



Spring 2018 | Salt Lake City

The Concrete Convention and Exposition

Program Book

March 25-29, 2018

Grand America and Little America Hotel
Salt Lake City, UT, USA



Convention Sponsors

Sponsors are listed as of 2/20/18

Cement Sponsor



Baker Concrete Construction



LafargeHolcim (US) Inc.

Admixture Sponsors



BASF Corporation



EUCLID CHEMICAL

The Euclid Chemical Company



FiberForce by ABC Polymer Industries



GCP Applied Technologies

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Pittsburgh Area Chapter – ACI
Rocky Mountain Chapter – ACI
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Intermountain Chapter Convention Committee

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Todd Laker, LaFarge Holcim

2018 Intermountain Chapter President

Darren Smith, Geneva Rock Products

Intermountain Chapter Lead Liaison

Tammy Meldrum, Intermountain Chapter – ACI

Student Program

Amanda Bordelon, University of Utah

Publicity

Terri Taylor, Collins Engineers

Contractors' Day

Mike Buehner, Reaveley Engineers + Associates

Technical Tours

Brent Maxfield, LDS Church

CC Liaison

Oscar Antommattei

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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!

American Concrete Institute Board of Direction

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ACI President's Welcome

ACI Members and Guests:















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

The Intermountain 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.

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

Kind Regards,
Khaled Awad
ACI President

ACI Sustaining Members

 Advanced Construction Technology Service
 American Society of Concrete Contractors
 Ash Grove Cement Co.
 Baker Concrete Construction, Inc.
 Barrier One Incorporated High Performance Concrete Admixture Barrier-1 Inc.
 BASF
 Bauman Landscape & Construction
 Boral Resources
 Braun Intertec Corporation
 Cantera Concrete Company "Measured Quality"
 CHRYSO, Inc.
 Concrete Reinforcing Steel Institute

 Building Knowledge. Delivering Results. CTLGroup
 Curecrete Distribution, Inc.
 Perform with Precision™ Dayton Superior Corporation
 The Formwork Experts Doka USA Ltd.
 SLAB SYSTEMS LLC Ductilcrete Slab Systems, LLC
 EUCLID CHEMICAL The Euclid Chemical Company
 Fibercon International, Inc.
 Full-Tilt Constructors, Inc.
 Future Tech Consultants
 GRACE CONSTRUCTION & PACKAGING GCP Applied Technologies
 STRUCTURAL CONCRETE LLC Keystone Structural Concrete LLC
 Bright People. Right Solutions. Kleinfelder
 SMART CONCRETE® Kryton International Inc.

 LafargeHolcim (US) Inc.
 HEIDELBERGCEMENT Group Lehigh Hanson
 CONTRACTING, LLC Lithko Contracting, LLC
 MAPEI
 Meadow Burke Products LLC
 Metromont Corporation
 Minova USA, Inc.
 MODERN TECHNOLOGY LABORATORIES Modern Technology Laboratories (MTL)
 Multiquip Inc.
 MUNICIPAL TESTING Municipal Testing
 CONCRETE CONSULTING P.C. North S.Tarr Concrete Consulting PC
 Oztec Industries, Inc.
 PENETRON Penetron International Ltd.
 PERI Formworks Systems, Inc.

 Portland Cement Association
 Precast/Prestressed Concrete Institute
 Saudi Building Code Saudi Building Code National Committee
 SERETTA CONSTRUCTION Seretta Construction Inc.
 Sika Corporation
 Go Green Specialty Products Group Specialty Products Group, Inc.
 STRUCTURAL
 Structural Services, Inc. Structural Services, Inc.
 TEKNA CHEM Tekna Chem
 TWC Concrete Services, LLC TWC Concrete Services, LLC
 CONCRETE INSIGHT Twining Concrete Insight
 all it takes! Wacker Neuson
 SEAIGHT W. R. Meadows, Inc.

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 is the same one from the Anaheim Convention.

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.

Exhibit Hall Refreshments—Grand Ballroom

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

ACI Store—Grand Ballroom

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

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

ACI University—A new global and online learning resource providing on-demand access to a wide range of topics on concrete materials, design, and construction. Learn more at the ACI University booth, located near the ACI Store.

ACI Foundation—A nonprofit subsidiary of ACI that facilitates industry research, collaboration, and student fellowships/scholarships. Learn more at the ACI Foundation booth, located near the ACI Store.

Career Center—ACI’s online job search engine is specifically designed to target jobs in the industry. Learn more at the Career Center, located near the ACI Store.

ACI Cyber Café—Grand Ballroom

Stop by the ACI Cyber Café—the perfect place to stay connected with work and family. Use the computers to browse the web, print on demand, or catch up on e-mail.

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

Meet Ups—Grand Ballroom

Take advantage of these group meet ups to get to know other ACI attendees. Stop by the meeting spot in the Exhibit Area during refreshment breaks or the Pre-Mixer Gathering at the Hotel Lobby Bar.

Coffee @ The Meeting Spot (Mon-Tue)	8:00 am – 8:30 am
Sodas @ The Meeting Spot (Mon-Tue)	1:30 pm – 2:00 pm
Pre-Mixer Gathering (Tue)	6:00 pm – 6:30 pm

Looking for Exercise?

Meet up with other ACI attendees in the [Main Lobby at the Grand America](#) before heading out for your morning run or walk. Local area maps are available at the hotel concierge desk. All are welcome.

Sunday – Wednesday	5:00 am and 6:00 am
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Morning yoga classes will be offered in the [Fitness Center at the Grand America](#) for those who are interested in putting a little balance into a hectic week. Led by yoga teacher Kimberly Kayler, this intro to yoga class requires no experience. Registration is not required and a limited quantity of yoga mats will be provided.

Monday – Wednesday	6:00 am – 6:45 am
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**Please consult your physician to determine if you are fit for this type of activity. Run/walk at your own risk.*

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.org/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 the booth of another exhibitor) will be asked by staff to cease this practice. Should this continue, they will be asked to leave the show floor immediately and will forfeit any exhibitor points earned for that show.

Local Information—Grand Ballroom



The Intermountain 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

General Information

Hotel Dining

The Grand America Hotel

Afternoon Tea

Hours: Monday – Sunday 1:00 pm – 3:30 pm

Garden Cafe

Hours: Sunday – Thursday 6:30 am – 9:00 pm; Friday – Saturday 6:30 am – 10:00 pm; Sunday Brunch 9:00 am – 2:00 pm

Gibson Lounge

Hours: Monday – Friday 5:00 pm – 12:00 am; Saturday – Sunday 12:00 pm – 12:00 am

La Bonne Vie

Hours: Monday – Saturday 11:00 am – 10:00 pm; Sunday 11:00 am – 7:00 pm

Lobby Lounge

Hours: Monday – Sunday 6:00 am – 10:00 pm

Room Service

Hours: Monday – Sunday 12:00 am – 12:00 am

The Little America Hotel

Coffee Shop

Hours: Monday – Saturday 6:00 am – 11:00 pm; Sunday 6:00 am – 10:00 pm

Lucky H Bar & Grille

Hours: Breakfast Buffet — Monday – Friday 7:00 am – 10:00 am, Saturday 7:00 am – 12:00 pm, Sunday 8:00 am – 2:00 pm; Lunch Buffet — Monday – Friday 11:00 am – 2:00 pm; Dinner Service — Monday – Sunday 5:00 pm – 10:00 pm

Lobby Lounge

Hours: Monday – Saturday 6:00 am – 8:00 pm; Sunday 6:00 am – 6:00 pm

Room Service

Hours: Monday – Sunday 6:00 am – 12:00 am

Please visit <https://saltlakecity.com/restaurants> to view additional restaurants and hours in Salt Lake City.

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 www.concrete.org and sign in.
2. Hover over **My ACI** and click on **My ACI CEU/PDH**.
3. Select the convention, day, and title of the session for which you are submitting session codes.
4. After successfully submitting the session 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, email your Professional Engineer's or Architecture license number to Eva Korzeniewski at emk@concrete.org.

Speaker Ready Room—Room 379

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

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

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

The Concrete Convention and Exposition

Fall 2018 | Las Vegas, NV—Grand Ballroom



Mark your calendars for The Concrete Convention and Exposition in Las Vegas, NV, October 14-18, 2018, at the Rio All-Suites Hotel and Casino. Stop by the Las Vegas Chapter Convention Committee desk Saturday through Tuesday to learn more about the convention!

Where's That Meeting Room?

GA = The Grand America Hotel LA = The Little America Hotel

The Grand America Hotel	
Room Name	Level
GA-Grand Ballroom A	First Floor
GA-Grand Ballroom B	
GA-Grand Ballroom C	
GA-Grand Ballroom D	
GA-Grand Ballroom Reception A-C	
GA-Imperial Ballroom A	
GA-Imperial Ballroom B	
GA-Imperial Ballroom C	
GA-Imperial Ballroom D	
GA-Imperial Ballroom Reception A-C	
GA-Grand Salon	
GA-Savoy	
GA-Envoy	
GA-Murano	
GA-Venezia	
GA-Gibson Lounge	
GA-Room 379	Third Floor
GA-Venice	
GA-Versailles	
GA-Belvedere	
GA-Fontainbleau	
GA-Vienna	
GA-Sussex	
GA-Hermitage	
GA-Tuscany	
GA-Bagatelle	
GA-Audubon	
GA-Milano	
GA-Riviera	
GA-Provence	
GA-Embassy	
GA-Ambassador	

The Little America Hotel	
Room Name	Level
LA-Grand Ballroom A	First Floor
LA-Grand Ballroom B	
LA-Grand Ballroom C	
LA-Wyoming	
LA-Idaho	
LA-Arizona	
LA-Cheyenne	
LA-Sinclair	
LA-Garden Terrace	
LA-Flagstaff	Second Floor
LA-Sun Valley	
LA-Tucson	
LA-Wasatch	
LA-Uintah	
LA-Sawtooth	
LA-Olympus	
LA-Teton	
LA-Snowbasin	

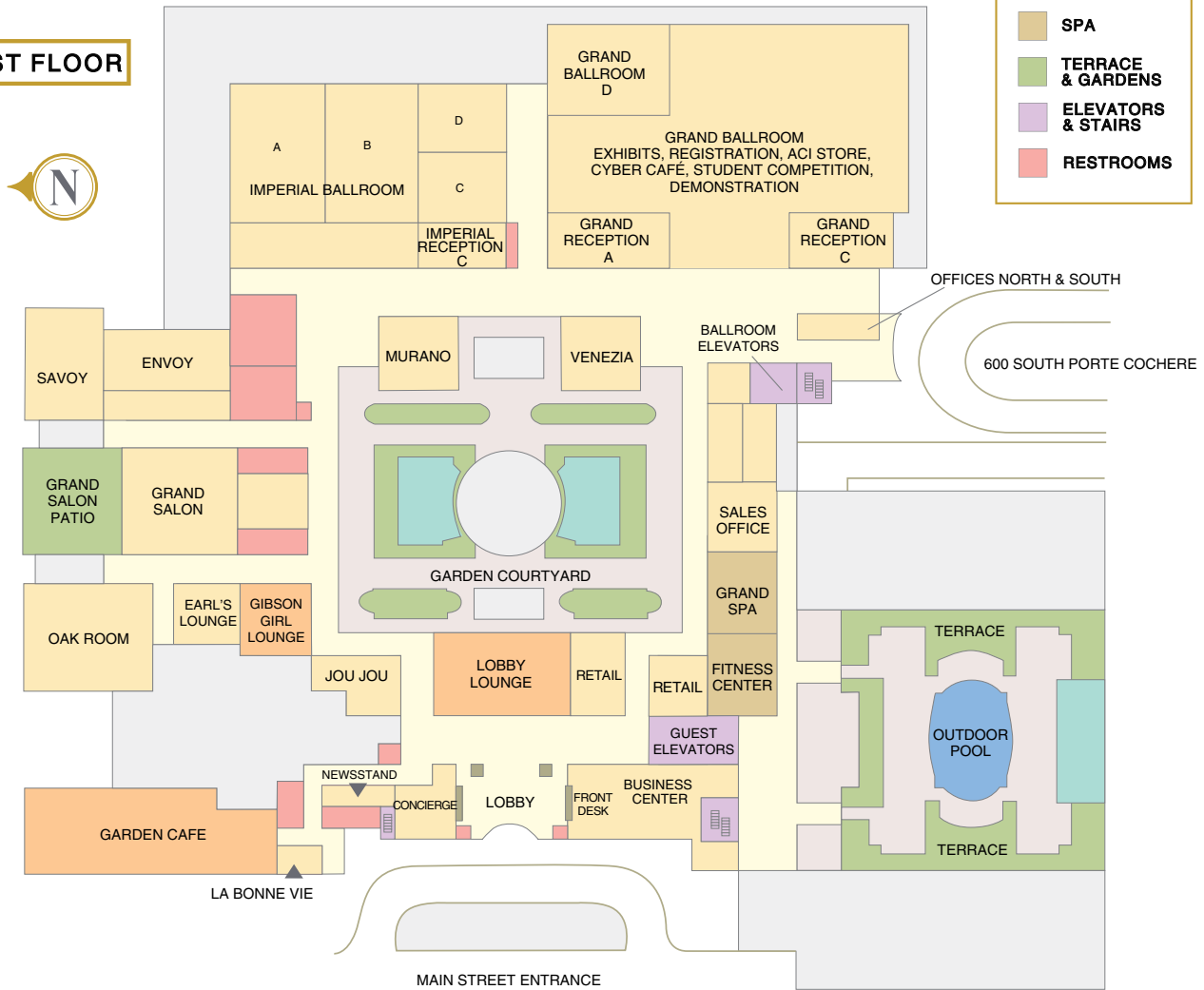
Meeting Space Maps

The GRAND AMERICA Hotel

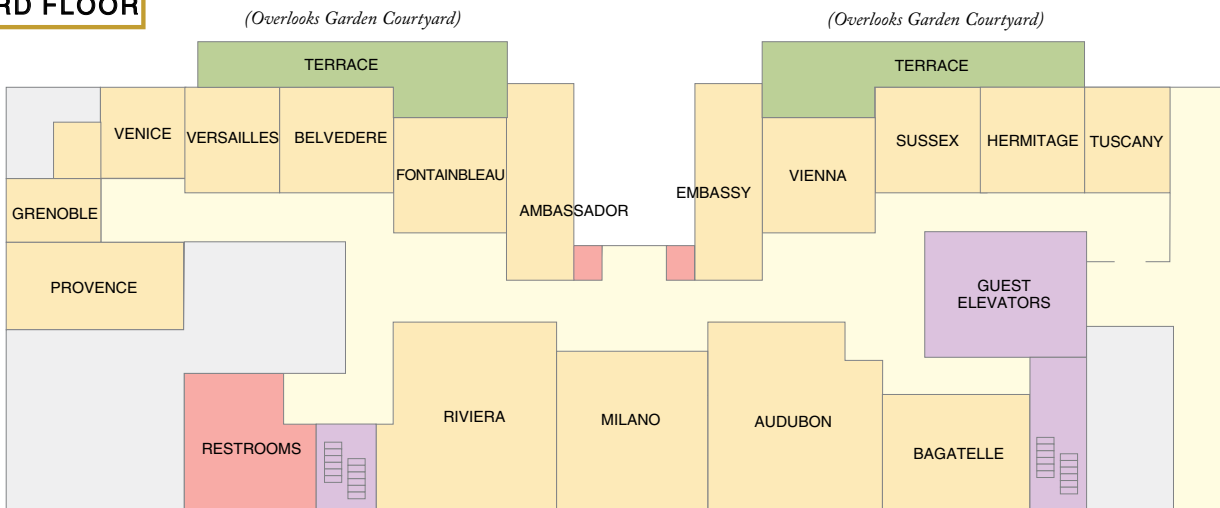
FIRST FLOOR

LEGEND

- DINING
- SPA
- TERRACE & GARDENS
- ELEVATORS & STAIRS
- RESTROOMS



THIRD FLOOR

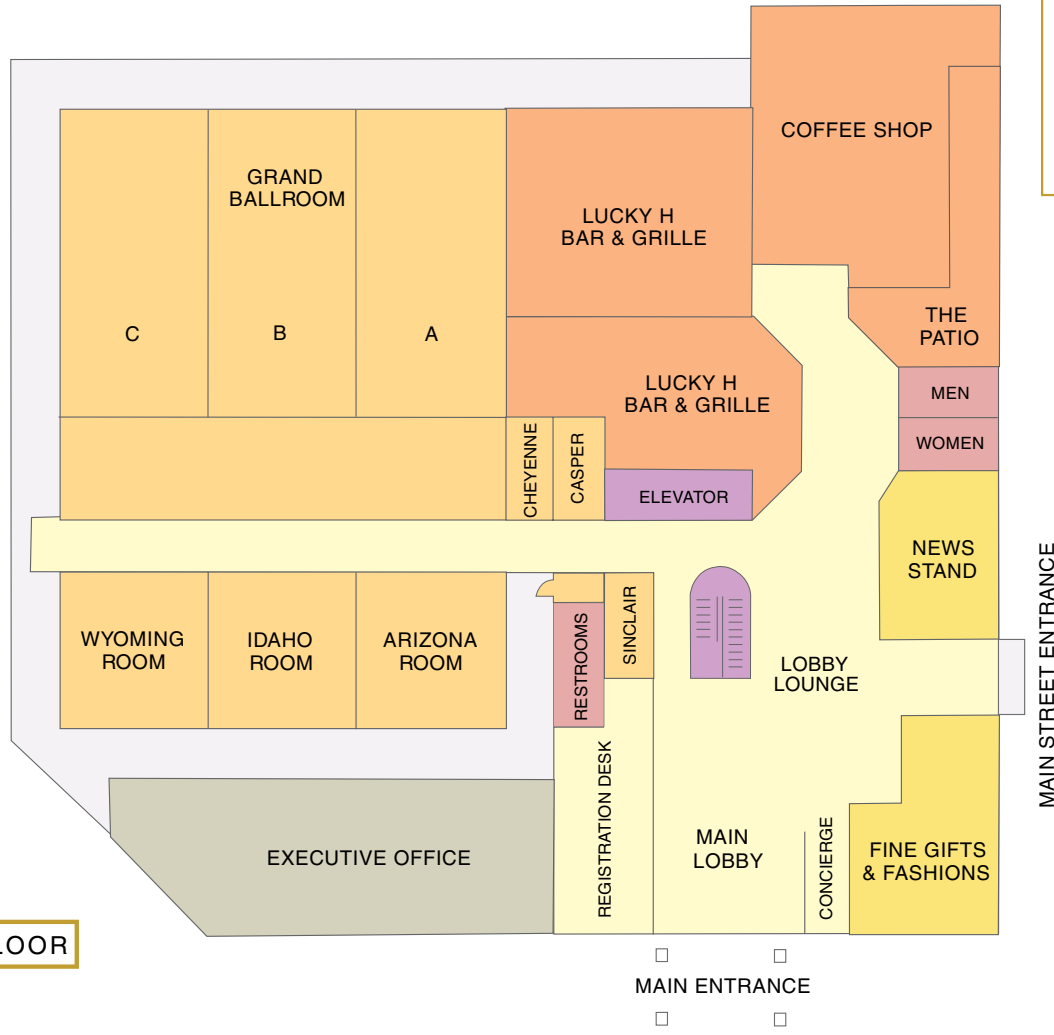


Meeting Space Maps

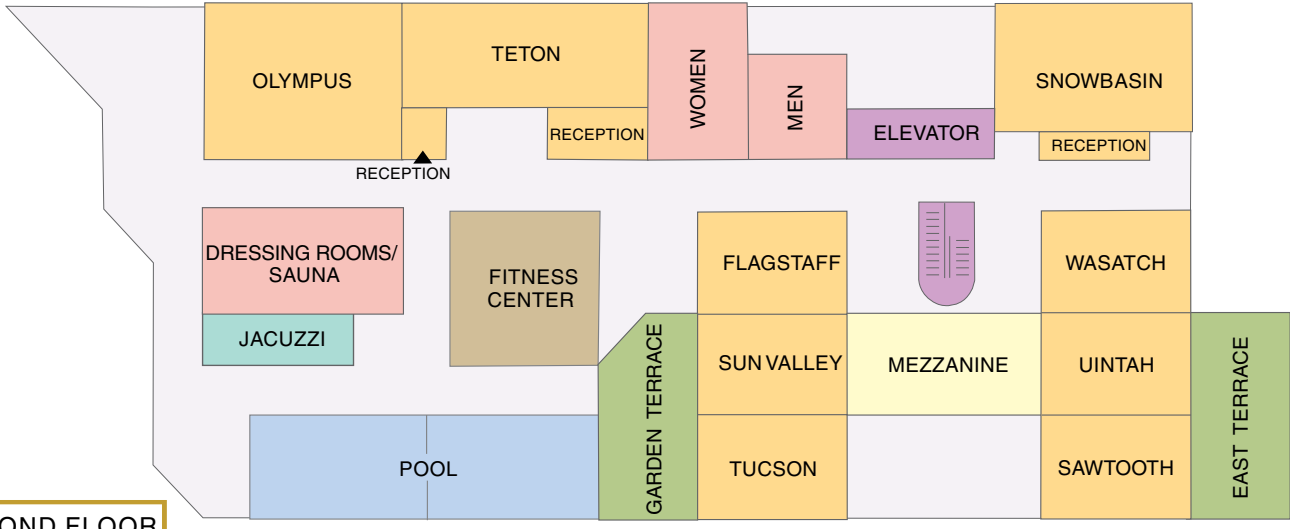
LITTLE AMERICA Hotel

SALT LAKE CITY

LEGEND	
	DINING
	MEETING ROOMS
	RETAIL SHOPS
	LOBBY AREAS
	FITNESS CENTER
	ELEVATORS & STAIRS
	RESTROOMS



FIRST FLOOR



SECOND FLOOR



Focus. Ingenuity. Teamwork.

We follow rigorous procedures to achieve superior workmanship. We think creatively and thoughtfully about both form and function.

We work together to solve challenges. We have the experience, the skill and the work ethic to get the job done right. Every time.



Leave less of a mark.



Everyday, all around us are chances to "be greener" – opportunities to leave less of a mark. Take cement for instance. Who thinks it could be made greener? We do.

Our Envirocore products help reduce the CO2 intensity of our cements. Plus, our stringent quality controls mean Envirocore can handle even the toughest jobs, like highways, bridges and more.

So the next time you're looking for cement, look for the mark that leaves less of a mark.

For more information on Envirocore by Holcim, please contact Todd Laker, LEED AP 801.829.2178 and Brooke W. Smartz, LEED AP 303.716.5285.

We thank the University of Utah for using Envirocore on the UofU Meldrum EMRL Building addition construction.



Exhibitors

GA-GRAND BALLROOM

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

EXHIBIT HOURS

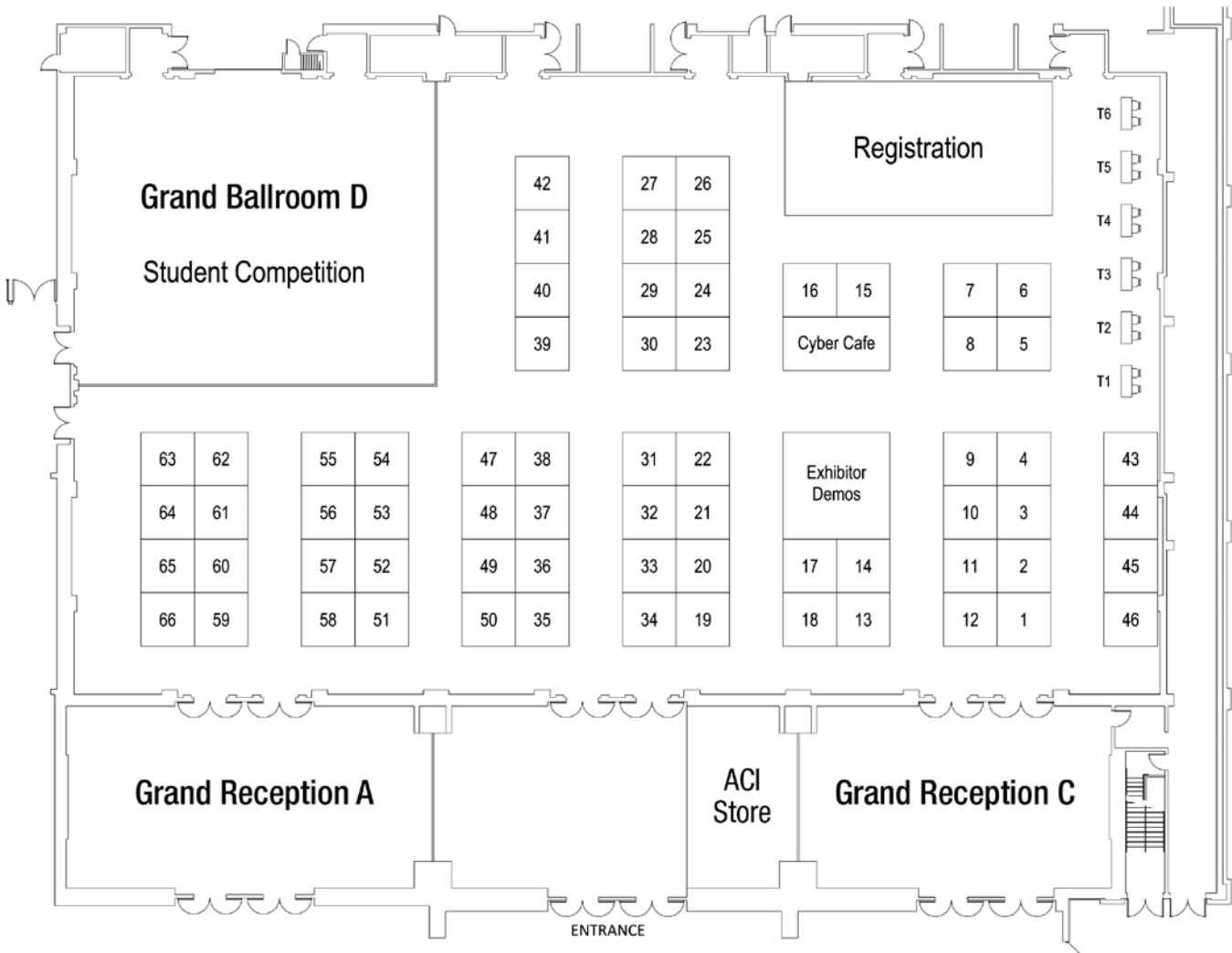
Sunday – Tuesday 8:00 am – 5:00 pm

ADAPT Corporation www.adaptsoft.com	Booth #49	International Concrete Repair Institute www.icri.org	Booth #38
ALS www.alsglobal.com	Booth #7	International Zinc Association www.zinc.org	Booth #50
Aquafin, Inc. www.aquafin.net	Booth #22	James Instruments www.ndtjames.com	Booth #40
BASF Corporation www.master-builders-solutions.basf.us	Booth #35	Kryton International Inc. www.kryton.com	Booth #30
Barsplice Products www.barsplice.com	Booth #47	LafargeHolcim www.lafargeholcim.com	Booth #27
Bekaert Corporation/Dramix Fibers www.bekaert.com	Booths #32 & 33	Myers Construction Materials Testing Equipment www.myerstest.com	Booth #8
Burgess Pigment Company www.OPTIPOZZ.com	Booth #5	Peikko USA www.peikkousa.com	Booth #24
Buzzi Unicem USA www.buzziunicemusa.com	Booth #12	Portland Cement Association www.cement.org	Booth #25
Concrete Reinforcing Steel Institute (CRSI) www.crsi.org	Booth #20	Premier CPG www.premiercpg.com	Booth #6
Concrete Sealants, Inc. www.conseal.com	Booth #31	Proceq USA, Inc. www.proceq.com	Booth #1
Cresset Chemical Company www.cresset.com	Booth #4	QuakeWrap Inc. www.quakewrap.com	Booth #21
Decon USA, Inc. www.deconusa.com	Booth #13	Radarview LLC/UCT www.radarviewllc.com	Booth #34
ELE International www.ele.com	Booth #58	Restruction Corporation www.restruction.com	Booth #37
The Euclid Chemical Company www.euclidchemical.com	Booth #26	Sika Corporation www.usa.sika.com	Booths #17 & 18
FiberForce by ABC Polymers www.abcpolymerindustries.com	Booth #39	Silica Fume Association www.silicafume.org	Booth #51
Forney, LP www.forneyonline.com	Booth #54	Slag Cement Association www.slagcement.org	Booth #48
GCP Applied Technologies www.gcp.com/en/solutions	Booth #19	Structural Technologies www.structuraltechnologies.com	Booth #23
Germann Instruments, Inc. www.germann.org	Booths #10 & 11	Vector Corrosion Technologies Inc. www.vector-corrosion.com	Booth #15
Headed Reinforcement Corp. (HRC) www.hrc-usa.com	Booth #16	Xypex Chemical Corporation www.imxtechnologies.com	Booth #9
Humboldt Mfg. Company www.humboldttnfg.com	Booth #36	Zircon Corporation www.zircon.com	Booth #42
Industrial Supply www.indsupply.com	Booth #55		

Exhibitors are listed as of 2/20/18.

Exhibitor Floor Plan

GRAND AMERICA HOTEL—GRAND BALLROOM



Exhibitor Demonstration Schedule

TIME	MONDAY, MARCH 26	TIME	TUESDAY, MARCH 27
9:45 - 10:15	BASF—Nanotechnology-Based, Strength-Enhancing Admixture – Master X-Seed 55	9:45 - 10:15	Bekaert—Dramix 4D-5D High Performance – Going where fibers have not gone before
10:30 - 11:00	Aquafin Inc.—High performance crystalline waterproofing admixture for concrete with integral corrosion inhibiting technology	10:30 - 11:00	Burgess Pigment— A Highly Reactive Metakoalin – OPTIPOZZ
1:00 - 1:30	ALS Environmental— Sampling Technique for Silica Analysis	1:00 - 1:30	Portland Cement Association— Codes and Market Analytics
3:30 - 4:00	Concrete Sealants Inc.—Protecting your concrete from the inside out with ConBlock		

Daily Program

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

✓= Separate fee required ★ = Guest-only event

GA = Grand America LA = Little America

Friday, March 23, 2018	
6:30 pm - 9:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
Saturday, March 24, 2018	
7:00 am - 6:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
2:00 pm - 6:00 pm	
ACI Registration	GA-Grand Ballroom
ACI Store	GA-Grand Ballroom
ACI Cyber Café & Meeting Spot	GA-Grand Ballroom
Afternoon Soda Break	GA-Grand Ballroom
Speaker Ready Room	GA-Room 379
8:00 pm - 9:30 pm	
Student Networking Reception	GA-Riviera
Sunday, March 25, 2018	
5:00 am and 6:00 am	
Run/Walk Meet-Up	GA-Main Lobby
7:00 am - 10:00 am	
★ Guest Hospitality	GA-Oak Room
Coffee Break	GA-Grand Ballroom
7:00 am - 6:00 pm	
Speaker Ready Room	GA-Room 379
7:30 am - 5:00 pm	
ACI Registration	GA-Grand Ballroom
ACI Cyber Café & Meeting Spot	GA-Grand Ballroom
8:00 am - 9:00 am	
Convention Orientation Breakfast	GA-Savoy
★ Guest Overview	GA-Oak Room
8:00 am - 5:00 pm	
ACI Store	GA-Grand Ballroom
Exhibits	GA-Grand Ballroom
8:00 am - 5:30 pm	
Committee Meetings	See Numeric or Convention App for detailed list
8:30 am - 9:30 am—Mini Session	
Rating Methods for Defining Performance of Existing Concrete Bridges	GA-Imperial Ballroom D
9:00 am - 3:00 pm	
Student Fiber-Reinforced Concrete Bowling Ball Competition	GA-Grand Ballroom
10:00 am - 11:30 am	
ACI International Forum	GA-Audubon
10:00 am - 5:00 pm	
★ Guest Lounge	GA-Oak Room
11:30 am - 1:30 pm	
✓International Lunch	GA-Savoy

1:00 pm - 3:00 pm—Sessions	
Controlling Fresh Properties of SCC for Adequate Placement	GA-Milano
How to Evaluate ASR Mitigation Performance of High-Alkali Pozzolans	GA-Audubon
Shear in Structural Concrete, Part 1 of 2	GA-Riviera
1:00 pm - 4:00 pm	
Afternoon Soda Break	GA-Grand Ballroom
2:30 pm - 3:30 pm—Mini Session	
Ensuring a Successful High-Strength Concrete Project	GA-Venezia
3:30 pm - 5:30 pm—Sessions	
Chemical Admixture Compatibility	GA-Milano
Seismic Repair and Retrofit of Concrete Bridges	GA-Audubon
Shear in Structural Concrete, Part 2 of 2	GA-Riviera
4:00 pm - 5:30 pm	
ACI Student Forum	GA-Imperial Ballroom C
5:45 pm - 7:00 pm	
Opening Session and Keynote Presentation	LA-Grand Ballroom A-C
7:15 pm - 8:15 pm	
Opening Reception and Awards Recognition	GA-Grand Ballroom
8:00 pm - 10:00 pm—Session	
Hot Topic Session: Accelerated Bridge Construction	GA-Audubon
9:00 pm - 10:30 pm	
Young Professional Networking Event	GA-Oak Room
Monday, March 26, 2018	
5:00 am and 6:00 am	
Run/Walk Meet-Up	GA-Main Lobby
6:00 am - 6:45 am	
Morning Yoga Class	GA-Fitness Center
6:30 am - 8:00 am	
Workshop for Technical Committee Chairs (by invitation only)	GA-Imperial Ballroom B
7:00 am - 8:30 am	
Speaker Development Breakfast	GA-Grand Ballroom D
7:00 am - 10:00 am	
★ Guest Hospitality	GA-Oak Room
Coffee Break	GA-Grand Ballroom
7:00 am - 6:00 pm	
Speaker Ready Room	GA-Room 379
7:15 am - 7:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list

Daily Program

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

✓= Separate fee required ★ = Guest-only event

GA = Grand America LA = Little America

7:30 am - 5:00 pm	
ACI Registration	GA-Grand Ballroom
ACI Cyber Café & Meeting Spot	GA-Grand Ballroom
8:00 am - 8:30 am	
Coffee @ Meeting Spot for first-time attendees	GA-Grand Ballroom
8:00 am - 5:00 pm	
ACI Store	GA-Grand Ballroom
Exhibits	GA-Grand Ballroom
8:30 am - 9:30 am—Mini Session	
Fundamentals of Non-Linear Fracture Mechanics and Size Effect	GA-Grand Reception A
8:30 am - 10:30 am—Sessions	
Advances in the Internal Curing of Cementitious Materials	GA-Milano
FRP Design Methodology and Applications for Blast- and Impact-Resistant Structures, Part 1 of 2	GA-Riviera
Research in Progress, Part 1 of 2	GA-Audubon
9:00 am - 11:00 am	
Professional Headshots—Complimentary	GA-Grand Ballroom
9:00 am - 12:00 pm	
✓Concrete Restoration Tour—Conference Center and Salt Lake Tabernacle Tour	GA-600 S Porte Cochere
9:45 am - 10:15 pm—Exhibitor Demo	
BASF	GA-Grand Ballroom
10:00 am - 11:00 am—Mini Sessions	
Creep and Shrinkage in Self-Consolidating Concrete and Composite Systems	GA-Provence
Fit into Particle Packing	LA-Uintah
10:00 am - 11:30 am—Session	
Undergraduate Research on Concrete Materials, Structural Design, and Construction	LA-Snowbasin
10:00 am - 2:30 pm	
★Guest Lounge	GA-Oak Room
10:30 am - 11:00 am—Exhibitor Demo	
Aquafin Inc.	GA-Grand Ballroom
10:30 am - 12:00 pm—Session	
ACI 123 Concrete Research Poster Session	GA-Grand Ballroom
11:00 am - 1:00 pm—Sessions	
Accelerated Bridge Construction (ABC)—Component and System Behavior	GA-Milano
FRP Design Methodology and Applications for Blast- and Impact-Resistant Structures, Part 2 of 2	GA-Riviera
Research in Progress, Part 2 of 2	GA-Audubon

11:15 am - 12:15 pm—Mini Session	
Formwork Pressure: Current Status, Predictive Methods, and Measurement Techniques	LA-Grand Ballroom B
11:30 am - 1:30 pm	
✓Student Lunch	GA-Imperial Ballroom B-D
1:00 pm - 1:30 pm—Exhibitor Demo	
ALS Environmental	GA-Grand Ballroom
1:00 pm - 2:00 pm	
✓Architectural Walking Tour	GA-600 S Porte Cochere
1:00 pm - 4:00 pm	
Afternoon Soda Break	GA-Grand Ballroom
1:30 pm - 2:00 pm	
Sodas @ The Meeting Spot for first-time attendees	GA-Grand Ballroom
1:30 pm - 3:30 pm—Sessions	
Concrete Modulus of Elasticity—How High is High?	GA-Riviera
Elevating Mentorship of Concrete Professionals	GA-Milano
Major Advancements in Pervious Concrete	GA-Audubon
2:00 pm - 4:00 pm	
Professional Headshots—Complimentary	GA-Grand Ballroom
3:30 pm - 4:00 pm—Exhibitor Demo	
Concrete Sealants Inc.	GA-Grand Ballroom
3:30 pm - 5:00 pm	
★Guest Social	GA-Oak Room
4:00 pm - 6:00 pm—Sessions	
Advances in Concrete Bridges: Design, Construction, Evaluation, and Rehabilitation, Part 1 of 2	GA-Milano
Precast Concrete Structure Research Advancements	GA-Audubon
Rating Methods for Defining Performance of Existing Concrete Bridges	GA-Riviera
4:30 pm - 6:00 pm	
International Organizing Committee—Third R. N. Raikar Memorial International Committee	GA-Imperial Ballroom C
6:00 pm - 7:00 pm	
✓Reception Honoring Michael P. Collins	LA-Wyoming
Women in ACI Reception	GA-Envoy
6:30 pm - 8:30 pm—Session	
123 Forum: Can Structural Health Monitoring Provide Actionable Information?	GA-Audubon

Daily Program

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

✓= Separate fee required ★ = Guest-only event

GA = Grand America LA = Little America

Tuesday, March 27, 2018	
5:00 am and 6:00 am	
Run/Walk Meet-Up	GA-Main Lobby
6:00 am - 6:45 am	
Morning Yoga Class	GA-Fitness Center
7:00 am - 10:00 am	
★ Guest Hospitality	GA-Oak Room
Coffee Break	GA-Grand Ballroom
7:00 am - 6:00 pm	
Speaker Ready Room	GA-Room 379
7:00 am - 6:30 pm	
Committee Meetings	See Numeric or Convention App for detailed list
7:30 am - 5:00 pm	
ACI Registration	GA-Grand Ballroom
ACI Cyber Café & Meeting Spot	GA-Grand Ballroom
8:00 am - 8:30 am	
Coffee @ Meeting Spot for first-time attendees	GA-Grand Ballroom
8:00 am - 5:00 pm	
ACI Store	GA-Grand Ballroom
Exhibits	GA-Grand Ballroom
8:30 am - 9:30 am—Mini Session	
Design and Construction with ICFs, Winter Construction, and Thermal Performance of ICF Walls	GA-Grand Reception A
8:30 am - 10:30 am—Sessions	
Advances in Concrete Bridges: Design, Construction, Evaluation, and Rehabilitation, Part 2 of 2	GA-Milano
Contractors' Day Session: From the Ashes: The Engineering and Construction Challenges of the Provo City Center Temple	GA-Audubon
The Role of Cracking on Corrosion of Reinforced Concrete	GA-Riviera
9:00 am - 11:00 am	
Professional Headshots—Complimentary	GA-Grand Ballroom
9:00 am - 12:00 pm	
✓ Concrete Restoration Tour—Utah State Capitol Base Isolator Tour	GA-600 S Porte Cochere
9:45 am - 10:15 am—Exhibitor Demo	
Bekaert	GA-Grand Ballroom
10:00 am - 5:00 pm	
★ Guest Lounge	GA-Oak Room
10:30 am - 11:00 am—Exhibitor Demo	
Burgess Pigment	GA-Grand Ballroom

11:00 am - 1:00 pm—Sessions	
Analysis and Interpretation of Structural Health Monitoring (SHM) Data: Big Data Management and Field Studies	GA-Riviera
New Innovations in Chemical Admixtures	GA-Milano
Settlement Cracking from Theory to Practice	GA-Audubon
11:30 am - 1:30 pm	
✓ Contractors' Day Lunch	GA-Savoy
1:00 pm - 1:30 pm—Exhibitor Demo	
Portland Cement Association	GA-Grand Ballroom
1:00 pm - 4:00 pm	
Afternoon Soda Break	GA-Grand Ballroom
1:30 pm - 2:00 pm	
Sodas @ The Meeting Spot for first-time attendees	GA-Grand Ballroom
1:30 pm - 2:30 pm—Mini Session	
On the Use of Advanced Finite Element Methods for Design of Reinforced Concrete Nuclear Structures	GA-Grand Salon
1:30 pm - 3:30 pm—Sessions	
Open Topic Session, Part 1 of 2	GA-Riviera
Quality Management: The Common Thread of Good Practice, Part 1 of 2	GA-Milano
1:40 pm - 4:00 pm	
✓ Bishops' Central Storehouse	GA-600 S Porte Cochere
2:00 pm - 3:00 pm—Mini Session	
New Applications for Drones and Laser Scanners	GA-Imperial Reception C
2:00 pm - 4:00 pm	
Professional Headshots—Complimentary	GA-Grand Ballroom
4:00 pm - 6:00 pm—Sessions	
Contractors' Day Session: Concrete Construction	GA-Audubon
Open Topic Session, Part 2 of 2	GA-Riviera
Quality Management: The Common Thread of Good Practice, Part 2 of 2	GA-Milano
5:30 pm - 6:30 pm	
Faculty Network Reception	GA-Savoy
6:00 pm - 6:30 pm	
Pre-Mixer Gathering for first-time attendees	GA-Lobby Bar
6:30 pm - 8:00 pm	
Concrete Mixer	GA-Imperial Ballroom

Daily Program

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

✓= Separate fee required ★ = Guest-only event

GA = Grand America LA = Little America

Wednesday, March 28, 2018	
5:00 am and 6:00 am	
Run/Walk Meet-Up	GA-Main Lobby
6:00 am - 6:45 am	
Morning Yoga Class	GA-Fitness Center
7:00 am - 10:00 am	
★ Guest Hospitality	GA-Oak Room
Coffee Break	GA-Grand Ballroom
7:00 am - 2:00 pm	
Speaker Ready Room	GA-Room 379
7:30 am - 6:00 pm	
Committee Meetings	See Numeric or Convention App for detailed list
8:00 am - 12:00 pm	
ACI Registration	GA-Grand Ballroom
ACI Store	GA-Grand Ballroom
8:00 am - 2:00 pm	
ACI Cyber Café & Meeting Spot	GA-Grand Ballroom
8:00 am - 4:00 pm	
Concrete Quality Technical Manager Certification Exam	GA-Versailles
8:30 am - 10:30 am—Sessions	
Fiber-Reinforced Concrete—From Fresh Properties to Structural Design: New Tools, Guides, and Reports	GA-Riviera
UHPC—Innovations in Bridge Design, Part 1 of 2	GA-Milano
Using Slag Cement to Elevate Concrete Performance	GA-Audubon

10:00 am - 5:00 pm	
★ Guest Lounge	GA-Oak Room
11:00 am - 1:00 pm—Sessions	
Design of Concrete Nuclear Structures: Relating FEM Analysis and RC Design Using Codes/Standards, Part 1 of 2	GA-Riviera
Repair of Concrete Session in Memory of Tony Murray, Part 1 of 2	GA-Audubon
UHPC—Innovations in Bridge Design, Part 2 of 2	GA-Milano
1:30 pm - 3:30 pm—Sessions	
Deicer Salts and Concrete Deterioration	GA-Milano
Design of Concrete Nuclear Structures: Relating FEM Analysis and RC Design Using Codes/Standards, Part 2 of 2	GA-Riviera
Repair of Concrete Session in Memory of Tony Murray, Part 2 of 2	GA-Audubon
6:30 pm - 8:00 pm	
President's Reception	GA-Imperial Ballroom A
Thursday, March 29, 2018	
10:15 am - 5:00 pm	
Board of Direction	GA-Savoy

Numerical Committee Meeting Listing

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

GA = Grand America LA= Little America

Code	Committee	Day	Time	Room Name
ACIFdn	ACI Foundation	Wed	8:00 am - 11:30 am	GA-Grand Reception A
BOD	Board of Direction	Thu	10:15 am - 5:00 pm	GA-Savoy
CAC	Chapter Activities	Mon	2:00 pm - 3:00 pm	GA-Provence
CAC-TG2	CAC Student Competition Task Group	Wed	10:00 am - 11:30 am	GA-Vienna
CLC	Construction Liaison	Sun	8:00 am - 10:30 am	LA-Olympus
CPC	Certification Programs	Tue	2:00 pm - 5:00 pm	GA-Provence
CRC	Concrete Research Council	Tue	11:00 am - 1:00 pm	GA-Murano
CSAO	Codes & Standards Advocacy & Outreach	Mon	3:30 pm - 5:30 pm	GA-Versailles
C601	Certified Quality Technical Manager	Mon	3:00 pm - 4:30 pm	GA-Venice
C601-D	Decorative Concrete Finisher	Sun	10:00 am - 11:30 am	GA-Murano
C601-E	Concrete Construction Sustainability	Tue	7:30 am - 9:00 am	LA-Sun Valley
C601-F	NDT Certification	Mon	1:00 pm - 3:00 pm	GA-Venice
C601-G	Self-Consolidating Concrete Testing	Mon	11:30 am - 1:00 pm	GA-Venice
C610	Field Technician Cert	Mon	8:30 am - 11:00 am	LA-Arizona
C620	Laboratory Tech Cert	Tue	8:30 am - 10:00 am	LA-Grand Ballroom C
C621	Cement Tester Certification	Wed	8:30 am - 9:30 am	GA-Fontainbleau
C630	Construction Inspector Cert	Mon	1:00 pm - 2:30 pm	LA-Sawtooth
C631	Conc Transportation Const Insp	Tue	10:00 am - 11:30 am	LA-Olympus
C640	Craftsman Cert	Sun	11:00 am - 2:00 pm	LA-Teton
C650	Tilt-up Certification Committee	Sun	4:00 pm - 5:30 pm	LA-Sinclair
C655	Foundation Constructor Certification	Mon	11:30 am - 1:00 pm	GA-Belvedere
C670	Masonry Technician Certification	Wed	9:30 am - 10:30 am	GA-Fontainbleau
C680	Adhesive Anchor Installer—Joint CRSI	Sun	11:30 am - 1:00 pm	GA-Fontainbleau
C681	Adhesive Anchor Installation Inspector Certification	Mon	4:30 pm - 5:30 pm	LA-Grand Ballroom A
C690	Concrete Quality Technical Manager Certification	Wed	10:30 am - 11:30 am	GA-Fontainbleau
EAC	Educational Activities M1	Tue	8:00 am - 11:30 am	LA-Teton
E701	Materials for Concrete Construction	Sun	9:00 am - 10:30 am	LA-Flagstaff
E702	Designing Concrete Structures	Mon	9:00 am - 10:30 am	GA-Imperial Reception C
E703	Concrete Construction Practices	Mon	4:00 pm - 6:00 pm	GA-Hermitage
E706	Repair Application Procedures	Sun	8:00 am - 10:00 am	LA-Idaho
E707	Specification Education	Tue	11:30 am - 1:00 pm	GA-Grand Reception C
E710	ACI University Programs	Sun	10:30 am - 12:00 pm	LA-Tucson
E905	Training Programs	Sun	9:00 am - 10:00 am	LA-Wyoming
Fellows	Fellows Nomination Committee	Tue	7:30 am - 9:00 am	GA-Hermitage
HTC	Hot Topic	Sun	2:30 pm - 4:00 pm	LA-Sinclair
IAC	International Advisory Committee	Tue	9:30 am - 11:30 am	GA-Grand Reception C
IC-Cert	International Certification	Sun	1:30 pm - 3:00 pm	GA-Bagatelle
IC-Conf	International Conferences	Mon	7:15 am - 8:30 am	GA-Belvedere
IPAC	International Project Awards Committee	Tue	7:00 am - 8:30 am	LA-Tucson
ITG-10	Alternative Cementitious Materials	Sun	10:30 am - 1:30 pm	GA-Venezia
MJEB	Materials Journal Editorial Board	Sun	8:00 am - 9:00 am	GA-Grand Reception C
MJEB	Materials Journal Editorial Board	Sun	9:00 am - 10:00 am	GA-Grand Reception C
NEW	New Board Orientation	Tue	12:00 pm - 1:45 pm	GA-Belvedere
NOM	Committee on Nominations	Thu	6:00 pm - 9:00 pm	GA-Vienna
SJEB	Structural Journal Editorial Board	Sun	9:00 am - 10:00 am	GA-Grand Reception C
SJEB	Structural Journal Editorial Board	Sun	10:00 am - 11:00 am	GA-Grand Reception C
SYPAC	Student and Young Professional Activities Committee	Wed	8:00 am - 9:30 am	GA-Murano
S801	Student Activities	Sun	7:30 am - 9:00 am	LA-Wyoming
S802	Teaching Methods and Educational Materials	Mon	8:30 am - 9:30 am	GA-Vienna

Numerical Committee Meeting Listing

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

GA = Grand America LA = Little America

Code	Committee	Day	Time	Room Name
S805	Collegiate Concrete Council	Sun	4:00 pm - 5:30 pm	GA-Imperial Ballroom C
S806	Young Professional Activities	Mon	2:00 pm - 3:30 pm	LA-Sun Valley
TAC	Technical Activities M1	Fri	6:30 pm - 9:00 pm	GA-Milano
TAC	Technical Activities M2	Sat	7:00 am - 6:30 pm	GA-Milano
TAC-RG1	TAC Review Group 1	Sat	1:00 pm - 4:00 pm	GA-Sussex
TAC-RG2	TAC Review Group 2	Sat	1:00 pm - 4:00 pm	GA-Hermitage
TAC-RG3	TAC Review Group 3	Sat	1:00 pm - 4:00 pm	GA-Tuscany
TCSC	TAC Construction Standards Committee	Wed	7:30 am - 9:30 am	GA-Sussex
TRRC	TAC Repair & Rehab	Tue	7:00 am - 8:30 am	LA-Grand Ballroom C
YOUNG	Young Member Committee	Sun	7:00 am - 8:00 am	LA-Sinclair
117	Tolerances	Tue	8:00 am - 12:00 pm	LA-Grand Ballroom B
117-A	Editorial and General Requirements	Mon	3:00 pm - 4:00 pm	GA-Fontainbleau
117-D	Cast in Place Concrete for Buildings	Mon	4:00 pm - 5:00 pm	GA-Fontainbleau
117-F	Cast In Place Floors	Mon	5:00 pm - 6:00 pm	GA-Fontainbleau
118	Use of Digital Technology	Tue	2:00 pm - 3:30 pm	GA-Imperial Reception C
120	History of Concrete	Tue	1:30 pm - 3:00 pm	GA-Murano
121	Quality Assurance Systems	Sun	3:00 pm - 5:00 pm	GA-Hermitage
122	Energy Efficiency	Mon	1:00 pm - 3:00 pm	LA-Cheyenne
123	Research and Current Developments	Sun	4:00 pm - 5:30 pm	GA-Provence
124	Aesthetics	Mon	12:30 pm - 2:00 pm	GA-Tuscany
130	Sustainability	Mon	2:00 pm - 5:00 pm	LA-Arizona
130-G	Education/Certification	Tue	8:30 am - 9:00 am	GA-Grand Reception C
130-L	Liaison Subcommittee	Mon	10:00 am - 11:00 am	GA-Ambassador
130	Sustainability of Concrete	Tue	1:00 am - 1:00 pm	GA-Imperial Ballroom A
131	BIM	Sat	8:00 am - 5:00 pm	GA-Riviera
131	BIM	Tue	3:00 pm - 5:00 pm	GA-Envoy
132	Responsibility (RCC)	Sun	2:00 pm - 5:00 pm	LA-Sun Valley
133	Disaster Reconnaissance	Sun	12:30 pm - 3:30 pm	GA-Grand Reception C
134	Concrete Constructability	Mon	8:30 am - 10:00 am	LA-Olympus
201	Durability	Sun	2:00 pm - 4:00 pm	GA-Provence
201	Durability	Tue	8:00 am - 11:00 am	GA-Imperial Ballroom A
201-D	Durability-Oversight Committee	Mon	11:30 am - 1:00 pm	LA-Uintah
201-TG1	Aggressive Chemicals	Mon	3:00 pm - 4:00 pm	GA-Hermitage
201-TG2	Physical Salt Attack	Sun	11:00 am - 12:00 pm	GA-Provence
201-TG3	Alkali-Aggregate Reactivity	Sun	12:00 pm - 2:00 pm	GA-Provence
201-TG5	Microbially Induced Corrosion of Concrete	Sun	10:00 am - 11:00 am	GA-Provence
207	Mass Concrete	Mon	10:00 am - 1:00 pm	GA-Grand Ballroom D
209	Creep and Shrinkage	Mon	10:00 am - 1:00 pm	GA-Provence
209-C	Models Applicability and Uncertainty	Sun	3:30 pm - 4:30 pm	GA-Sussex
209-D	Numerical Methods and 3D Analyses	Sun	4:30 pm - 5:30 pm	GA-Sussex
211	Proportioning	Wed	8:00 am - 10:00 am	GA-Imperial Ballroom A
211-A	Proportioning-Editorial	Tue	10:00 am - 12:00 pm	LA-Uintah
211-I	Assessing Aggregate Gradation	Tue	1:00 pm - 3:00 pm	GA-Hermitage
211-M	Aggregate Packing Model	Mon	10:00 am - 11:00 am	LA-Uintah
211-N	Proportioning with Ground Limestone and Material Fillers	Tue	3:00 pm - 5:00 pm	LA-Teton
211-TG2	Developing & Using a Three Point Curve Task Group	Tue	11:30 am - 1:00 pm	GA-Hermitage
212	Chemical Admixtures	Mon	2:00 pm - 5:00 pm	LA-Teton
213	Lightweight	Tue	1:30 pm - 3:30 pm	LA-Sun Valley
213-TG1	Lightweight-Editorial TG	Tue	11:00 am - 12:30 pm	GA-Sussex
214	Strength Tests	Mon	3:30 pm - 5:30 pm	LA-Idaho

Numerical Committee Meeting Listing

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GA = Grand America LA = Little America

Code	Committee	Day	Time	Room Name
214-A	Document Preparation	Mon	12:30 pm - 2:00 pm	LA-Wasatch
215	Fatigue	Sun	12:00 pm - 2:00 pm	LA-Sun Valley
216	Fire Resistance	Mon	10:00 am - 12:00 pm	GA-Vienna
221	Aggregates	Tue	11:00 am - 1:30 pm	GA-Imperial Ballroom B
222	Corrosion of Metals	Tue	2:00 pm - 5:00 pm	LA-Idaho
222-TG1	Developing Standardized Tests for Chloride Threshold	Sun	1:30 pm - 4:30 pm	GA-Imperial Reception C
223	Shrinkage-Compensating	Tue	2:00 pm - 5:00 pm	LA-Olympus
224	Cracking	Sun	2:30 pm - 5:00 pm	LA-Teton
225	Hydraulic Cements	Mon	1:00 pm - 5:00 pm	GA-Belvedere
228	Nondestructive Testing	Sun	9:30 am - 12:30 pm	GA-Imperial Ballroom A
228-B	Visual Inspection	Sun	1:00 pm - 3:00 pm	GA-Embassy
229	Controlled Low-Strength Materials	Tue	2:00 pm - 5:00 pm	GA-Vienna
230	Soil Cement	Tue	8:00 am - 9:30 am	LA-Cheyenne
231	Early Age	Mon	12:30 pm - 2:30 pm	LA-Grand Ballroom B
232	Fly Ash in Concrete	Mon	1:00 pm - 4:00 pm	GA-Vienna
233	Ground Slag	Tue	2:00 pm - 5:00 pm	LA-Grand Ballroom B
234	Silica Fume	Tue	2:00 pm - 4:30 pm	LA-Tucson
236	Material Science	Mon	4:30 pm - 5:30 pm	GA-Imperial Ballroom B
236-TG1	Advanced Analysis Techniques	Sun	3:00 pm - 4:00 pm	LA-Wasatch
237	Self-Consolidating Concrete	Mon	8:15 am - 12:15 pm	LA-Grand Ballroom B
238	Workability of Fresh Concrete	Tue	8:00 am - 10:00 am	GA-Vienna
238-A	Student Workability	Tue	10:00 am - 11:30 am	GA-Fontainbleau
239	Ultra-High Performance Concrete	Mon	3:30 pm - 6:00 pm	LA-Grand Ballroom B
239-A	Emerging Technology Report	Sun	1:00 pm - 3:00 pm	GA-Hermitage
239-C	Structural Design on UHPC	Mon	10:30 am - 12:30 pm	LA-Sinclair
239-D	Materials & Methods of Construction with UHPC	Mon	1:00 pm - 3:00 pm	GA-Hermitage
240	Natural Pozzolans	Mon	10:00 am - 1:00 pm	LA-Wyoming
240-TG1	Test Methods and Testing of Natural Pozzolans Task Group	Mon	8:00 am - 9:30 am	LA-Wyoming
241	Nanotechnology of Concrete	Sun	4:00 pm - 5:30 pm	LA-Olympus
241-A	The Application and Implementation of Nano-Engineered Concrete	Tue	1:00 pm - 3:00 pm	LA-Teton
241-SC	Steering Committee	Sun	11:00 am - 12:00 pm	LA-Snowbasin
241-TG1	Nanotechnology of Concrete M2	Sun	2:00 pm - 3:30 pm	GA-Versailles
242	Alternative Cements	Tue	12:00 pm - 2:00 pm	LA-Grand Ballroom B
301	Specifications	Sat	1:00 pm - 4:00 pm	GA-Grand Reception A
301	Specifications	Sun	1:00 pm - 4:00 pm	GA-Grand Reception A
301	Specifications	Mon	1:00 pm - 4:00 pm	GA-Envoy
301-A	General Requirements, Definitions, and Tolerances - Section 1	Sun	8:00 am - 9:30 am	GA-Venice
301-B	Formwork and Formwork Accessories - Section 2	Sat	6:30 pm - 8:30 pm	GA-Tuscany
301-C	Reinforcement and Reinforcement Supports - Section 3	Sat	4:30 pm - 6:30 pm	GA-Grand Reception A
301-D	Concrete Mixtures - Section 4	Sun	8:00 am - 9:30 am	GA-Provence
301-E	Handling, Placing, and Constructing - Section 5	Sat	4:30 pm - 6:00 pm	GA-Tuscany
301-F	Architectural Concrete - Section 6	Sun	10:30 am - 12:30 pm	LA-Olympus
301-G	Lightweight Concrete - Section 7	Sun	8:00 am - 9:00 am	LA-Arizona
301-H	Mass Concrete - Section 8	Sun	9:30 am - 11:00 am	GA-Versailles
301-I	Post-Tensioned Concrete - Section 9	Sun	8:00 am - 9:30 am	GA-Versailles
301-J	Shrinkage Compensating Concrete - Section 10	Sun	8:00 am - 9:30 am	LA-Snowbasin
301-K	Industrial Floor Slabs - Section 11	Sun	9:30 am - 11:00 am	LA-Snowbasin

Numerical Committee Meeting Listing

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

GA = Grand America LA = Little America

Code	Committee	Day	Time	Room Name
301-L	Tilt-Up Construction - Section 12	Sun	7:30 am - 9:30 am	GA-Fontainbleau
301-SC	Spec-Steering Committee	Sat	11:30 am - 1:00 pm	GA-Grand Reception A
302	Construction of Concrete Floors	Mon	8:30 am - 1:00 pm	GA-Imperial Ballroom A
303	Architectural Cast-in-Place	Mon	8:30 am - 11:30 am	LA-Sun Valley
304	Measuring/Mix/Trans/Placing	Mon	11:30 am - 1:00 pm	LA-Grand Ballroom C
304-F	Measuring/Mixing-Volumetric	Mon	10:00 am - 10:30 am	LA-Cheyenne
305	Hot Weather	Sun	2:00 pm - 4:00 pm	LA-Olympus
306	Cold Weather	Tue	8:30 am - 11:00 am	GA-Murano
307	Chimneys	Mon	2:00 pm - 5:00 pm	LA-Wasatch
308	Curing	Wed	10:00 am - 1:00 pm	GA-Venezia
308-A	Curing-Guide	Wed	8:00 am - 10:00 am	GA-Venezia
308-B	Curing-Specifications	Tue	4:00 pm - 5:30 pm	LA-Wyoming
309	Consolidation	Sun	3:00 pm - 4:30 pm	GA-Embassy
310	Decorative Concrete	Sun	3:00 pm - 5:30 pm	GA-Imperial Ballroom D
310/308-TG2	Curing Decorative Concrete Joint TG	Sun	2:00 pm - 3:00 pm	GA-Imperial Ballroom D
310-J	Polished Finishes	Tue	10:00 am - 12:30 pm	LA-Grand Ballroom C
311	Inspection	Tue	12:30 pm - 2:30 pm	GA-Envoy
313	Bins and Silos	Mon	8:30 am - 5:00 pm	LA-Tucson
314	Simplified Design of Buildings	Sun	8:30 am - 10:30 am	LA-Tucson
315	Detailing of Concrete Reinforcement	Sun	2:00 pm - 5:00 pm	LA-Wyoming
318	Building Code	Wed	8:00 am - 6:00 pm	GA-Imperial Ballroom B
318-A	General Concrete Construction	Tue	1:30 pm - 6:00 pm	GA-Fontainbleau
318-B	Anchorage and Reinforcement	Mon	2:00 pm - 5:00 pm	GA-Grand Reception A
318-B	Anchorage and Reinforcement	Tue	8:00 am - 12:30 pm	LA-Grand Ballroom A
318-C	Serviceability/Safety	Tue	8:00 am - 12:30 pm	LA-Idaho
318-D	Members	Tue	1:30 pm - 6:00 pm	GA-Grand Reception A
318-E	Section and Member Strength	Mon	10:00 am - 1:00 pm	GA-Grand Reception C
318-E	Section and Member Strength	Tue	7:30 am - 12:30 pm	LA-Wyoming
318-F	Foundations	Tue	8:00 am - 12:30 pm	GA-Imperial Reception C
318-G	Precast and Prestressed Concrete	Tue	8:00 am - 12:30 pm	GA-Imperial Ballroom C
318-H	Seismic Provisions	Tue	1:30 pm - 6:00 pm	LA-Grand Ballroom A
318-J	Joints and Connections	Tue	1:30 pm - 6:00 pm	GA-Grand Reception C
318-L	International Liaison	Mon	2:30 pm - 4:00 pm	GA-Tuscany
318-N	Nonlinear Dynamic Analysis	Sun	1:00 pm - 5:00 pm	LA-Idaho
318-R	High Strength Reinforcement	Mon	10:00 am - 1:00 pm	GA-Fontainbleau
318-R	High Strength Reinforcement	Tue	1:30 pm - 6:00 pm	GA-Venezia
318-S	Spanish Translation	Mon	11:00 am - 12:30 pm	LA-Teton
325	Pavements	Tue	3:30 pm - 5:30 pm	GA-Murano
325-A	Pavements-Design	Tue	9:00 am - 10:00 am	LA-Sun Valley
325-C	Pavements-Prestressed and Precast	Tue	10:30 am - 11:30 am	LA-Cheyenne
325-E	Accelerated Paving	Tue	2:00 pm - 3:30 pm	GA-Bagatelle
325-F	Concrete Pavement Overlays	Tue	12:00 pm - 1:00 pm	GA-Imperial Ballroom D
325-TG1	Task Group on Thin Concrete Pavements	Tue	1:00 pm - 2:00 pm	GA-Imperial Reception C
327	RCC Pavements	Tue	11:00 am - 1:00 pm	GA-Venezia
329	Performance Criteria for Ready-Mixed Concrete	Wed	9:30 am - 11:30 am	GA-Murano
330	Parking Lots and Site Paving	Wed	8:00 am - 12:00 pm	GA-Savoy
332	Residential Concrete	Tue	1:30 pm - 5:00 pm	GA-Versailles
332-B	Residential Concrete Materials and Placement	Sun	4:00 pm - 5:30 pm	LA-Flagstaff
332-D	Residential Concrete-Footings & Foundation Walls	Tue	8:30 am - 11:30 am	LA-Sawtooth
332-E	Residential Concrete-Above Grade Walls	Tue	11:30 am - 1:00 pm	LA-Teton

Numerical Committee Meeting Listing

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GA = Grand America LA = Little America

Code	Committee	Day	Time	Room Name
332-F	Residential Concrete-Slabs	Tue	10:30 am - 12:00 pm	LA-Sun Valley
334	Shells	Mon	5:00 pm - 7:00 pm	LA-Arizona
336	Footings, Mats and Drilled Piers	Sun	1:30 pm - 5:30 pm	GA-Venice
341	Earthquake-Resistant Bridges	Sun	3:00 pm - 5:00 pm	LA-Arizona
341-A	Earthquake Resistant Bridges-Columns	Sun	1:00 pm - 3:00 pm	LA-Arizona
341-C	Earthquake Resistant Bridges-Retrofit	Sun	9:00 am - 11:00 am	LA-Arizona
341-D	Earthquake Resistant Bridges-Performance-Based Seismic Design	Sun	11:00 am - 1:00 pm	LA-Arizona
342	Bridge Evaluation	Sun	8:30 am - 10:30 am	GA-Imperial Ballroom D
343	Bridge Design	Mon	10:00 am - 12:00 pm	LA-Olympus
345	Bridge Construction, Maintenance, and Repair	Sun	1:30 pm - 3:30 pm	GA-Sussex
347	Formwork for Concrete	Sat	2:00 pm - 7:00 pm	GA-Audubon
347	Formwork for Concrete	Sun	8:00 am - 12:00 pm	GA-Envoy
348	Structural Reliability and Safety	Mon	2:00 pm - 3:30 pm	GA-Bagatelle
349	Nuclear Structures	Tue	1:30 pm - 5:00 pm	GA-Grand Salon
349-A&B	Nuclear Structures-Materials & Design	Mon	1:00 pm - 4:30 pm	LA-Grand Ballroom C
349-C	Nuclear Str-Anchorage	Mon	8:00 am - 11:00 am	LA-Grand Ballroom C
350	Environmental Structures	Wed	8:00 am - 4:00 pm	GA-Imperial Ballroom C-D
350-A	Env Str-General & Concrete	Tue	1:00 pm - 5:00 pm	GA-Sussex
350-B	Env Str-Durability	Mon	8:30 am - 1:00 pm	GA-Hermitage
350-C	Env Str-Reinf & Development	Sun	8:30 am - 11:30 am	LA-Sawtooth
350-D	Env Str-Structural	Mon	8:30 am - 6:30 pm	LA-Flagstaff
350-E	Env Str-Precast/Prestressed	Sun	1:30 pm - 5:30 pm	LA-Sawtooth
350-F	Env Str-Seismic	Tue	8:30 am - 3:00 pm	LA-Snowbasin
350-G&K	Tightness Testing & Hazardous Materials	Mon	8:00 am - 12:00 pm	GA-Embassy
350-H	Env Str-Editorial	Mon	12:30 pm - 2:00 pm	GA-Ambassador
350-J	Env Str-Education	Tue	1:00 pm - 3:00 pm	GA-Tuscany
350-L	Env Str-Specification	Tue	5:00 pm - 6:00 pm	GA-Tuscany
350-SC	Env Str-Steering Comm	Sun	11:30 am - 1:00 pm	LA-Sawtooth
351	Foundations for Equipment and Machinery	Tue	10:00 am - 12:00 pm	GA-Imperial Ballroom D
351-C	Equipment Foundations - Dynamic Foundations	Mon	4:30 pm - 6:30 pm	GA-Provence
351-D	Design Provisions for Heavy Industrial Equipment and Machinery Concrete Support Structures	Tue	8:30 am - 10:00 am	GA-Fontainbleau
352	Joints	Sun	2:00 pm - 5:00 pm	GA-Envoy
352-TG1	Slab-Column Joints & Connections	Mon	12:00 pm - 1:30 pm	GA-Sussex
352-TG2	Beam-Column Joints & Connections	Mon	1:30 pm - 3:00 pm	GA-Sussex
355	Anchorage	Sun	1:30 pm - 5:00 pm	GA-Grand Salon
357	Offshore and Marine	Tue	8:00 am - 11:00 am	LA-Wasatch
357-TG1	ACI 357R-84 Revision	Mon	8:00 am - 10:00 am	LA-Cheyenne
357-TG1	ACI 357R-84 Revision	Tue	1:00 pm - 3:00 pm	GA-Venice
357-TG2	ACI 357.2R-10 Revision	Sun	1:00 pm - 3:00 pm	LA-Tucson
357-TG3	ACI 357.3R-14 Revision	Sun	3:00 pm - 5:00 pm	LA-Tucson
360	Slabs on Ground	Sun	12:30 pm - 2:00 pm	LA-Olympus
360	Slabs on Ground	Mon	2:00 pm - 6:30 pm	GA-Imperial Ballroom A
362	Parking Structures	Mon	1:00 pm - 5:00 pm	GA-Grand Reception C
362-A	Updating Guide to Struct Maint of Pkg Struct Doc	Sun	1:00 pm - 4:00 pm	LA-Flagstaff
363	High-Strength	Sun	2:30 pm - 5:00 pm	GA-Venezia
363-A	High-Strength Lightweight Concrete	Tue	3:30 pm - 5:00 pm	GA-Belvedere
364	Rehabilitation	Mon	1:00 pm - 4:00 pm	LA-Wyoming
364-A&C	Rehabilitation-Evaluation & Rehabilitation-TechNotes	Mon	9:30 am - 11:00 am	LA-Sawtooth

Numerical Committee Meeting Listing

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GA = Grand America LA = Little America

Code	Committee	Day	Time	Room Name
364-TG1	Rehabilitation Guide	Mon	11:00 am - 12:00 pm	GA-Sussex
365	Service Life	Mon	9:00 am - 11:00 am	GA-Bagatelle
369	Seismic Repair and Rehab	Mon	2:00 pm - 6:00 pm	GA-Imperial Reception C
369-A	General Provision	Sun	10:00 am - 12:00 pm	LA-Wyoming
369-C	Frames	Sun	1:00 pm - 3:00 pm	GA-Vienna
369-D	Walls	Sun	10:00 am - 12:00 pm	GA-Vienna
369-E	Diaphragms and Foundations	Sun	3:00 pm - 5:30 pm	GA-Vienna
369-F	Retrofit	Sun	3:00 pm - 5:30 pm	GA-Bagatelle
370	Blast and Impact Load Effects	Sun	3:00 pm - 5:00 pm	GA-Murano
371	Elevated Tanks with Concrete Pedestals	Mon	3:00 pm - 5:00 pm	LA-Sawtooth
372	Tanks Wrapped with Wire/Strand	Tue	3:00 pm - 5:00 pm	GA-Venice
374	Seismic Design	Mon	8:30 am - 12:00 pm	GA-Envoy
375	Design for Wind Loads	Mon	1:00 pm - 3:30 pm	LA-Idaho
376	RLG Containment Structures - M1	Mon	1:00 pm - 4:00 pm	GA-Embassy
376-01	Steering Subcommittee	Sun	10:30 am - 12:00 pm	GA-Ambassador
376-A	Code, Education & Publication Subcommittee	Mon	10:00 am - 12:00 pm	LA-Wasatch
376-B	Materials Subcommittee	Sun	1:00 pm - 3:00 pm	GA-Ambassador
376-C	Analysis Subcommittee	Sun	3:00 pm - 5:00 pm	GA-Ambassador
376-D	Design & Construction Subcommittee	Mon	8:00 am - 10:00 am	GA-Fontainbleau
377	Performance-Based Structural Integrity & Resilience of Concrete Structures	Mon	10:00 am - 12:30 pm	GA-Versailles
378	Concrete Wind Turbine Towers	Mon	8:15 am - 9:30 am	LA-Sawtooth
408	Bond and Development of Steel Reinforcement	Sun	8:30 am - 11:30 am	GA-Grand Reception A
408-A	Mechanical Reinforcing Bar Anchorages and Splices	Sun	1:30 pm - 3:30 pm	GA-Fontainbleau
421	Reinf Slabs	Sun	10:00 am - 1:00 pm	LA-Idaho
423	Prestressed	Mon	8:30 am - 12:30 pm	LA-Idaho
423-C	Corrsn & Repr Grtd Tendons	Sun	3:00 pm - 5:00 pm	LA-Snowbasin
423-F	Sustainable Prestressed Concrete	Sun	1:00 pm - 3:00 pm	LA-Snowbasin
423-G	Specification for Unbonded Single-Strand Tendon Materials	Mon	4:00 pm - 6:00 pm	LA-Uintah
423/445	Adhoc Grp on Shear in Prestress Conc	Sun	4:00 pm - 5:30 pm	LA-Wasatch
423-TG2	Anchorage Zone Task Group	Sun	4:00 pm - 5:30 pm	GA-Grand Reception A
435	Deflection	Mon	3:00 pm - 6:00 pm	GA-Sussex
437	Strength Evaluation	Mon	10:30 am - 12:30 pm	GA-Tuscany
439	Steel Reinforcement	Mon	8:30 am - 10:30 am	LA-Teton
439-A	Steel Reinf-Wire	Sun	3:30 pm - 5:00 pm	GA-Versailles
440	Fiber-Reinforced Polymer	Tue	8:00 am - 11:00 am	GA-Imperial Ballroom B
440-E	FRP-Prof Education	Mon	11:30 am - 1:00 pm	LA-Grand Ballroom A
440-F	FRP-Repair Strengthening	Mon	1:00 pm - 4:00 pm	LA-Grand Ballroom A
440-H	FRP-Reinforced Concrete	Sun	2:30 pm - 5:00 pm	GA-Imperial Ballroom B
440-H	FRP-Reinforced Concrete	Mon	8:00 am - 10:00 am	LA-Grand Ballroom A
440-I	FRP-Prestressed Concrete	Sun	10:30 am - 12:00 pm	GA-Imperial Ballroom B
440-K	FRP-Material Characteristics	Mon	10:00 am - 11:30 am	LA-Grand Ballroom A
440-M	FRP-Repair of Masonry Str	Sun	8:00 am - 10:30 am	GA-Imperial Ballroom B
440-TG3	Anchorage Task Group	Sun	1:00 pm - 2:30 pm	GA-Imperial Ballroom B
441	Reinforced Columns	Mon	11:30 am - 2:00 pm	LA-Sun Valley
441-B	Lateral Reinforcement	Mon	9:00 am - 10:00 am	GA-Ambassador
444	Structural Health Monitoring and Instrumentation	Tue	8:00 am - 11:00 am	GA-Venezia
445	Shear and Torsion	Mon	2:00 pm - 6:00 pm	GA-Grand Ballroom D
445-A	Shear & Torsion-Strut & Tie	Sun	9:30 am - 12:30 pm	GA-Tuscany
445-B	Shear & Torsion-Seismic Shear	Sun	9:30 am - 11:30 am	LA-Wasatch

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Code	Committee	Day	Time	Room Name
445-C	Shear & Torsion-Punching Shear	Sun	1:00 pm - 3:00 pm	LA-Wasatch
445-D	Shear & Torsion-Database	Mon	11:00 am - 1:00 pm	LA-Cheyenne
445-E	Shear & Torsion-SOA Torsion	Sun	12:30 pm - 2:00 pm	GA-Tuscany
446	Fracture Mechanics	Mon	8:30 am - 10:00 am	GA-Grand Ballroom D
447	Finite Element Analysis	Mon	11:00 am - 1:30 pm	GA-Imperial Reception C
506	Shotcreting	Tue	8:30 am - 11:30 am	GA-Envoy
506-A	Shotcreting-Evaluation	Mon	8:30 am - 10:00 am	GA-Venice
506-B	Shotcreting-Fiber Reinforced	Mon	2:00 pm - 3:30 pm	GA-Versailles
506-C	Shotcreting-Guide	Mon	10:00 am - 11:30 am	GA-Venice
506-E	Shotcreting-Specifications	Mon	12:30 pm - 2:00 pm	GA-Versailles
515	Protective Systems	Tue	9:00 am - 11:00 am	LA-Tucson
522	Pervious Concrete	Tue	8:00 am - 11:00 am	GA-Grand Salon
523	Cellular Concrete	Tue	8:30 am - 10:30 am	LA-Arizona
524	Plastering	Mon	8:30 am - 10:00 am	GA-Provence
526	Autoclaved Aerated Concrete	Mon	2:00 pm - 6:00 pm	GA-Ambassador
526	Autoclaved Aerated Concrete	Tue	10:30 am - 1:00 pm	LA-Arizona
533	Precast Panels	Mon	8:30 am - 10:00 am	LA-Uintah
543	Piles	Mon	8:30 am - 11:30 am	GA-Belvedere
544	Fiber-Reinforced Concrete	Tue	3:00 pm - 5:30 pm	LA-Grand Ballroom C
544-A	FRC-Production & Applications	Mon	2:00 pm - 5:00 pm	LA-Olympus
544-C	FRC-Testing	Tue	2:00 pm - 3:00 pm	LA-Grand Ballroom C
544-D	FRC-Structural Uses	Tue	12:00 pm - 1:30 pm	GA-Grand Salon
544-E	FRC-Mechanical Properties	Mon	5:00 pm - 6:30 pm	LA-Olympus
544-F	FRC-Durability	Tue	10:30 am - 12:00 pm	GA-Grand Reception A
544-SC	FRC-Steering Committee	Mon	8:30 am - 10:00 am	GA-Grand Reception C
546	Repair	Mon	9:30 am - 12:00 pm	GA-Grand Reception A
546-D	Bagged Materials	Mon	8:00 am - 9:30 am	GA-Grand Reception A
546-E	Corrosion Studies	Sun	10:00 am - 11:30 am	GA-Fontainebleau
548	Polymers and Polymer Adhesives for Concrete	Tue	8:30 am - 11:30 am	GA-Provence
548-A	Polymers-Overlays	Mon	1:00 pm - 3:00 pm	LA-Snowbasin
548-B	Adhesives in Concrete	Mon	3:00 pm - 5:00 pm	LA-Snowbasin
548-TG1	Updating Guide for the Use of Polymers in Concrete	Mon	11:00 am - 12:30 pm	LA-Sawtooth
549	Thin Reinforced Cementitious Products and Ferrocement	Sun	12:00 pm - 2:00 pm	LA-Wyoming
549-L	Liaison	Sun	8:00 am - 12:00 pm	GA-Belvedere
550	Precast Structures	Sun	3:00 pm - 5:00 pm	GA-Savoy
551	Tilt-Up	Sun	9:00 am - 11:00 am	GA-Imperial Ballroom C
552	Cementitious Grouting	Tue	4:00 pm - 5:30 pm	LA-Sun Valley
552-TG1	Additive Manufacturing	Mon	1:30 pm - 3:00 pm	GA-Fontainebleau
555	Concrete with Recycled Materials	Mon	5:00 pm - 6:30 pm	GA-Vienna
560	Design & Constr ICFs	Tue	8:30 am - 10:30 am	GA-Grand Reception A
562	Evaluation, Repair, and Rehab	Sun	1:00 pm - 5:00 pm	GA-Imperial Ballroom A
562-A	General	Sat	12:00 pm - 4:00 pm	GA-Provence
562-B	Loads	Sun	8:00 am - 10:00 am	LA-Uintah
562-C	Evaluation	Sat	4:00 pm - 5:00 pm	GA-Sussex
562-C	Evaluation	Sat	6:00 pm - 8:00 pm	GA-Sussex
562-D	Design	Sat	9:00 am - 12:00 pm	GA-Sussex
562-E	Coordination	Mon	8:00 am - 10:00 am	LA-Wasatch
562-F	Durability	Sat	6:00 pm - 9:00 pm	GA-Hermitage
563	Specs Repair of Struct Concrete in Buildings	Tue	1:00 pm - 5:00 pm	LA-Arizona

Sessions & Events

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Saturday, March 24, 2018

8:00 pm – 9:30 pm

Student Networking Reception—GA-Riviera

Sponsored by ACI Student and Young Professional Activities Committee

The ACI Student and Young Professional Activities Committee (SYPAC) invites all students, faculty advisors, and mentors to the Student Networking Reception. This casual and fun environment is an opportunity to engage with future concrete professionals and professors. Students will be entered into a drawing for door prizes. In addition, pizza and beverages will be provided for free on a first-come, first-served basis.

Sunday, March 25, 2018

8:00 am – 9:00 am

Convention Orientation Breakfast—GA-Savoy

Moderated by David A. Lange, University of Illinois

First-time Convention attendees are invited to join ACI Vice President David Lange 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 Concrete Convention and Exposition has to offer.

8:30 am – 9:30 am

MINI SESSION: Rating Methods for Defining Performance of Existing Concrete Bridges—GA-Imperial Ballroom D

Sponsored by ACI Committees 341, 342, 343, and 345
Moderated by Khatereh Vaghefi, WSP USA; and Nestor R. Rubiano, HNTB Corporation

The main objective of this session is to provide an overview of methodologies for rating existing concrete bridge components including bridge deck, superstructure, and substructure, using both LRFR and LFR approaches. Presentations will include case studies of load rating concrete bridges with various structural configurations such as typical prestressed I-girders, reinforced and prestressed multi-cell box girder bridges, segmental concrete bridges, bridges with large horizontal curvatures and complex geometry (for example, concrete arch and rigid frame bridges), and bridges with insufficient plans or details. Presentations will also emphasize relevant refined analysis methods that extend beyond traditional AASHTO rating methods, such as finite element modeling, grillage modeling, and diagnostic load testing. This session will be of interest to bridge owners, operators, design engineers, and researchers.

8:30 am: Load Rating of Multi-Cell Concrete Box Girder Bridges Using Grillage Modeling Method

Khatereh Vaghefi, WSP USA

8:50 am: Load Rating of the Historic Adamsville Bridge in Gallia County, Ohio

Michael Lenett, TranSystems Corporation

9:10 am: Load Rating of Prestressed Concrete Bridges Using Field Tests

Eli Hernandez, Missouri University of Science and Technology; and John J. Myers, Missouri University of Science and Technology



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PDH Codes: _____

9:00 am – 3:00 pm

Student Fiber-Reinforced Concrete Bowling Ball Competition—GA-Grand Ballroom

Sponsored by ACI Committee S801 and Subcommittee 544-A
Moderated by Walter H. Flood IV, Flood Testing Labs Inc.

Students will eagerly form and construct fiber-reinforced bowling balls, hoping that they don't strike out in competition against their peers. All will enjoy seeing the students knock down pins with their concrete bowling balls, prior to loading their balls within an inch of failure. Successful student teams will learn about advanced casting processes to produce a round concrete ball, the working properties of fiber-reinforced concrete, and the art of picking up a 7-10 split, performing under extreme pressure, working as part of a team, and the benefits of fiber reinforcing. Attendees are encouraged to stop by the competition to see these teams compete against one another as they strike and crush their bowling balls to within an inch of its strength. This competition is sponsored by S801 Student Activities and 544-0A FRC-Education Production Application.

10:00 am – 11:30 am

ACI International Forum—GA-Audubon

Chaired by Vice President David A. Lange, University of Illinois

The ACI International Forum provides an opportunity for convention attendees to meet and learn from ACI international partners, chapter representatives, and ACI leadership about worldwide events, activities, initiatives, and common themes of interest to the concrete materials, design, and construction industry.

Speakers include: Johan Silfwerbrand, Swedish Concrete Association; Michael van Koevorden, Concrete Institute of Australia; Ken Hover, ACI Past President; Robert Lewis, Institute of Concrete Technology-UK; Raman Mangabhai, Institute of Concrete Technology-UK; Radhika Marikan, India Chapter – ACI; Hong-Gun Park, Korea Concrete Institute; Paolo Casadei, Italy Chapter – ACI; Min-Yuan Cheng, Taiwan Concrete Institute; Antoni Cladera, Vice President, Spanish Structural Engineering Association; and Kamal Khayat, RILEM.

Sessions & Events

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Sunday, March 25, 2018

11:30 am – 1:30 pm

✓ *International Lunch—GA-Savoy*

\$30 U.S. per person

Topic: Road to New Transport Infrastructure—Super Express Maglev and Extended Airport

Sponsored by ACI International Advisory Committee

Speaker: Koichi Maekawa, University of Tokyo

Featured speaker Professor Koichi Maekawa will give a presentation on “Road to New Transport Infrastructure—Super Express Maglev and Extended Airport.” This presentation will provide an overview of the Maglev super-express train and ocean-extended Tokyo International Airport as national challenges to a new transport infrastructure. An overview of Maglev linear-Shinkansen construction of approximately \$30 billion is presented to meet the increasing traffic demand and business, and the new conceptual design for concrete structures and new performance requirements for materials will be reported. Another recent achievement to meet the challenge of inbound transport is the extended Tokyo Haneda International Airport. It is truly one monolithic non-jointed reinforced concrete deck of 0.6 km² and has become the world’s first non-crack runway structure built above the ocean. The lifetime performance-based design/contract and the new construction system with super-quality concrete are the technical highlight, and the crack control and the fatigue damage assessment are underlined. The social efficiency of these transport infrastructures will be thought about together with the engineering interest.

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

Controlling Fresh Properties of SCC for Adequate Placement—GA-Milano

Sponsored by ACI Committees 237 and 238

Moderated by Dimitri Feys, Missouri University of Science and Technology; and Celik Ozyildirim, VDOT

Self-consolidating concrete (SCC) is known to be more sensitive to changes in constituent elements, mixture design, and mixing procedure, which can have significant consequences on placement. Especially controlling the water content, including the moisture content of the sand, is a challenge, limiting the practical implementation of SCC. This session will reveal different strategies to control the variation in fresh properties, making the session suitable to material producers, contractors, engineers, owners, and academics. By attending this session, participants will be informed on: variations in concrete constituents, mixture design, mixing, transportation, and placement procedures influencing fresh SCC properties; which countermeasures can be taken to control these variations; the importance of an adequate quality control system for the successful implementation of SCC; and future perspectives in actively controlling fresh SCC properties.

1:00pm: The Perfect SCC Project

G. Terry Harris, GCP Applied Technologies

1:20 pm: Safer Concrete Pumping and Casting by Active Rheology and Stiffening Control

Geert De Schutter, Ghent University

1:40 pm: Monitoring SCC Performance During Production and Determining Adjustments

Joseph A. Daczko, BASF Corporation

2:00 pm: Robustness of Self-Consolidating Concrete Incorporating Different Viscosity-Enhancing Admixtures

Kamal H. Khayat, Missouri University of Science and Technology

2:20 pm: Breaking the Ice: Controlling SCC in Hot Water

Lloyd Keller, EllisDon Corporation; and Stacia Van Zetten, EllisDon Corporation

2:40 pm: Controlling Fresh Properties of SCC: Why Mixing Energy and Placement Matter

Dimitri Feys, Missouri University of Science and Technology



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PDH Codes: _____

1:00 pm – 3:00 pm

How to Evaluate ASR Mitigation Performance of High-Alkali Pozzolans—GA-Audubon

Sponsored by ACI Committees 232 and 240

Moderated by Farshad Rajabipour, Penn State University; and Robert E. Neal, Lehigh Portland Cement Company

Not all pozzolans are similarly effective against alkali-silica reaction (ASR). It is of utmost practical importance to determine the required dosage of a pozzolan to mitigate ASR in concrete containing given reactive aggregates. Although standard tests and procedures are available for this purpose, reliable and practical options to evaluate high-alkali pozzolans (for example, fly ashes, and natural and glass pozzolans with Na₂O_{eq} > 4.0%) are limited. This session compares the results, benefits, and limitations of available methods with the goal of identifying best practices to evaluate the ASR mitigation of high-alkali pozzolans. The session will be especially valuable to owners, engineers, and material suppliers.

1:00 pm: Assessing ASR Mitigation in Fly Ash with High Alkali Content

Thano Drimalas, University of Texas at Austin; Jason H. Ideker, Oregon State University; and Kevin J. Folliard, University of Texas at Austin

1:20 pm: The Effect of High-Alkali Pozzolans on Alkali-Silica Reaction in Concrete

Michael Thomas, University of New Brunswick; Mahipal Kasaniya, University of New Brunswick; and Ted Moffatt, University of New Brunswick

1:40 pm: ASR Testing of High-Alkali Natural Pozzolans

Ryan Kalina, University of Texas at Austin; Maria G. Juenger, University of Texas at Austin; Raissa P. Ferron, University of Texas at Austin; and Saif Al-Shmaisani, University of Texas at Austin

2:00 pm: Testing the ASR Mitigation Potential of High-Alkali Glass Powder

Jared R. Wright, Walker Consultants

2:20 pm: Significance of Test Methods in Evaluating the Performance of Some High-Alkali Pozzolans (Rice-Husk Ash and Ground Glass) in Mitigating Alkali-Silica Reaction

Prasad Rangaraju, Clemson University



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PDH Codes: _____

Sessions & Events

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1:00 pm – 3:00 pm

Shear in Structural Concrete, Part 1 of 2—GA-Riviera

Sponsored by ACI Committee 445

Moderated by Abdeldjelil Belarbi, University of Houston; and Denis Mitchell, McGill University

This symposium honoring Michael P. Collins titled “Shear in Structural Concrete” will discuss various aspects of shear design and evaluation of structures. The objective is to make ACI members aware of important behavioral aspects of structural concrete members subjected to shear. This symposium would appeal to structural designers, researchers, and students studying concrete design. This is a hot topic due to the tremendous interest already shown in discussions at ACI Committee 445 meetings and the need to consider modifications to the ACI code.

1:00 pm: Reinforcing Bridge I-Girders Using FRP Shear Strips

Denis Mitchell, McGill University; Rico Massa, McGill University; and William D. Cook, McGill University

1:17 pm: The Toronto Shear Size Effect Series

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

1:34 pm: The Modified Compression Field Theory: Then and Now

Frank J. Vecchio, University of Toronto; and Vahid Sadeghian, University of Toronto

1:51 pm: The Role of Measurement on Our Understanding of Structural Concrete

Daniel Kuchma, Tufts University

2:08 pm: Does the Size Effect Exist in Reinforced Masonry?

Edward G. Sherwood, Carleton University; and Salah Sarhat, Queen’s University

2:25 pm: Design of Concrete Wall Buildings for Seismic Shear—The Canadian Code Provisions

Perry Adebar, University of British Columbia

2:42 pm: Deflection Control of Concrete Beams Accounting for Shear Deformations

Adam Lubell, Read Jones Christoffersen Ltd.



PDH Codes: _____

2:30 pm – 3:30 pm

MINI SESSION: Ensuring a Successful High-Strength Concrete Project—GA-Venezia

Sponsored by ACI Committee 363

Moderated by William M. Hale, University of Arkansas

This session highlights the successful use of high-strength concrete (HSC). The session also includes a historical overview of HSC, information on developing HSC mixture proportions, and best practices on testing HSC.

2:30 pm: A Historical Perspective of High-Strength Concrete (HSC) Throughout the Decades

John J. Myers, Missouri University of Science and Technology

2:45 pm: An Update on High-Strength Concrete Aspects for the One-Kilometer-Tall Jeddah Tower

Robert C. Sinn, Thornton Tomasetti Inc.

3:00 pm: High-Strength Concrete in Practice: In-Situ Strength versus Cylinder Strength

R. Brett Holland, Simpson Gumpertz & Heger, Inc.; and Matthew R. Sherman

3:15 pm: ASTM Static Modulus of Elasticity Round Robin Results Summary: Chicago High-Rise Update

Walter H. Flood IV, Flood Testing Labs Inc.



PDH Codes: _____

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Sunday, March 25, 2018

3:30 pm – 5:30 pm

Chemical Admixture Compatibility—GA-Milano

Sponsored by ACI Committees 212 and 236

Moderated by Paramita Mondal, University of Delaware; and Nathan A. Tregger, GCP Applied Technologies Inc.

The interaction between chemical admixtures and components of concrete such as cement, supplementary cementitious materials, and pore solution has significant effect on the effectiveness of chemical admixture in controlling performance including rheology, setting, and microstructure development. The session will discuss possible compatibility issues between chemical admixtures and other components of concrete highlighting the physical and chemical phenomena affecting the adsorption of chemical admixtures on binder materials, stability of chemical admixtures in pore solution, interference with cement hydration and the resulting effects on fresh and hardened properties of cement paste, mortar, and concrete. The session should be of interest to researchers, concrete engineers, material suppliers, and students.

3:30 pm: A Practitioner's Approach to Mitigating the Potential for Catastrophic Concrete Incompatibility

Tim Cost, V.T. Cost, PE, FACI

3:45 pm: Delayed Addition of Water Reducers

G. Terry Harris, GCP Applied Technologies; and Nathan A. Tregger, GCP Applied Technologies

4:00 pm: Role of Processing on Admixture Interactions in Cement Paste

Raissa Ferron, University of Texas at Austin; and Han Dongyeop, University of Texas

4:15 pm: Study of Admixtures by Adsorption, Rheology, Calorimetry, Slump, and Strength

Claudiane Ouellet-Plamondon, ETS

4:30 pm: Organic Admixtures and Cement Particles: Competitive Adsorption and its Macroscopic Rheological Consequences

Nicolas Roussel, IFSTTAR

4:45 pm: Need for New Admixtures to be Used in Alkali-Activated Binders

Paramita Mondal, University of Delaware; and Palash Badjatya, University of Illinois at Urbana-Champaign

5:00 pm: Machine Learning of Superplasticizer Compatibility with Supplementary Cementitious Materials

Newell Washburn, Carnegie Mellon University; Christopher Childs, Carnegie Mellon University; Kimberly E. Kurtis, Georgia Institute of Technology; and Renee Rios, Carnegie Mellon University

5:15 pm: Chemical Admixture and Supplementary Cementitious Material Interactions and Incompatibilities

Prannoy Suraneni, University of Miami; and Sivakumar Ramanathan, University of Miami



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PDH Codes: _____

3:30 pm – 5:30 pm

Seismic Repair and Retrofit of Concrete Bridges—GA-Audubon

Sponsored by ACI Committee 441 and Subcommittee 341-C
Moderated by Shahria Alam, University of British Columbia

Bridges are essential components of transportation systems. The failure and damage of bridges not only affects its immediate users, but also brings serious aftermath to earthquake events. With the increase in transportation demand and more stringent seismic performance requirements, bridge retrofit and repair is an important task for engineers and researchers. Bridge retrofits usually involve functional upgrades (such as deck widening) and seismic upgrades (such as strengthening seismic load path). The effects of the two upgrades are usually coupled and need to be analyzed. Many of the existing bridges do not meet the requirements in current design codes and thus cannot be analyzed using standard methods. Therefore, more sophisticated analysis and customized solution are needed. While providing structural upgrade solutions to seismic issues, engineers also need to reduce the interruption to the traffic as much as possible. Development and implementation of innovative retrofit and repair methods are expected to upgrade deficient bridges to current standards and minimize traffic interruption. The main objective of this session is to present results from recent research studies (experimental/numerical/analytical) and practical examples of existing bridge retrofit and repair. This session will provide a forum for practicing engineers and researchers to share and discuss the various issues related to design and construction issues of existing bridges.

3:30 pm: Rehabilitation of Longitudinal Joints of Double-Tee Bridges

Lucas M. Bohn, South Dakota State University; Mostafa Tazarv, South Dakota State University; and Nadim I. Wehbe, South Dakota State University

3:50 pm: Rapid Repair of Hollow-Core FRP-Concrete-Steel Columns

Mohamed A. ElGawady, Missouri University of Science and Technology; Ahmed Ghenni, Missouri University of Science and Technology; and Sujith Anumolu, Missouri University of Science and Technology

4:10 pm: Fragility Analysis of Retrofitted Multi-Column Bridge Bent Subjected to Near Fault and Far Field Ground Motion

Abu Hena Billah, University of British Columbia; and Shahria Alam, University of British Columbia

4:30 pm: Seismic Repairing of a Seismically Damaged Bridge Column with Low-Grade GFRP Material

M. Shahria Alam, University of British Columbia

4:50 pm: Retrofit and Rehabilitation of a 100-Year Old Historic Concrete Arch Bridge and Walls

Ebrahim Amirhormozaki, Kleinfelder Engineering; and Nathan Stuart Johnson, Cabling Salutations Inc.



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PDH Codes: _____

Sessions & Events

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GA = Grand America LA = Little America

3:30 pm – 5:30 pm

Shear in Structural Concrete, Part 2 of 2—GA-Riviera

Sponsored by ACI Committee 445

Moderated by Abdeldjelil Belarbi, University of Houston; and Denis Mitchell, McGill University

The session description for this session may be found in the Part 1 listing; refer to page 25.

3:30 pm: A Kinematic Approach for the Complete Shear Behavior of Short FRC Coupling Beams

Boyan Mihaylov, University of Liege; Jiam Liu, University of Liege; and Remy Lobet, University of Liege

3:47 pm: Towards the Development of Direct Crack-Based Assessment of Structures

Paolo Calvi, University of Washington; David Ruggiero, Read Jones Christoffersen Ltd.; and Giorgio T. Proestos, University of Toronto

4:04 pm: Floating Concrete Structures: The Need for Proper Design

Tor Ole Olsen, Dr.techn.oOlav Olsen

4:21 pm: Structural Engineering in the 21st Century: The Perspective of a University of Toronto Graduate

Oguzhan Bayrak, University of Texas

4:38 pm: Modeling Parameters in Punching Shear Finite Element Analysis of Concrete Slabs

Maria Anna Polak, University of Waterloo; Aikaterini Genikomsou, Queen's University; and Graeme J. Milligan, University of Waterloo

4:55 pm: Establishing the Shear Constitutive Laws of FRP-Strengthened RC Members

Abdeldjelil Belarbi, University of Houston; and Mehdi Zomorodian, University of Houston

5:12 pm: Sustained Loading Effects in Concrete Members without Shear Reinforcement

Joost Walraven, Delft Technical University; and Reza Sakhosh, Shell



PDH Codes: _____

4:00 pm – 5:30 pm

ACI Student Forum—GA-Imperial Ballroom C

Sponsored by the ACI Student and Young Professional Activities Committee

Moderated by Kanette S. Worlds, American Concrete Institute

The ACI Student Forum provides an opportunity for student chapters and competition teams to exchange ideas and best practices. Student speakers will deliver presentations about the activities and achievements of their student chapter or competition team. A limited number of presentations spots are available. Speakers may present as a group or an individual.

5:45 pm – 7:00 pm

Opening Session and Keynote Presentation—LA-Grand Ballroom A-C

The Opening Session is the official start to the ACI Convention and will begin with a welcome address by ACI President Khaled

Awad. Next, the emcee for the night, George Seegebrecht, will recognize new Honorary Members, Fellows, and 50-Year Members for their contributions to the concrete industry. Then our featured keynote speaker Nick Tasler will give a presentation on the science of decision making. Tasler is an internationally acclaimed thought leader, organizational psychologist, and the No. 1 best-selling author of four counter-intuitive books on the art and science of making decisions and leading change. This is an Opening Session you don't want to miss!

7:15 pm – 8:15 pm

Opening Reception and Awards Recognition—GA-Grand Ballroom

Immediately following the Opening Session and Keynote Presentation, attendees are invited to the exhibit hall for this evening reception. Congratulate Awardees, 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: Accelerated Bridge Construction—GA-Audubon

Sponsored by Hot Topic Committee
Moderated by Terri Taylor, HNTB Inc.

The Utah Department of Transportation (UDOT) has championed and widely implemented accelerated bridge construction (ABC), and the use of ABC is now common practice throughout the State of Utah. In the past, construction strategies had largely been evaluated based on the costs of materials and labor. However, Utah's highway users no longer prefer lowest-cost construction strategies, and therefore the way in which projects were evaluated and selected had to change to respond to their needs. Because Utah's highway users highly value their time, and since user costs are real costs incurred by the public, project cost evaluations must also consider the time of the highway users. The ABC Program met these needs. Its overall philosophy is driven by the public's demand to reduce congestion and increase safety. Its specific goals are to minimize traffic disruption, reduce on-site construction time, improve work zone safety and improve quality.

8:00 pm: Brief Introduction on UDOT and the Approach to ABC
Randall Park, Utah Department of Transportation

8:10 pm: Process to Implementation
Carmen Swanwick, Utah Department of Transportation

8:30 pm: Insight From a Contractor's Perspective
Eric Wells, Granite Construction

8:50 pm: Insight into the ABC Program in Utah From the Fabricator Perspective
Lee Wegner, Forterra Structural Precast

9:10 pm: Nashville FastFix8—ABC/CMGC Overview, Challenges, and Lessons Learned
Oscar Antommattei, Kiewit Corporation

9:30 pm: Panel Discussion/Q&A



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Sessions & Events

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Sunday, March 25, 2018

9:00 pm – 10:30 pm

Young Professional Networking Event—GA-Oak Room

Sponsored by the ACI Student and Young Professional Activities Committee

The ACI Student and Young Professional Activities Committee invites all young professional and mentors for a casual networking exchange following the Opening Reception. Attendees will meet with fellow young professionals, Student and Young Professional Activities Committee (SYPAC) members, and establish connections with ACI mentors. Please wear your ACI convention badge and bring your business card to be entered into a drawing for door prizes.

Monday, March 26, 2018

6:30 am – 8:00 am

Workshop for Technical Committee Chairs (by invitation only)—GA-Imperial Ballroom B

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—

GA-Grand Ballroom D

Sponsored by ACI Committee S802

Moderated by Devin Harris, University of Virginia

Speaker: Arsenio Caceres, University of Puerto Rico

Topic: Low-Tech Solutions to Enhance Presentations

Whether in a technical conference or in the classroom, engaging the audience should always be a priority when making a presentation. In this session we will present four tools that can enhance the experience and interaction with the audience. The first tool is a simple solution that lets teachers collect real-time formative assessment data without the need for tech devices. It gives the audience the chance to participate without feeling self-conscious and combines the power of retrieval practice without the distractions that smartphones can bring. The second tool can be used to create animated video explainers online. The animations are short in duration, but it can increase the level of engagement compared to a slide-show. The third tool is a way to collect email addresses from your live audience. A handout offer is designed, the audience is invited to claim it by visiting a web page and leaving their email addresses. The handouts are sent by email and the addresses are collected and sent to an appropriate CSV file. The fourth tool is an application that requires little effort and no complex design software to produce attracting, high quality infographics online. Short stories can be presented with visual impact with this tool. These commercially available applications can make a presentation or lecture more attractive and it will achieve the purposes of retention of information, engagement of audience, and learning.

8:30 am – 9:30 am

MINI SESSION: Fundamentals of Non-Linear Fracture Mechanics and Size Effect—GA-Grand Reception A

Sponsored by ACI Committee 446

Moderated by Christian Carlon, University of Bologna

This mini-session will help researchers and professional engineers and architects strengthen their knowledge on non-linear fracture mechanics and size effect.

8:30 am: Why Do We Have Fracture Mechanics?

David Darwin, University of Kansas

8:50 am: What is a Process Zone and Why Do I Care?

Gianluca Cusatis, Northwestern University

9:10 am: Size Effect: Why? What Kind? What for?

Zdenek P. Bazant, Northwestern University



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Sessions & Events

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8:30 am – 10:30 am

Advances in the Internal Curing of Cementitious Materials—GA-Milano

Sponsored by ACI Committees 213 and 231

Moderated by: Ali Ghahremaninezhad, University of Miami

Internal curing has proven effective in mitigating autogenous shrinkage cracking in cementitious materials. Because cracking strongly compromises the service life of cementitious materials, internal curing provides significant contributions to the durability of infrastructure. There have been significant advancements in fundamental and applied research in the internal curing methods in the last two decades. The objective of this session is to bring together researchers, material suppliers, and contractors to discuss the recent developments in the internal curing technology. Abstracts that provide fundamental or practical contributions are invited.

8:30 am: Examining the Impact of SAP on Curing Efficiency through Neutron Radiography

Mehdi Khanzadeh Moradillo, Oklahoma State University; Jason Weiss, Oregon State University; Luca Montanari, Oregon State University; and Prannoy Suraneni, University of Miami

8:47 am: The Effect of Chemistry of Superabsorbent Polymers on their Desorption in Cementitious Materials

Khshayar Farzarian, University of Miami; and Ali Ghahremaninezhad, University of Miami

9:04 am: Characterizing Chemical Admixture Absorption of Lightweight Fine Aggregate

Bruno Martinez, Holcim Group Mexico; and Maria G. Juenger, University of Texas

9:21 am: Synthesis and Characterization of Polymer Hydrogels used as Internal Curing Agents: Impact of Polymer Chemistry on Cement Microstructure and Mortar Strength

Kendra Erk, Purdue University; and Matthew Krafcik, Purdue University

9:38 am: Field Assessment of Internal Curing on Warping on Concrete Slabs

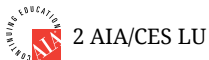
Peter Taylor, CP Tech Center; and Kegin Wang, Iowa State University

9:55 am: A New Generation of SAP for Internal Curing of Concrete

Chiara Villani, BASF Corp

10:12 am: The Influence of Alkalinity of Portland Cement on the Absorption Characteristics of Superabsorbent Polymers (SAP) for Use in the Internally Cured Concrete

Juan Tabares, Purdue University; and Jan Olek, Purdue University



PDH Codes: _____

8:30 am – 10:30 am

FRP Design Methodology and Applications for Blast- and Impact-Resistant Structures, Part 1 of 2—GA-Riviera

Sponsored by ACI Committees 370 and 440

Moderated by Jason Florek, Stone Security Engineering; and Mark Weaver, Karagozian & Case, Inc.

ACI Committee 370 and ACI Subcommittee 440-F are jointly developing the standard “Blast Design Guidelines for Externally Bonded FRP Applications” to provide guidance for designing concrete and masonry wall panels with an application of fiber-reinforced polymer (FRP) that are subject to blast loading. The opening presentations in this two-part session will provide an overview of the proposed standard, while covering some basic blast design practices and introducing the underlying single-degree-of-freedom (SDOF) analysis methodology. Subsequent presentations will discuss alternate slab analysis approaches, as well as FRPs used as column reinforcement, catching systems, and anchors within a blast- and/or impact-resistant design. Focused talks on FRP detailing and FRP manufacturers’ insights will also be presented.

8:30 am: Update on the “Blast Design Guidelines for Externally Bonded FRP Applications” Standard

Jason Florek, Stone Security Engineering

8:50 am: Blast Design Methodology for FRP Upgrades to Masonry and Reinforced Concrete Walls in the SBEDS Program

Marlon L. Bazan, Protection Engineering Consultants; and Charles J. Oswald, Protection Engineers Consultants

9:15 am: Design of FRP Catcher Systems for Blast Loads

John E. Crawford, Karagozian & Case, Inc.

9:40 am: Advanced Modeling of Blast Response of Reinforced Concrete Slabs with and without FRP Retrofit

Tarek H. Kewaisy, Louis Berger; and Ahmed Khalil, Applied Science International, LLC

10:05 am: Considerations for Design and Analysis of FRP Retrofitted Walls and Slabs Subjected to Blast Loading

Eric Jacques, Virginia Polytechnic Institute and State University



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Sessions & Events

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Monday, March 26, 2018

8:30 am – 10:30 am

Research in Progress, Part 1 of 2—GA-Audubon

Sponsored by ACI Committee 123

Moderated by Matthew O'Reilly, University of Kansas

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: An Investigation on the Chloride Ion Penetration Reduction Properties of Ground Glass in Marine Concrete

Ashley Murr, University of Minnesota Duluth; and Mary U. Christiansen, University of Minnesota Duluth

8:45 am: Advanced Calibration Technique to Optimize Water Vapor Diffusivity Models of Concrete

Somayeh Nassiri, Washington State University; Milena Rangelov, Washington State University; Tim Ginn, Washington State University; and Deviyani Gurung, Washington State University

9:00 am: Development of a Practical Testing Procedure for Performance Evaluation of Concrete Against Microbially Induced Corrosion

Ali Riza Erbektas, Oregon State University; O. Burkan Isgor, Oregon State University; and W. Jason Weiss, Oregon State University

9:15 am: Geopolymers for Use in Nuclear Facilities and High-Temperature Environments

Casey Sundberg, University of Minnesota Duluth; and Mary U. Christiansen, University of Minnesota Duluth

9:30 am: Durability of CFRP-Concrete Interface Subjected to an Acidic Environment

Yongcheng Ji, University of Colorado Denver; and Yail Jimmy Kim, University of Colorado Denver

9:45 am: Introducing Admixtures via Saturated Lightweight Fine Aggregate

Bruno Fong-Martinez, The University of Texas at Austin

10:00 am: Bio-Inspired Cementitious Material: Effect of Biopolymers on Calcium-Silicate-Hydrate

Ali Ghahremaninezhad, University of Miami; and Mahsa Kamali, University of Miami

10:15 am: Development of a Rapid and Reliable Pozzolanic Reactivity Test

Mahipal Kasaniya, University of New Brunswick; Michael Thomas, University of New Brunswick; and Edward Moffatt, University of New Brunswick



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PREFERRED EDUCATION PROVIDER

PDH Codes: _____

9:00 am – 12:00 pm

✓ Concrete Restoration Tour—Conference Center and Salt Lake Tabernacle Tour—GA-600 S Porte Cochere

\$21 U.S. per person

Coordinated by Intermountain Chapter – ACI

The Conference Center is one of the largest theater-style auditoriums in the world, with seats for approximately 21,000 people. The steel roof trusses span up to 290 ft, and are supported on one end by a massive 30 ft deep and 152 ft long transfer truss over the stage. These trusses support a garden roof complete with fountains, granite walkways, and trees. The 100 ft cantilever balcony sits above the seating below. The 1.4 million ft² complex is located across the street from Temple Square. The Salt Lake Tabernacle is home to the world-renowned Mormon Tabernacle Choir. It was constructed between 1864 and 1867. Between 2005 and 2007, the tabernacle was closed for extensive seismic upgrading and renovations. A technical presentation regarding the engineering and construction aspects of these two buildings will be given prior to breaking into smaller groups for a tour of both facilities. Tennis shoes are recommended for this tour as there is extensive walking.

PREREGISTRATION IS REQUIRED TO ATTEND. Tickets are available for purchase at ACI Registration. Tours are nonrefundable. All tours depart from the 600 South Porte Cochere entrance.

10:00 am – 11:00 am

MINI SESSION: Creep and Shrinkage in Self-Consolidating Concrete and Composite Systems—GA-Provence

Sponsored by ACI Committee 209

Moderated by Brock D. Hedegaard, University of Wisconsin-Madison

Attendees of this session will learn about the creep and shrinkage properties of self-consolidating concrete, explored using experimental results and the World Database. Attendees will also learn about creep and shrinkage in composite systems, whether structural systems such as composite floor slabs or material systems such as fiber-reinforced concrete. Attendees will observe differences in various creep and shrinkage design models with respect to experimental observations of time-dependent behavior of SCC both with and without steel and synthetic fiber reinforcement. Attendees will recognize shrinkage gradients through the depth of concrete-steel composite floor slabs, and how these impact time-dependent deformations and stresses. Attendees will be introduced to the Global Database for creep and shrinkage and how to use this for querying creep and shrinkage experimental data for specific concretes.

10:00 am: Analysis of Shrinkage and Mixture Properties through the Established World SCC Database

Jenn-Chuan Chern, National Taiwan University; and Cheng-Tsang Wang, National Taiwan University

10:20 am: Comparison of Model Predictions for SCC with and without Fibers

Hani H. Nassif, Rutgers University; and Adi Abu-Obeidah, Rutgers University

10:40 am: Considerations on the Service Behavior and Design of Composite Steel-Concrete Floor Systems

Gianluca Ranzi, University of Sydney



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PREFERRED EDUCATION PROVIDER

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Sessions & Events

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10:00 am – 11:00 am

MINI SESSION: Fit into Particle Packing—LA-Uintah

Sponsored by ACI Subcommittee 211-M

Moderated by James M. Shilstone, The Shilstone Companies Inc.

Aggregate particle packing for optimizing concrete mixture proportioning can be a daunting subject. This session will attempt to explain the latest in particle packing without being overwhelming. Attendees will learn both the basics of particle packing as well as the concepts behind current research. Particle packing helps minimize aggregate voids to reduce water and paste demands. Many current particle-packing models assume spherical particles. Maximum-density aggregates may not be best for the concrete. ACI 211 b/bo is a form of particle packing.

10:00 am: An Introduction to Particle Packing

James Shilstone, The Shilstone Companies Inc.

10:20 am: Summary of Particle Packing Models

Konstantin Sobolev, University of Wisconsin–Milwaukee

10:40 am: Particle Packing with Non-Spherical Shapes

Nicolas Ali Libre, Missouri University of Science and Technology



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10:00 am – 11:30 am

Undergraduate Research on Concrete Materials, Structural Design and Construction—LA-Snowbasin

Sponsored by the ACI Student and Young Professional Activities Committee

Moderated by Robert Donald Devine, University of Notre Dame; Bjorn E. Vors, University of Saskatchewan; and Ryan Whelchel, Purdue 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. It is expected that this session will draw a new group of students to ACI and the 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. Become familiar with the quality and breadth of research being conducted by undergraduate students across the globe. Learn about cutting-edge research that is in its infancy as undergraduate students conduct pilot studies and plan for graduate research. Connect with talented undergraduate students who are seeking employment opportunities, graduate school positions, and professional mentors. Learn about the topics included in the session.

10:00 am: Effects of Age and Chloride Concentration on Delamination in Concrete Bridge Decks in Utah

Kaylee Bateman, Brigham Young University

10:12 am: Improving the Surface Durability of Pervious Concrete Using Lithium Silicate

Bethany Buckland, University of Missouri-Kansas City

10:24 am: Development of Geopolymer Mixtures with Direct Electric Curing and Self-Sensing Capabilities by Using Carbon Nano-Fibers

Niko Celia, Rowan University

10:36 am: High Strain Rate Shear Behavior of Ultra-High-Performance Concrete

Peter Collins, Utah State University

10:48 am: Inventing a New Ductile Composite System as Non-Corrosive Lightweight Alternative to Steel

Andrew Foerster, Kansas State University

11:00 am: Nonlinear Ultrasonic Pulse Velocity Testing for Internal Damage Profiling in Concrete

Valerie Makri, University of Illinois at Urbana-Champaign

11:12 am: Equilibration of Chloride Ions in Concrete Bridge Decks after Rehabilitation Using Hydro-Demolition and Concrete Overlay

Elizabeth Roper, Brigham Young University

11:24 am: Influence of Pumping Parameters on the Freeze/Thaw and Scaling Resistance of Highly Workable Concrete

Alexandra Wehar, Missouri University of Science and Technology



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PDH Codes: _____

Sessions & Events

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Monday, March 26, 2018

10:30 am – 12:00 pm

ACI 123 Concrete Research Poster Session— GA-Grand Ballroom

Sponsored by ACI Committee 123

Moderated by Robert J. Thomas, Utah State University; and
Lisa E. Burris, The Ohio State University

The ACI 123 Concrete Research Poster Session complements the existing Research in Progress and Open Topic sessions and provides further opportunity for the presentation of original, unpublished results from ongoing research projects and leading-edge concrete technology throughout the world.

Nonlinear Dynamic Analysis of Tall Concrete Buildings: A Case Study of Wind Performance Based Design

Antonio De Luca, Thornton Tomasetti; and Ali Ashrafi, Thornton Tomasetti

What are Alkali-Activated Materials? An Investigation Using Atom Probe Tomography

Atolo Tuinukuafe, University of Alabama; Tyler Kaub, University of Alabama; Charles Weiss, U.S Army Corps ERDC; Paul Allison, University of Alabama; and Armen Amirkhonian, University of Alabama

Preliminary Procedure for Mechanistic Design of Pervious Concrete Pavements

Somayeh Nassiri, Washington State University; and Othman Alshareedah, Washington State University

Strand-Concrete Bond in Pretensioned Concrete Systems (PTC)—Mechanisms and Laboratory Testing

Prabha Mohandoss, Indian Institute of Technology Madras; Radhakrishna G. Pillai, Indian Institute of Technology Madras; and Ravindra Gettu, Indian Institute of Technology Madras

Finite Element Analysis and Prediction Model Development for Pull-Through Failure of Torque-Controlled Expansion Anchors

Somayeh Nassiri, Washington State University; and Zhao Chao, Washington State University

Evaluation of Metakaolin as a Cement Replacement in Binary and Ternary Blended Cements

Matthew Sullivan, The University of Georgia; Mi G. Chorzepa, The University of Georgia; and Stephan Durham, The University of Georgia

Energy Absorption of Cementitious Composite Incorporating Polypropylene and Cold-Drawn Shaved Steel Fiber under Low-Velocity Impact Test

Robabeh Jazaei, University of Nevada, Las Vegas; and Samad Gharehdaghimollahajloo, University of Nevada, Las Vegas

Effect of Ground Glass Composition on the Compressive Strength and Hardened Air Void System of Portland Cement Mortars

Colton H. Moore, University of Minnesota Duluth; and Mary U. Christiansen, University of Minnesota Duluth

Development of Thermally and Structurally Efficient Corbel Floor Connections in Concrete Sandwich Wall Panels

Taylor J. Sorensen, Utah State University; and Marc Maguire, Utah State University

Shear-Induced Creep Deformation of Cement Mortars

Subodh Ashok Mhamankar, Kansas State University

Screening Test of Fire Spalling Behavior with Ring Restrained Specimen

Mistuo Ozawa, Gunma University; Toru Tanibe, Taiheiyo Materials; and Manabu Kanematsu, Tokyo University of Science

Evaluation of Lower Quality Recycled PCCP for Portland Cement Treated Base (PCTB)

Koby Daily, Kansas State University; and Masomeh Tavakol, Kansas State University

Mechanical Properties of Portland Limestone Cement (PLC) Concrete with up to 30% Limestone Content

Jose E. Garcia, The University of Texas at Austin; Nicolas B. Tiburzi, The University of Texas at Austin; Thanu Drimalas, The University of Texas at Austin; and Kevin J. Folliard, The University of Texas at Austin

Development of Eco-Friendly Concrete

Hayder H. Alghazali, Missouri University of Science and Technology; and John J. Myers, Missouri University of Science and Technology

Development of Novel Method for Quality Control and Compliance of Concrete Mixtures Using Surface Resistivity Testing

Wassay Gulrez, Oklahoma State University; and Julie Ann Hartell, Oklahoma State University

Sessions & Events

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11:00 am – 1:00 pm

Accelerated Bridge Construction (ABC)—Component and System Behavior—GA-Milano

Sponsored by ACI Committees 239 and 341 and Subcommittee 408-A

Moderated by Mostafa Tazarv, South Dakota State University; and Zachary B. Haber, Federal Highway Administration

Accelerated bridge construction (ABC) heavily relies on prefabricated reinforced concrete elements. However, the integrity of a bridge incorporating prefabricated elements depends on the performance of connections under service, strength, and extreme limit state loads. New substructure and superstructure ABC connections are emerging to maximize the speed of construction and to reduce onsite activities

11:00 am: Shake Table Testing of a Large-Scale Two-Span ABC Bridge System

Jose Miquel Benjumea Royero, University of Nevada, Reno; M Saiid Saiidi, University of Nevada, Reno; and Ahmad Itani, University of Nevada, Reno;

11:25 am: Shaking Table Testing of Self-Centering Hollow-Core FRP-Concrete-Steel Bridges Columns Subjected to Near-Fault Ground Motion

Ayman Moustafa; Missouri University of Science and Technology; and Mohamed A. ElGawady, Missouri University of Science and Technology

11:50 am: Experimental Studies on Precast Columns with Grouted Coupler Connections and Shifted Plastic Hinging

Kevin R. Mackie, University of Central Florida; Haider M. K. Al-Jelawy, University of Central Florida; and Zachary B. Haber, Federal Highway Administration

12:15 pm: Precast Post-Tensioned Segmental Piers with Emulative and Non-Emulative Joints

Cancan Yang, University of Buffalo; and Pinar Okumus, University of Buffalo

12:40 pm: Fully-Precast Superstructure Bridges for Local Roads

Mostafa Tazarv, South Dakota State University; and Nadim I. Wehbe, South Dakota State University



PDH Codes: _____

11:00 am – 1:00 pm

FRP Design Methodology and Applications for Blast- and Impact-Resistant Structures, Part 2 of 2—GA-Riviera

Sponsored by ACI Committees 370 and 440

Moderated by Jason Florek, Stone Security Engineering; and Mark Weaver, Karagozian & Case, Inc.

The session description for this session may be found in the Part 1 listing; refer to page 29.

11:00 am: Performance of CFRP Retrofitted Columns under Shock Tube Simulated Blast Loading

Alan Lloyd, University of New Brunswick

11:25 am: FRP Composite Detailing for Blast Loading Applications

Zach Smith, Karagozian & Case, Inc.

11:50 am: FRP Design Methodology and Applications for Blast and Impact Resistant Structures—A Manufacturer's Perspective

Scott Arnold, Fyfe Co. LLC

12:15 pm: Design of CFRP Anchorage to Improve Blast Performance of Mitigated Concrete Slabs

Sarah Orton, University of Missouri at Columbia

12:40 pm: Experimental Validation of CFRP Retrofit Options for RC Walls against Blast Threats

Vincent Chiarito, US Army Engineer Research and Development Center



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Monday, March 26, 2018

11:00 am – 1:00 pm

Research in Progress, Part 2 of 2—GA-Audubon

Sponsored by ACI Committee 123

Moderated by Matthew O'Reilly, University of Kansas

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

11:00 am: Thermal Detection of Subsurface Delaminations in Reinforced Concrete Bridge Decks Using Unmanned Aerial Vehicle

Tarek Omar, University of Western Ontario

11:15 am: The Effect of Glass Composition on the Alkali-Silica Reaction Mitigation Potential of Ground Glass in Concrete

Nathan R. Doolittle, University of Minnesota Duluth; and Mary U. Christiansen, University of Minnesota Duluth

11:30 am: Performance of Autoclaved Aerated Concrete (AAC) and (CMU) Beams Strengthened with Inorganic Basalt Composites at Elevated Temperatures

Alaa Abd Ali, Rutgers University; Husam Najm, Rutgers University; and P. N. Balaguru, Rutgers University

11:45 am: A New Approach to Determine Debonding Stain Limit of FRP Sheets Anchored with FRP Spike Anchors

Alaa Al-Sammari, University of Massachusetts

12:00 pm: Service Life Assessment of Existing Concrete Structures

Antonio De Luca, Thornton Tomasetti; Giovanni Loreto, Kennesaw State University; Antonio Nanni, University of Miami; and Liling Cao, Thornton Tomasetti

12:15 pm: Novel Finite Element Analysis of Curved Reinforced Concrete Box Girders Using Hybrid Beam and Shell Elements

Taiyu Song, Georgia Institute of Technology; Chuang-Sheng Walter Yang, Georgia Institute of Technology; and David Scott, Georgia Institute of Technology

12:30 pm: In-Service Evaluation of a Fire Damaged and FRP Laminate Strengthened Reinforced Concrete Bridge

Santosh Timilsina, The University of Texas at Arlington; Nur Yazdani, The University of Texas at Arlington; Yazan Almomani, The University of Texas at Arlington; and Angie Uribe, The University of Texas at Arlington

12:45 pm: Shear Capacity of Hollow-Core Slabs with Concrete Filled Cores

Matthew McDermott, University of Minnesota Duluth



2 AIA/CES LU



PREFERRED EDUCATION PROVIDER

PDH Codes: _____

11:15 am – 12:15 pm

MINI SESSION: Formwork Pressure: Current Status, Predictive Methods and Measurement Techniques—LA-Grand Ballroom B

Sponsored by ACI Committees 231 and 347 and Subcommittee 237-TG

Moderated by Lloyd J. Kellyer, EllisDon Corporation

Attendees at this session will become familiar with the state-of-the-art practices in North America and Europe for predicting formwork pressure and for measuring the actual pressures exerted on the forms during placement of self-consolidating concrete in vertical structural elements.

11:15 am: Formwork Pressure Technote

Kamal H. Khayat, Missouri University of Science & Technology

11:35 am: Rilem TC—A Recent Publication the Addresses European Techniques for Predicting Formwork Pressure

Nicolas Roussel, LCPC

11:55 am: Equipment, Methods, and Techniques Used in Measuring Formwork Pressure in the Field

Lloyd J. Keller, EllisDon Corporation; and Stacia Van Zetten, EllisDon Corporation



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PREFERRED EDUCATION PROVIDER

PDH Codes: _____

11:30 am 1:30 pm

✓ Student Lunch—GA-Imperial Ballroom B-D

\$61 U.S. per person

Topic: Learn the Difference between Showing Up and Winning the Gold

Sponsored by Baker Concrete Construction Company, Inc.



Coordinated by the Intermountain Chapter Convention Committee

Speaker: Nikki Stone, 1998 Olympic Gold Medalist

Join students and other ACI attendees for the Student Lunch with featured speaker Nikki Stone, 1998 Olympic Gold Medalist and best-selling author. Attendees will gain the ability to “go for the gold” when everything is on the line. They’ll have the tools to think, prepare, and perform like a champion no matter the surrounding environment or influential parties. All are welcome to register for the lunch. Following the lecture, the results of the student competition will be announced.

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

Sessions & Events

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1:00 pm – 2:00 pm

Architectural Walking Tour—GA-600 S Porte Cochere

Sponsored by ACI Committee 124

Join ACI Committee 124 for a free walking tour of architectural concrete buildings led by Intermountain Chapter – ACI member Sarah Sutherland, Business Development Director of Forterra Structural & Specialty Products. The tour will last approximately 1 hour and will visit a variety of notable concrete buildings within easy walking distance of the convention venue. Plan on joining us to stretch your legs and see some of the beautiful concrete buildings that make Salt Lake City a great concrete town.

PREREGISTRATION IS REQUIRED TO ATTEND. All tours depart from the 600 South Porte Cochere entrance.

1:30 pm – 3:30 pm

Concrete Modulus of Elasticity—How High is High?—GA-Riviera

Sponsored by ACI Committees 236, 238, and 363

Moderated by Van K. Bui, BASF Construction Chemicals; and Charles K. Nmai, BASF Corporation – Admixtures Systems

The requirements for achieving sufficient modulus of elasticity (MOE) of concrete is increasing not only for high-rise structures, but also for concrete precast/prestressed components and repair application. However, achieving high modulus of elasticity, while maintaining good workability, pumpability, and consolidation of concrete is of challenge for concrete producers and contractors. Key factors affecting MOE include mixture design, rheological properties, and construction practices also influence in-place MOE and its homogeneity. Testing of MOE of high-performance concrete also requires special attentions to achieve reliable data. The session will be beneficial for engineers, specifiers, concrete producers, contractors, and academic communities.

1:35 pm: A Tall Building Engineer's Perspective on Specifying Modulus of Elasticity

Robert C. Sinn, Thornton Tomasetti Inc.

1:58 pm: An Overview of Factors Influencing on Concrete Modulus of Elasticity

Van K. Bui, BASF Construction Chemicals

2:21 pm: Producing High-Modulus-of-Elasticity Concrete—Meeting Specification and Contractor Expectations

Nicholas J. Beristain, Votorantim Cimentos

2:44 pm: Testing the Limits of Concrete Modulus of Elasticity in Chicago

Walter H. Flood IV, Flood Testing Labs Inc.

3:07 pm: Uncoupling Modulus of Elasticity and Strength—Effect of Small Addition of Carbon Nanotubes on Concrete Properties

Surendra P. Shah, Northwestern University



PDH Codes: _____

1:30 pm – 3:30 pm

Elevating Mentorship of Concrete Professionals—GA-Milano

Sponsored by ACI Committee E802

Moderated by Charles E. Pierce, University of South Carolina

This educational session will consist of two parts: a presentation from the Walter P. Moore award recipient; and a panel session on mentoring of students and young professors/professionals to include undergraduate and graduate students, interns, post-doctoral researchers, and new hires in academia and industry. Attendees who are involved or interested in effective mentoring strategies are encouraged to join us for this engaging session.

1:30 pm: Walter P. Moore Awardee Presentation

Matthew Lovell, Rose-Hulman Institute of Technology

2:00 pm: Panel Session: Elevating Mentorship of Concrete Professionals

Karla Kruse, Wiss Janney Elstner Associates; Megan Sarah Voss, University of Florida; Tarek S Khan, BASF Construction Chemicals; and William M Hale, University of Arkansas



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Sessions & Events

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Monday, March 26, 2018

1:30 pm – 3:30 pm

Major Advancements in Pervious Concrete— GA-Audubon

Sponsored by ACI Committee 522

Moderated by Scott J. Erickson, Evolution Pervious Paving Resources

Introduce dramatic advancements in uses for pervious concrete for surface and ground water treatment. Attendees should learn of research proving effective treatment of surface water and an extraordinary discovery that pervious concrete can treat contaminated ground water in superfund sites. Two other highly respected speakers will talk about advancements in pervious testing: one introducing a new standard test method that will help researchers who are attempting to solve salt and deicer damage, and one covering the effectiveness of existing pervious testing standards. Research showing the mechanical advantages of using fiber in pervious concrete will be shared. The final presentation will introduce both updated pervious training content for the NRMCA Pervious Training Manual, and a sample of a video series created to by the NPCPA that allows multi-language narration to help non-English speaking installers become certified.

1:30 pm: Intro to \$3B Market for Pervious Concrete for Ground Water Filtration

John T. Kevern, University of Missouri-Kansas City

1:50 pm: Removal of Nutrients in Pervious Concrete (Potential to Absorb and Precipitate Nitrate and Phosphate in Flushed Storm Water)

Luis A. Mata, University of Toledo; and Haithem Aboujrad, Lawrence Technological University

2:10 pm: Proposed Standard Method of Testing Effectiveness of Products Used to Fight Concrete Damage Caused by Chemical Deicing Products

Liv Haselbach, Lamar University

2:30 pm: Enhancing Mechanical Properties of Pervious Concrete Using Carbon Fiber Composite Reinforcement

Somayeh Nassiri, Washington State University

2:50 pm: Statistical Results from Heavy Industrial Pervious Parking Mixture Designs Using Current ASTM Test Methods

Heather J. Brown, Middle Tennessee State University

3:10 pm: Introduction to Multi-Language Pervious Training Video Series

Scott J. Erickson, Evolution Pervious Paving Resources



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PREFERRED EDUCATION PROVIDER

PDH Codes: _____

4:00 pm – 6:00 pm

Advances in Concrete Bridges: Design, Construction, Evaluation, and Rehabilitation, Part 1 of 2—GA-Milano

Sponsored by ACI Committees 342, 343, and 345

Moderated by Yail Jimmy Kim, University of Colorado Denver

These special sessions will emphasize recent advances in concrete bridges, including design, construction, and rehabilitation. Presentations will encompass a variety of technical aspects, such as the innovative design methods of bridge structures, accelerated bridge construction, damage detection and assessment techniques, and strengthening of deteriorated bridge members. Both experimental and analytical investigations are of interest. The sessions bring to light recent research findings and provide an opportunity to discuss present challenges and technical demands. Critical information is given to those who lead tomorrow's bridge design and construction, including practicing engineers, government officials, and academics. An ACI Special Publication will be published.

4:00 pm: Integrated Condition Rating Model for Rational Assessment of Reinforced Concrete Bridge Decks

Moncef L. Nehdi, Western University; and Tarek Omar, Western University

4:17 pm: Recent Occurrences of ASR in Concrete Bridges

Mark Williams, Walter P. Moore

4:34 pm: Pedestrian Bridge as Clarifying Example of CFRP-PC Design

Marco Rossini, University of Miami; and Antonio Nanni, University of Miami

4:51 pm: Evolution of Textile-Reinforced Concrete Bridges

Sophia Perse, Institute of Structural Concrete; and Josef Hegger, RWTH Aachen University

5:08 pm: Towards Modeling Deep-Beam Action on Numerical Assessment of Bridge Cap Beams

Rafael de Amorim Salgado, University of Toledo

5:25 pm: Application of a Reference-Free Damage Identification Technique for Evaluation of a Slab-on-Truss Girder Bridge System

Mamdouh M. El-Badry, University of Calgary; and Mohammad Moravvej, University of Calgary

5:42 pm: Strength Degradation of CFFT Cylinders Subjected to Accelerated Seawater Corrosion and Sustained Axial Load

Song Wang, Missouri University of Science and Technology; and Mohamed A. ElGawady, Missouri University of Science and Technology



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Sessions & Events

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4:00 pm – 6:00 pm

Precast Concrete Structure Research Advancements—GA-Audubon

Sponsored by the ACI Committee 550
Moderated by Larbi M. Sennour, The Consulting Engineers Group, Inc.; and Lance Osborne, Structural Technologies VSL

The technical session will discuss recently completed research and development efforts on topics related to precast and prestressed concrete structures. Presentations will focus on experimental and numerical studies which were conducted on the performance of precast building components and the resulting design recommendations and code changes which were developed. Topics include recent advances in the design of spandrel beams, hybrid frames, fatigue performance of flange-to-flange connections, and development of a new design methodology for seismic design of precast diaphragms. Attendees will learn the approaches used for the development of the guidelines and will be able to identify where to access the standards for use in design.

4:00 pm: Seismic Design of Diaphragms by the Provisions of ASCE 7-16

Satyendra Ghosh, SK Ghosh Associates Inc.; Clay J. Naito, Lehigh University; and Ned M. Cleland, Blue Ridge Design Inc.

4:20 pm: Seismic Design Guidelines for Solid and Perforated Hybrid Precast Concrete Shear Walls

Yahya C. Kurama, University of Notre Dame; and Brian Smith, University of Notre Dame

4:40 pm: Dap Research

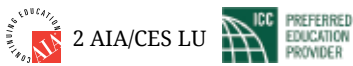
Blake Andrews, Wiss Janney Elstner Associates; and Amir Botros, North Carolina State University

5:00 pm: Fatigue Performance of Welded Flange-to-Flange Connections

Clay J. Naito, Lehigh University

5:20 pm: L-Shaped Beam Ledges

Greg Lucier, North Carolina State University



PDH Codes: _____

4:00 pm – 6:00 pm

Rating Methods for Defining Performance of Existing Concrete Bridges—GA-Riviera

Sponsored by ACI Committees 341, 342, 343, and 345
Moderated by Khatereh Vaghefi, WSP USA; and Nestor R. Rubiano, HNTB Corporation

The main objective of this session is to provide an overview of methodologies for rating existing concrete bridge components including bridge deck, superstructure, and substructure, using both LRFR and LFR approaches. Presentations will include case studies of load rating concrete bridges with various structural configurations such as typical prestressed I-girders, reinforced and prestressed multi-cell box girder bridges, segmental concrete bridges, bridges with large horizontal curvatures and complex geometry (for example, concrete arch and rigid frame bridges), and bridges with insufficient plans or details. Presentations will also emphasize relevant refined analysis methods that extend beyond traditional AASHTO rating methods such as finite element modeling, grillage modeling and diagnostic load

testing. This session will be of interest to bridge owners, operators, design engineers, and researchers.

4:00 pm: Load-Rating Strategies for Concrete Bridges with Insufficient Details

Mehrdad Dizaji, University of Virginia; Mohamad Alipour Tabrizi, University of Virginia; Devin K. Harris, University of Virginia; and Osman Eser Ozbulut, University of Virginia

4:25 pm: Condition Assessment and Load Rating for a Cracked Widened Bridge

Nestor R. Rubiano, HNTB Corporation

4:50 pm: Load Testing: Not Just for the Big Bad Bridges

Andrew J. Foden, WSP USA; and Zachary James Van Brunt, WSP USA

5:15 pm: Load Rating of 87-Year-Old Reinforced Concrete Tee Beam Bridge

Farhad D. Panthaki, TranSystems Corporation

5:40 pm: Load Rating of a 100-Year-Old Multi-Span Flat Slab Bridge in Alabama

Patryk Wolert, Auburn University; Marek K. Kolodziejczyk, Auburn University; James Michael Stallings, Auburn University; and Andrzej S Nowak, Auburn University



PDH Codes: _____

6:00 pm – 7:00 pm

✓ Reception Honoring Michael P. Collins—LA-Wyoming \$35 U.S. per person

This reception is the final event of the Michael P. Collins Symposium on Structural Concrete in Shear, honoring Prof. Michael Collins for his outstanding contributions in this field of knowledge. Collins is a structural engineer whose research concerns the basic shear-transfer mechanisms in reinforced concrete structures. His research has improved the safety of buildings, bridges, nuclear containment structures, and offshore oil platforms. Collins received his BE from the University of Canterbury, Christchurch, New Zealand, in 1964 and his PhD from the University of New South Wales, Sydney, Australia, in 1968. He joined the University of Toronto in 1969, was appointed to the Bahen-Tanenbaum Chair in Civil Engineering in 1995, and was selected as a University Professor in 1999. Collins concentrated his research effort on understanding how cracked reinforced concrete resists shear stress. Shear failures can cause concrete structures to collapse without warning; hence, accurate analytical models for shear behavior are critical for public safety. The Compression Field Theory and subsequently the Modified Compression Field Theory, developed by Collins and his colleagues at the University of Toronto, provide a rational basis for shear design and has received worldwide recognition. The Modified Compression Field Theory is currently the design standard in the Canadian Standard CAN/CSA A23.3-04, which is soon to be updated and included in the European Building Code. He is the author of over 80 technical papers, eight of which have received a research prize. This reception will feature light hors d'oeuvres and a cash bar.

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.

Sessions & Events

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Monday, March 26, 2018

6:00 pm – 7:00 pm

Women in ACI Reception—GA-Envoy

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 and others. Proceeds from the auction go toward sponsoring free registration for a young professional to attend the spring or fall convention. 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: How Can Current Research Make Concrete a More Competitive Construction Material?—GA-Audubon

Sponsored by ACI Committee 123

Moderated by Jacob Henschen, Valparaiso University; and Jan Vosahlik, CTLGroup

With the advancement of materials science and development of new manufacturing processes, a variety of materials are beginning to encroach on territory long held by concrete: glue-laminated timber products allow designers to use wood for structures that used to be dominated by steel and concrete; advances in polymer additives in asphalt binders are making pavements more resilient; the relative ease of recycling of asphalt pavements makes them an attractive alternative to portland cement concrete pavements. The question then becomes, what are the key research areas that will continue to make concrete an attractive material in residential and infrastructure applications? Research in both areas is extensive and ongoing; however, only a limited amount of research-generated knowledge will be used in real-world applications. This forum will provide insight to ongoing research areas that can give an edge to cement-based materials on the construction market, and effective methods of implementing and adopting research in the industry.

The forum will focus on the following themes:

- What are the greatest “threats” to concrete as a construction material? How are new cement-based products addressing problems found in concrete construction? Are some of these materials actually better?
- How is current research advancing concrete as a construction material? Should research focus on industry partnerships to achieve wider adoption?
- What are the common barriers when implementing concrete research into practice? How can knowledge transfer between researchers and practitioners be improved?
- What are the most pressing research needs in the concrete industry from the perspective of the researcher, designer, and owner?

A panel of experts from various backgrounds will discuss these questions and more to provide the audience information regarding the latest developments of concrete research. The forum will start with short presentation by each of the panelists.

The presentations will be followed by an interactive discussion with the audience.

6:30 pm: ACI 123 Concrete Research Poster Session—Outstanding Poster Award

Robert J. Thomas, Utah State University

6:35 pm: Introduction of Panelists and Forum Topic

Jacob Henschen, Valparaiso University; and Jan Vosahlik, CTLGroup

6:40 pm: Research: Rocking Resiliency, Confirming Codes, and Keeping Concrete Competitive

Paul Tennis, Portland Cement Association

6:55 pm: Mass Timber and the Next Generation of Wood Building Construction

Eric N. Landis, University of Maine

7:10 pm: Choosing Pavement Material: Not a Black and White Issue

Thomas Van Dam, NCE

7:25 pm: How Concrete Meets Sustainability Demands and Competition from Timber—The Swedish Experience

Johan L. Silfwerbrand, KTH Royal Institute of Technology

7:40 pm: Embracing New Technology to Optimize Concrete Cycling Times

Walter H. Flood IV, Flood Testing Laboratories

7:55 pm: Railroad Ties—Can Concrete Successfully Replace Wood in the Future?

Kyle A. Riding, University of Florida

8:10 pm: Audience Questions and Panel Discussion

Jacob Henschen, Valparaiso University; Jan Vosahlik, CTLGroup; Eric N. Landis, University of Maine; Thomas Van Dam, NCE; Johan L. Silfwerbrand, KTH Royal Institute of Technology; Walter H. Flood IV, Flood Testing Laboratories; and Kyle A. Riding, University of Florida

Tuesday, March 27, 2018

8:30 am – 9:30 am

MINI SESSION: Design and Construction with ICFs, Winter Construction, and Thermal Performance of ICF Walls—GA-Grand Reception A

Sponsored by ACI Committee 560

Moderated by Robert E. Sculthorpe, RBS Consulting Engineers

Inform attendees of winter construction of multi-story university student residences using ICF walls and precast hollow core concrete floors, taking advantage of the insulating properties of ICFs. Learning the benefit of speed of construction when building multi-story buildings with ICF walls and precast hollow-core concrete floors. Examples of buildings up to 22 stories built with ICF walls and precast hollow-core concrete floors demonstrating the benefits of this type of concrete construction. Thermal performance of ICF walls in comparison with wood frame walls.

8:30 am: Winter Build of Multi-Story Student Residences

Keven C. Rector, NUDURA Corporation

8:55 am: Presentation on Thermal Testing of ICF Walls and Wood Frame Walls

Kevin Davis, Quadlock ICF



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8:30 am – 10:30 am

Advances in Concrete Bridges: Design, Construction, Evaluation, and Rehabilitation, Part 2 of 2—GA-Milano

Sponsored by ACI Committee 342, 343, 345

Moderated by Yail Jimmy Kim, University of Colorado Denver

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

8:30 am: Experimental Evaluation of the Seismic Performance of Hollow-Core Composite Bridge Columns Subject to Cyclic Loading

Mohanad M. Abdulazeez, Missouri University of Science and Technology; and Mohamed A. ElGawady, Missouri University of Science and Technology

8:47 am: Rapid Repair and Replacement of Earthquake-Damaged Concrete Columns Using Plastic Hinge Relocation with CFRP Shell

Ruoyang Wu, University of Utah; and Chris P. Pantelides, University of Utah

9:04 am: Shear Tests on Prestressed Concrete Continuous Beams under Concentrated and Distributed Loads

Martin Herbrand, RWTH Aachen University; Josef Hegger, RWTH Aachen University; and Viviane Adam, RWTH Aachen University

9:21 am: Assessment of Deteriorated Precast Prestressed Concrete Adjacent Box Beam Bridges

Ryan T. Whelchel, Purdue University; Christopher Williams, Purdue University; and Robert J. Frosch, Purdue University

9:39 am: Big Data for Highway Bridges in the United States

Yail Jimmy Kim, University of Colorado Denver

9:55 am: Hybrid Large Rupture Strain FRP Tubes Encased in Concrete Subjected to Cyclic Axial in Compressive Loading

Monika Nain, Missouri University of Science and Technology

10:12 am: Retrofit and Rehabilitation of the Historic One-Century-Old Reinforced Concrete Arch Bridge and Retaining Walls

Ebrahim Amirhormozaki, Kleinfelder Engineering; and Nathan S. Johnson, Kleinfelder Inc.



PDH Codes: _____

8:30 am – 10:30 am

Contractors' Day Session: From the Ashes: The Engineering and Construction Challenges of the Provo City Center Temple—GA-Audubon

Sponsored by the Intermountain Chapter – ACI

Moderated by Brent Maxfield, The Church of Jesus Christ of Latter-day Saints

On December 17, 2010, a fire destroyed the pioneer-era Provo Tabernacle, leaving only a portion of the exterior walls remaining. On October 1, 2011, the Church of Jesus Christ of Latter-day Saints announced that the tabernacle would be restored and converted into a temple. Thus began the very technically challenging effort to create the Provo City Center Temple. This presentation will discuss the history of the structure, the fire, cleanup efforts, shoring, ground water management, water-

proofing, wall strengthening and restoration, as well as the beauty that was created inside and outside. This presentation will be given through the eyes of the Church project manager, the structural engineer, and the contractor. This session will be presented as a panel discussion, discussing the process from beginning to end. Panelists will be: Andy Kirby, Project Manager for the owner, The Church of Jesus Christ of Latter-day Saints; Jesse Malan, Structural Engineer, Reaveley Engineers + Associates; and John Emery and Mark Robins, Project Managers for the Contractor, Jacobsen Construction.



PDH Codes: _____

8:30 am – 10:30 am

The Role of Cracking on Corrosion of Reinforced Concrete—GA-Riviera

Sponsored by ACI Committee 222

Moderated by Matthew O'Reilly, University of Kansas

Cracking is often considered detrimental to the corrosion resistance of reinforced concrete structures, but the magnitude of this effect is less clear. Crack size, location, and depth all may affect the impact of cracking on corrosion, and there is debate as to whether small cracks are detrimental to corrosion resistance. Presentations will highlight recent research into the effect of cracking on corrosion resistance of concrete and the effectiveness of crack mitigation/repair. This session will be of interest to contractors, engineers, and owners who wish to learn how cracking can impact the service life of structures they design, build, and use.

8:30 am: Chloride Ingress at Cracks

Neal S. Berke, Tourney Consulting Group, LLC

8:50 am: Role of Alkali-Silica Reaction Cracking on Corrosion of Prestressed Concrete at Lucinda Jetty

Marita L. Berndt, Swinburne University of Technology

9:10 am: Quantified Influence of Concrete Cracks on Corrosion Initiation in Bridge Decks

Michael C. Brown, WSP USA; Richard E. Weyers, Associated Materials Engineers; and Soundar Sriram G. Balakumaran, Virginia Department of Transportation

9:30 am: Effect of Early-Age Cracking on Corrosion Initiation in Reinforced Concrete

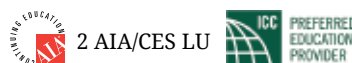
James D. Lafikes, University of Kansas; David Darwin, University of Kansas; Matthew O'Reilly, University of Kansas; and Omid Farshadfar, Thornton Tomasetti

9:50 am: Performance of Cracked High-Performance Concrete Blocks Containing Supplementary Cementing Materials and Corrosion-Inhibiting Admixtures in a Harsh Marine Environment

Edward G. Moffatt, University of New Brunswick; Andrew Fahim, University of New Brunswick; and Herwing Lopez-Calvo, University of New Brunswick

10:10 am: Effect of Cracking on Reinforced Concrete Corrosion—Project Examples

Brian M. Pailes, Rutgers University



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Tuesday, March 27, 2018

9:00 am – 12:00 pm

✓ **Concrete Restoration Tour—Utah State Capitol Base Isolator Tour—GA-600 S Porte Cochere**

\$22 U.S. per person

Coordinated by Intermountain Chapter – ACI

As Utah's most prominent landmark, the Capitol has been home to the State of Utah's government for over a century. In 2008, the Utah State Capitol underwent a major seismic retrofit. Installation of 265 base isolators for the 90+-year-old Capitol required a complete removal of the existing foundation, leading to an ingenious method of a load-transfer system. In addition to the base isolation, existing columns, walls, and the dome were reinforced, making the structure stronger in the effect of an earthquake. Tours of the Capitol and viewing of the isolation system are available to approved groups. There is no restriction on who can enter the Capitol Building.

PREREGISTRATION IS REQUIRED TO ATTEND. Tickets are available for purchase at ACI Registration. Tours are nonrefundable. All tours depart from the 600 South Porte Cochere entrance.

11:00 am – 1:00 pm

Analysis and Interpretation of Structural Health Monitoring (SHM) Data: Big Data Management and Field Studies—GA-Riviera

Sponsored by ACI Committee 444

Moderated by Mohamed ElBatanouny, Wiss Janney Elstner Associates, Inc.; and Frederick D. Heidbrink, Wiss Janney Elstner Associates, Inc.

The objective of this session is to present and discuss different approaches to analyze and reduce data from structural health monitoring systems, especially in field settings. The focus is how to translate SHM data into useful information that can be used by engineers and owners to understand the current condition of the monitored structure, prediction of remaining service life and damage prognosis, and maintenance scheduling and prioritization, if applicable. This session will be of interest to engineers, researchers, and infrastructure owners and operators.

11:00 am: Remote Monitoring and Evaluation of Corrosion Damage at a Decommissioned Nuclear Facility Using Acoustic Emission

Marwa Abdelrahman, Wiss Janney Elstner Associates, Inc.; Michael Serrato, Savannah River National Laboratory; Mohamed ElBatanouny, Wiss Janney Elstner Associates, Inc.; and Paul H. Ziehl, University of South Carolina

11:25 am: Monitoring of a Prestressed Concrete Bridge during Structural Load Testing Using Ultrasonic Full-Waveform Comparison

Thomas Schumacher, Portland State University; and Ali Hafiz, Portland State University

11:50 am: Damage Evaluation of Alkali-Silica Reaction of Stressed-Confined Concrete Structures Using Acoustic Emission

Paul H. Ziehl, University of South Carolina; Lateef N. Assi, University of South Carolina—Columbia; Rafal Naheth Wadie Anay, University of South Carolina—Columbia; and Vafa Soltanghareai, University of South Carolina—Columbia

12:15 pm: Big Data: What You Save is What You Get Fast

Richard Lindenberg, Wiss Janney Elstner Associates Inc.

12:40pm: Railway Bridge Monitoring and Assessment through Integrated Fiber-Optic Sensor Networks

Liam Butler, University of Cambridge; Campbell R. Middleton, University of Cambridge; and Mohammed Z. E. B. Elshafie, University of Cambridge



2 AIA/CES LU



PDH Codes: _____

11:00 am – 1:00 pm

New Innovations in Chemical Admixtures—GA-Milano

Sponsored by ACI Committee 212

Moderated by Kari L. Yuers, Kryton International Inc.; and G. Terry Harris, GCP Applied Technologies

All audiences will benefit from attending this session on New Innovations in Chemical Admixtures. Chemical admixtures is one of the fastest growing and innovative areas of concrete construction currently. This session will highlight new admixture technology and how these new admixtures bring value to concrete by improving plastic and hardened properties, providing improved economy, and changing the limits on how concrete can be used as a constructible material. Attendees will be provided with knowledge about chemical admixtures and how and where to use them effectively.

11:00 am: Introduction to What's New in Chemical Admixtures

Kari L. Yuers, Kryton International Inc.

11:10 am: A Chemical Admixture with Carbon Nanotubes

Yuan Gao, Northwestern University; David J. Corr, Northwestern University; and Maria S. Konsta-Gdoutos, Northwestern University

11:35 am: The Use of Microspheres as an Alternative to Entrained Air Bubbles for Providing Resistance to Freeze-Thaw and Salt Scaling

Michael D. A. Thomas, University of New Brunswick; and Edward G. Moffatt, University of New Brunswick

12:00 pm: New Generation of High-Range Water Reducers

Suzanne Lianopoulos, BASF; and Thomas M. Vickers, BASF

12:25 pm: A New Generation of Micro-Particulate-Based Admixtures for Concrete

Christopher John Eagon, BASF; and Paul Horst Seiler, BASF Corp.



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PDH Codes: _____

Sessions & Events

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11:00 am – 1:00 pm

Settlement Cracking from Theory to Practice— GA-Audubon

Sponsored by ACI Committee 224 and 231

Moderated by Rouzbeh Khajehdehi, University of Kansas; and Iman Mehdipour, University of Missouri

Settlement of concrete is a phenomenon that takes place during the early hours after concrete is cast. This can be a problem in structures having top bars where the settlement of the fresh concrete around the reinforcement can cause cracking and/or a weak plane right above the reinforcement. This session includes presentations providing explanations from research studies and actual projects on the topic of concrete settlement, tests methods developed to measure this phenomenon, and techniques available to reduce it.

11:00 am: Settlement of Fresh Concrete: Using Neutron Radiography to Quantify the Influence of Mixture Proportions

Mehdi Khanzadeh Moradillo, Oregon State University; and W. Jason Weiss, Oregon State University

11:25 am: Surface Settlement of SCC—How Critical is it on Concrete Performance?

Kamal H. Khayat, Missouri University of Science and Technology

11:50 am: Dealing with Plastic Settlement Cracking: Case Studies and Lessons Learned

Oscar R. Antonmattei, Kiewit Engineering Group

12:15 pm: How to Reduce Settlement Cracking in Reinforced Concrete

Muzai Feng, University of Kansas; Rouzbeh Khajehdehi, University of Kansas; David Darwin, University of Kansas; and Eman Khalid Ibrahim, University of Kansas



2 AIA/CES LU



PREFERRED EDUCATION PROVIDER

PDH Codes: _____

1:30 pm – 2:30 pm

MINI SESSION: On the Use of Advanced Finite Element Methods for Design of Reinforced Concrete Nuclear Structures—GA-Grand Salon

Sponsored by ACI Committees 349 and 447

Moderated by Ganesh Thiagarajan, University of Missouri; and Amit H. Varma, Purdue University

The objective of the session is to discuss and demonstrate the usage of advanced finite element techniques in the analysis and design of reinforced concrete nuclear structures. Presentations will include the challenges faced in applying finite element methods and the solutions devised to enable the use of the analysis results in design of such structures.

1:30 pm: Analysis and Design of Concrete Nuclear Structures for Accident Thermal Loading

Kadir Sener, Purdue University; Amit H. Varma, Purdue University; and Saahastaranshu Bharadwaj, Purdue University

1:45 pm: Numerical Simulation of the Limit State of a

1:4-Scale Prestressed Concrete Containment Vessel (PCCV)

Jian Wu, South China University of Technology; Ding-Di Hao, South China University of Technology; and Meng Chu, Shanghai Nuclear Engineering Research and Design Institute

2:00 pm: A Performance Based Design of a Reinforced Support Structure of Advanced Passive Cooling System in NPP

Meng Chu, Shanghai Nuclear Engineering Research and Design Institute

2:15 pm: Finite Element Analysis of the Structural Behaviors of Pre-Stressed Concrete Slabs Subjected to Blast Loadings

Seongkug Ha, Korea Institute of Nuclear Safety; and Raeyoung Jung, Korea Institute of Nuclear Safety



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PREFERRED EDUCATION PROVIDER

PDH Codes: _____

11:30 am – 1:30 pm

✓ Contractors' Day Lunch—GA-Savoy

\$64 U.S. per person

Topic: Feeding the 7 Basic Needs of Healthy and Productive Relationships...The Art of Doing More with Less

Coordinated by the Intermountain Chapter – ACI

Speaker: Matt Townsend – Communication & Relationship Expert

Join other ACI attendees and contractors for the Contractors' Day Lunch. With his engaging and entertaining style, Matt Townsend teaches what he has learned over the last 20 years as a leadership consultant and relationship coach, working with thousands of corporate clients. His funny yet universal stories teach how his principles apply to everyday life, no matter your life situation. He will also leave you with the tools and skills necessary to take his concepts and immediately apply them into your real management and day-to-day experiences.

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.

Sessions & Events

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Tuesday, March 27, 2018

1:30 pm – 3:30 pm

Open Topic Session, Part 1 of 2—GA-Riviera

Sponsored by ACI Committee 123

Moderated by Giovanni Loreto, Kennesaw State University

The Open Topic Session is a forum for presenting recent technical information that could not be scheduled into other convention sessions.

1:30 pm: Nonlinear Finite Element Analysis of RC Flat Plates: Toward Structural Performance Assessment

Trevor D. Hrynyk, University of Texas at Austin; and Chong Yik M. Goh, University of Texas at Austin

1:50 pm: In-Situ Evaluation of FRP Strengthening for Corrosion-Deteriorated Bridge Bent Caps

Yazan Shaher Almomani, The University of Texas at Arlington

2:10 pm: High-Volume Hybrid Fibers Engineered for High-Performance Cementitious Composites

Alaa Abd Ali, Husam Najm; and P. N. Balaguru, Rutgers University

2:30 pm: A High-Fidelity Numerical Model of Post-Installed Steel Anchors under Dynamic Loads

Serhan Guner, University of Toledo

2:50 pm: Finite Element Analyses and Proposed Strengthening of a Reinforced Concrete Box Girder Bridge Subjected to Differential Settlement

Caleb B. Mitchell, Kansas State University; and Hayder A. Rasheed, Kansas State University

3:10 pm: Bond Strength of Post-Installed GFRP Bars in Structural Connections

Muhammad Shahraiz Bajwa, University of Minnesota Duluth; Benjamin Z. Dymond, University of Minnesota Duluth; and Rania Al-Hammoud, University of Waterloo



2 AIA/CES LU



PDH Codes: _____

1:30 pm – 3:30 pm

Quality Management: The Common Thread of Good Practice, Part 1 of 2—GA-Milano

Sponsored by ACI Committees 121

Moderated by Michelle E. Walters, Hatch; and Stephen Marchese, Future Tech Consultants

The importance of quality and quality standards include reference to ISO 9001. Beyond the technical aspects, the practice of quality management is about people, relationships, and processes that can have a huge impact on results. Where does one find this type of content, and who will be so bold as to start this discussion? These topics are discussed in many committee meetings where of the most passionate debates revolve around them and how industry stakeholders work together. The concrete industry will benefit from a healthy discussion in a public forum on QMS implementation. The hosting of various speakers, topics, and perspectives will help to engage subject matter experts, high-light practices, and impact other committee documents.

1:30 pm: The Evolution of Concrete Production Quality Control

James M. Shilstone, The Shilstone Companies, Inc.

2:00 pm: Quality Metrics and Methods for Tracking, Trending, and Improving Concrete Construction

John L. Hausfeld, Baker Concrete Construction, Inc.

2:30 pm: Pros and Cons of Various Basis Quality Standards in the Concrete Industry: From ISO to Lab Certification Programs

Jinesh K. Mehta, Alta Vista Solutions, Inc.

3:00 pm: Quality Control of Silica Fume Concrete Bridge Decks

Thomas G. Tyler, Skanska USA Civil Northeast



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PDH Codes: _____

1:40 pm – 4:00 pm

✓ Bishops' Central Storehouse—GA-600 S Porte Cochere

\$20 U.S. per person

Coordinated by Intermountain Chapter – ACI

Constructed on 36 acres in Salt Lake City, the Bishops' Central Storehouse can hold 65,000 pallets of food and supplies that are distributed to over 110 storehouses in the United States, Canada, and internationally. The 540,000 ft² facility includes the storage warehouse and 63,000 ft² of freezer, refrigerator, and cold dock space, offices, transportation center, tire storage, and a fire pump house. More than 40,000 yd³ of concrete was used to build the facility. The structure and its mechanical, electrical, and fire protection systems were designed to allow the facility to be occupied immediately following the maximum considered earthquake ground motion. *Please note: this tour requires a significant amount of walking.*

PREREGISTRATION IS REQUIRED TO ATTEND. Tickets are available for purchase at ACI Registration. Tours are nonrefundable. All tours depart from the 600 South Porte Cochere entrance.

2:00 pm – 3:00 pm

MINI SESSION: New Applications for Drones and Laser Scanners—GA-Imperial Reception C

Sponsored by ACI Committee 118

Moderated by James M. Shilstone, The Shilstone Companies, Inc.

While the use of drones and laser scanners isn't new, changes in technology have made both items more flexible and accessible. Learn how drones and lasers are being used in increasingly innovative ways. Drones aren't just for "fly-bys" anymore. Drones provide access to previously inaccessible areas and are not limited to the sky; they also swim. As the cost of laser scanning declines, new uses are constantly being discovered. Laser scanners can measure as-built tolerances with a high degree of accuracy.

2:00 pm: The Latest News in Drones

James M. Shilstone, The Shilstone Companies, Inc.

2:30 pm: The Latest News in Laser Scanning

James M. Shilstone, The Shilstone Companies, Inc.



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PDH Codes: _____

Sessions & Events

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4:00 pm – 6:00 pm

Contractors' Day Session: Concrete Construction—GA-Audubon

Sponsored by Intermountain Chapter – ACI
Moderated by Jerry G. Hall, Geneva Rock Products, Inc.

A presentation addressing common specified requirements for as-cast, architectural, smooth-rubbed, and grout-cleaned rubbed finishes, as well as as-cast surface defects and anomalies, including honeycomb, air voids or bugholes, sand streaking, and offsets. The presentation will also address construction, forming, mixture design, transportation, and engineering challenges faced in extreme conditions.

4:00 pm: As-Cast Concrete Surface Finishes: Specifications, Defects, and Repairs

Kim D. Basham, KB Engineering

5:00 pm: Overcoming Challenges in Concrete Construction
Jon Brinkerhoff, Layton Construction; and Sam Koceja, Altview Concrete



PDH Codes: _____

4:00 pm – 6:00 pm

Open Topic Session, Part 2 of 2—GA-Riviera

Sponsored by ACI Committee 123
Moderated by Giovanni Loreto, Kennesaw State University

The Open Topic Session is a forum for presenting recent technical information that could not be scheduled into other convention sessions.

4:00 pm: A State-of-the-Art Review on Mechanical Behavior of Corrosion-Damaged RC Beams

Amir Safiey, Clemson University; and Mahmoodreza Soltani, Clemson University

4:20 pm: The Effect of Glass Composition and Activator Type on the Compressive Strength and Leaching Properties of Glass-Based Geopolymers

Mary U. Christiansen, University of Minnesota Duluth; Corey A. Schlosser, University of Minnesota Duluth; and Scott Larson, University of Minnesota Duluth

4:40 pm: Effect of Compressive Strength of Concrete on the Transmission Length of Pre-Tensioned Concrete Systems

Radhakrishna Pillai, Indian Institute of Technology Madras; Prabha Mohandoss, Indian Institute of Technology Madras; and Amlan K. Sengupta, Indian Institute of Technology Madras

5:00 pm: Using PVA to Improve Concrete Behavior during Different Stages of Flexural Test

Salam Adil Wtaife, University of Misan and Florida Institute of Technology; Ahmed Abbas Alsabbagh, University of Babylon and Florida Institute of Technology; and Nakin Suksawang, Florida Institute of Technology

5:20 pm: Alkali-Silica Reaction for Concrete Strengthened with Composite Sheets

Wei Li, University of Colorado Denver; Yongcheng Ji, University of Colorado Denver; and Yail Jimmy Kim, University of Colorado Denver

5:40 pm: On the Interaction Between Superabsorbent Polymers (SAP) and a Cementitious Matrix

Ali Ghahremaninezhad, University of Miami; and Khashayar Farzarian, University of Miami



PDH Codes: _____

4:00 pm – 6:00 pm

Quality Management: The Common Thread of Good Practice, Part 2 of 2—GA-Milano

Sponsored by ACI Committees 121
Moderated by Michelle E. Walters, Hatch; and Thomas G. Tyler, Skanska USA Civil Northeast

The session description for this session may be found in the Part 1 listing; refer to page 42.

4:00 pm: A Quality System That Pays: The Business Case for Developing a Quality Management System (QMS)

Samuel J. Lines, Concrete Sealants Inc.

4:30 pm: Concrete Producer Quality Management System

Karthik H. Obla, NRMCA

5:00 pm: Updating of the 121R-08, "Guide for Concrete Construction Quality Systems in Conformance with ISO 9001"

James R. Turnham, Turnham Consultants Inc.

5:30 pm: Best Practices for Concrete Inspection, Reporting and Construction Field Quality: Project Start-Up Meetings, Setting Project Expectations with Mock Ups, Craft Training, VDC Collaboration, and Work Planning

Guillermo Puerta Falla, University of California, Los Angeles



PDH Codes: _____

5:30 pm – 6:30 pm

Faculty Network Reception—GA-Savoy

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—GA-Imperial Ballroom

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

Sessions & Events

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Wednesday, March 28, 2018

8:00 am – 4:00 pm

Concrete Quality Technical Manager Certification Exam—GA-Versailles

The CQTM Exam session starts at 8:00 am and can take up to 6 hours to complete. The exam includes:

- Written Exam: 100 questions, open-book exam—allowed up to 4 hours
- Practical Exam: 25 questions, open-book exam—allowed up to 2 hours

Continental breakfast and a lunch will be provided. The attendee is responsible for purchasing and bringing a copy of CP-91, Concrete Technical Manager Reference Package. Contact Mike Morrison, Manager, New Program Development, for more information at mike.morrison@concrete.org.

8:30 am – 10:30 am

Fiber-Reinforced Concrete—From Fresh Properties to Structural Design: New Tools, Guides, and Reports—GA-Riviera

Sponsored by ACI Committee 544
Moderated by Barzin Mobasher, Arizona State University; and Liberato Ferrara, Politecnico di Milano

During the past 3 years, ACI Committee 544 has developed five new documents addressing the testing and fresh concrete properties, mechanical properties, back calculation of tensile properties, structural design with fiber-reinforced concrete (FRC), design of elevated slabs with FRC, and design of precast tunnel lining with FRC. These published reports (ACI 544.6R, 544.7R, 544.8R, 544.9R, and 544.3R) are currently available for the engineering community and offer a completely fresh way to use, design, and implement FRC in a variety of applications. The purpose of this session is to dedicate a presentation to each document addressing its content, how the specific topics of documents interact with each other, as well ways to implement and incorporate the knowledge in these documents in the design and specification. The speakers are the members of the committee who were the primary authors of the documents.

8:30 am: An Overview of Two Documents—ACI 544.9R and ACI 544.2R-17: Report on the Measurement of Fresh State Properties, Mechanical Properties, and Fiber Dispersion of Fiber-Reinforced Concrete

Liberato Ferrara, Politecnico di Milano

8:50 am: An Overview of the Document ACI 544.8R-16: Report on Indirect Method to Obtain Stress-Strain Response of Fiber-Reinforced Concrete (FRC)

Barzin Mobasher, Arizona State University

9:10 am: An Overview of the Document ACI 544.4R: Design Guide for Fiber Reinforced Concrete

Amir Bonakdar, The Euclid Chemical Company

9:30 am: An Overview of the Document ACI 544.6R-15: Report on Design and Construction of Steel Fiber-Reinforced Concrete Elevated Slabs

Xavier Destree, Xavier Destree Ltd.

9:50 am: An Overview of the Document ACI 544.7R-16: Report on Design and Construction of Fiber-Reinforced Precast Concrete Tunnel Segments

Mehdi Bakhshi, AECOM

10:10 am: Recent Advances in Durability: An Overview of the Document ACI 544.5R-10 and New Document on Testing, Creep, Shrinkage, Service life, Crack Width Prediction

Corina-Maria Aldea, Amec Foster Wheeler



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PDH Codes: _____

8:30 am – 10:30 am

UHPC—Innovations in Bridge Design, Part 1 of 2—GA-Milano

Sponsored by ACI Committees 239, 343, and 544
Moderated by Kay Wille, University of Connecticut

Bridge decks, bridge girders, or bridge steel tubes filled with ultra-high-performance concrete (UHPC) were the first large-scale applications of UHPC, which led to many fascinating bridge designs using precast/prestressed or cast-in-place concrete technology. Since then, innovations in bridge design have further advanced using UHPC as shear connector, repair material, or as ductile and impact-absorbent material in parts of bridge columns. UHPC is seen as one of the breakthroughs in the construction industry of the twenty-first century due to its excellent mechanical performance and its enhanced durability properties in comparison to conventional concrete. In general, UHPC is being used to increase the load-carrying capacity and to enhance the durability performance of newly designed bridges as well as aging and deteriorating bridges. The session will invite national and international experts in the field of bridge design to share their knowledge and experiences.

8:30 am: Feasibility of Using GFRP Reinforced UHPC Elements for Stay-in-Place Formwork

Weina Meng, Missouri University of Science and Technology; and Kamal H. Khayat, Missouri University of Science and Technology

8:50 am: Using Ultra-High-Performance Concrete (UHPC) within End Connections for End-Girder Continuity in Live Load Continuous Bridges

Saipavan Rallabhandhi, Missouri University of Science and Technology; and John J. Myers, Missouri University of Science and Technology

9:10 am: UHPC Decked NU Girders for a Private Bridge, Shanty Bay, Ontario, Canada

Maier K. Tadros, e.construct USA LLC; Philip Loh, FACCA Inc.; and Adam Sevenker, e.construct USA LLC

9:30 am: Bond between UHPC and Non-Metallic Reinforcing Bars

Jun Wang, University of Colorado Denver; Yongcheng Ji, University of Colorado Denver; and Yail Jimmy Kim, University of Colorado Denver

9:50 am: Towards Ultra-High-Performance Concrete Structural Design Guidance in the United States

Rafic G. El-Helou, FHWA TFHRC; and Benjamin Graybeal, Federal Highway Administration

10:10 am: Compression Membrane Behavior in UHPC Slabs

Serdar Astarlioglu, U.S. Army ERDC; Bradley W. Foust, U.S. Army ERDC; and Theodor Krauthammer, University of Florida



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Sessions & Events

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8:30 am – 10:30 am

Using Slag Cement to Elevate Concrete Performance—GA-Audubon

Sponsored by ACI Committee 233

Moderated by Mark D. Luther, LafargeHolcim; and Jay E. Whitt, Lehigh Cement

ACI Committee 233, Slag Cement in Concrete and Mortar, is sponsoring a 2-hour session whose theme is “Using Slag Cement to Elevate Concrete Performance.” There will be two session co-moderators (Mark Luther (LafargeHolcim) and Jay Whitt (Lehigh Cement)). Slag cement can be used in concrete projects to improve durability and provide a long service life. Examples of slag cement used in an upgrade to a 100-year-old cement plant and a bridge will be presented. Examples of high doses of slag cement in mass concrete will be discussed. The Slag Cement Association (SCA) Awards presentations will be for each individual project receiving an award. Those who should attend: engineers, architects, owners, specifiers, materials suppliers, contractors, academics, and students.

8:30 am: Using Slag Cement to Upgrade a 100-Year-Old Cement Plant

Joe Kelley, Sherman International, LLC; Gary F. Knight, Lehigh Hanson; and Gordon R. McLellan, Lehigh Cement Company

8:50 am: Examples of Concrete Performance Boosting with Slag Cement

David J. Imse, Skyway Cement Company, LLC

9:10 am: Usefulness of Very High Slag Cement Content Concretes

Mark D. Luther, LafargeHolcim; and Henry B. Prenger, LafargeHolcim

9:30 am: SCA 2017 Awards Presentations

Drew Burns, Slag Cement Association



PDH Codes: _____

11:00 am – 1:00 pm

Design of Concrete Nuclear Structures: Relating FEM Analysis and RC Design Using Codes/Standards, Part 1 of 2—GA-Riviera

Sponsored by ACI Committees 349 and 447

Moderated by Amit H. Varma, Purdue University; and Stewart C. Gallocher, CRA Risk Analysis

Concrete nuclear structures are labyrinthine in plan with several intersecting cross-connected squat walls. The design demands are calculated by conducting elastic 3D finite element analysis. It was interesting to see the different ways that the different offices are using our design codes (meant for frame-type structures) with results of finite element method (FEM) analyses. The issue here is that the FEM provides eight internal forces (three membrane, three out-of-plane, and two shears) that we have to design for, and unlike steel where one can convert all these degrees of freedom into Von Mises and check against one allowable. Concrete does not lend itself to the use of Von Mises, not without a whole lot of manipulation of data. This is further compounded by the fact that our codes are really set up for component/member design not element design. So in the past, we have had to set up elaborate strips in the FEMs that aggregate the results of several elements together into cross-sectional

forces that we can then check against code-allowable. This too is very data-intensive and has its own challenges. The aim of the Sessions is to have presentations of best practices of Element-Based Designs from across the industry with expert advice on what works and what does not. And if we do this right, ACI 349 hopes to publish proceedings that give concrete guidelines on how the ACI codes should be applied for element based design.

11:00 am: Design of Nuclear Power Plant Reinforced Concrete Walls and Slabs Using Finite Element Results

Luis Moreschi, Bechtel; Jaspal Saini, Bechtel; and Javeed Munshi, Bechtel

11:20 am: The Next Innovative Steps in Finite Element Modeling and Methods for a More Competitive and Safer Nuclear Civil Structure Design

Guillaume Herve-Secourgeon, Électricité de France

11:40 am: Finite Element Analysis and Design of Reinforced Concrete for Nuclear Facilities: Benefits and Shortcomings

Daniel W. Eggers, Simpson Gumpertz & Heger Inc.; Christine Roy, Simpson Gumpertz & Heger Inc.; and Jeremy Bowers, Omaha Public Power District

12:00 pm: A Study on Design Method Based on Two-Scale Analysis for RC Structures in NPPs

Rong Pan, Nuclear and Radiation Safety Center, MEP

12:20 pm: Design of RC Nuclear Structures: Assessing Demands from FEM Analysis and Interpreting Design Equations from Codes/Standards—Part 1

Carlos Madera, Purdue University; Amit H. Varma, Purdue University; and Saahastaranshu Bhardwaj, Purdue University



PDH Codes: _____

11:00 am – 1:00 pm

Repair of Concrete Session in Memory of Tony Murray, Part 1 of 2—GA-Audubon

Sponsored by ACI Committee 546

Moderated by Paul E. Gaudette, Wiss, Janney, Elstner Associates, Inc.; and Pete Barlow, Contech Services, Inc.

This session is a concrete repair session to honor the contributions of Tony Murray (who passed in 2016) to ACI and the concrete repair community. Tony was Chair of ACI Committees 503, 546, and 563, and a member of CLC, TAC, 364, 503, 546, 562, 563, and TRRC. He was a Fellow of ACI and speaker over many years at ACI concrete repair seminars. He was also an engineer, materials expert, and owned a structural concrete repair construction company. The session will include speakers from the concrete repair and materials community and the topics that reflect Tony's wide range of knowledge in concrete repair and materials.

11:00 am: Concrete Repairs: The Basics Still Matter: Contributions and Principles Adopted by the Industry

Bruce A. Collins, Restruction Corporation

11:30 am: Structural Repairs Using Preplaced Aggregate

John S. Lund, Martin/Martin, Inc.

12:00 pm: Lessons Learned from a Master in Concrete Repair (Tony Murray)

Gene R. Stevens, JR Harris & Co Structural Engineers; and Jim Harris, JR Harris & Co Structural Engineers

12:30 pm: Avoiding Mistakes in Concrete Repair

Predrag L. Popovic, Wiss, Janney, Elstner Associates, Inc.

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Wednesday, March 28, 2018

11:00 am – 1:00 pm

UHPC—Innovations in Bridge Design, Part 2 of 2—GA-Milano

Sponsored by ACI Committees 239, 343, 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 44.

11:00 am: UHPFRC and Iron Association: An Innovative Way to Repair, Reinforce, and Requalify Nineteenth-Century Metal Bridges in Nantes Area, France

Thomas Dupeyroux, Departmental Council of Loire-Atlantique – Bridge

11:17 am: Toward Non-Prestressed Ultra-High-Performance Fiber-Reinforced Concrete Bridge Girders

Shih-Ho Chao, University of Texas at Arlington

11:34 am: Chloride Ingress and Corrosion in UHPC Closure Pours

Robert Spragg, SES Group and Associates LLC

11:51 am: Novel Precast Deck-to-Girder Composite Connections Using UHPC

Zachary B. Haber, Federal Highway Administration

12:08 pm: Developing Ultra-High-Performance Concrete Mix Designs for Arizona Bridge Element Connections

Barzin Mobasher, Arizona State University; Narayanan Neithalath, Arizona State University; Aashay Arora, Arizona State University; Matthew Aguayo, Arizona State University; Farrokh Kianmofrad, Arizona State University; and Yiming Yao, Southeast University

12:25 pm: UHPC Concrete Pavement Repair Applications

Matthew D'Ambrosia, MJ2 Consulting, PLLC

12:42 pm: UHPC Pier Repair and Retrofit Applications

Gregory Nault, LafargeHolcim



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PDH Codes: _____

1:30 pm – 3:30 pm

Deicer Salts and Concrete Deterioration—GA-Milano

Sponsored by ACI Committees 201 and 325
Moderated by David A. Rothstein, Twining Concrete Insight

This session will present the latest in research and practical experience on understanding the links between the use of deicer salts and the deterioration of concrete pavements and flatwork. This session will focus on chloride-based deicers and will be of interest to owners, designers, contractors, suppliers, and researchers.

1:30 pm: An Overview of Joint Deterioration

Peter C. Taylor, CP Tech Center

1:55 pm: Direct Observation of Ion Penetration and Salt Scaling

Tyler Ley, Oklahoma State University; Mehdi Khanzadeh-Moradillo, Oregon State University; Ghazal Sokansehat, Oklahoma State University; and Amir Behravan, Oklahoma State University

2:20 pm: Resistance of Concrete to Different Exposures with Chloride-Based Salts

Mohamed Bassuoni, University of Manitoba; and Ahmed Ali Ghazy, University of Manitoba

2:45 pm: Salt Damage and Freeze-Thaw Damage in Cementitious Materials Exposed to Deicers

Chunyu Qiao, Oregon State University; Prannoy Suraneni, University of Miami; Marison Tsui-Chang, Oregon State University; Vahid Azas, Oregon State University; Mehdi Khanzadeh Moradillo, Oregon State University; Burkan Isgor, Oregon State University; and W. Jason Weiss, Oregon State University

3:10 pm: Concrete Pavement Durability: Toward Performance-Related Models that Include Freeze-Thaw, Transport, and Deicing Salt Damage

Prannoy Suraneni, Oregon State University; Chunyu Qiao, Oregon State University; Marisol Tsui Chang, Oregon State University; Alex Coyle, Oregon State University; Vahid Azad, Oregon State University; Burkan Isgor, Oregon State University; and W. Jason Weiss, Oregon State University



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1:30 pm – 3:30 pm

Design of Concrete Nuclear Structures: Relating FEM Analysis and RC Design Using Codes/Standards, Part 2 of 2—GA-Riviera

Sponsored by ACI Committees 349 and 447

Moderated by Amit H. Varma, Purdue University; and Stewart C. Gallocher, CRA Risk Analysis

The session description for this session may be found in the Part 1 listing; refer to page 45.

1:30 pm: Challenges for Design of Safety-Related Nuclear Power Plant Structures Using Three-Dimensional Finite Element Models

Javad Moslemian, Sargent & Lundy; Kevin P. Huberty, Sargent & Lundy; and Andrew W. Blomquist, Sargent & Lundy

1:50 pm: Design of Reinforced Concrete Walls, Floors and Basemats in Nuclear Power Plants Using Finite Element Analysis

Carlos Cantarero-Leal, Westinghouse Electric Company; Kai Zhang, Westinghouse Electric Company; Bernd R. Laskewitz, Westinghouse Electric Company; and Tod H. Baker, Westinghouse Electric Company

2:10 pm: Design of Nuclear Power Plant Concrete/Composite Structures Using Finite Element Analysis Results

Mustafa Ozkan, Rizzo Associates; Abdullah Evren Ulku, Wayne State University; Cagri Olgur, Georgia Institute of Technology; James C Hays, Paul C Rizzo & Association

2:30 pm: An Overview of Post-Processing of FEA Results for the Design of Nuclear Concrete Structures

Jason L. Draper, Burns & McDonnell

2:50 pm: Design of RC Nuclear Structures: Using ACI Code Equations along with Linear Elastic FEM Analysis Results

Amit H. Varma, Purdue University; Saahastaranshu Bhardwaj, Purdue University; Carlos Madera, Purdue University; and Stewart C. Gallocher, CRA Risk



2 AIA/CES LU



PDH Codes: _____

1:30 pm – 3:30 pm

Repair of Concrete Session in Memory of Tony Murray, Part 2 of 2—GA-Audubon

Sponsored by ACI Committee 546

Moderated by Paul E. Gaudette, Wiss, Janney, Elstner Associates, Inc.; and Pete Barlow, Contech Services, Inc.

The session description for this session may be found in the Part 1 listing; refer to page 45.

1:30 pm: Post-Tensioning Repairs and Modifications

Pete Barlow, Contech Services, Inc.

2:00 pm: Investigation and Practical Repair of Structural Concrete Damaged by Freeze-Thaw Cyclic Activity

Thomas L. Rewerts, Thos. Rewerts & Co., LLC

2:30 pm: Repair of a Highly Loaded, Severely Distressed Precast Column

John D. Reins, Wiss, Janney, Elstner Associates, Inc.

3:00 pm: Reinforcement Corrosion, No Perfect Solution

Fred R. Goodwin, BASF

6:30 pm – 8:00 pm

President's Reception—GA-Imperial Ballroom A

ACI President Khaled Awad invites all convention attendees to the President's Reception, where you'll have the opportunity to network with committee Chairs, chapter Presidents, and international attendees. An assortment of food and beverages will be available.



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- Provided \$200,000 for research projects that have a direct impact on ACI Technical committees;
- Contributed \$65,000 to new technology initiatives;
- Hosted two successful Technology Forums which explored integration of concrete durability into building codes and how international entities approach this task and the significance of how new technologies can positively impact concrete construction;
- Awarded \$100,000 in fellowships and scholarships to 17 deserving students; and
- Created a new fellowship award, the Don Marks Memorial Fellowship, through funding from our contractor sponsors and industry supporters.

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