D
7:30 am - 5:00 pm	
ACI Registration	C-BALLROOM AB & FOYER
8:00 am - 9:00 am	
Convention Orientation Breakfast	H-REGENCY B
★Guest Overview	H-LAKESHORE A&B
8:00 am - 5:00 pm	
ACI Bookstore & Resource Pavilion	C-BALLROOM AB & FOYER
Exhibits	C-BALLROOM AB & FOYER
8:00 am - 5:30 pm	
Committee Meetings	See Numeric or Convention App for detailed list
9:00 am - 10:00 am	
Student Competition Check-In	C-BALLROOM AB & FOYER
10:00 am - 11:30 am	
ACI International Forum	C-202 B
10:00 am - 5:00 pm	
★Guest Lounge	H-LAKESHORE A&B
11:00 am - 4:00 pm	
Student FRC Bowling Ball Competition	C-BALLROOM AB & FOYER

11:30 am - 1:30 pm	
✓International Lunch	H-REGENCY B
1:00 pm - 3:00 pm—Sessions	
Further Investigations of Carbon Dioxide Utilization in Concrete	C-202 B
Ground Limestone and Mineral Filler: Inert Fillers or Active Ingredients?	C-202 D
Precast Concrete Pavements: Best Practices and Innovations, Part 1 of 2	C-202 A
1:00 pm - 4:00 pm	
Afternoon Soda Break	C-BALLROOM AB & FOYER
2:00 pm - 4:00 pm—Session	
International Session: At the Frontiers of Concrete Technology and Sustainable Development in China	C-202 E
3:30 pm - 5:30 pm—Sessions	
Precast Concrete Pavements: Best Practices and Innovations, Part 2 of 2	C-202 A
Strengthening of Concrete Structures with Fabric-Reinforced Cementitious Matrix Composites—Systems and Applications	C-202 B
Will Concrete and Masonry Survive the New Energy Codes?	C-202 D
5:45 pm - 7:00 pm	
Opening Session & Awards Program	C-BALLROOM C
7:00 pm - 8:00 pm	
Opening Reception	C-BALLROOM AB & FOYER
8:00 pm - 10:00 pm—Sessions	
Hot Topic Session I: Meeting Market Demand of Fly Ash	C-202 B
Hot Topic Session II: New One-Way Shear Equations for the 318 Building Code, Is it Time?	C-202 D
9:00 pm - 10:30 pm	
Student and Young Professional Networking Event	H-BISTRO BAR
Monday, April 18, 2016	
5:00 am and 6:00 am	
Run/Walk Meet-Up	HYATT LOBBY
6:30 am - 8:00 am	
Workshop for Technical Committee Chairs (by invitation only)	C-BALLROOM C
7:00 am - 8:30 am	
Speaker Development Breakfast	H-REGENCY A

Daily Program

For detailed program information and program changes, download the Convention App.
 √ = Separate fee required ★ = Guest-only event C = Wisconsin Center H = Hyatt Regency

7:00 am - 10:00 am	
★Guest Hospitality	H-LAKESHORE A&B
Coffee Break	C-BALLROOM AB & FOYER
7:00 am - 6:00 pm	
Speaker Ready Room	C-201 D
7:15 am - 7:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
7:30 am - 5:00 pm	
ACI Registration	C-BALLROOM AB & FOYER
8:00 am - 5:00 pm	
ACI Bookstore & Resource Pavilion	C-BALLROOM AB & FOYER
Exhibits	C-BALLROOM AB & FOYER
8:30 am - 10:30 am—Sessions	
Nanoscale Fiber-Reinforced Concrete, Part 1 of 2	C-202 B
Research in Progress, Part 1 of 2	C-202 A
Slag Cement Use in Notable Structures, Part 1 of 2	C-202 E
Undergraduate Research on Concrete Materials, Structural Design, or Construction	C-202 D
10:00 am - 5:00 pm	
★Guest Lounge	H-LAKESHORE A&B
10:30 am - 11:00 am—Session	
Research in Progress Poster Session	C-202 FOYER
10:30 am - 11:00 am—Exhibitor Demo	
ATENA – Cervenka Consulting S.R.O.	C-BALLROOM AB & FOYER
11:00 am - 1:00 pm—Sessions	
Concrete Bridges Built with Advanced Materials: Seismic Performance and Design Issues, Part 1 of 2	C-202 D
Nanoscale Fiber-Reinforced Concrete, Part 2 of 2	C-202 B
Research in Progress, Part 2 of 2	C-202 A
Slag Cement Use in Notable Structures, Part 2 of 2	C-202 E
11:30 am - 1:30 pm	
√Student Lunch	C-BALLROOM C
12:00 pm - 12:30 pm—Exhibitor Demo	
Giatec Scientific Inc.	C-BALLROOM AB & FOYER
1:00 pm - 4:00 pm	
Afternoon Soda Break	C-BALLROOM AB & FOYER

1:30 pm - 2:00 pm—Exhibitor Demo	
Zircon Corporation	C-BALLROOM AB & FOYER
1:30 pm - 3:30 pm—Sessions	
Advances in Test Methods to Evaluate Alkali-Aggregate Reactivity in Job Concrete Mixtures, Part 1 of 2	C-202 E
Concrete Bridges Built with Advanced Materials: Seismic Performance and Design Issues, Part 2 of 2	C-202 D
One Size Does Not Fit All: Performance-Based Approaches to Mass Concrete Design and Construction, Part 1 of 2	C-202 B
Student-Driven Competitions as a Teaching and Learning Tool	C-202 A
3:30 pm - 5:00 pm	
★Guest Social (by invitation only)	H-REGENCY A
4:00 pm - 6:00 pm—Sessions	
Advances in Test Methods to Evaluate Alkali-Aggregate Reactivity in Job Concrete Mixtures, Part 2 of 2	C-202 E
Concrete Pavement Construction	C-202 D
One Size Does Not Fit All: Performance-Based Approaches to Mass Concrete Design and Construction, Part 2 of 2	C-202 B
6:00 pm - 7:00 pm	
Women in ACI Reception	H-REGENCY A
6:30 pm - 8:30 pm—Session	
123 Forum: Can We Implement Performance-Based Specifications for Durability of Concrete? Will They Work?	C-202 B
7:00 pm - 8:00 pm	
Richard D. Stehly Memorial Hockey Game	H-DEPART HYATT LOBBY
Tuesday, April 19, 2016	
5:00 am and 6:00 am	
Run/Walk Meet-Up	HYATT LOBBY
6:30 am - 6:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
7:00 am - 10:00 am	
★Guest Hospitality	H-LAKESHORE A
Coffee Break	C-BALLROOM AB & FOYER
7:00 am - 6:00 pm	
Speaker Ready Room	C-201 D

Daily Program

For detailed program information and program changes, download the Convention App.
 ✓ = Separate fee required ★ = Guest-only event C = Wisconsin Center H = Hyatt Regency

7:30 am - 5:00 pm	
ACI Registration	C-BALLROOM AB & FOYER
8:00 am - 5:00 pm	
ACI Bookstore & Resource Pavilion	C-BALLROOM AB & FOYER
Exhibits	C-BALLROOM AB & FOYER
8:30 am - 10:30 am—Sessions	
ACI 301-16 Specifications for Structural Concrete, Part 1 of 2	C-202 A
Calibration and Validation of Analytical Models for Concrete Structures, Part 1 of 2	C-202 E
Fly Ash in Concrete Tribute to Tarun R. Naik, Part 1 of 2	C-202 D
UHPC—Testing of Material Properties, Part 1 of 2	C-202 B
10:00 am - 5:00 pm	
★Guest Lounge	H-LAKESHORE A
11:00 am - 1:00 pm—Sessions	
Calibration and Validation of Analytical Models for Concrete Structures, Part 2 of 2	C-202 E
Leveraging Mobile Technology in Design of Low-Rise Concrete Buildings	C-202 D
Thixotropy of Concrete—How It Can Help, Part 1 of 2	C-202 A
UHPC—Testing of Material Properties, Part 2 of 2	C-202 B
11:30 am - 1:30 pm	
✓Contractors' Day Lunch	H-REGENCY D
1:00 pm - 4:00 pm	
Afternoon Soda Break	C-BALLROOM AB & FOYER
1:30 pm - 3:30 pm—Sessions	
Contractors' Day Session: Avoiding Problems through Sound Prevention Methods	C-202 D
Design of Concrete Elements Using High-Strength Reinforcement	C-202 E
Open Topic Session, Part 1 of 2	C-202 B
Thixotropy of Concrete—How It Can Help, Part 2 of 2	C-202 A
4:00 pm - 6:00 pm—Sessions	
ACI 301-16 Specifications for Structural Concrete, Part 2 of 2	C-202 A
Fly Ash in Concrete Tribute to Tarun R. Naik, Part 2 of 2	C-202 D
Open Topic Session, Part 2 of 2	C-202 B

Two-Way Slab Systems: Recent Developments and Showcases on Design, Analysis, Construction, and Evaluation Methods	C-202 E
5:30 pm - 6:30 pm	
Faculty Network Reception	H-ATRIUM
6:30 pm - 8:00 pm	
Concrete Mixer	C-EXHIBIT HALL B
Wednesday, April 20, 2016	
5:00 am and 6:00 am	
Run/Walk Meet-Up	HYATT LOBBY
7:00 am - 10:00 am	
★Guest Hospitality	H-LAKESHORE A
Coffee Break	C-BALLROOM AB & FOYER
7:00 am - 12:00 pm	
Speaker Ready Room	C-201 D
7:00 am - 6:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
8:00 am - 12:00 pm	
ACI Bookstore & Resource Pavilion	C-BALLROOM AB & FOYER
ACI Registration	C-BALLROOM AB & FOYER
8:30 am - 10:30 am—Sessions	
ACI 562 Concrete Repair Code, Applicability, and Use	C-202 B
Advances in the Use of Polymers in Concrete, Part 1 of 2	C-202 E
Getting the Most Out of Decorative Concrete	C-202 D
10:00 am - 5:00 pm	
★Guest Lounge	H-LAKESHORE A
11:00 am - 1:00 pm—Sessions	
Advances in the Use of Polymers in Concrete, Part 2 of 2	C-202 E
Concrete Consolidation in the 21st Century	C-202 B
Recycled Materials to Enhance CLSM Applications and Properties	C-202 D
6:30 pm - 8:00 pm	
President's Reception (by invitation only)	H-REGENCY A&B
Thursday, April 21, 2016	
10:00 am - 5:00 pm	
Board of Direction	H-LAKESHORE A&B

Numerical Committee Meeting Listing

For detailed program information and program changes, download the Convention App.

C = Wisconsin Center H = Hyatt Regency

Code	Committee	Day	Time	Room Name
ACI/ASCE-SEI	ACI/ASCE-SEI	Sun	3:00 pm - 5:00 pm	H-MANAGERS SUITE
ACIFdn	ACI Foundation	Wed	9:00 am - 11:30 am	C-203 A
BOD	Board of Direction	Thu	10:00 am - 5:00 pm	H-LAKESHORE A&B
CC	Convention Committee	Tue	3:00 pm - 4:00 pm	C-102 B
CAC	Chapter Activities	Mon	2:00 pm - 5:00 pm	C-103 D
CLC	Construction Liaison	Sun	8:00 am - 10:30 am	C-102 E
CPC	Certification Programs	Tue	2:00 pm - 5:00 pm	H-GILPATRICK
CRC	Concrete Research Council	Tue	11:00 am - 1:00 pm	C-102 B
CSAO	Committee on Codes and Standards Advocacy and Outreach	Mon	3:30 pm - 5:00 pm	H-EXECUTIVE C
C601	New Certification Program	Mon	3:00 pm - 4:30 pm	C-102 B
C601-B	Concrete Quality Technical Mgr	Wed	10:00 am - 12:00 pm	C-103 A
C601-D	Decorative Concrete Finisher	Sun	10:00 am - 11:30 am	C-103 A
C601-E	Concrete Construction Sustainability Assessor	Tue	7:30 am - 9:00 am	H-EXECUTIVE D
C601-F	Nondestructive Testing Technician	Mon	1:00 pm - 3:00 pm	H-EXECUTIVE B
C601-G	Self-Consolidating Concrete Testing	Mon	11:30 am - 1:00 pm	H-EXECUTIVE C
C601-H	Cement Testing	Wed	7:00 am - 8:30 am	C-103 A
C601-I	Shotcrete Inspector	Sun	1:00 pm - 3:00 pm	H-MANAGERS SUITE
C601-J	Adhesive Anchor Installation Inspector	Mon	4:30 pm - 5:30 pm	C-102 B
C610	Field Technician Cert	Mon	8:30 am - 11:00 am	C-102 B
C620	Laboratory Tech Cert	Tue	8:00 am - 9:30 am	C-102 E
C630	Construction Inspector Cert	Mon	1:00 pm - 2:30 pm	C-203 A
C631	Conc Transportation Const Insp	Tue	10:00 am - 11:30 am	C-102 E
C640	Craftsman Cert	Sun	11:00 am - 1:00 pm	C-103 B
C650	Tilt-up Constructor Cert	Sun	11:00 am - 12:30 pm	H-CRYSTAL ROOM
C655	Foundation Constructor Certification	Mon	11:30 am - 1:00 pm	H-MANAGERS SUITE
C660	Shotcrete Nozzleman Cert	Sun	10:00 am - 12:00 pm	H-LAKESHORE C
C670	Masonry Technician Certification	Wed	8:30 am - 10:00 am	C-103 E
C680	Adhesive Anchor Installer	Tue	12:30 pm - 2:00 pm	C-203 A
EAC	Educational Activities	Tue	7:00 am - 12:00 pm	H-CRYSTAL ROOM
E701	Materials for Concrete Construction	Sun	9:00 am - 10:30 am	H-EXECUTIVE C
E702	Designing Concrete Structures	Mon	5:00 pm - 6:30 pm	H-EXECUTIVE A
E703	Concrete Construction Practices	Mon	4:00 pm - 6:00 pm	C-203 A
E706	Concrete Repair Education	Sun	8:00 am - 10:00 am	C-103 A
E707	Specification Education	Tue	11:30 am - 1:00 pm	H-EXECUTIVE D
E710	ACI University Programs	Sun	10:30 am - 12:00 pm	H-MANAGERS SUITE
HTC	Hot Topic	Sun	2:30 pm - 4:00 pm	H-CRYSTAL ROOM
IAC	International Advisory Committee	Tue	8:30 am - 11:30 am	C-101 C
IC-Conf	International Conferences	Mon	7:15 am - 8:30 am	H-EXECUTIVE C
IC-Cert	International Certification	Sun	1:30 pm - 3:00 pm	H-EXECUTIVE A
Intl-Frm	ACI International Forum	Sun	10:00 am - 11:30 am	C-202 B
IPAC	International Project Awards Committee	Tue	7:00 am - 8:30 am	H-EXECUTIVE B
ITG-10	ITG-10 Alternative Cementitious Materials	Sun	10:30 am - 1:30 pm	C-101 D
MEMC	Membership	Sun	1:00 pm - 3:00 pm	C-203 B
MKTC	Marketing	Mon	2:00 pm - 5:00 pm	C-103 C
PUBC	Publications	Tue	9:30 am - 11:00 am	H-EXECUTIVE C

Numerical Committee Meeting Listing

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C = Wisconsin Center H = Hyatt Regency

Code	Committee	Day	Time	Room Name
SYPAC	Student and Young Professional Activities	Wed	7:00 am - 9:00 am	C-203 A
S801	Student Activities	Sun	8:00 am - 10:00 am	C-203 D
S802	Teaching Methods and Educational Materials	Mon	8:30 am - 9:30 am	C-103 D
S805	ACI Collegiate Concrete Council-CLGE	Sun	4:00 pm - 5:30 pm	C-201 B
S806	Young Professional Activities	Mon	2:00 pm - 3:30 pm	C-102 C
TAC	Technical Activities M1	Fri	6:30 pm - 9:00 pm	H-MILWAUKEE ROOM
TAC	Technical Activities M2	Sat	7:00 am - 6:00 pm	H-MILWAUKEE ROOM
TAC-RG1	TAC Review Group 1	Sat	3:00 pm - 5:00 pm	H-EXECUTIVE A
TAC-RG2	TAC Review Group 2	Sat	3:00 pm - 5:00 pm	H-EXECUTIVE B
TAC-RG3	TAC Review Group 3	Sat	3:00 pm - 5:00 pm	H-EXECUTIVE C
TCSC	TAC Construction Standards	Wed	7:30 am - 10:00 am	C-203 B
TRRC	TAC Repair & Rehab	Tue	7:00 am - 8:30 am	H-EXECUTIVE A
TTAG	Technology Transfer Advisory Group	Tue	6:30 am - 8:00 am	H-LAKESHORE C
117	Tolerances	Tue	8:30 am - 11:30 am	C-102 A
118	Use of Digital Technology	Tue	2:00 pm - 3:30 pm	H-EXECUTIVE A
120	History	Tue	1:30 pm - 3:00 pm	C-101 C
121	Quality Assurance	Sun	3:00 pm - 5:30 pm	C-103 A
122	Energy Efficiency	Mon	1:00 pm - 3:00 pm	H-CRYSTAL ROOM
123	Research	Sun	4:00 pm - 5:30 pm	H-EXECUTIVE B
124	Aesthetics	Mon	12:30 pm - 1:30 pm	C-101 D
130	Sustainability M1	Mon	2:00 pm - 5:00 pm	C-102 D
130	Sustainability M2	Tue	11:00 am - 1:00 pm	C-202 C
130-D	Rating Systems/Sustainability Tools	Tue	2:00 pm - 4:00 pm	C-102 C
130-F	Social Issues	Sun	12:30 pm - 2:00 pm	C-102 B
130-G	Education/Certification	Tue	7:30 am - 9:00 am	H-EXECUTIVE C
131	BIM M1	Sat	8:00 am - 5:00 pm	H-LAKESHORE A
131	BIM M2	Tue	3:00 pm - 5:00 pm	C-203 C
132	Responsibility	Sun	2:00 pm - 5:00 pm	H-LAKESHORE C
133	Disaster Reconnaissance	Sun	12:30 pm - 3:30 pm	C-202 C
201	Durability	Tue	8:00 am - 11:00 am	C-202 C
201-D	Durability-Oversight Committee	Mon	11:30 am - 1:00 pm	H-CRYSTAL ROOM
201-TG1	Aggressive Chemicals	Mon	3:00 pm - 4:00 pm	H-EXECUTIVE D
201-TG2	Physical Salt Attack	Sun	11:00 am - 12:00 pm	C-102 A
201-TG3	Alkali-Aggregate Reactivity	Sun	12:00 pm - 2:00 pm	H-LAKESHORE C
201-TG4	Impact of Natural and Other Pozzolans on Durability	Sun	12:00 pm - 1:00 pm	C-102 A
207	Mass Concrete	Mon	10:00 am - 12:30 pm	C-102 D
209	Creep & Shrinkage	Mon	10:00 am - 1:00 pm	C-203 B
209-C	Models Applicability and Uncertainty	Sun	11:30 am - 12:30 pm	H-PERE MARQUETTE
209-D	Numerical Methods and 3D Analyses	Sun	4:30 pm - 5:30 pm	H-CRYSTAL ROOM
211	Proportioning	Wed	8:00 am - 11:00 am	C-102 B
211-A	Proportioning-Editorial	Tue	10:00 am - 12:00 pm	H-EXECUTIVE A
211-I	Assessing Aggregate Gradation	Tue	1:00 pm - 3:00 pm	H-EXECUTIVE B
211-N	Proportioning-Limestone	Tue	3:00 pm - 4:00 pm	H-EXECUTIVE B
211-P	Guide for Selecting Proportions for Pumpable Concrete	Mon	3:00 pm - 4:30 pm	H-CRYSTAL ROOM

Numerical Committee Meeting Listing

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C = Wisconsin Center H = Hyatt Regency

Code	Committee	Day	Time	Room Name
211-TG1	Proportioning Concrete with Non Clinker Based Cements	Tue	1:00 pm - 3:00 pm	H-EXECUTIVE C
211-TG2	Developing & Using a Three Point Curve Task Group	Tue	11:30 am - 1:00 pm	H-EXECUTIVE C
212	Chemical Admixtures	Mon	2:00 pm - 5:00 pm	C-103 E
213	Lightweight	Tue	1:30 pm - 3:30 pm	C-201 B
213-TG1	Lightweight-Editorial TG	Tue	11:00 am - 12:30 pm	H-PERE MARQUETTE
214	Strength Tests	Mon	4:00 pm - 5:30 pm	H-REGENCY B
214-A	Document Preparation	Tue	1:00 pm - 3:00 pm	H-PERE MARQUETTE
215	Fatigue	Sun	8:00 am - 9:30 am	H-GILPATRICK
216	Fire Resistance	Mon	10:00 am - 12:00 pm	C-103 B
221	Aggregates	Sun	11:30 am - 1:00 pm	C-103 A
221-TG1	Task Group on AAR	Mon	4:30 pm - 6:30 pm	H-CRYSTAL ROOM
222	Corrosion	Tue	2:00 pm - 5:00 pm	H-MILWAUKEE ROOM
223	Shrinkage-Compensating	Tue	2:00 pm - 5:00 pm	H-LAKESHORE C
224	Cracking	Sun	2:30 pm - 5:00 pm	C-101 C
225	Hydraulic Cements	Mon	1:00 pm - 4:00 pm	C-103 A
228	Nondestructive Testing	Sun	9:30 am - 12:30 pm	C-102 C
228-B	Visual Inspection	Sun	1:00 pm - 3:00 pm	H-GILPATRICK
229	Controlled Low-Strength	Tue	2:00 pm - 5:00 pm	C-102 A
230	Soil Cement	Tue	8:00 am - 9:30 am	C-102 D
231	Early Age	Mon	2:00 pm - 4:00 pm	H-REGENCY B
232	Fly Ash in Concrete	Mon	1:00 pm - 4:00 pm	C-201 B
233	Slag Cement	Tue	2:00 pm - 5:00 pm	C-202 C
234	Silica Fume	Tue	2:00 pm - 4:30 pm	C-203 A
236	Material Science	Mon	4:30 pm - 5:30 pm	C-202 C
236-TG1	Advanced Analysis Techniques for Concrete	Sun	3:00 pm - 4:00 pm	C-201 B
237	Self-Consolidating Concrete	Mon	8:15 am - 11:00 am	C-203 C
237-TG1	Self-Consolidating Concrete Task Group	Sun	12:00 pm - 4:30 pm	H-EXECUTIVE C
238	Workability of Fresh Concrete	Tue	8:00 am - 10:00 am	C-203 A
238-A	Student Workability	Tue	10:00 am - 11:30 am	H-GILPATRICK
239	Ultra-High Performance Concrete	Mon	3:30 pm - 5:30 pm	C-102 C
239-A	Emerging Technology Report	Sun	1:00 pm - 3:00 pm	H-EXECUTIVE B
239-C	Structural Design on UHPC	Mon	10:30 am - 12:30 pm	C-203 D
240	Natural Pozzolans	Mon	10:00 am - 1:00 pm	H-REGENCY A
241	Nanotechnology of Concrete	Sun	4:00 pm - 5:30 pm	C-101 A&B
241-A	The Application and Implementation of Nano-Engineered Concrete	Tue	1:00 pm - 3:00 pm	C-203 C
301	Specifications M1	Sun	1:00 pm - 4:00 pm	H-REGENCY C
301	Specifications M2	Mon	1:00 pm - 4:00 pm	H-REGENCY D
301-A	General Requirements	Sun	8:00 am - 9:30 am	C-101 D
301-B	Formwork and Formwork Accessories	Sun	8:00 am - 9:30 am	C-101 C
301-C	Reinforcement and Reinforcement Supports	Sun	9:30 am - 11:00 am	C-101 C
301-D	Concrete Mixtures	Sun	8:00 am - 9:30 am	C-102 B
301-E	Handling, Placing, and Constructing	Sun	9:30 am - 11:00 am	C-102 B
301-F	Architectural Concrete	Sun	8:00 am - 9:30 am	C-203 A
301-G	Lightweight Concrete	Sun	8:00 am - 9:30 am	C-103 D

Numerical Committee Meeting Listing

For detailed program information and program changes, download the Convention App.

C = Wisconsin Center H = Hyatt Regency

Code	Committee	Day	Time	Room Name
301-H	Mass Concrete	Sun	9:30 am - 11:00 am	C-103 D
301-I	Post-Tensioned Concrete	Sun	8:00 am - 9:30 am	C-203 E
301-J	Shrinkage-Compensating Concrete	Sun	8:00 am - 9:30 am	C-103 E
301-K	Industrial Floor Slabs	Sun	9:30 am - 11:00 am	C-103 E
301-L	Tilt-Up Construction	Sun	9:30 am - 11:00 am	C-203 A
301-M	Precast Structural Concrete	Sun	8:00 am - 9:30 am	C-103 B
301-N	Precast Architectural Concrete	Sun	9:30 am - 11:00 am	C-103 B
301-TGE	Editorial Committee	Mon	4:00 pm - 5:00 pm	C-103 A
302	Floor Construction	Mon	8:30 am - 1:00 pm	C-101 A&B
303	Architectural CIP	Mon	8:30 am - 10:30 am	C-101 C
304	Measuring/Mix/Trans/Placing	Mon	11:30 am - 1:00 pm	C-203 C
305	Hot Weather	Sun	2:00 pm - 4:00 pm	H-REGENCY A
306	Cold Weather	Tue	8:30 am - 11:30 am	C-103 E
307	Chimneys	Mon	2:00 pm - 5:00 pm	C-102 E
308	Curing	Wed	10:00 am - 1:00 pm	C-102 D
308-A	Curing-Guide	Wed	8:00 am - 10:00 am	C-102 D
308-B	Curing-Specifications	Tue	4:00 pm - 5:30 pm	H-EXECUTIVE B
309	Consolidation	Sun	3:00 pm - 4:30 pm	H-EXECUTIVE A
310	Decorative Concrete	Sun	3:00 pm - 5:30 pm	H-REGENCY D
310/308-TG2	Curing Decorative Concrete Joint TG	Sun	2:00 pm - 3:00 pm	H-REGENCY D
310-J	Polished Finishes	Tue	10:00 am - 11:30 am	C-101 D
311	Inspection	Tue	12:30 pm - 2:30 pm	H-LAKESHORE B
313	Bins and Silos	Mon	8:30 am - 5:00 pm	H-EXECUTIVE A
314	Simplified Design Buildings	Sun	8:30 am - 10:00 am	C-203 C
315	Detailing	Sun	2:00 pm - 5:00 pm	C-102 B
318	Building Code	Wed	8:00 am - 6:00 pm	C-101 A&B
318-A	General Concrete Construction	Tue	1:30 pm - 6:00 pm	C-203 D
318-B	Anchorage and Reinforcement M1	Mon	2:00 pm - 5:00 pm	C-203 C
318-B	Anchorage and Reinforcement M2	Tue	8:00 am - 12:30 pm	C-201 B
318-C	Serviceability/Safety M1	Mon	2:00 pm - 5:00 pm	C-103 B
318-C	Serviceability/Safety M2	Tue	8:00 am - 12:30 pm	C-203 B
318-D	Members	Tue	1:30 pm - 6:00 pm	C-103 A
318-E	Section and Member Strength	Tue	7:30 am - 12:30 pm	C-203 D
318-F	Foundations	Tue	8:00 am - 12:30 pm	C-103 A
318-G	Precast and Prestressed Concrete	Tue	8:00 am - 12:30 pm	C-103 D
318-H	Seismic Provisions	Tue	1:30 pm - 6:00 pm	C-102 D
318-J	Joints and Connections	Tue	1:30 pm - 6:00 pm	C-203 B
318-L	International Liaison	Mon	2:30 pm - 4:00 pm	C-203 A
318-R	High Strength Reinforcement	Tue	1:30 pm - 6:00 pm	C-103 D
318-S	Spanish Translation	Mon	11:00 am - 12:30 pm	C-102 E
325	Pavements	Tue	3:30 pm - 5:30 pm	C-201 B
325-A	Pavements-Design	Tue	9:00 am - 10:00 am	H-EXECUTIVE A
325-C	Pavements-Prestressed and Precast	Tue	10:30 am - 12:00 pm	H-EXECUTIVE B
325-D	Proportioning for Pavements	Tue	1:00 pm - 3:00 pm	H-EXECUTIVE D
325-E	Accelerated Paving	Tue	2:00 pm - 3:30 pm	H-CRYSTAL ROOM
325-F	Concrete Pavement Overlays	Tue	12:00 pm - 1:00 pm	H-EXECUTIVE B
327	RCC Pavements	Tue	11:00 am - 1:00 pm	C-103 B

Numerical Committee Meeting Listing

For detailed program information and program changes, download the Convention App.

C = Wisconsin Center H = Hyatt Regency

Code	Committee	Day	Time	Room Name
329	Perf. Ready Mixed	Wed	9:30 am - 11:30 am	C-102 E
330	Parking Lots and Site Paving	Wed	8:00 am - 12:00 pm	C-102 A
332	Residential Concrete	Tue	1:30 pm - 5:00 pm	C-102 E
332-B	Conc Mtrls and Plcmt	Tue	9:00 am - 10:30 am	H-EXECUTIVE B
332-D	Residential Conc-Footings & Foundation Walls	Tue	9:00 am - 10:30 am	C-103 C
332-E	Residential Concrete-Above Grade Walls	Tue	11:30 am - 1:00 pm	C-102 E
332-F	Residential Concrete-Slabs	Tue	10:30 am - 12:00 pm	H-MANAGERS SUITE
334	Shells	Mon	5:00 pm - 7:00 pm	H-EXECUTIVE C
336	Footings	Sun	1:00 pm - 5:00 pm	C-203 E
341	Earthquake-Resistant Bridges	Sun	3:00 pm - 5:00 pm	C-102 C
341-A	Equake Res Brdgs-Columns	Sun	11:00 am - 12:30 pm	H-MILWAUKEE ROOM
341-B	Equake Res Brdgs-Pier Walls	Sun	1:30 pm - 3:00 pm	H-PERE MARQUETTE
341-C	Equake Res Brdgs-Retrofit	Sun	8:00 am - 9:30 am	H-MILWAUKEE ROOM
341-D	Equake Res Brdgs-Perf-Based Seismic Design	Sun	9:30 am - 11:00 am	H-MILWAUKEE ROOM
342	Bridge Evaluation	Sun	8:30 am - 10:30 am	C-102 A
343	Bridge Design	Mon	10:00 am - 12:00 pm	H-REGENCY B
343-G	Editorial	Sun	10:00 am - 11:00 am	H-CRYSTAL ROOM
345	Bridge Construction	Sun	1:30 pm - 3:30 pm	C-101 D
347	Formwork M1	Sat	2:00 pm - 9:00 pm	H-LAKESHORE C
347	Formwork M2	Sun	8:00 am - 1:00 pm	C-201 B
348	Safety	Mon	2:00 pm - 3:30 pm	C-203 B
349	Nuclear Structures	Tue	1:30 pm - 5:00 pm	C-101 A&B
349/359/370	349/359/370 Joint Task Group	Tue	10:00 am - 12:30 pm	C-203 A
349-A&B	Nuclear Structures-Design & Materials	Mon	8:00 am - 11:30 am	C-202 C
349-C	Nuclear Str-Anchorage	Mon	1:00 pm - 4:30 pm	C-202 C
350	Environmental Structures M1	Tue	8:00 am - 12:30 pm	C-101 A&B
350	Environmental Structures M2	Wed	8:00 am - 4:00 pm	C-202 C
350-A	Env Str-General & Concrete	Tue	1:00 pm - 5:00 pm	C-203 E
350-B	Env Str-Durability	Mon	8:30 am - 1:00 pm	H-EXECUTIVE D
350-C	Env Str-Reinf & Development	Sun	8:30 am - 11:30 am	C-203 B
350-D	Env Str-Structural	Mon	8:30 am - 6:30 pm	H-MILWAUKEE ROOM
350-E	Env Str-Precast/Prestressed	Sun	1:00 pm - 5:00 pm	C-102 A
350-F	Env Str-Seismic	Tue	1:00 pm - 3:30 pm	C-101 D
350-H	Env Str-Editorial	Mon	12:30 pm - 2:00 pm	H-PERE MARQUETTE
350-J	Env Str-Education	Mon	1:00 pm - 3:00 pm	H-EXECUTIVE D
350-L	Env Str-Specification	Tue	5:00 pm - 6:00 pm	H-EXECUTIVE D
350-SC	Env Str-Steering Comm	Sun	11:30 am - 1:00 pm	H-EXECUTIVE B
351	Equip Foundations	Tue	10:00 am - 12:00 pm	C-102 D
351-C	Equip Fdns-Dynamic Fdns	Mon	4:30 pm - 6:30 pm	C-201 B
351-D	Design Provisions for Heavy Industrial Equipment and Machinery Concrete Support Structures	Tue	8:00 am - 10:00 am	C-101 D
352	Joints	Sun	2:00 pm - 5:00 pm	C-102 D
352-TG1	Slab-Column Joints & Connections	Mon	3:00 pm - 4:30 pm	C-101 D
352-TG2	Beam-Column Joints & Connections	Mon	1:30 pm - 3:00 pm	C-101 D
355	Anchorage	Sun	1:30 pm - 5:00 pm	C-203 C

Numerical Committee Meeting Listing

For detailed program information and program changes, download the Convention App.

C = Wisconsin Center H = Hyatt Regency

Code	Committee	Day	Time	Room Name
357	Offshore & Marine	Tue	9:30 am - 11:30 am	H-EXECUTIVE D
359	Nuclear Reactors	Wed	9:00 am - 1:00 pm	C-203 C
359-A&B	Working Group on Design/Working Group on Mats, Fabrication & Examination	Tue	8:00 am - 12:00 pm	C-203 E
359-C	Working Group on Modernization	Wed	7:00 am - 9:00 am	C-203 C
360	Slabs on Ground	Mon	2:00 pm - 6:30 pm	C-101 A&B
362	Parking Structures	Mon	1:00 pm - 5:00 pm	C-203 E
362-A	Updating Guide to Struct Maint of Pkg Struct Doc	Sun	1:00 pm - 4:00 pm	C-103 D
363	High-Strength	Sun	2:30 pm - 5:00 pm	C-102 E
363-A	High-Strength Lightweight Concrete	Tue	3:30 pm - 5:00 pm	H-PERE MARQUETTE
364	Rehabilitation	Mon	1:00 pm - 4:00 pm	C-102 A
364-A	Editorial Subcommittee	Mon	9:30 am - 11:00 am	C-103 D
364-TG1	Rehab Guide	Mon	11:00 am - 12:00 pm	C-203 E
365	Service Life	Mon	9:00 am - 11:00 am	C-102 E
369	Seismic Rehab M1 Part 1	Sun	10:00 am - 12:00 pm	C-203 D
369	Seismic Rehab M1 Part 2	Sun	1:00 pm - 5:30 pm	C-203 D
369	Seismic Rehab M2	Mon	2:00 pm - 6:00 pm	H-LAKESHORE C
370	Blast and Impact Load Effects	Sun	3:00 pm - 5:00 pm	H-GILPATRICK
371	Elevated Tanks with Concrete Pedestals	Mon	3:00 pm - 5:00 pm	H-PERE MARQUETTE
372	Tanks Wrapped Wire/Strand	Tue	3:00 pm - 5:00 pm	H-EXECUTIVE D
374	Seismic Design	Mon	8:30 am - 12:00 pm	C-102 C
375	Design for Wind Loads	Mon	1:00 pm - 3:30 pm	H-EXECUTIVE C
376	RLG Containment Structures	Mon	1:00 pm - 4:00 pm	C-101 C
376-01	Steering Subcommittee	Sun	10:30 am - 12:00 pm	H-EXECUTIVE C
376-A	Code, Education & Publication Subcommittee	Mon	10:00 am - 12:00 pm	C-103 E
376-B	Materials Subcommittee	Sun	1:00 pm - 3:00 pm	C-103 E
376-C	Analysis Subcommittee	Sun	3:00 pm - 5:00 pm	C-103 E
376-D	Design & Construction Subcommittee	Mon	8:00 am - 10:00 am	H-PERE MARQUETTE
377	Performance-Based Structural Integrity & Resilience of Concrete Structures	Mon	10:00 am - 12:30 pm	H-EXECUTIVE B
408	Bond and Development of Steel Reinforcement	Sun	8:30 am - 11:30 am	C-102 D
408-A	Mech Splices	Sun	8:00 am - 8:30 am	C-102 D
421	Reinf Slabs	Sun	10:00 am - 1:00 pm	C-203 C
423	Prestressed	Mon	8:30 am - 12:30 pm	C-201 B
423/445	Adhoc Grp on Shear in Prestress Conc	Sun	4:00 pm - 5:30 pm	H-EXECUTIVE D
423-C	Corrsn & Repr Grtd Tendons	Sun	3:00 pm - 5:00 pm	C-203 A
423-F	Sustainable Prestressed Concrete	Sun	1:00 pm - 3:00 pm	C-103 A
423-G	Specification for Unbonded Single-Strand Tendon Materials	Mon	4:00 pm - 6:00 pm	H-GILPATRICK
423-TG1	Unbonded Tendons Task Group	Sun	1:00 pm - 3:00 pm	C-203 A
423-TG2	Anchorage Zone Task Group	Sun	4:00 pm - 5:30 pm	C-103 D
435	Deflection	Mon	3:00 pm - 6:00 pm	H-EXECUTIVE B
437	Strength Evaluation	Mon	10:30 am - 12:30 pm	C-101 D
439	Steel Reinforcement	Mon	8:30 am - 10:30 am	C-203 D
439-A	Steel Reinf-Wire	Sun	3:30 pm - 5:00 pm	C-101 D

Numerical Committee Meeting Listing

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Code	Committee	Day	Time	Room Name
440	Fiber-Reinforced Polymer	Tue	8:00 am - 11:00 am	C-102 C
440-F	FRP-Repair-Strengthening	Mon	3:00 pm - 6:00 pm	H-REGENCY C
440-G	FRP-Student	Sun	10:00 am - 11:30 am	C-203 E
440-H	FRP-Reinforced Concrete M1	Sun	12:30 pm - 3:30 pm	C-101 A&B
440-H	FRP-Reinforced Concrete M2	Mon	1:00 pm - 3:00 pm	H-REGENCY C
440-I	FRP-Prestressed Concrete	Sun	3:30 pm - 5:00 pm	C-202 C
440-K	FRP-Material Characteristics	Sun	8:00 am - 10:00 am	C-101 A&B
440-M	FRP-Repair of Masonry Str	Mon	8:30 am - 11:30 am	H-REGENCY C
440-TG2	Repair Construction Specification	Mon	11:30 am - 1:00 pm	C-102 B
441	Columns	Mon	11:30 am - 2:00 pm	H-LAKESHORE C
441-A	High-Strength Conc	Mon	8:00 am - 9:00 am	H-CRYSTAL ROOM
441-B	Lateral Reinf	Mon	9:00 am - 10:00 am	H-CRYSTAL ROOM
444	Structural Health Monitoring and Instrumentation	Tue	8:00 am - 10:00 am	H-GILPATRICK
445	Shear & Torsion	Mon	2:00 pm - 6:00 pm	C-203 D
445-A	Shear & Torsion-Strut & Tie	Sun	9:30 am - 12:30 pm	H-EXECUTIVE A
445-B	Shear & Torsion-Seismic Shear	Sun	9:30 am - 11:30 am	H-EXECUTIVE B
445-C	Shear & Torsion-Punching Shear	Sun	1:00 pm - 3:00 pm	H-MILWAUKEE ROOM
445-D	Shear & Torsion-Shear Databases	Sun	2:00 pm - 5:00 pm	C-103 B
445-E	Shear & Torsion-Torsion	Sun	12:30 pm - 2:00 pm	H-CRYSTAL ROOM
446	Fracture Mechanics	Mon	8:30 am - 10:00 am	C-203 B
447	Finite Element Analysis M1	Mon	11:00 am - 1:30 pm	C-103 D
447	Finite Element Analysis M2	Mon	5:00 pm - 6:30 pm	H-PERE MARQUETTE
506	Shotcreting	Tue	8:30 am - 11:30 am	C-203 C
506-A	Shotcreting-Evaluation	Mon	1:30 pm - 3:00 pm	H-MANAGERS SUITE
506-B	Shotcreting-Fiber-Reinforced	Mon	3:30 pm - 5:00 pm	C-203 B
506-C	Shotcreting-Guide	Mon	8:30 am - 10:30 am	C-203 A
506-E	Shotcreting-Specifications	Mon	10:30 am - 12:30 pm	C-203 A
506-F	Shotcreting-Underground	Mon	4:30 pm - 5:30 pm	C-101 D
515	Protective Systems	Tue	9:00 am - 11:00 am	H-PERE MARQUETTE
522	Pervious Concrete	Tue	8:00 am - 11:00 am	C-102 B
523	Cellular Concrete	Tue	8:30 am - 10:30 am	C-103 B
524	Plastering	Mon	8:30 am - 10:00 am	C-102 A
526	Autoclaved Aerated Concrete	Tue	11:00 am - 1:30 pm	C-102 C
533	Precast Panels	Mon	8:30 am - 10:00 am	C-103 B
543	Piles	Mon	8:30 am - 11:30 am	H-EXECUTIVE C
544	Fiber-Reinforced Concrete	Tue	3:00 pm - 5:30 pm	C-103 C
544-A	FRC-Education Production Application	Mon	10:00 am - 1:00 pm	C-102 A
544-C	FRC-Testing	Tue	1:30 pm - 3:00 pm	C-103 C
544-D	FRC-Structural Uses	Tue	11:30 am - 1:00 pm	C-102 A
544-E	FRC-Mechanical Properties	Mon	5:00 pm - 6:30 pm	H-MANAGERS SUITE
544-F	FRC-Durability	Tue	10:30 am - 12:00 pm	C-103 C
544-SC	FRC-Steering Committee	Mon	8:30 am - 10:00 am	C-103 E
546	Repair	Mon	8:30 am - 10:30 am	C-103 C
546-D	Bagged Materials	Sun	10:00 am - 11:00 am	H-GILPATRICK
546-E	Corrosion Studies	Sun	11:00 am - 12:00 pm	H-GILPATRICK

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548	Polymers	Tue	8:30 am - 11:30 am	H-LAKESHORE C
548-A	Polymers-Overlays	Mon	8:15 am - 11:00 am	H-LAKESHORE C
548-B	Polymers-Adhesives	Mon	3:00 pm - 5:00 pm	H-MANAGERS SUITE
548-C	Structural Polymer Design	Mon	11:00 am - 12:30 pm	C-103 A
549	Thin Reinforced	Sun	11:00 am - 1:00 pm	C-102 E
550	Precast Structures	Sun	3:00 pm - 5:00 pm	C-203 B
551	Tilt-Up	Sun	9:00 am - 11:00 am	C-202 C
552	Cementitious Grouting	Tue	4:00 pm - 5:30 pm	H-EXECUTIVE A
555	Recycled	Mon	5:00 pm - 6:30 pm	C-103 D
560	Design & Constr ICFs	Tue	8:30 am - 10:30 am	H-MANAGERS SUITE
562	Eval, Repair & Rehab	Sun	1:00 pm - 5:00 pm	C-103 C
562-A	General	Sat	10:00 am - 4:00 pm	H-PERE MARQUETTE
562-B	Loads	Sun	8:00 am - 10:00 am	H-CRYSTAL ROOM
562-C	Evaluation M1	Sat	4:00 pm - 5:00 pm	H-PERE MARQUETTE
562-C	Evaluation M2	Sat	6:00 pm - 8:00 pm	H-PERE MARQUETTE
562-D	Design M1	Sat	8:00 am - 12:00 pm	H-EXECUTIVE D
562-D	Design M2	Sat	1:00 pm - 2:00 pm	H-EXECUTIVE D
562-E	Education	Mon	8:00 am - 10:00 am	H-EXECUTIVE B
562-F	Durability	Sat	6:00 pm - 9:00 pm	H-EXECUTIVE D
563	Specs for Repair of Struct Conc in Bldgs	Tue	1:00 pm - 5:00 pm	C-103 B



Strategic
Development
Council

aciFoundation

Final
call to attend
the
SDC
Technology Forum #39



Photo courtesy of visitsanantonio.com - Tim Thompson

May 10, 2016 – Concrete 2029 Workshop
A strategy for improvement of the concrete construction industry.

May 11-12, 2016

Hear about new technologies to improve the quality, efficiency, sustainability, and resiliency in concrete construction and presentations as well as breakouts on crack reduction and BIM.

Both in San Antonio, TX – Hilton Palacio del Rio

Visit www.concretesdc.org to register & learn more about each event.

Sessions & Events

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Sunday, April 17, 2016

8:00 am – 9:00 am

Convention Orientation Breakfast—H-REGENCY B

Moderated by Lawrence Homer Taber, Black & Veatch

First-time convention attendees are invited to join Lawrence Homer Taber, 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-202 B

Chaired by ACI Vice President Michael J. Schneider

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 concrete material suppliers, designers, and those in the construction industry. Presentations will be given by the following individuals from around the globe: Dr. Hasan Al Nawadi, Iraq Chapter – ACI; Prof. Jongsung Sim, Prof. Thomas Kang, and Prof. Hong-Gun Park, Korea Concrete Institute (KCI); Dr. S.K. Manjrekar, India Chapter – ACI; Prof. Hitoshi Shiohara, Japan Concrete Institute (JCI); Prof. Man-Yop Han, Asian Concrete Federation (ACF); and Dr. Kamal Khayat, RILEM.

11:00 am – 4:00 pm

Student FRC Bowling Ball Competition—C-BALLROOM AB & FOYER

Sponsored by ACI Committee S801

Moderated by Walter H. Flood, Flood Testing Labs, Inc.

During the Fiber-Reinforced Concrete (FRC) Bowling Ball Competition, run by members of ACI Committee 440, students will design and construct a fiber-reinforced concrete bowling ball that will achieve optimal performance under specified failure criteria and develop a fabrication process that produces a radial uniform density while maximizing volume. Convention attendees are invited to stop by to witness the students' evaluations. Cheer them on while they chase an elusive turkey on the bowling lane and see their fiber-reinforced handiwork crushed to a full 25 mm of deflection. Check-in for this competition begins at 9:00 am.

11:30 am – 1:30 pm

✓International Lunch—H-REGENCY B

\$30 U.S. per person

Topic: Sustainable Developments of Concrete Technology in China

Sponsored by the ACI International Advisory Committee
Speaker: Zongjin Li, Hong Kong University of Science and Technology

Dr. Zongjin Li, Professor at the Hong Kong University of Science and Technology, will give a presentation on Sustainable Development of Concrete Technology in China. The growing concern over global warming and other significant ecological changes has spurred much debate in all fields of science and

technology. Concrete is the most popular and widely used construction material in the world. It not only consumes a huge amount of energy and natural sources but it also emits a large amount of CO₂, mainly due to the production of cement. In China, the annual consumption of concrete has been over 7 billion tons since the last decade and the number of large national concrete infrastructure continues to increase. It is evident that such a large amount of concrete production definitely puts significant impact on the energy, resources, environment, and ecology of society. Therefore, how to develop the concrete technology in a more sustainable way has become an urgent issue for the nation. In this presentation, the scientific strategies for the sustainable development of concrete infrastructure in China will be presented, including the new understanding on the nature of cement hydration and the origin of the mechanical properties, the deterioration mechanism of concrete under the coupling effect of loading and environmental factors, the load-carrying capacity and durability unified service life design theory, and the methodologies for developing tougher and more ductile concrete to improve the serviceability of concrete structures. Moreover, the sustainable features of several typical concrete infrastructures in China, such as the Hong Kong–Zhuhai–Macau Bridge, Beijing Capital International Airport Terminal 3, and the Jinghu High-Speed Railway, will be briefly introduced.

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

Further Investigations of Carbon Dioxide Utilization in Concrete—C-202 B

Sponsored by ACI Committees 130 and 236

Moderated by Yixin Shao, McGill University, and Sean Monkman, CarbonCure Technologies

This session will bring together researchers who are investigating the use of carbon dioxide as a feedstock in concrete production. A chemical reaction between carbon dioxide and the hydrating or early-age concrete can effectively bind carbon dioxide into the concrete, thereby modifying the concrete properties and the microstructures while providing an environmental benefit.

1:00 pm: Carbon Dioxide Sequestration through Mineralization

Bruce W. Ramme, We Energies

1:20 pm: Performance of Carbonation-Cured Concrete with Portland Limestone Cement

Yixin Shao, McGill University; and Hilal El-Hassan, United Arab Emirates University

1:40 pm: Carbon Sequestration and the Impact on Concrete Performance

Oscar Tavares, Innovative Alternatives LLC

2:00 pm: Performance of Carbonated Calcium Silicate Concrete Exposed to NaCl, CaC₁₂, and MgC₁₂ Deicing Salt

W. Jason Weiss, Oregon State University; Yaghoob Farnam, Purdue University; and Jitendra Jain, Solidia Technology

2:20 pm: Properties of the Carbonation Activated Calcium Silicate Systems

Warda B. Ashraf, Purdue University; and Jan Olek, Purdue University

Sessions & Events

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2:40 pm: Case Study in Using CO₂ to Optimize Cement Savings in Ready Mixed Concrete

Sean Monkman, CarbonCure Technologies; Kevin M. Cail, CarbonCure Technologies; John Cook, Thomas Concrete; and Mark MacDonald, CarbonCure Technologies

 2 AIA/CES LU/HSW

PDH Codes: _____

Sunday, April 17, 2016

1:00 pm – 3:00 pm

Ground Limestone and Mineral Filler: Inert Fillers or Active Ingredients?—C-202 D

Sponsored by ACI Committees 211 and 237, and ACI Subcommittee 211-N
Moderated by Eric P. Koehler, Titan America

This session will explore whether ground limestone and mineral filler should be considered inert fillers or considered to contribute to hydration, strength, economy, and sustainability of concrete mixtures. This session will show how the use of ground limestone and mineral filler affects concrete properties and how mixture proportions can be optimized to take advantage of these materials.

1:00 pm: Examining the Interactions of Limestone Powder with Portland Cement and Fly Ash in Binary and Ternary Blends

Scott Jones, National Institute of Standards & Technology; and Dale P. Bentz and Paul E. Stutzman, National Institute of Standards & Technology

1:25 pm: Use of Milled Limestone in High-Performance Self-Consolidating and Vibrated Concretes

Van K. Bui, BASF Corporation

1:50 pm: What Does Isothermal Calorimetry Tell Us about Limestone and Ground Lightweight Aggregates?


Prannoy Suraneni, ETH Zürich; and Jason Weiss, Jason H. Ideker, and Tengfei Fu, Oregon State University

2:15 pm: White Concrete Using Ground Limestone

Bobby Bergman, Huber Carbonates; and Lane G. Shaw, JM Huber

2:40 pm: Durability of Blended Binder Concretes Containing Limestone: Chloride Ion and Transport Experiments and Simulations

Narayanan Neithalath, Arizona State University; Gaurav N. Sant, University of California, Los Angeles; and Aashay Arora and Pu Yang, Arizona State University

 2 AIA/CES LU

PDH Codes: _____

1:00 pm – 3:00 pm

Precast Concrete Pavements: Best Practices and Innovations, Part 1 of 2—C-202 A

Sponsored by ACI Committee 325

Moderated by Shiraz D. Tayabji, Advanced Concrete Pavement Consultancy LLC

The production use of precast concrete pavement (PCP) has come a long way over the last 15 years. Since the first new-generation PCP projects were constructed during 2001, the technology has gained wider acceptance in the United States for rapid repair and rehabilitation of concrete pavements, as well as for heavily trafficked asphalt concrete pavements and intersections. Since 2001, many projects have been constructed and many advances have been made and continue to be made in the design, panel fabrication, and panel installation aspects of the technology. In the United States, the PCP technology is being used for intermittent repairs (full-depth or full-panel replacement) and for continuous applications (longer length/wider area rehabilitation) with service life expectations of at least 20 years for repairs and at least 40 years for continuous applications, without significant future corrective treatment.

The two sessions, organized by ACI Committee 325, with support from the Federal Highway Administration (FHWA), will present the current developments and best practices related to PCP design, panel fabrication, and panel installation processes. In the first session, experts from several highway agencies, including Wisconsin DOT, will present the implementation details related to new PCP applications by their agencies.

1:00 pm: Overview of Precast Concrete Pavement Practices and Recent Innovations

Shiraz D. Tayabji, Advanced Concrete Pavement Consultancy LLC

1:20 pm: Implementation of Precast Concrete Pavement Technology in the United States—FHWA Initiatives

Samuel S. Tyson, Federal Highway Administration

1:40 pm: Recent Innovations in Jointed Precast Concrete Pavement Systems

Peter J. Smith, The Fort Miller Company Incorporated

2:00 pm: FHWA/SHRP2 Precast Concrete Pavement Implementation Assistance Program Projects

Shiraz D. Tayabji, Advanced Concrete Pavement Consultancy LLC

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Sessions & Events

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2:00 pm – 4:00 pm

International Session: At the Frontiers of Concrete Technology and Sustainable Development in China—C-202 E

Sponsored by the International Advisory Committee, the ACI Chapter Activities Committee, and ACI Committee 130
Moderated by Herbert Wei Zheng, Gammon Construction Limited; and Zongjin Li, HKUST

“China has consumed more cement in 3.5 years than United States did in 100 years,” said Bill Gates in 2014, referring to his favorite historian Vaclav Smil, who wrote *Making the Modern World: Materials and Dematerialization*. The exciting progress in infrastructure construction in China has been empowered not only by evolution of new materials but also renovation of traditional materials, both accompanied with notable challenges to the sustainability development. This session will present leading examples to demonstrate how the concrete, “the most important man-made material,” argued by Smil, is optimized and used for a variety of applications in construction.

2:00 pm: Innovative Technologies in National Infrastructure Projects in China

Changwen Miao, Southeast University

2:25 pm: Embodied Carbon of Concrete/Steel Building Structures Using Nonlinear Optimization

Julian Lee, Construction Industry Council

2:45 pm: Carbon-Neutral Construction Products Manufactured with Cement and Concrete Wastes

Herbert Wei Zheng, Gammon Construction Limited; and Chi Sun Poon, The Hong Kong Polytechnic University

3:00 pm: Belite-Based Low-Carbon Clinker Cements for High-Performance Concrete

Tongbo Sui, Sinoma International Research Institute

3:20 pm: Advancements in Control of Cracking in Early-Age Concrete

Jiaping Liu, Jiangsu Research Institute

3:40 pm: Technology Development for Concrete Structure Design in China

Xianglin Gu, Tongji University

3:30 pm – 5:30 pm

Precast Concrete Pavements: Best Practices and Innovations, Part 2 of 2—C-202 A

Sponsored by ACI Committee 325

Moderated by Samuel S. Tyson, Federal Highway Administration

The session description for this session may be found in the Part 1 listing; refer to page 22.

3:30 pm: Precast Concrete Pavement Implementation in Wisconsin

David Layton, Wisconsin Department of Transportation

3:50 pm: Precast Concrete Pavement Implementation by Illinois Tollway

Steven L. Gillen, Illinois Tollway

4:10 pm: Precast Concrete Pavement Implementation in California

Mehdi Parvini, California Department of Transportation

4:30 pm: The Los Angeles SH 101 Pavement Rehabilitation Using Precast Concrete Panels

Shiraz D. Tayabji, Advanced Concrete Pavement Consultancy LLC



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PDH Codes: _____

3:30 pm – 5:30 pm

Strengthening of Concrete Structures with Fabric-Reinforced Cementitious Matrix Composites—Systems and Applications—C-202 B

Sponsored by ACI Committees 364, 546, and 549, and ACI Subcommittee 562-E

Moderated by Antonio Nanni, University of Miami

The objective of the session is to present convention attendees with the latest developments (both in terms of commercially available material systems as well as applications) of a novel cement-based strengthening composite termed “fabric-reinforced cementitious matrix” (FRCM). ACI has developed a design and installation guide that addresses this technology representing a new tool available to professionals working in the repair/rehabilitation of existing structures. The guide is ACI 549.4R-13, “Guide to Design and Construction of Externally Bonded Fabric-Reinforced Cementitious Matrix (FRCM) Systems for Repair and Strengthening Concrete and Masonry Structures.”

3:30 pm: Structural Repair Viaduct on Italian Highway

Giovanni Mantegazza, Ruredil; and Francesco Focacci, University E-campus

3:47 pm: Study of the Interfacial Debonding of PBO FRCM-Concrete Systems

Lesley H. Sneed, Missouri S&T; and Christian Carloni, University of Bologna

4:04 pm: Strengthening of RC Elements with FRCM in School Building in Italy

Giovanni Mantegazza, Ruredil; and Natale Pontiggia, Independent Consultant

Sessions & Events

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4:21 pm: Confined Concrete Elements with Cement-Based Composites: Confinement Effectiveness and Prediction Models

Luciano Ombres, University of Calabria; and Stefania Mazzuca, University of Calabria

4:38 pm: Performance of RC Axial-Type Element Strengthened with FRCC Composites

Giovanni Loreto, Georgia Institute of Technology; and Antonio Nanni, University of Miami

4:55 pm: Long-Term Performance of FRCC-Strengthened RC Beams Subject to Fatigue

Vanessa Pino, University of Miami; and Houman Akbari Hadad, University of Miami



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PDH Codes: _____

Sunday, April 17, 2016

3:30 pm – 5:30 pm

Will Concrete and Masonry Survive the New Energy Codes?—C-202 D

Sponsored by ACI Committees 122, 130, and 560
Moderated by John P. Ries, Expanded Shale, Clay and Slate Institute, and Jeffrey F. Speck, Trinity Lightweight

Energy efficiency codes are being adopted and enforced by more jurisdictions. Criteria are being developed for more features than the building components traditionally addressed by the codes and standards, such as thermal performance of fenestration and insulated elements of building envelope enclosures. Attendees will develop an understanding of the new requirements and how concrete and masonry can be designed and constructed to comply with them, focusing on addressing thermal anomalies in concrete and masonry buildings. The impacts of ties, anchors, shelf angles, projected slabs, and exterior structural elements are being considered in proposed revisions to standards. Each of these could have a significant impact on the design and configuration of concrete and masonry elements and can eliminate the use of conventional details and even systems. Learn where thermal bridging needs to be addressed and what options are available to mitigate these effects.

3:30 pm: Thermal Anomalies: Impact on Concrete and Masonry Building Design

Stephen S. Szoke, Portland Cement Association

3:55 pm: Effects of Envelope Thermal Transmittance on Energy Use in Buildings with Exterior Mass Walls

William Mark McGinley, University of Louisville

4:20 pm: Thermal Bridging in Masonry: Effective Details to Improve Masonry Thermal Performance

Nicholas R. Lang, National Concrete Masonry Association

4:45 pm: Overview of ACI 560R: Report on Design and Construction with Insulating Concrete Forms

Robert E. Sculthorpe, Consultant; and Robert C. Rogers, Schaefer



2 AIA/CES LU/HSW

PDH Codes: _____

5:45 pm – 7:00 pm

Opening Session & Awards Program—C-BALLROOM C

The Concrete Convention and Exposition officially begins during the Opening Session and Awards Program on Sunday evening. ACI's Emcee for the night, Patrick McGaughey, will welcome attendees, and over 100 groups or individuals will be recognized for their contributions to the concrete industry. McGaughey is an international business speaker with a background of professional success in broadcasting and business association management. The program will conclude with Sharon Wood giving her farewell speech and passing the gavel to ACI Vice President Michael J. Schneider.

7:00 pm – 8:00 pm

Opening Reception—C-BALLROOM AB & FOYER

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 I: Meeting Market Demand of Fly Ash—C-202 B

Sponsored by Hot Topics Committee
Moderated by William J. Lyons, The Euclid Chemical Company

The use of fly ash has increased over the past 15 years with the growth of sustainable concrete. Keeping up with the supply has been a growing concern among many constituents in the concrete construction industry. These presentations offer the industry different perspectives on the challenges and realities of fly ash production and supply and what they are doing to satisfy the customer.

8:00 pm: Fly Ash Supply—A Power Generator's Perspective Bruce Ramme, We Energies

8:30 pm: Fly Ash Supply—A Supplier's Perspective Tilghman H. Keiper, SEFA Group

9:00 pm: Fly Ash Supply—A User's Perspective Thomas H. Adams, American Coal Ash Association



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Sessions & Events

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8:00 pm – 10:00 pm

Hot Topic Session II: New One-Way Shear Equations for the 318 Building Code, Is it Time?—C-202 D

Sponsored by Hot Topics Committee
Moderated by Abdeldjelil Belarbi, University of Houston, and David H. Sanders, University of Nevada

The basic one-way shear equations in the ACI 318 Building Code have not changed since 1971, while other codes in the world have made changes. The current code consists of over 17 different equations. There have been advances in the understanding of size effect, members without transverse reinforcement, and members with the light longitudinal reinforcement. Members of Joint ACI-ASCE committees 445 and 446, and ACI Subcommittee 318-A devoted a great effort in the last two decades to investigate the effectiveness and safety of the current 318 one-way shear design equations. Immediately after the 318-14 Code cycle, the above committees challenged the researcher and practitioner community to present proposals for new one-way shear design methods that are safer and more effective for possible incorporation into the 318-19 code cycle. To date, six proposals have been submitted. These proposals were first evaluated against the existing 445 experimental shear database and then implemented in a comprehensive design example database that includes slabs, beams, and columns with prestress and non-prestress. This session will present the result summary of these evaluations and give a chance to each proposal's author to describe the advantages of their method over the current 318-14 equations. The discussions held at this Hot Topic Session will be used by 318-E and 318 as input into their deliberations on the next step for one-way shear design for the 318-19 Building Code. This will be followed with a period of Q/A and attendees' input and feedback on the new approaches.

8:00 pm: New Look at One-Way Shear Design Approach – ACI 318-E Initiative

David H. Sanders, University of Nevada

8:05 pm: Summary of ACI-ASCE 445 Activities on One-Way Shear Design Methods

Abdeldjelil Belarbi, University of Houston

8:13 pm: Use of Design Database to Compare Design Approaches

Daniel A. Kuchma, Tufts University

8:23 pm: One-Way Shear Design Method Based on a Multi-Action Model

Antoni Cladera, University of Balearic Islands; and Antonio Marí and Jesús Bairan, Polytechnic University of Catalonia

8:31 pm: One-Way Shear Design Method – A Unified Approach

Robert J. Frosch, Purdue University; Qian Yu, University of Pittsburgh; Zdeněk P. Bažant and Gianluca Cusatis, Northwestern University; Mija H. Hubler, University of Colorado, Boulder; and Jialing Le, University of Minnesota, Minneapolis

8:39 pm: One-Way Shear Design Method – Simplifying the ACI Shear Provisions

Evan C. Bentz, University of Toronto; and Michael P. Collins, University of Toronto

8:47 pm: One-Way Shear Design of Structural Concrete within the Design Concept of Strut-and-Tie Models

Karl-Heinz Reineck, Stuttgart University

8:55 pm: One-Way Shear Design Method – Unified Theory by UH-NTU Version

Thomas T.C. Hsu, University of Houston; and Yi-An Li and Shyh-Jiann Hwang, National Taiwan University

9:03 pm: One-Way Shear Design Method Based on Concrete Compression Zone Failure Mechanism

Hong-Gun Park, Seoul National University

9:11 pm: Question and Answers



2 AIA/CES LU

PDH Codes: _____

9:00 pm – 10:30 pm

Student and Young Professional Networking Event—H-BISTRO BAR

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

The ACI Student and Young Professional Activities Committee and the 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.

Sessions & Events

For detailed program information and program changes, download the Convention App.
√ = Separate fee required ★ = Guest-only event C = Wisconsin Center H = Hyatt Regency

Monday, April 18, 2016

6:30 am – 8:00 am

Workshop for Technical Committee Chairs— C-BALLROOM C

Sponsored by the ACI Technical Activities Committee (TAC)
Moderated by H. R. Trey Hamilton, University of Florida

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.**

7:00 am – 8:30 am

Speaker Development Breakfast—H-REGENCY A

Sponsored by ACI Committee S802
Moderated by Arsenio Caceres-Fernandez, University of Puerto Rico
Speaker: Michelle L. Wilson, Portland Cement Association

Topic: Actively Engaging an Audience

It is the goal of this breakfast to provide an informal venue for attendees to learn how to become better presenters. The breakfast format promotes interaction between attendees.

This session provides an interactive and entertaining insight into effectively engaging an audience. It also looks at the problems and pitfalls that speakers should expect: when to expect them, how to handle them, and what a successful resolution looks like. The presentation will also address the different types of learning styles and how presenters can tailor a talk using proven techniques to address all types of adult learners.

8:30 am – 10:30 am

Nanoscale Fiber-Reinforced Concrete, Part 1 of 2— C-202 B

Sponsored by ACI Committees 236, 241, 523, and 544
Moderated by Maria S. Konsta-Gdoutos, Democritus University of Thrace, and Konstantin Sobolev, University of Wisconsin-Milwaukee

Nanofibers demonstrated an excellent potential for enhanced fracture toughness, energy absorption capacity, durability, and strain sensing in cementitious nanocomposites. This session will bring together science and application aspects related to nanofiber application in cement-based materials.

8:30 am: Effects of CNTs/CNFs on Shrinkage Cracking and Self-Curing Process in Cement Mortars

Yuan Gao, Northwestern University; Maria S. Konsta-Gdoutos, Democritus University of Thrace; and David J. Corr and Surendra P. Shah, Northwestern University

8:50 am: Development of High-Performance Cement Composite Using Cellulose Nanocrystals

W. Jason Weiss, Oregon State University; Tengfei Fu, Oregon State University; Prannoy Suraneni, ETH Zürich; and Jeff Youngblood, and Pablo Zarattieri, Purdue University

9:10 am: Cellulose Nanopulps and Natural Nanofibers in Cement-Based Composites: Effects on Autogenous and Drying Shrinkage

Liberato Ferrara, Polytechnic University of Milan; Romindo Dias Toledo Filho, and Saulo Rocha Ferreira, Federal University of Rio de Janeiro; and Visar Rexhep Krelani, Polytechnic University of Milan

9:30 am: A New Polymer Concrete with Improved Fracture Resistance Using Carbon Nanotubes

Mahmoud M. Reda Taha, University of New Mexico; and Moneeb Genedy, Ala Eddin Douba, and Rafiqul Tarefder, University of New Mexico

9:50 am: Phase Evolution of Oil Well Cements with Nanoadditive at Elevated Temperatures and Pressures

Shiho Kawashima, Columbia University; and Siwei Ma, Columbia University

10:10 am: The Effect of Graphene Oxide on the Hydration and Behavior of Cement-Based Materials

Jessica Flores, University of Miami; and Ali Ghahremaninezhad, University of Miami



2 AIA/CES LU

PDH Codes: _____

8:30 am – 10:30 am

Research in Progress, Part 1 of 2—C-202 A

Sponsored by ACI Committee 123
Moderated by Chris Carroll, Saint Louis University, and Fatmir Menkulasi, Louisiana Tech University

This session will feature presentations of original, unpublished results from ongoing research projects and leading-edge concrete technology and research throughout the world.

8:30 am: Expansion Behavior of Reinforced Concrete Elements Due to Alkali-Silica Reaction

Morgan Allford, The University of Texas at Austin; and David Wald, Oguzhan Bayrak, and Trevor Hrynyk, The University of Texas at Austin

8:45 am: Microstructure-Guided Design and Development of Sustainable Next-Generation Infrastructure Materials through Numerical Simulation

Sumanta Das, Arizona State University; Sudhanshu S. Singh, Indian Institute of Technology Kanpur; and Nikhilesh Chawla and Narayanan Neithalath, Arizona State University

9:00 am: Carbonation Processes in Submerged Concrete in a Simulated CO₂ Invasive Fish Barrier System

Tyler R. Johnson, United States Army Engineer Research and Development Center; and Sarah L. Williams and Robert D. Moser, United States Army Engineer Research and Development Center

9:15 am: Setting Bar-Bending Requirements for High-Strength Steel Bars

Stephen Zhao, The University of Texas at Austin; and Dr. Wassim Ghannoum, The University of Texas at Austin

Sessions & Events

For detailed program information and program changes, download the Convention App.
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9:30 am: Friction and Texture Retention of Concrete Pavements after Diamond Grinding and Grooving

Nathan Klenke, University of Alabama; David Fowler, The University of Texas at Austin; and Eric Giannini and Jay Lindly, University of Alabama

9:45 am: Numerical Modeling of Expansion in Reinforced Concrete Elements Due to Alkali-Silica Reaction


David Wald, The University of Texas at Austin; and Trevor Hrynyk, Oguzhan Bayrak, and Morgan Allford, The University of Texas at Austin

10:00 am: Superabsorbent Polymers as an Internal Curing Agent to Mitigate Autogenous Shrinkage in High-Performance Concrete with Silica Fume

Jennifer Annette Canul-Polanco, Universidad Autónoma de Nuevo León; and Alejandro Duran-Herrera and Pedro Loebardo Valdez-Tamez; Universidad Autónoma de Nuevo León

10:15 am: Surface Electric Resistivity; A Confident Technique to Evaluate Permeability on Ultra-High-Performance Concrete (UHPC)

Guillermo Hernandez Carrillo, Universidad Autónoma de Nuevo León; and Alejandro Durán-Herrera and Pedro L. Valdez Tamez, Universidad Autónoma de Nuevo León

 2 AIA/CES LU

PDH Codes: _____

8:30 am – 10:30 am

Slag Cement Use in Notable Structures, Part 1 of 2—C-202 E

Sponsored by ACI Committee 233
Moderated by Mark D. Luther, Holcim (US) Incorporated; and Jay E. Whitt, Essroc Cement

The Session (Parts 1 and 2) demonstrate that slag cement is used commonly across North America in high-profile and, in many cases, award-winning projects. It shows that a broad array of applications employ slag cement to achieve reliably special properties in addition to more typically seen requirements. The session shows multiple instances when slag cement was used to achieve combinations of low heat, high strength, increased workability, low permeability, low unit weight, whiter color, and higher recycled materials content, among others. A broad array of slag-cement dosages is represented, ranging up to 80%. Engineers, architects, owners, and students will learn that slag cement can play a reliable and predictable role in achieving a successful project outcome. Part 2 includes a 40-minute exposition and presentation of the 2015 Slag Cement Association projects and awards.

8:30 am: Tilikum Crossing Bridge

Matthew R. Wood, Ash Grove

8:50 am: Examples of High-Volume Usage of Slag Cement in Mining Applications

Corina-Maria Aldea, Amec Foster Wheeler

9:10 am: Port Authority of New York and New Jersey—Slag-Cement Concrete Use in Three Notable Projects

Casimir J. Bognacki, The Port Authority of New York & New Jersey

9:30 am: Slag Cement Use in Ontario

Michael J. Stanzel, ESSROC Italcementi

9:50 am: Slag Cement Use in the Expansion and Renovation of the Davis Wade Stadium at Mississippi State University

Tim Cost, Holcim (United States) Incorporated

 2 AIA/CES LU/HSW

PDH Codes: _____

8:30 am – 10:30 am

Undergraduate Research on Concrete Materials, Structural Design, or Construction—C-202 D

Sponsored by ACI Committee S805
Moderated by Scott H. Smith, University of Georgia, and Ahmed Al-Basha, New Mexico State University

The objective of this session is to provide a greater opportunity for undergraduate students to present their research at a national meeting. This session will focus on research conducted predominately by undergraduate students, with an emphasis on students enrolled at nondoctoral institutions. It is expected that this type of session will draw a new group of students to ACI and the ACI Convention. It will also allow students to hear presentations of a slightly less technical nature that are more in keeping with their current level of knowledge regarding concrete.

8:30 am: Designing UHPC for Ballistic Penetration Resistance and Nuclear Attenuation

Spencer Buan, West Point Military Academy; and Zach Cohen, West Point

8:45 am: An Evaluation of Geopolymer Concrete as a Fire Resistance Material

Bryce Hansen, University of Minnesota, Duluth

9:00 am: Effect of Foundry Waste on the Mechanical Properties of Portland-Cement Concrete

Alexander Burkhart, Texas State University

9:15 am: Non-Invasive Bridge Inspection Using Mobile and Wearable Technology

Nicolas Maguire, University of Virginia

9:30 am: Effects of Nano-Silica on Recycled Aggregate Concrete

Mohamed Zeidan, Southeastern Louisiana University

9:45 am: Pull Strengths of Glass Fiber-Reinforced Polymer Composite Connection Using Various Concrete Surface Preparation Techniques

Vanessa McEntee, University of Utah

10:00 am: Using Digital Imaging Correlation Techniques to Evaluate Inelastic Deformation Capacity of Large-Scale Reinforced Concrete Structures

Alicia Pedneault, University of California, Los Angeles

10:15 am: Coal Combustion Bottom Ash as an Internal Curing Agent

Jared DeLee, UMKC; and John T. Kevern, University of Missouri-Kansas City

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Sessions & Events

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Monday, April 18, 2016

10:30 am – 11:00 am

Research in Progress Poster Session—C-202 FOYER

Sponsored by ACI Committee 123
Moderated by Chris Carroll, Saint Louis University, and Fatmir Menkulasi, Louisiana Tech University

The Research in Progress Poster Session complements 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.

Comparison of Fresh Concrete Air Content Test Methods and Analysis of Hardened Air Content in Wisconsin Pavements

Le T. Pham, University of Wisconsin; and Steven M. Cramer, University of Wisconsin

Synthesis and Characterization of Superabsorbent Polymer Hydrogels Used as Internal Curing Agents in Concrete

Kendra A. Erk, Purdue University; and Matthew J. Krafcik, Travis L. Thornell, Stacey L. Kelly, Matthew J. Parsons, and Austin D. Beggs, Purdue University

Evaluation on Autogenic Self-Healing Process in Concrete Using Surface Wave Transmission

Eunjong Ahn, Ulsan National Institute of Science and Technology; Sung Woo, Pukyong National University; and Myoungsu Shin and Seongwoo Gwon, Ulsan National Institute of Science and Technology

Microstructural Characterization of Modified Sulfur Composites with Fly Ash and Waste Rubber

Seongwoo Gwon, UNIST; and Myoungsu (James) Shin, UNIST

What Does Surface Resistivity Really Tell Us about Permeability?

Elizabeth I. Nadelman, Georgia Institute of Technology; and Lisa E. Burris, Behnaz H. Zaribaf, and Kimberly E. Kurtis, Georgia Institute of Technology

Use of Borosilicate Waste Glass in Portland-Cement-Based Composites: Accelerated Alkali-Silica Expansion, Electrical Resistivity, and Pozzolanic Activity Development

Anguiano-Perez, Universidad Autónoma de Nuevo León; and A. Durán-Herrera, Universidad Autónoma de Nuevo León

Self-Consolidating Concrete with Enhanced Shear Friction Capacity for Cold Joint and Applications

Giovanni Loreto, Georgia Institute of Technology; and Russell T. Gentry, Kimberly E. Kurtis, and Lawrence F. Kahn, Georgia Institute of Technology

Towards Modeling of Progressive Collapse in Frame Structures

Markus Jesswein, Ryerson University; and Serhan Guner, University of Toledo

11:00 am – 1:00 pm

Concrete Bridges Built with Advanced Materials: Seismic Performance and Design Issues, Part 1 of 2—C-202 D

Sponsored by ACI Committee 341
Moderated by Shahria Alam, University of British Columbia, and Bassem Andrawes, University of Illinois at Urbana-Champaign

ACI Committee 341, “Earthquake-Resistant Concrete Bridges,” will be sponsoring a session on the seismic performance evaluation, design, and retrofitting of concrete bridges by using advanced materials such as shape memory alloy (SMA) in the form of reinforcing bar, wire, or strand; ultra-high-strength metals; ultra-high-performance cement composites; and nanosilica. The main objective of this session is to present results from recent research studies (experimental/numerical/analytical) and practical examples of application of advanced materials in reinforced concrete (RC) bridge piers, bents, or full bridges. This session is for practitioners, educators, and researchers.

11:00 am: Design Guideline for SMA-Reinforced ECC Bridge Columns

Mostafa Tazarv, South Dakota State University; and M. Saiid Saiidi, University of Nevada, Reno

11:25 am: Seismic Performance of SMA-Retrofitted Bridge Subjected to Strong Main Shock-Aftershock Sequences

Donghyuk Jung, University of Illinois at Urbana-Champaign; and Bassem Andrawes, University of Illinois at Urbana-Champaign

11:50 am: Durability and Seismic Performance of Bridge Columns with Ductile Fiber-Reinforced Cementitious Materials and Superelastic Alloys

Bora Gencturk, University of Houston; and F. Hosseini, University of Houston

12:15 pm: Rapid Repair of Bridge Columns by Plastic Hinge Relocation

Zach Kris, North Carolina State University; and Emrah Tasdemir, Mervyn J. Kowalsky, Rudolf Seracino, and James M. Nau, North Carolina State University



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PDH Codes: _____

11:00 am – 1:00 pm

Nanoscale Fiber-Reinforced Concrete, Part 2 of 2—C-202 B

Sponsored by ACI Committees 236, 241, 523, and 544
Moderated by Surendra P. Shah, Northwestern University, and Konstantin Sobolev, University of Wisconsin–Milwaukee

The session description for this session may be found in the Part 1 listing; refer to page 26.

11:00 am: Wollastonite Nanofiber Reinforcement in Cementitious Composites

Barzin Mobasher, Arizona State University; and Vikram Dey, Arizona State University

11:20 am: Energy Absorption Capacity and Corrosion Assessment of CNT/CNF Cement Mortars

Maria S. Konsta-Gdoutos, Democritus University of Thrace; David J. Corr, Surendra P. Shah, and Yuan Gao, Northwestern University; and Panagiotis A. Danoglides, Democritus University of Thrace

Sessions & Events

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11:40 am: Smart Materials and Sensors Based on Fiber-Reinforced Concrete

Konstantin Sobolev, University of Wisconsin–Milwaukee; Ismael Flores Vivian, CEMIX-Building Materials; Scott Muzenski, Professional Service Industries; and Joshua Hoheneder, HBK Engineering, LLC

12:00 pm: Effect of Carbon Nanofibers on the Mechanical Properties and Shrinkage of Low-Viscosity Cementitious Materials

Ardavan Yazdanbakhsh, City College; and Calvin Chu, City College

12:20 pm: Contributions of Nanomaterial towards Total Transport Packing Density of Ultra-High-Performance Concrete

Amirpasha Peyvandi, Stantec Incorporated

12:40 pm: Nanostructured Three-Phase Foams and Their Application in Foam Concrete

Christina Kramer, University of Siegen; and Reinhard Trettin, University of Siegen



2 AIA/CES LU

PDH Codes: _____

11:00 am – 1:00 pm

Research in Progress, Part 2 of 2—C-202 A

Sponsored by ACI Committee 123

Moderated by Chris Carroll, Saint Louis University, and Fatmir Menkulasi, Louisiana Tech University

The session description for this session may be found in the Part 1 listing; refer to page 26.

11:00 am: Investigation of Concrete Setting and Hardening Using Leaky Rayleigh Wave Measurements

Hajin Choi, University of Illinois at Urbana-Champaign; and Homin Song and Quang Ngoc Vinh Tran, University of Illinois at Urbana-Champaign

11:15 am: Effects of Using 0.7-Inch Diameter Strands on the End-Region Serviceability and Shear Strength of Precast Pretensioned I-Girders

Roya Abyaneh, The University of Texas at Austin; and Alex Katz, Jessica Salazar, Hyun Su Kim, Hossein Yousefpour, Trevor Hrynyk, and Oguzhan Bayrak, The University of Texas at Austin

11:30 am: Reinforcement Limits for Structural Concrete Elements with High-Strength Steel

Aishwarya Y. Puranam, Purdue University; and Santiago Pujol, Purdue University

11:45 am: Response of High-Strength Steel Reinforced Concrete Frames to Simulated Earthquakes

Lucas Laughery, Purdue University; and Santiago Pujol, Purdue University

12:00 pm: FRM Composite Mechanical Properties under High Temperature

Jacopo Donnini, Marche Polytechnic University; Valeria Corinaldesi, Marche Polytechnic University; and Francisco De Caso y Basalo and Antonio Nanni, University of Miami

12:15 pm: Modeling of Interior Beam-Column Joints for Holistic Nonlinear Analysis Frames

Zhangcheng Pan, University of Toronto; and Serhan Guner and Frank J. Vecchio, University of Toronto

12:30 pm: Application of the 4-Point Bending Test Method for Interface Shear Transfer in Concrete Members

Mahmoodreza Soltani, Clemson University; and Brandon E. Ross and Thomas E. Cousins, Clemson University

12:45 pm: Development of a Guideline for Load Testing in the Netherlands

Eva O. L. Lantsoght, Delft University of Technology



2 AIA/CES LU

PDH Codes: _____

11:00 am – 1:00 pm

Slag Cement Use in Notable Structures, Part 2 of 2—C-202 E

Sponsored by ACI Committee 233

Moderated by Mark D. Luther, Holcim (United States) Incorporated, and Jay E. Whitt, Essroc Cement

The session description for this session may be found in the Part 1 listing; refer to page 27.

A 40-minute exposition and presentation of the slag cement association projects and awards will take place.

11:00 am: Recent Illinois Tollway Paving Using Slag Cement

Matthew Dominick D'Ambrosia, CTLGroup

11:20 am: Four Bridges

Henry B. Prenger, LafargeHolcim

11:40 am: High Slag Replacement Projects in Florida

Gordon R. McLellan, Hanson Slag Cement

12:00 pm: Presentation of the Slag Cement Association 2015 Project of the Year Awards

John M. Melander, Slag Cement Association

12:40 pm: A Missouri Trifecta—The Mississippi River Stan Musial Veterans Memorial Bridge; the Missouri River West-bound Blanchette Bridge Rebuild; and the MD&A Spin Cell

Mark D. Luther, Holcim (United States) Incorporated



2 AIA/CES LU/HSW

PDH Codes: _____

Sessions & Events

For detailed program information and program changes, download the Convention App.
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Monday, April 18, 2016

11:30 am – 1:30 pm

✓ **Student Lunch—C-BALLROOM C**

\$45 U.S. per person

Topic: Top Ten Useful Lessons for Structural Engineers

Sponsored by Baker Concrete Construction Company, Inc.



Coordinated by the Wisconsin Chapter – ACI and ACI Committee S801

Speaker: Lawrence C. Novak, Portland Cement Association

Join students and other ACI attendees for the Student Lunch. Larry Novak will give an energetic presentation on the “Top Ten Lessons for Structural Engineers.” All are welcome to register for the lunch. Following the lecture, the results of the student competition will be announced.

Samuel Smiles, a Scottish author (1812-1904), wrote that “We learn wisdom from failure much more than from success. We often discover what will do, by finding out what will not do; and probably he who never made a mistake, never made a discovery.”

Typically much is written and presented about outstanding projects in our profession.

Rarely do we talk about the philosophy of design...even rarer do we take two steps back and delve into the important life lessons which can be gleaned from a career in structural engineering.

We would like to take this opportunity to lead the group on an amazing journey of discovery to explore what it means to be a Structural Engineer. What do we really do and what does the world expect of us?

The thoughts offered will be geared toward engineers at all phases of their far-reaching careers—from recent graduates to those enjoying their retirement—and all the wonderful experiences and challenging decisions we encounter along the path.

PREREGISTRATION IS REQUIRED TO ATTEND. This lunch is expected to sell out. A very limited number of tickets will be available for purchase on-site. Please notify the ACI Registration Desk if you have any dietary restrictions.

1:30 pm – 3:30 pm

Advances in Test Methods to Evaluate Alkali-Aggregate Reactivity in Job Concrete Mixtures, Part 1 of 2—C-202 E

Sponsored by ACI Committees 201 and 221
Moderated by Prasad R. Rangaraju, Clemson University, and Anol Kanti Mukhopadhyay, Texas A&M Transportation Institute

The principal objectives of the existing standard test methods for evaluating alkali-aggregate reactivity (AAR) in mortars and concrete is to identify the susceptibility of aggregates to undergo alkali-silica reaction (ASR), to identify the effectiveness of supplementary cementitious materials (SCMs) in mitigating ASR, and quantify the suitable dosage level of SCMs in the concrete mixtures. However, these tests are conducted using

test specimens prepared with defined materials and mixture proportions and cannot provide a direct measure of how a job's concrete mixture might perform in the field. These sessions will shed light on developments in the areas of new test methods that are focused on assessing the alkali-silica reactivity potential of a job's concrete mixture and new nondestructive test methods to evaluate the extent of damage in job concrete mixtures. Engineers, contractors, researchers, and students will benefit from attending this session to learn about the latest research and test methods that will pave the way for a performance-based approach in specifying durability in concrete mixtures.

1:30 pm: Limitations to Current AAR Testing Methods and Proposed Solutions

Jason H. Ideker, Oregon State University; Michael D. A. Thomas, University of New Brunswick; and W. Jason Weiss, Oregon State University

1:55 pm: Effect of Specimen Size, Geometry, and SCM Replacement on Alkali Leaching in the Concrete Prism Test
Soley Unnur Einarsdottir, University of Toronto; and R. Doug Hooton, University of Toronto

2:20 pm: Considerations in Application of Miniature Concrete Prism Test (MCPT) to Evaluate Alkali-Silica Reactivity Potential of Job Concrete Mixtures

Prasad R. Rangaraju, Clemson University; Enamur Latifee, Ahsanullah University of Science and Technology; and Sai Enugala, Clemson University

2:45 pm: A Multi-Physics Approach to Detection of ASR
Mehdi Rashidi, Georgia Institute of Technology; Kimberly E. Kurtis, Georgia Institute of Technology; Kristin Donnell, Missouri S&T; and Laurence J. Jacobs, Georgia Institute of Technology



2 AIA/CES LU

PDH Codes: _____

1:30 pm – 3:30 pm

Concrete Bridges Built with Advanced Materials: Seismic Performance and Design Issues, Part 2 of 2—C-202 D

Sponsored by ACI Committee 341
Moderated by Shahria Alam, University of British Columbia, and Bassem Andrawes, University of Illinois at Urbana-Champaign

The session description for this session may be found in the Part 1 listing; refer to page 28.

1:30 pm: A Bridge Bent Suitable for Accelerated Bridge Construction (ABC) in High Seismic Regions

John F. Stanton, University of Washington; and Marc O. Eberhard, Travis Thonstad, and Olafur Sveinn Haraldsson, University of Washington

1:55 pm: Performance-Based Damage States of Shape Memory Alloy (SMA) Reinforced Concrete Bridge Piers
AHM Muntasir Billah, University of British Columbia; and Shahria Alam, University of British Columbia

2:20 pm: Shake Table Testing of a Damage-Resistant Segmental Double Skin Bridge Column with Replaceable Energy Dissipaters

Ayman Moustafa, Missouri S&T; and Mohamed A. El-Gawady, Missouri S&T

Sessions & Events

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2:45 pm: Rapid Repair of Hollow-Core FRP-Concrete-Steel Columns

Omar Abdelkarim, Missouri S&T; and Mohamed A. El-Gawady, Sujith Anumolu, and Ahmed Ghani, Missouri S&T



2 AIA/CES LU

PDH Codes: _____

1:30 pm – 3:30 pm

One Size Does Not Fit All: Performance-Based Approaches to Mass Concrete Design and Construction, Part 1 of 2—C-202 B

Sponsored by ACI Committee 207

Moderated by Oscar R. Antommattei, Kiewit Corp–Kiewit Infrastructure Engineers Company, and Jonathan L. Poole, CTLGroup

The objective of the session is to present performance-based approaches to design and construction of mass concrete. These approaches may include different specification requirements for mass concrete, such as performance-based temperature specifications, practical guidelines on concrete proportions, pre- and post-cooling methods for construction, insulation, and other novel methodologies. Conflicts with other typical project needs such as strength, speed of construction, and service life requirements will be discussed.

1:30 pm: Temperature Rise of Mass Concrete Using Current Cements and Supplementary Cementitious Materials

Katie J. Bartojay, United States Bureau of Reclamation

1:50 pm: Are We There Yet? A Perspective about Today's Knowledge, Standards, and Practices for Mass Concrete

Oscar R. Antommattei, Kiewit Corporation–Kiewit Infrastructure Engineers Company

2:10 pm: Concrete at Early Ages: Experimental Study, 3D FEA, and Monitoring of Santo Antônio's Spillway

Flavio Mamede P. Gomes, FURNAS-Concrete Laboratory; Miguel A. D. Azenha, University of Minho; and Flavio V. Souza, Multi-Mechanics

2:30 pm: Ridiculous Concrete Requirements

Stephen B. Tatro, Tatro Hinds Advanced Concrete Engineering; and James K. Hinds, Tatro Hinds Advanced Concrete Engineering

2:50 pm: Reducing Mass Concrete Issues at the World Trade Center Reconstruction Project

Paul D. Brooks, Holcim



2 AIA/CES LU

PDH Codes: _____

1:30 pm – 3:30 pm

Student-Driven Competitions as a Teaching and Learning Tool—C-202 A

Sponsored by ACI Committee S802

Moderated by Devin K. Harris, University of Virginia, and Chris Carroll, Saint Louis University

This session will present a series of case studies on the use of formal student-driven competitions such as the ACI FRP Composites, ACI Pervious Concrete, PCI Big Beam, and ASCE Concrete Canoe as a teaching and learning tool for students in the area of concrete. The objective will be to provide

an overview of the successes and challenges associated with integrating these competitions into civil engineering (CE) curricula and the outcomes derived from the student perspective. This session will be geared toward faculty of CE programs, but will also be well-suited for students interested in participating in the competitions and industry looking for these motivated participants.

1:30 pm: Walter P. Moore Award Winner

Gaurav Sant, University of California, Los Angeles

2:00 pm: Mix Design Competitions for Project-Based Learning in Concrete Materials Courses

Eric R. Giannini, University of Alabama

2:18 pm: How ACI Student Competitions Can Help Fill the Voids in Classic CE Curricula

Mary U. Christiansen, University of Minnesota–Duluth

2:36 pm: Egg Protection Device—Starting A University-Wide Phenomena

Chris Carroll, Saint Louis University

2:54 pm: PCI Big Beam Student Competition as Tool to Teach Structural Reinforced Concrete Behavior

Sriram R. Aaleti, University of Alabama Tuscaloosa

3:12 pm: All aboard the Concrete Canoe

Seamus F. Freyne, Mississippi State University



2 AIA/CES LU

PDH Codes: _____

4:00 pm – 6:00 pm

Advances in Test Methods to Evaluate Alkali-Aggregate Reactivity in Job Concrete Mixtures, Part 2 of 2—C-202 E

Sponsored by ACI Committees 201 and 221

Moderated by Prasad R. Rangaraju, Clemson University, and Anol Kanti Mukhopadhyay, Texas A&M Transportation Institute

The session description for this session may be found in the Part 1 listing; refer to page 30.

4:00 pm: The Role of Alkalis in Alkali-Silica Reaction Tests

Michael D. A. Thomas, University of New Brunswick

4:25 pm: An Accelerated ASR Test Method: The Concrete Cylinder Test

Thano Drimalas, The University of Texas at Austin; and Kevin J. Folliard, and Stephen Stacey, The University of Texas at Austin

4:50 pm: Emerging Rapid Aggregate and Concrete Test Methods for Evaluating ASR-Resistant Job Concrete Mixes

Anol Kanti Mukhopadhyay, Texas A&M Transportation Institute; and Kai-Wei Liu, Texas A&M Transportation Institute

5:15 pm: Autoclave Methods for Detecting Alkali-Silica Reactivity: Advantages and Limitations

Stephanie G. Wood, The University of Alabama; Robert Moser, US Army ERDC; Eric R. Giannini, University of Alabama; and Ashley Victoria Sutton, University of Alabama



2 AIA/CES LU

PDH Codes: _____

Sessions & Events

For detailed program information and program changes, download the Convention App.
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Monday, April 18, 2016

4:00 pm – 6:00 pm

Concrete Pavement Construction—C-202 D

Sponsored by ACI Committee 325
Moderated by Kurt D. Smith, Applied Pavement Technology, Inc.

Effective construction practices are essential to the long-term performance of the concrete pavement structure. This session reviews successful construction practices for a range of concrete pavements.

4:00 pm: Urban Concrete Pavement Construction
Thomas J. Van Dam, NCE

4:20 pm: Bonded Concrete Overlay of Asphalt-Urban Pavement Rehabilitation Solutions
Tim Cost, LafargeHolcim

4:40 pm: Construction of an Unbonded Concrete Overlay under Traffic
Peter C. Taylor, CP Tech Center

5:00 pm: Evolution of RCC Construction in Texas
Jan R. Prusinski, Cement Council of Texas

5:20 pm: Two-Lift Concrete Paving: Construction Overview
Kurt D. Smith, Applied Pavement Technology, Inc.



2 AIA/CES LU

PDH Codes: _____

4:00 pm – 6:00 pm

One Size Does Not Fit All: Performance-Based Approaches to Mass Concrete Design and Construction, Part 2 of 2—C-202 B

Sponsored by ACI Committee 207
Moderated by Oscar R. Antommattei, Kiewit Corp–Kiewit Infrastructure Engineers Company, and Jonathan L. Poole, CTLGroup

The session description for this session may be found in the Part 1 listing; refer to page 31.

4:00 pm: Use of Temperature History to Facilitate Quality Bagged Product Production
James S. Williamson, Wright Concrete

4:20 pm: Slag Cement and Mass Concrete Experiences in Four Landmark Bridges
Henry B. Prenger, Lafarge

4:40 pm: Challenges with Self-Consolidating Mass Concrete
Ufuk Dilek, CB&I

5:00 pm: Mitigating Thermal Cracking Risk in the Face of Impractical Prescriptive Specifications
Scott R. Cumming, WSP Canada Incorporated/Levelton Consultants Ltd

5:20 pm: Using Cooling Pipes to Take the “Mass Concrete” Out of Mass Concrete
Jon Feld, CTLGroup; and John W. Gajda, CTLGroup



2 AIA/CES LU

PDH Codes: _____

6:00 pm – 7:00 pm

Women in ACI Reception—H-REGENCY A

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 created 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: Can We Implement Performance-Based Specifications for Durability of Concrete? Will They Work?—C-202 B

Sponsored by ACI Committee 123
Moderated by Tengfei Fu, Oregon State University, and Eric R. Giannini, University of Alabama

Compared to traditional prescriptive specifications, the use of performance-based specifications allows contractors and producers to be more innovative in mixture design and proportioning, potentially providing an element of sustainability in concrete construction. This forum will provide information on recent developments, successful implementations, and current challenges related to the use of performance-based specifications.

This Forum will focus on the following:

What are performance-based specifications?

Prescriptive versus performance specifications

Examples of successful implementation of performance-based specifications in concrete construction

Challenges with implementing performance-based specifications

What are some of the research needs?

What is the concrete industry doing to move toward a performance-based alternative?

A panel of experts will cover these topics and debate these questions, and more, to provide the audience with information regarding the latest development/implementations/challenges related to performance-based specification. The forum will start with short presentations by each panelist, followed by an interactive discussion with the audience.

6:35 pm: Is the Concrete Profession Ready for Performance Specifications that Provide an Alternative to Prescriptive w/c and Air Content Requirements?
W. Jason Weiss, Oregon State University

6:45 pm: Performance-Based Specifications—DOT's Perspective
Tom Yu, Federal Highway Administration

6:55 pm: Implementation of Performance-Based Specifications for Concrete Durability
Matthew Dominick D'Ambrosia, CTLGroup

7:05 pm: Performance-Based Specifications for Durability and Longevity of Concrete
James Hicks, J.K. Hicks Engineering

Sessions & Events

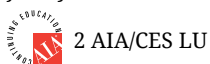
For detailed program information and program changes, download the Convention App.
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7:15 pm: Performance-Based Specifications—State of the Industry and Way Forward

Karthik H. Obla, NRMCA

7:25 pm: Field Testing—RCPT and Microwave Test

Casimir J. Bognacki, The Port Authority of New York & New Jersey



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PDH Codes: _____

7:00 pm – 8:00 pm

Richard D. Stehly Memorial Hockey Game—H-DEPART HYATT LOBBY

ACI members and staff will take to the ice to participate in what is becoming an ACI tradition—the Richard D. Stehly Memorial Hockey Game. All convention attendees are invited to come enjoy the fun. Transportation will be provided for those who preregister for this event; limited seats are available. Attendees may also arrange for their own transportation. Directions will be available at registration. Although there is no charge for the event, donations to the Richard D. Stehly Memorial Fellowship will be accepted from attendees. Transportation will depart from the Hyatt at 6:00 pm. **Transportation is sold out.**

Tuesday, April 19, 2016

8:30 am – 10:30 am

ACI 301-16 Specifications for Structural Concrete, Part 1 of 2—C-202 A

Sponsored by ACI Committees 301 and E707
Moderated by James N. Cornell, The Beck Group, and Aimee Pergalsky, Euclid Chemical

ACI Committee 301 has just completed a comprehensive revision to the content of ACI 301, “Specifications for Structural Concrete.” This revision expanded the scope of ACI 301 and revised many of the requirements that have been in previous versions for many years. The goal of this session is to show how the design and construction team should use ACI 301 when it’s referenced in Project Specifications, with an emphasis on understanding the relationship between ACI codes and specifications. Topics include modifications to many of the default requirements within the specification and an introduction to new topics. A review of New Business items for the next 301 revision will follow.

8:30 am: Welcome and Introduction to 301-16

James Cornell, The Beck Group

9:00 am: Section 1 – General Requirements

Steven Jaycox, Testing Lab Inc.

9:20 am: Section 2 – Formwork/Accessories and Section 3 – Reinforcement/Supports

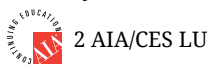
Daniel Toon, United Forming, Inc.

9:35 am: Section 4 – Concrete Mixtures and Section 5 – Handling, Placing, and Constructing

Henry Prenger, Lafarge Holcim

10:10 am: Section 6 – Architectural Concrete and Section 12 – Tilt-Up Construction

Anthony DeCarlo, TWC Concrete Services, LLC



2 AIA/CES LU

PDH Codes: _____

8:30 am – 10:30 am

Calibration and Validation of Analytical Models for Concrete Structures, Part 1 of 2—C-202 E

Sponsored by Joint ACI-ASCE Committees 446 and 447
Moderated by Ioannis Koutromanos, Virginia Polytechnic Institute & State University, and Gianluca Cusatis, Northwestern University

This pair of sessions will provide guidelines for the calibration of analytical models for concrete structures. Features of response that must be captured by a simulation and the procedures to validate the accuracy of a model will also be discussed. Various material models (for example, continuum models, lattice models, and discrete crack models) and loading scenarios (for example, ultimate static states and earthquakes) are covered. The first session will be focused on the material level, while the second session will be focused on the analysis of components and systems.

8:30 am: Calibration and Validation of Concrete and Reinforced Concrete Computational Models: Guidelines for Researchers and Practitioners

Gianluca Cusatis, Northwestern University

8:50 am: Calibration and Validation of Concrete Models for the Simulation of the Dynamic Response of Concrete Structures

Roobeh Rezakhani, Northwestern University; and Gianluca Cusatis, Northwestern University

9:10 am: Calibration and Validation of Lattice Discrete Particle Model for Shear Failure in Reinforced Concrete Beams without Stirrups

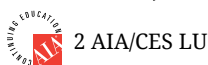
Sina Khodaie, University of South Carolina at Columbia; Fabio Matta, University of South Carolina; and Mohammed Galal Alnaggar, Rensselaer Polytechnic Institute

9:30 am: Prediction Quality in Simulated Anchor Pullout Tests

Kresimir Nincevic, Christian Dopple Laboratory; Roman Wendner, BOKU Vienna; and Marco Marcon, Christian Doppler Laboratory

9:50 am: Parameter Identification of the Lattice Discrete Particle Model (LDPM) Using Incomplete Experimental Data

Mohammed Galal Alnaggar, Rensselaer Polytechnic Institute; Gianluca Cusatis, Northwestern University; and Naina Bhanon, Northwestern University



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Sessions & Events

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Tuesday, April 19, 2016

8:30 am – 10:30 am

Fly Ash in Concrete Tribute to Tarun R. Naik, Part 1 of 2—C-202 D

Sponsored by ACI Committees 232, 236, and 241, and ACI Subcommittee 544-E

Moderated by Konstantin Sobolev, University of Wisconsin-Milwaukee; and Bruce W. Ramme, We Energies

The use of industrial by-products (IBP) as mineral additives or supplementary cementitious materials (SCMs) comprises a valuable segment of cement and concrete technology. Due to the improved performance, concrete with SCMs, fly ash, and slag cement has been widely used since the implementation of the Resource Conservation and Recovery Act in 1986. The specification of SCMs provides a significant contribution to sustainable development due to the application of green energy and resource-saving construction materials manufactured with less cost and fewer greenhouse gas emissions. With this session, the founding director of UWM Center for Byproduct Utilization (CBU), Professor Tarun R. Naik, will be recognized for significant contribution to the beneficial application of fly ash in concrete.

8:30 am: An Update on Combustion Products' Utilization in Wisconsin

Bruce W. Ramme, We Energies; and Mathew P. Tharaniyil, Bloom Companies, LLC

9:00 am: The Coal Combustion Residual Rule and Expected Trends in Fly Ash Use

Ken Ladwig, EPRI

9:30 am: The Effect of Fly Ash on Strength Development of Superplasticized Concrete

Konstantin Sobolev, University of Wisconsin-Milwaukee; Ismael FloresVivian, CEMIX-Building Materials; Scott Muzenski, Professional Service Industries (PSI); and Reza Moini, University of Wisconsin-Milwaukee

10:00 am: The Use of Nano Materials to Overcome the Effects of High-Volume Fly Ash Contents in Cementitious Mixtures

Jussara Tanesi, SES Group & Associates; Haejin Kim and Jose F. Muñoz, SES Group & Associates LLC; and Ahmad A. Ardani, FHWA



2 AIA/CES LU

PDH Codes: _____

8:30 am – 10:30 am

UHPC—Testing of Material Properties, Part 1 of 2—C-202 B

Sponsored by ACI Committees 239 and 544

Moderated by Kay Wille, University of Connecticut

No standardized methods or detailed recommendations for testing and characterizing ultra-high-performance concrete (UHPC) material properties are currently available. UHPC properties require adopted and new preparation procedures, quality control, and test methods. The variation of test methods impedes the comparison of material parameters among different research groups and test centers. Discussions of current test methods, issues, benefits, and limitations will be beneficial for the development of unified test/preparation recommendations. The session

provides an ideal platform for input and discussion of this topic, which should be of high interest among researchers and practitioners. Sharing academic knowledge about UHPC test methods and material characterization will facilitate the acceptance and application of the material in U.S. construction.

8:30 am: Direct Capture of UHPC Tensile Properties

Benjamin Graybeal, Federal Highway Administration

8:50 am: Tested Compression, Fracture, and Fiber-Matrix Interaction Behavior in Ultra-High-Performance Concrete

Rafic ElHelou, Virginia Polytechnic Institute & State University

9:10 am: Tensile and Flexural Behavior of UHPC under High-Speed Tensile and Impact Loads

Barzin Mobasher, Arizona State University

9:30 am: Specimen Dimensions for SHPB Testing of UHPC

Andrew Groeneveld, Michigan Technological University

9:50 am: Impact Testing of UHPC Using SHPB

Kay Wille, University of Connecticut



2 AIA/CES LU

PDH Codes: _____

11:00 am – 1:00 pm

Calibration and Validation of Analytical Models for Concrete Structures, Part 2 of 2—C-202 E

Sponsored by Joint ACI-ASCE Committees 446 and 447

Moderated by Ioannis Koutromanos, Virginia Polytechnic Institute & State University, and Gianluca Cusatis, Northwestern University

The session description for this session may be found in the Part 1 listing; refer to page 33.

11:00 am: Analysis of Damage and Failure of RC Structural Components Using Three-Dimensional Finite Element Models

Ioannis Koutromanos, Virginia Polytechnic Institute & State University; and Mohammadreza Moharrami, Virginia Polytechnic Institute and State University

11:20 am: Investigation of Reinforced Concrete Wall Failure Mechanisms Using Nonlinear Continuum Analysis

Zachary Whitman, University of Washington; and Dawn E. Lehman and Laura N. Lowes, University of Washington

11:40 am: Calibration of Material Models for Nonlinear Finite Element Analysis of Seismically Deficient Reinforced Concrete Beam-Column Joints

James B. Deaton, Simpson Gumpertz & Heger; and Kenneth M. Will, Georgia Institute of Technology

12:00 pm: Three-Dimensional Beam-Truss Model for Seismic Analysis of Reinforced Concrete Walls and Slabs

Yuan Lu, UC Berkeley; Marios Panagiotou, Nabih Youssef Associates; and Ioannis Koutromanos, Virginia Polytechnic Institute & State University

12:20 pm: Structural-Level Computational Framework for Ultra-High-Performance Concrete

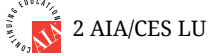
Rafic El-Helou, Virginia Polytechnic Institute & State University; Gianluca Cusatis, Northwestern University; and Cristopher D. Moen and Ioannis Koutromanos, Virginia Polytechnic Institute & State University

Sessions & Events

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12:40 pm: Validation Needs for Early-Age Concrete Modeling

John E. Bolander, University of California, Davis; and Armando Prado and Yaming Pan, University of California, Davis



2 AIA/CES LU

PDH Codes: _____

11:00 am – 1:00 pm

Leveraging Mobile Technology in Design of Low-Rise Concrete Buildings—C-202 D

Sponsored by ACI Committees 118 and 314
Moderated by Jose M. Izquierdo-Encarnacion, Porticus, and Michael C. Mota, Concrete Reinforcing Steel Institute

“Guide to a Simplified Design for Reinforced Concrete Buildings,” ACI 314R-16 presents simplified methods and design techniques that facilitate and speed the engineering of low-rise buildings within certain limitations. Material is presented in an order that follows typical design process with procedures introduced as the designer will need them in the course of a building design. An overview of ACI 314R-16 and the easiness of integrating modern calculation platforms for quick analysis and design will be presented.

11:00 am: Design of Low-Rise Buildings Using ACI 314R-11

Jose M. Izquierdo-Encarnación, PORTICUS CSP

11:30 am: Learn about ACI University App

Ronald L. O’Kane, Leigh & O’Kane LLC

12:00 pm: Using Mobile Technology to Determine Concrete Properties Onsite

Aali R. Alizadeh, Gatec Scientific Incorporated

12:30 pm: Leveraging Technology Advances to Stem the Gap in Workforce Shortages

David H. DeValve, Oklahoma Steel & Wire



2 AIA/CES LU

PDH Codes: _____

11:00 am – 1:00 pm

Thixotropy of Concrete—How It Can Help, Part 1 of 2—C-202 A

Sponsored by ACI Committees 237 and 238
Moderated by Kejin Wang, Iowa State University, and Steven B. Feldman, National Institute of Standards and Technology

Fresh concrete often exhibits a continuous decrease in viscosity with time under shear (due to its internal structure breakdown) but a subsequent increase in viscosity at rest (due to the buildup and recovery of the structure on removal of shear). The difference in behavior results from its thixotropy, which can be very important for advanced concrete construction methods, such as self-consolidating, multi-lift casting, slip-form paving, pumping, and so on. Concrete having little and very slow thixotropy development may be subjected to prolonged high formwork pressure and segregation, while concrete having very high and fast thixotropy development may cause construction difficulties due to rapid loss of flowability. This technical session will discuss the origins, measuring, and control methods, as well as practical applications of concrete thixotropy.

11:00 am: Effect of SCC Mixture Composition on Thixotropy

Kamal H. Khayat, Missouri S&T; and Ahmed F. Omran, University of Sherbrooke

11:35 pm: Lack of SCC Robustness—How Will It Influence the Structural Buildup at Rest and Form Pressure?

Peter H. Billberg, Swerock

12:00 pm: A Novel Approach to Evaluate Thixotropy of Cement-Based Materials

M. Chaouche, CNRS, ENS-Cachan; Surendra P. Shah, Northwestern University; Shiho Kawashima, Columbia University; and Theau Conte, ENS Cachan

12:25 pm: Destruction of Thixotropy

Dimitri Feys, Missouri S&T; and Azadehalsadat Asghari, Missouri S&T



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PDH Codes: _____

11:00 am – 1:00 pm

UHPC—Testing of Material Properties, Part 2 of 2—C-202 B

Sponsored by ACI Committees 239 and 544
Moderated by Kay Wille, University of Connecticut

The session description for this session may be found in the Part 1 listing; refer to page 34.

11:00 am: Effect of Loading Rate and Notch Depth on Flexural Strength and Fracture Energy Dissipation of UHPC Beams under Four-Point Bending Test

Kamal H. Khayat, Missouri S&T

11:20 am: Development of Sustainable UHPC with Local Materials

Srinivas Allena, Washington State University-TriCities

11:40 am: Development of Ecofriendly, High-Performance Mortar for Concrete Repair

Gilson R. Lomboy, Iowa State University

12:00 pm: Double-Edge Wedge Splitting (DEWS): An Indirect Tension Test to Identify Postcracking Behavior of HPFRCCs

Liberato Ferrara, University of Italy

12:20 pm: Assessing Dimensional Stability in UHPC Materials

Igor De la Varga, Turner-Fairbank Highway Research Center



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Sessions & Events

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Tuesday, April 19, 2016

11:30 am – 1:30 pm

✓ **Contractors' Day Lunch—H-REGENCY D**

\$46 U.S. per person

Topic: Developing Successful Strategy to Mitigate and Manage Risk on a Project

Coordinated by Wisconsin Chapter – ACI and the Construction Liaison Committee

Speaker: Mark Federle, Marquette University

Join other ACI attendees and contractors for the Contractors' Day Lunch. Dr. Mark Federle will give a special presentation. To best manage risk, a project manager must be able to accurately identify risk, quantify the probability of risk occurrence, and take specific action to manage those risks. Common risks, ways to analyze and control them, and steps to manage risk will be detailed.

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

Contractors' Day Session: Avoiding Problems through Sound Prevention Methods—C-202 D

Sponsored by Wisconsin Chapter – ACI

Moderated by Joshua P. Skogman, Mortenson Construction

This session features four speakers who will focus on various proactive methods, techniques, and technologies that will help identify and prevent problems from occurring with your projects. Attendees will have a better understanding of what can be done to prevent potential known issues and ways to prepare for unforeseen problems that seem to come out of left field. As Ben Franklin said, "An ounce of prevention is worth a pound of cure." This session will be beneficial for contractors, architects, and engineers.

1:30 pm: Proper Cold Weather Concrete Operations

Kenneth C. Hover, Cornell University

2:00 pm: Effective Techniques for Limiting Cracking and Curling of Slabs

Kim D. Basham, KB Engineering LLC

2:30 pm: New Technology Aids for Concrete Construction

Shaun Hester, Mortenson Construction

3:00 pm: Joint Durability: An Update on Mechanism and Solutions

Lawrence L. Sutter, Michigan Technological University



2 AIA/CES LU

PDH Codes: _____

1:30 pm – 3:30 pm

Design of Concrete Elements Using High-Strength Reinforcement—C-202 E

Sponsored by ACI Committees 439 and E702

Moderated by Todd R. Hawkinson, Wire Reinforcement Institute

Concrete elements have used reinforcement to improve concrete behavior. Advances in steel reinforcement have changed the traditional design and application of reinforced concrete elements. This session will discuss deflections of concrete beams reinforced with high-strength steel, design efficiencies using high-strength steel, using high-strength welded wire reinforcement in concrete structural applications, and design methodology for using ATM A1035 Grade 100 steel in reinforced concrete structural applications.

1:30 pm: Deflection of Concrete Beams Reinforced with High-Strength Steel

Adam S. Lubell, Read Jones Christoffersen Ltd

2:00 pm: High-Strength WWR in Concrete Structural Applications

David H. DeValve, Oklahoma Steel & Wire

2:30 pm: Design Efficiencies Using ASTM A1035 Grade 100 in Reinforced Concrete Structure Applications

Salem S. Faza, MFMX Technologies

3:00 pm: Recent Developments with Respect to High-Strength Steel Reinforcement

David A. Fanella, Concrete Reinforcing Steel Institute



2 AIA/CES LU

PDH Codes: _____

1:30 pm – 3:30 pm

Open Topic Session, Part 1 of 2—C-202 B

Sponsored by ACI Committee 123

Moderated by Lisa Burris, Georgia Institute of Technology, and Aaron K. Larosche, Pivot Engineers

The Open Topic Sessions are forums for presenting recent technical information that could not be scheduled into other convention sessions.

1:30 pm: Study on Interaction between Rocking-Wall System and Surrounding Structural Systems

Qingzhi Liu, University of Minnesota; Catherine French, University of Minnesota; and Sri Sritharan, Iowa State University

1:50 pm: Testing and Analyzing Two Deep Beams Using Strut-and-Tie Modeling

Amir R. Ghiami Azad, The University of Texas at Austin; and Gabriel E. Polo, Gloriana A. Martinez, Randale L. Shinn, Katelyn S. Beiter, Trevor D. Hrynyk, and Oguzhan Bayrak, The University of Texas at Austin

2:10 pm: Punching Shear Strength of Reinforced Concrete Slab-Column Connections Reinforced with Shear Bands under Gravity Loading

Thai X. Dam, University of Michigan; James K. Wight, University of Michigan; and Gustavo J. Parra-Montesinos, University of Wisconsin

Sessions & Events

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2:30 pm: Design Model for Bond-Loss Resistance of Pretensioned I-Girders

Behnam Naji, Clemson University; and Brandon E. Ross, Clemson University

2:50 pm: Corrosion Assessment of Coupled Steel Reinforcement with Ni-Ti Based Shape Memory Alloy in Simulated Concrete Pore Solution

A. Poursaee, Clemson University; and Brandon E. Ross and L. Abo Alarab, Clemson University

3:10 pm: Influence of Carbon Nanotube Clustering of and Moisture on Electrical Properties of Cementitious-Based Composite: Experiments and Micromechanics

Sung-Hwan Jang, Carnegie Mellon University; Daniel Peter Hochstein, Manhattan College; and Shiho Kawashima and Huiming Yin, Columbia University



2 AIA/CES LU

PDH Codes: _____

1:30 pm – 3:30 pm

Thixotropy of Concrete—How It Can Help, Part 2 of 2—C-202 A

Sponsored by ACI Committees 237 and 238
Moderated by Kejin Wang, Iowa State University, and Steven B. Feldman, National Institute of Standards and Technology

The session description for this session may be found in the Part 1 listing; refer to page 35.

1:30 pm: New Approach to Assess Buildup of Cement-Based Suspensions

Ammar Yahia, University of Sherbrooke; and Ahmed Mostafa, University of Sherbrooke

1:55 pm: Thixotropy, Flocculation, and Laser Spectroscopy
Jae Hong Kim, Ulsan National Institute of Science & Technology; Hong Jae Yim, Kyungpook National University; and Surendra P. Shah, Northwestern University

2:20 pm: Use of Thixotropy Model to Capture Competition between Paste Deflocculation and Sand Particle Migration in Fresh Mortars

Shiho Kawashima, Columbia University; and Ye Qian, Columbia University

2:45 pm: Thixotropic Behavior of Fresh Cement Paste with Highly Purified Magnesium Alumino-Silicate Clay: Measurements and Interpretation

Kejin Wang, Iowa State University; and Gilson R. Lomboy, Iowa State University

3:05 pm: Real-Time Control of Thixotropy

Raissa Ferron, University of Texas at Austin



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PDH Codes: _____

4:00 pm – 6:00 pm

ACI 301-16 Specifications for Structural Concrete, Part 2 of 2—C-202 A

Sponsored by ACI Committees 301 and E707
Moderated by James N. Cornell, The Beck Group, and Aimee Pergalsky, Euclid Chemical

The session description for this session may be found in the Part 1 listing; refer to page 33.

4:00 pm: Session Introduction

Aimee Pergalsky, Euclid Chemical

4:05 pm: Section 7 – Lightweight Concrete and Section 8 – Mass Concrete

John Gajda, CTLGroup

4:30 pm: Section 9 – Post-Tensioned Concrete

Miroslav F. Vejvoda, Post-Tensioning Institute

4:50 pm: Section 10 – Shrinkage Compensating Concrete for Interior Slabs and Section 11 – Industrial Floor Slabs

Scott M. Tarr, North Starr Concrete Consulting

5:10 pm: Section 12 – Precast Structural Concrete and Section 13 – Precast Architectural Concrete

Jason P. Bray, Walter P. Moore & Associates, Inc.

5:30 pm: New Business: What's Next for ACI 301

Michelle L. Wilson, Portland Cement Association



2 AIA/CES LU

PDH Codes: _____

4:00 pm – 6:00 pm

Fly Ash in Concrete Tribute to Tarun R. Naik, Part 2 of 2—C-202 D

Sponsored by ACI Committees 232, 236, 241, and 544
Moderated by Konstantin Sobolev, University of Wisconsin-Milwaukee, and Bruce W. Ramme, We Energies

The session description for this session may be found in the Part 1 listing; refer to page 34.

4:00 pm: The Influence of Fly Ash on Freezing-Thawing, Scaling, and Deicing Salts' Resistance of Concrete

Jan Olek, Purdue University

4:30 pm: Fly Ash Optimization to Control ASR Using a Rapid Concrete Cylinder Test

Anol Kanti Mukhopadhyay, Texas A&M Transportation Institute; and Kai-Wei Liu, Texas A&M Transportation Institute

4:55 pm: Mechanochemical Activation and Nanoengineering for Next Generation of Cements with Supplementary Cementitious Materials

Konstantin Sobolev, University of Wisconsin-Milwaukee; Ismael Flores Vivian, CEMIX-Building Materials; and Rani G. K. Pradoto and Marina Ivanovna Kozhukhova, University of Wisconsin-Milwaukee

5:20 pm: Examples of High-Volume Usage of Fly Ash in Mining Applications

Corina-Maria Aldea, Amec Foster Wheeler

5:50 pm: Honorary Session Closing Remarks

Tarun R. Naik, University of Wisconsin – Milwaukee



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Sessions & Events

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Tuesday, April 19, 2016

4:00 pm – 6:00 pm

Open Topic Session, Part 2 of 2—C-202 B

Sponsored by ACI Committee 123
Moderated by Lisa Burris, Georgia Institute of Technology, and Aaron K. Larosche, Pivot Engineers

The session description for this session may be found in the Part 1 listing; refer to page 36.

4:00 pm: Using X-Ray Radiographs to Image Ion Transport in Cement-Based Materials

Mehdi Khanzadeh Moradillo, Oklahoma State University; and M. Tyler Ley, Oklahoma State University

4:20 pm: Can We Increase the Modulus without Increasing Compressive Strength? A New Meta-Material Approach

Surendra Shah, Northwestern University; and Maria Konsta-Gdoutos, Democritus University of Thrace

4:40 pm: Multiscale Rheological Evaluation of Novel Alternative Cementitious Materials for the Development of Sustainable Infrastructure

Sarah L. Williams, United States Army Engineer Research and Development Center; Robert D. Moser, United States Army Engineer Research and Development Center; and Lisa E. Burris and Kimberly E. Kurtis, Georgia Institute of Technology

5:00 pm: Development of Eco-Friendly Superworkable Concrete Using Particle Packing Mix Design Methodology

Iman Mehdipour, Center for Infrastructure Engineering Studies; and Nicolas Ali Libre and Kamal H. Khayat, Missouri S&T

5:20 pm: Sensitivity of Miniature Concrete Prism Test (MCPT) in Identifying False-Positive and False-Negative Aggregate Sources

Enugala Sai Sudhir Reddy, Clemson University; and Kaveh Afshinnia and Prasada Rao Rangaraju, Clemson University

5:40 pm: Unsaturated Moisture Transport in Damage Concrete and Mortar: Numerical and Experimental Investigation

Danny Smyl, North Carolina State University; Farnam Ghazemzadeh, Uzan and Case, LLC; and Mohammad Pour-Ghaz, North Carolina State University



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4:00 pm – 6:00 pm

Two-Way Slab Systems: Recent Developments and Showcases on Design, Analysis, Construction, and Evaluation Methods—C-202 E

Sponsored by Joint ACI-ASCE Committee 421
Moderated by Myoungsu Shin, Ulsan National Institute of Science and Technology, and Mustafa A. Mahamid, University of Illinois at Chicago

Reinforced concrete slabs have a complex behavior and are vulnerable to different failure modes. In designing slabs, provi-

sions for shear, shear reinforcement requirements, and moment transfer at the support is an area of continued research and advancement. Also, serviceability issues are important to the designers, especially with the advancement in materials used in concrete. Also, there have been new slab systems that have been introduced to the construction market during the last few years, such as voided slab systems; it is important to introduce design procedures and challenges to the structural engineering community.

Due to the availability of many commercial software that are used in the analysis and design of reinforced concrete slab systems, this session will also highlight the important practical issues that need to be considered by engineers.

As concrete slabs are the most widely used floor systems, it is essential to highlight the recent advancements in the analysis and design of these systems. This session focuses on the recent developments, research, practical analysis and design issues, and serviceability issues encountered in studies performed on reinforced concrete slabs and in practice. The session will attract practicing engineers, university professors, manufacturers, and students.

4:00 pm: Modeling of Reinforced and Fiber-Reinforced Concrete Slabs under Impact Loads

Trevor D. Hrynyk, University of Texas at Austin; and Frank J. Vecchio, University of Toronto

4:15 pm: 3-D Finite Element Analysis of Concrete Flat Slabs Retrofitted with Steel Shear Bolts

Aikaterini Genikomsou, University of Waterloo; and Maria A. Polak, University of Waterloo

4:30 pm: Highly Effective Lattice Punching Shear Reinforcement

Johannes Furche, Filigran Traegersysteme GmbH & Co. KG

4:45 pm: Punching Strength of Actual Two-Way Slabs Accounting for Membrane Action and Moment Redistribution

Aurelio Muttoni, EPFL; and Miguel Fernandez Ruiz, University of Switzerland

5:00 pm: Shear Behavior in Indirectly Supported R/C Slabs Provided with Dapped Ends

Pietro Gambarova, Politecnico di Milano – DICA; and Francesco Lo Monte, Polytechnic University of Milan

5:15 pm: Probabilistic Analysis of Interior Reinforced Concrete Flat Slabs

Georgios Balomenos, University of Waterloo; and Maria A. Polak and Mahesh D. Pandey, University of Waterloo

5:30 pm: ACI 421.3R15: Guide to Design of Reinforced Two-Way Slab Systems

James S. Lai, Structural Engineering Consultant; and Mustafa A. Mahamid, University of Illinois at Chicago

5:45 pm: Punching Shear Strength of Donut-Type Two-Way Hollow Slab

Chang-Sik Choi, Hanyang University; and Hyung-Suk Jung, and Joo-Hong Chung, Hanyang University



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5:30 pm – 6:30 pm

Faculty Network Reception—**H-ATRIUM**

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-EXHIBIT HALL B**

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

Wednesday, April 20, 2016

8:30 am – 10:30 am

ACI 562 Concrete Repair Code, Applicability, and Use—**C-202 B**

Sponsored by ACI Committees 562 and E702
Moderated by Carl J. Larosche, Wiss, Janney, Elstner Associates, Incorporated, and Jared E. Brewe, Simpson Gumpertz & Heger

The objective of the session is to educate government code officials, licensed design professionals, owners, and contractors on the applicability and use of ACI 562-13, "Code Requirements for Evaluation, Repair, and Rehabilitation of Concrete Buildings and Commentary," and the new ACI/ICRI "Guide to the Code for Evaluation, Repair, and Rehabilitation of Concrete Building" through practical examples.

8:30 am: Structural Repair of a Concrete Parking Garage Using ACI 562-13

Kevin Conroy, Simpson Gumpertz & Heger; and Gustavo Tumi-
alan, Simpson Gumpertz & Heger

8:55 am: ACI 562 Construction and Quality Assurance Provisions

Jay H. Paul, Klein & Hoffman Incorporated

9:20 am: An Example of Strengthening Repairs with External Post-Tensioning Reinforcement

Gene R. Stevens, JR Harris & Co Structural Engineers

9:45 am: Design Strength Requirements for Externally Applied Reinforcing Systems

Tarek Alkhrdaji, Structural Technologies

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8:30 am – 10:30 am

Advances in the Use of Polymers in Concrete, Part 1 of 2—**C-202 E**

Sponsored by ACI Committees 236, 241, and 548
Moderated by Michael S. Stenko, Transpo Industries Inc.; and
Mahmoud M. Reda Taha, University of New Mexico

This session will explore new research findings and new industrial developments related to the use of polymers and adhesives in concrete. Presentations will cover experimental research and field investigations where innovative uses

of polymers in concrete led to producing polymer cement composites with improved properties. The audience will include participants from the government, industry, and academia. There is a considerable interest in state government DOTs in new materials and methods to improve performance of PC overlays. There is also a growing industrial interest in the industry to explore sustainable polymer resins and to take advantage of improved PC properties using nanomaterials.

8:30 am: Virginia's Experience with High-Friction Surface Treatments

Michael M. Sprinkel, Virginia Center for Transportation
Innovation & Research

8:50 am: Smart Monitoring of Fatigue Damage in Polymer Concrete Using Carbon Nanotubes

Mahmoud M. Reda Taha, University of New Mexico

9:10 am: Hydrophobic and Superhydrophobic Coatings for Concrete


Konstantin Sobolev, University of Wisconsin-Milwaukee

9:30 am: Use of Polymers in Calcium Aluminate Cement for Resurfacing in High Humidity Areas

Joseph A. Nuciforo, JPCI Services

9:50 am: Are Concrete-Polymer Materials Really Sustainable?

David W. Fowler, The University of Texas at Austin

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8:30 am – 10:30 am

Getting the Most Out of Decorative Concrete—**C-202 D**

Sponsored by ACI Committees 124 and 310
Moderated by Larry Rowland, Lehigh White Cement Company,
and Anne M. Werner, Southern Illinois University Edwardsville

This session will include an introductory presentation on how to reliably and economically achieve defined architectural floor finishes by following the guidance provided by ACI 310R-13, "Guide to Decorative Concrete." The presentation will be followed by a panel discussion on the main points in the process of achieving an acceptable finished concrete floor project.

8:30 am: Remediation Costs Created by Ignoring the Guidance in 310 Guide to Decorative Concrete—The Cost of Ignorance

James Vermillion, Concrete Polishing & Artistic Staining

9:00 am: Panel Discussion—Insight into a Successful Completion of a Polished Concrete Surface

Joe A. Reardon, Diamatic USA, Incorporated; Scott C. Metzger,
Metzger McGuire Company; Kevin Sigourney, Proso, Incorporated;
and Ben Wiese, Multiquip Incorporated

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Wednesday, April 20, 2016

11:00 am – 1:00 pm

Advances in the Use of Polymers in Concrete, Part 2 of 2—C-202 E

Sponsored by ACI Committees 236, 241, and 548
Moderated by Mahmoud M. Reda Taha, University of New Mexico, and Jay Lee, EPS Materials

The session descriptions for this session may be found in the Part 1 listing; refer to page 39.

11:00 am: Water Permeability Aspects of Polymer Sealers in Concrete

Jay Lee, EPS Materials

11:20 am: Innovative Pervious Concrete Using Recycled Waste Latex Paint

Aly Said, Pennsylvania State University

11:40 am: Effect of Temperature on Epoxy Viscosity for PC Applications on Sloped Surfaces

Michael S. Stenko, Transpo Industries Inc.

12:00 pm: Performance of Latex-Modified Bridge Decks Overlays After 20+ Years of Service

Jacques A. Bertrand, Ambex Concrete Technologies Incorporated

12:20 pm: Curing Latex-Modified Concrete Overlays in Cold Weather

Michael M. Sprinkel, Virginia Center for Transportation Innovation & Research



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11:00 am – 1:00 pm

Concrete Consolidation in the 21st Century—C-202 B

Sponsored by ACI Committees 238 and 309
Moderated by Eamonn F. Connolly, James McHugh Construction Company, and Dimitri Feys, Missouri S&T

The purpose of the session is to show the audience how consolidation needs to be reconsidered for modern twenty-first-century concrete mixtures. The anticipated presentations will show the influence of concrete proportioning and workability on the consolidation energy necessary. The contributions will mainly focus on flowable concrete that is not yet consolidating. The main audience for the session is contractors, but concrete producers, materials suppliers, designers, architects, and scientists will also have interest in this session.

11:00 am: The Milwaukee Art Museum and Discovery World: Two Hundred Yards and Four Years Apart, Illustrating the Evolution of Concrete from the 20th to the 21st Century

John F. Gibbons, Concrete Materials Consultant

11:20 am: Consolidation: A Little More Than Just Putting a Vibrator in Concrete

Eamonn F. Connolly, James McHugh Construction Company

11:40 am: Concrete Properties, Placement Techniques, and Consolidation—How They Interact

Joseph A. Daczko, BASF

12:00 pm: Stability and Retention of Entrained Air in Vibrated Concrete

David A. Lange, University of Illinois; Daniel Castaneda and Jeremy Koch, University of Illinois; Randy Ewolddt, University of Illinois; and Kyle Riding, Kansas State University

12:20 pm: Performance of Super-Workable Concrete Mix Designs with Adapted Rheology for Infrastructures Applications

Cristian Daniel Sotomayor Cruz, Consultcreto; Kamal H. Khayat, Missouri S&T; and Ammar Yahia, University of Sherbrooke



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11:00 am – 1:00 pm

Recycled Materials to Enhance CLSM Applications and Properties—C-202 D

Sponsored by ACI Committee 229
Moderated by Frank A. Kozeliski, Kozeliski Consulting LLC, and Bruce W. Ramme, We Energies

This session will provide engineers, contractors, and students with an understanding of what recycled materials are used in controlled low-strength materials (CLSM); what properties can be improved with the addition of recycled material content; and examples of applications of CLSM with recycled materials.

11:00 am: Colored CLSM to Help Identify What is Buried in the Trenches for Years to Follow

Frank A. Kozeliski, Kozeliski Consulting LLC

11:20 am: Development and Use of Thermally Conductive CLSM for the Zoo Interchange Project

Steve St. Amour, We Energies; and Bruce W. Ramme, We Energies

11:40 am: A Case Study of Mass Placement of Enhanced, Extremely Low-Density CLSM

Edward (Ned) M. Glysson, Elastizell Corporation of America; and Trevor Towerly, Elastizell Corporation of America

12:00 pm: CLSM Used to Aid Tunnel Boring in Washington, DC

Tilghman H. Keiper, The SEFA Group

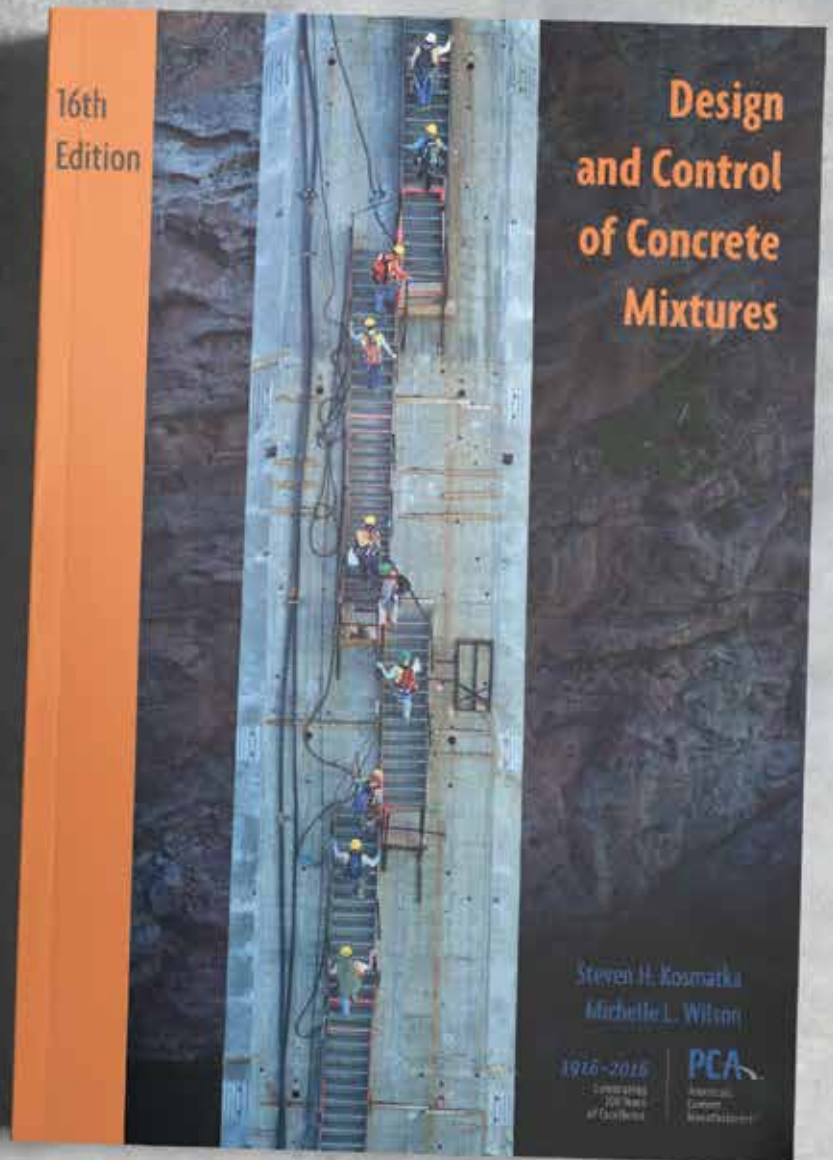
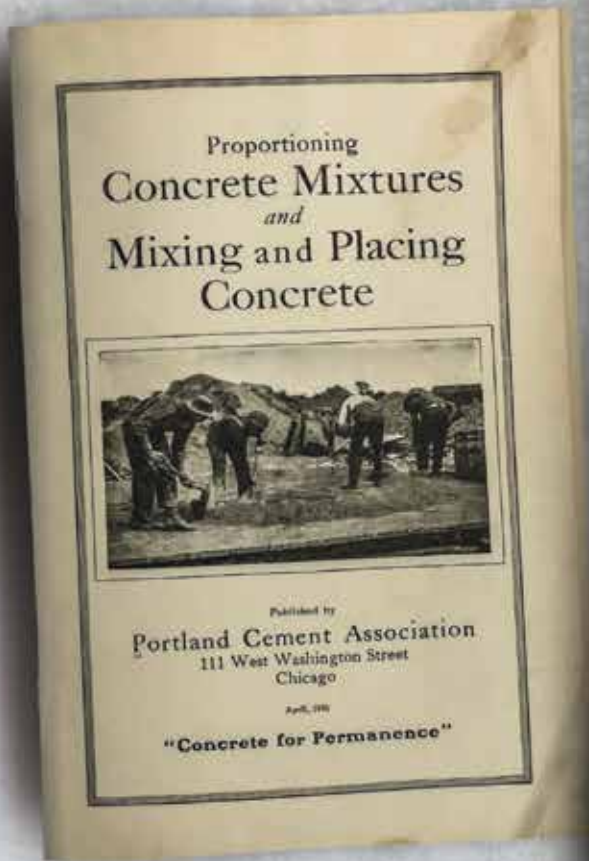
12:20 pm: Permeable Low-Density CLSM

Milton R. Gomez, Aerix Industries



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