ACI Spring 2012 Convention Program Book

March 18-22, 2012
Hyatt Regency Dallas
Dallas, TX

Scan to view Program Book online
Get Your Passport Ready!

Forming Our Future
ACI Fall 2012 Convention
October 21-25, 2012
Sheraton Centre
Toronto, ON, Canada
www.aciconvention.org

Toronto photos courtesy of Doug Brown
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March 18-22, 2012
Hyatt Regency Dallas
Dallas, TX

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ACI President’s Welcome

ACI members and guests: Welcome to Dallas and the ACI Spring 2012 Convention!

Thank you for attending the ACI Spring 2012 Convention! Each of you plays an important role in the success of every convention by bringing your knowledge, questions, unique experience, enthusiasm, and dedication to our Institute. The success and growth of ACI relies on its most valuable asset—its members. ACI’s Strategic Plan calls for developing camaraderie by creating “a place for everyone with a technical interest in concrete”–and the Dallas Convention is just such a place. By attending this exciting convention, you are helping ACI reach a strategic goal!

ACI and the Northeast Texas Chapter have worked hard to develop a convention program that allows all attendees to learn, contribute, and network in a professional environment. Convention highlights include the Opening Session and Awards Ceremony, the Art of Concrete Student Competition, the Concrete Mixer at Gilley’s, and much more. Whether you attend committee meetings, technical sessions, or network with friends and other concrete professionals, it is my hope that all of you will both gain and share valuable industry information and experience.

Thanks to all of you for your support and for making this convention a success. I hope your time in Dallas is productive and memorable and that you have the opportunity to experience all that the city has to offer. I am not only honored to share this week with each one of you, but it has been the mountaintop experience of my career to have served as your President.

Kind regards,

Kenneth C. Hover
ACI President
Greetings:

As Governor of Texas, I am pleased to extend greetings to everyone attending the Spring 2012 Convention of the American Concrete Institute.

Concrete is a vital component of our nation’s infrastructure and the construction industry. I’m sure that as concrete technology continues to expand, the material will be even more widely depended upon for characteristics such as strength, fire resistance, and energy efficiency.

Organizations like yours promote cutting-edge professional development while fostering the camaraderie that challenges and inspires professionals to reach their full potential. I’m sure that this convention will offer you many opportunities to network, brainstorm, and grow.

For those from out of town, be sure to take the time to see what Dallas has to offer. One of the nation’s greatest cities, Dallas has everything from historical sites to great music to fantastic food.

First Lady Anita Perry joins me in wishing you a successful convention.

Sincerely,

Rick Perry
Governor
March 18, 2012

Greetings!

On behalf of the City of Dallas and the Dallas City Council, it is my pleasure to welcome you to the Big “D.” With over 1.2 million people, Dallas is our country’s 9th largest city and one of the finest places in the world to live and visit. We are thrilled that the American Concrete Institute has chosen Dallas as host city for its spring 2012 Convention.

In Dallas, there is something for everyone! So while you are in town, I hope you will have the opportunity to explore one of our city’s thirteen entertainment districts each offering a unique flavor and history. I know you will find our city accommodating and am sure you will enjoy our southern hospitality. That is why we love to call Dallas our home. Again, welcome to Dallas. I hope you have a memorable and exciting convention.

Best regards,

Michael S. Rawlings
Mayor
ACI Sustaining Members

ACS Manufacturing Corporation

Ash Grove Cement Company

Ashford Formula

Baker Concrete Construction, Inc.

Barrier-1 Inc.

The Chemical Company

BASF Corporation

BCS

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Cantera Concrete Company

CECO Concrete Construction

Changzhou Jianlian Reinforcing Bar Conjunction Co., Ltd.

CHRYSO, Inc.

Commercial Contracting Corporation

Concrete Engineering Specialists

Concrete Reinforcing Steel Institute
**Convention Sponsors**

The ACI Northeast Texas Chapter wishes to thank the following organizations for their donations to make the ACI Spring 2012 Convention a success. Sponsors are listed as of 2/8/12.

<table>
<thead>
<tr>
<th>Texas Ranger -</th>
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<td>Marshall -</td>
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Convention Sponsors

The ACI Northeast Texas Chapter wishes to thank the following organizations for their donations to make the ACI Spring 2012 Convention a success. Sponsors are listed as of 2/8/12.

Deputy - $1,000+ (cont.)

ACI Southern Carolina Chapter

State Trooper - $500+ (cont.)

ACI Central Texas Chapter

ACI Eastern Pennsylvania and Delaware Chapter

ACI Florida Suncoast Chapter

ACI Georgia Chapter

ACI Illinois Chapter

ACI Intermountain Chapter

ACI Las Vegas Chapter

ACI Louisiana Chapter

ACI Maryland Chapter

ACI New Jersey Chapter

ACI New Mexico Chapter

ACI Ontario Chapter

ACI Pittsburgh Chapter

ACI Rocky Mountain Chapter

ACI San Diego International Chapter

Command Alkon

D&S Engineering Labs PLLC

Doug Deno

Henley-Johnston & Associates, Inc.

Robert Henry

Karmy Construction

Jay Shilstone

Speed Fab-Crete

Texas Best Concrete

Victor Villarreal

S-FRAME Software Inc.
ACI Northeast Texas Chapter
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Robert Ray, Terracon Consultants, Inc.

Past President
Perry Kakara, Alliance Geotechnical Group

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Megan Dangel, Lafarge
Chris Harbour, Southern Star/Argos, USA
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Meghan Morales, Wiss, Janney, Elstner Associates, Inc.
Bonnie G. Reed, Fugro Consultants
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Convention Committee

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Victor Villarreal, Texas Industries, Inc.

Co-Chairman
Leo Fellin, Texas Industries, Inc.

Contractors’ Day
Gabriel Ojeda, Fritz-Pak Corporation
Dionne Ojeda, Fritz-Pak Corporation

Exhibits
John Turner, Concrete Reinforcing Steel Institute

Fundraising
Jay Shilstone, Command Alkon
Gene Marter, CMCI

Guest Program
Jeff N. Choate, BASF
Megan Dangel, Lafarge
Pam Danner
Judy Smith

Publicity
Steve Taylor, W.R. Grace & Co.

Social Events
Bob Henry
Douglas Deno, Wiss Janney Elstner Associates
Chris Harbour, Southern Star/Argos, USA
Gary Herron, D & S Engineering Labs
Curtis Lee, Southern Star/Argos, USA

Student Program
Vartan Babakhanian, Hanson

Technical Sessions
Meghan Morales, Wiss, Janney, Elstner Associates, Inc.

Treasurer
Eric Cleveland, Terracon Consultants, Inc.
ACI REGISTRATION  MARSALIS HALL

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

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

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

- Member: Blue
- Attendee: Black
- Fellow: Green
- Honorary Member: Red
- Staff: Orange
- Guest: Tan
- Student: Green Ribbon

ATTENTION ACI ATTENDEES!
First-time convention attendees have a “Convention #1” ribbon on their name badges. Please welcome them to the convention!

SCHEDULE CHANGES
Cancellations, additions, and location changes to the convention schedule will be posted daily on a monitor in the exhibit area at the Hyatt Regency Dallas.

EMERGENCIES
In the event of an emergency, we kindly request that you do NOT dial 9-1-1. Please go to the nearest house phone to contact the operator by dialing “0” or security at extension “55” at the Hyatt Regency Dallas.

PHOTOGRAPHS/VIDEO
ACI will take photographs and video during the ACI Spring 2012 Convention and reproduce them in ACI educational, news, or promotional material—whether in print, electronic, or other media—including the ACI Web site. By participating in the ACI Spring 2012 Convention, you grant ACI the right to use your name, photograph, and biography for such purposes. Please note: Photographing, audio recording, and videotaping a presentation or speaker is prohibited without the speaker’s prior written consent.
GENERAL INFORMATION

BREAKS
Beverages are available courtesy of ACI during the following hours:

- **Saturday**: Soda: 2:00 pm - 5:00 pm
- **Sunday - Tuesday**: Coffee: 7:00 am - 10:00 am, Soda: 11:30 am - 3:00 pm
- **Wednesday**: Coffee: 7:00 am - 10:00 am

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

ALCOHOL POLICY
Nonalcoholic beer and soft drinks are available at all ACI-sponsored receptions. The legal drinking age in Dallas is 21.

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

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

ACI CAREER CENTER
Looking for a job or an employee? Visit the ACI Bookstore to view ACI’s Online Career Center. This job search engine is specifically targeted to the concrete industry. Job seekers, you’ll have an opportunity to post your résumé and view, apply for, and save available jobs. Currently, there are approximately 190 jobs listed in the ACI Career Center. Employers, you’ll have the opportunity to post job openings, post internships FREE of charge, and target the individuals you want to attract.

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

CYBER STATIONS AND WIRELESS HOT SPOTS  MARSALIS HALL
Stay connected to home and work! Take advantage of the cyber stations and FREE wireless hot spots available in the exhibit area during the following hours:

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

To access the wireless connection, look for ACI Cyber Café 1, ACI Cyber Café 2, ACI Cyber Café 3, or ACI Cyber Café 4 in your network connections.

MEETING SPOT  MARSALIS HALL
Convention attendees are encouraged to visit the meeting spot for coffee or lunch and meet first-time attendees and other convention attendees, Monday and Tuesday, 8:00 am - 8:30 am and 12:00 pm - 1:00 pm.

LOCAL INFORMATION  MARSALIS HALL
ACI Northeast Texas Chapter members will be happy to answer general convention questions and provide information about the local area. Stop by their information desk during the following hours:

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

RESTAURANTS
Parrino’s Oven
Serves flavorful, authentic Italian dishes, including pasta and pizza. A casual, contemporary bistro setting, located on the atrium level. Open for dinner daily from 5:00 pm to 11:00 pm.

Centennial Café
Features flavors from the five regions of Texas, traditional favorites, and the Hyatt signature breakfast menu. Hours: Breakfast: Monday - Friday, 6:00 am - 11:00 am; Saturday and Sunday, 6:00 am - 12:00 pm; Lunch: Monday - Saturday, 11:00 am - 2:30 pm; and Sunday, 12:00 pm - 2:30 pm.

Coffee’s Post
Serves Starbucks coffee, pastries, sandwiches, salads, fresh fruit, juices, soda, bottled water, and other quick snacks. Open Monday - Saturday, 6:00 am - 12:00 am; and Sunday, 6:00 am - 8:00 pm.
RESTAURANTS (cont.)
Five Sixty by Wolfgang Puck
Serves Asian-influenced cuisine designed by Wolfgang Puck served in the revolving dining room atop Reunion Tower. Ultra-contemporary bar and stylish lounge. Happy Hour: Monday - Thursday, 5:30 pm - 7:00 pm; Dinner: Monday - Thursday, 5:00 pm - 11:00 pm; Friday - Saturday, 5:00 pm -12:00 am; Bar and Lounge: Monday - Thursday, 5:00 pm - 11:00 pm; and Friday - Saturday, 5:00 pm - 12:00 am. Closed Sunday.

Room Service
Room service is available at the Hyatt Regency Dallas daily from 6:00 am to 12:00 am. Dial ext. 7143 from your guest room.

TRANSPORTATION
Airport Shuttle
SuperShuttle offers a shuttle service to the Dallas/Fort Worth International Airport for $17 U.S. each way. The SuperShuttle van should arrive within 15 to 30 minutes of making your on-site reservation. Advance reservations are recommended and are required for all return transfers. To make your shuttle reservations in advance, please call (800) 258-3826 or visit www.supershuttle.com. Please note that the SuperShuttle may make additional stops at other hotels that may delay your anticipated arrival/departure time.

Taxis
Taxi cabs are available outside the Hyatt Regency Dallas. The rate for a taxi to the airport is approximately $43 one way.

DART Rail
DART Rail serves the major downtown hotels and numerous other attractions and districts, including the West End, Deep Ellum, and the Dallas Arts District. A stop is located in Union Station, which can be accessed from the Hyatt via the Exhibition Level. For additional information on DART fares and routes, visit www.dart.org.

SESSION ATTENDANCE TRACKING FORM
The Session Attendance Tracking Form found at the back of the program book can be submitted to state boards that allow self-reporting of Continuing Education activities as evidence of participation. In most cases, one contact hour is equal to one Professional Development Hour (PDH). Check with your state board for acceptance criteria. Codes will be given out during each session to track your attendance. Please note: ACI does not track and cannot provide documentation confirming attendee participation or attendance at any ACI session held during the convention.
SESSION HANDOUTS ON DEMAND
Handouts are available from speakers who have elected to provide and post them to the ACI Web site. Stop by a 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.

SPEAKER READY ROOM 357 THE CENTRAL
The Speaker Ready Room is available to moderators, speakers, and committee Chairs during the following hours:

<table>
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<tr>
<th>Day</th>
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<tr>
<td>Saturday</td>
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<tr>
<td>Wednesday</td>
<td>7:00 am - 12:00 pm</td>
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All speakers are requested to check in at the Speaker Ready Room 1 day prior to their session to ensure that:
• ACI has downloaded their presentation on the network in the session rooms; and
• Speakers’ session handouts are downloaded onto the ACI Web site.

ACI FALL 2012 CONVENTION MARSALIS HALL
Mark your calendars for the ACI Fall 2012 Convention in Toronto, ON, Canada, October 21-25, 2012, at the Sheraton Centre. Stop by the ACI Ontario Chapter Desk Saturday through Tuesday to learn more about the convention and Toronto.

Don’t Forget Your Passport!
ACI is heading to Toronto for the Fall 2012 Convention this October. U.S. Citizens: If you don’t have a passport or need to renew it, don’t delay. Go to the State Department’s Web site now to apply (http://www.state.gov/m/a/dir/forms/passport). Since 2004, to enhance border security, U.S. citizens have needed a passport to go to Canada and return to the U. S. with limited exceptions. Join ACI in Toronto October 21-25, 2012!
Tours and Guest Events

Tour tickets may be purchased until 24 hours prior to the event, based on availability.
All tours will depart from the Trinity Crossing Entrance
in the main lobby of the Hyatt Regency Dallas.

Sunday - Wednesday

★ Guest Hospitality
Continental Breakfast 7:00 am - 10:00 am  PEGASUS B
Guest Lounge 10:00 am - 4:00 pm  PARRINO’S PATIO

Use the ticket behind your name badge to gain entry to Guest Hospitality. You must be a registered guest to attend.

Sunday, March 18, 2012

★ Guest Overview  PEGASUS B
8:00 am - 9:00 am
Acquaint yourself with the week ahead! You’ll also get a preview of
the guest programs for the ACI Fall 2012 Convention in Toronto, ON,
Canada, and the ACI Spring 2013 Convention in Minneapolis, MN.

✓ Discover Dallas City Tour and Sixth Floor Museum
1:00 pm - 5:00 pm
$77 U.S. per person
Explore Dallas on a driving tour of the downtown area. Guests will
discover Dallas’ remarkable history, find out how Dallas was
named, and why it was founded on the banks of the Trinity River.
A professional guide will detail the history behind famous Dallas
landmarks, including the Grassy Knoll, Dealey Plaza, The West End
Historic District, Pioneer Plaza, and more. Guests will be escorted
through the pages of time as they learn about the assassination of
President John F. Kennedy; trace the route of the motorcade; and
explore Oak Cliff, the area that Lee Harvey Oswald called home.
The tour will end at the Sixth Floor Museum, which chronicles
Kennedy’s life and legacy.

✓ = Separate fee required
★ = Guest-only event
High Fashion on the High Plains: Neiman Marcus, NorthPark and Breakfast with Tiffany & Company
8:00 am - 12:30 pm
$167 U.S. per person
Revel in the lap of luxury as you board a motor coach and explore high fashion in Dallas. The tour will begin by driving through historic downtown Dallas, where guests will see the historic Neiman Marcus flagship store on the way to Highland Park, Dallas’ premier residential area. Next, the group will be treated to a light breakfast and an exclusive, private presentation by Tiffany & Company titled “Tiffany & Company: The History of Fashion,” where each guest will receive an exclusive souvenir collectible from Tiffany & Company valued at $75. The tour will also explore the 20th-century art of the Nasher collection located throughout the mall and conclude at NorthPark’s Neiman Marcus store. This tour is limited to the first 50 attendees.

Tours and Guest Events

Tour tickets may be purchased until 24 hours prior to the event, based on availability.
All tours will depart from the Trinity Crossing Entrance in the main lobby of the Hyatt Regency Dallas.

Monday, March 19, 2012
✓ High Fashion on the High Plains: Neiman Marcus, NorthPark and Breakfast with Tiffany & Company
8:00 am - 12:30 pm
$167 U.S. per person
Revel in the lap of luxury as you board a motor coach and explore high fashion in Dallas. The tour will begin by driving through historic downtown Dallas, where guests will see the historic Neiman Marcus flagship store on the way to Highland Park, Dallas’ premier residential area. Next, the group will be treated to a light breakfast and an exclusive, private presentation by Tiffany & Company titled “Tiffany & Company: The History of Fashion,” where each guest will receive an exclusive souvenir collectible from Tiffany & Company valued at $75. The tour will also explore the 20th-century art of the Nasher collection located throughout the mall and conclude at NorthPark’s Neiman Marcus store. This tour is limited to the first 50 attendees.

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Tours and Guest Events

Tour tickets may be purchased until 24 hours prior to the event, based on availability.
All tours will depart from the Trinity Crossing Entrance in the main lobby of the Hyatt Regency Dallas.

✓ John Fitzgerald Kennedy Tour
1:00 pm - 5:00 pm
$79 U.S. per person
The assassination of President John F. Kennedy, which continues to fascinate and perplex Americans, is the focal point of this tour. Guests will trace the route of the Presidential motorcade, visit the Grassy Knoll, and see the Triple Underpass. The group will also be able to see Oswald’s rooming house; the site of Jack Ruby’s apartment; and the famous Texas Theater, where Oswald was eventually apprehended. The tour will conclude at the Sixth Floor Museum and includes an audio tour (available in a variety of languages). The original corner window from which Oswald allegedly fired the shots that killed the President, now encased in glass, is one of the many exhibits that examine JFK’s life and times, death, and legacy at the Sixth Floor Museum.

Monday, March 19, 2012

★ Guest Social
3:30 pm - 5:00 pm
Please join Mrs. Hover for light refreshments. This is a wonderful opportunity to get to know other registered guests and enjoy a refreshing break! A local storyteller and musician will be there to entertain you with some tall Texas tales. A guest name badge is required to attend this event.

✓ = Separate fee required
★ = Guest-only event
Tours and Guest Events

Tour tickets may be purchased until 24 hours prior to the event, based on availability.

All tours will depart from the Trinity Crossing Entrance in the main lobby of the Hyatt Regency Dallas.

Tuesday, March 20, 2012

✓ Cowtown & Culture
8:00 am - 4:00 pm
$125 U.S. per person

This tour will begin in the heart of downtown Fort Worth and Sundance Square, which comprises over 20 square blocks of turn-of-the-century buildings that include shops, restaurants, movie theaters, and nightclubs. The group will continue on to the historic Stockyards and The Maverick for a private shopping experience that includes refreshments. Enjoy shopping and browsing in this elegant store while sipping mimosas and savoring light breakfast fare. After exploring the multitude of shops on Exchange Avenue and seeing the Fort Worth Herd Cattle Drive, the group will enjoy a relaxing lunch at the world-famous Joe T. Garcia’s Mexican Restaurant. Additionally, the group will discover the Cowtown Coliseum, the infamous White Elephant Saloon, and Billy Bob’s Texas before ending at the crown jewel of the Fort Worth Arts District—the Kimball Museum. The Kimball boasts an astounding collection, including works by Rembrandt and Monet. Entry to the Kimball Museum is included with the tour.

✓ = Separate fee required
Tours and Guest Events

Tour tickets may be purchased until 24 hours prior to the event, based on availability.
All tours will depart from the Trinity Crossing Entrance
in the main lobby of the Hyatt Regency Dallas.

✓ Dallas’ Hallowed Haunts
9:00 am - 1:00 pm
$92 U.S. per person

Learn about Dallas’ haunts and lore when you visit several hallowed landmarks. The tour will begin at the elegant Adolphus Hotel, where attendees will learn about guest reports of mysterious sounds of music and footsteps on the 19th floor, once the site of the Adolphus’ Grand Ballroom, and the myriad of secret passages and doors that are scattered throughout the hotel. As the tour continues, attendees will visit the Majestic Theater, learn of the Lady of White Rock Lake, visit the Millermore Mansion, and learn of the ghosts at Dallas Old Jail. The tour will conclude with tales of immigrant spirits at the Sons of Hermann Hall before going to lunch at one of Dallas’ haunted restaurants. This tour includes entrance to Dallas Heritage Village, home of the original Dallas settlers, as well as a three-course lunch.

✓ = Separate fee required
Tours and Guest Events

Tour tickets may be purchased until 24 hours prior to the event, based on availability.

All tours will depart from the Trinity Crossing Entrance in the main lobby of the Hyatt Regency Dallas.

Wednesday, March 21, 2012

✓ Lone Star Sports Legends—Nowhere Else but Texas!
8:00 am - 12:00 pm
$135 U.S. per person

Few people realize that Dallas is home to five major sports teams: the Dallas Cowboys, the Dallas Stars, the Dallas Mavericks, FC Dallas, and the Texas Rangers. ACI sports fans will be able to immerse themselves in sports legend as the tour travels to the homes of some of these teams, including the new Texas stadium, fondly referred to as “the house that Jerry built.” The tour will begin by taking a short trip to Arlington, TX, to visit the home of the new Cowboys Stadium, where the group will receive a VIP Guided Tour of the stadium and have the opportunity to tour the Cowboys’ and cheerleaders’ locker rooms. After touring the stadium, the group will enjoy a meal at the House of Blues, followed by a guided tour of Victory Park. This tour includes the $30 entrance fee to Jerry’s World and a souvenir photo on the Dallas Stadium star.

✓ = Separate fee required
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<td>Atrium Level</td>
</tr>
<tr>
<td>Moreno B</td>
<td>Atrium Level</td>
</tr>
<tr>
<td>Pegasus A</td>
<td>Lobby Level</td>
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<tr>
<td>Pegasus B</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>Parrino's Patio</td>
<td>Atrium Level</td>
</tr>
<tr>
<td>Reunion A - H</td>
<td>Lobby Level</td>
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<tr>
<td>Reunion Foyer</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>Reverchon A</td>
<td>Atrium Level</td>
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<tr>
<td>Reverchon B</td>
<td>Atrium Level</td>
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<tr>
<td>Sanger A</td>
<td>Atrium Level</td>
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<tr>
<td>Sanger B</td>
<td>Atrium Level</td>
</tr>
<tr>
<td>Trinity Crossing Entrance</td>
<td>Lobby Level</td>
</tr>
<tr>
<td>Windsor</td>
<td>Atrium Level</td>
</tr>
</tbody>
</table>
Exhibitors
Exhibitor Listing as of 3/2/12

The ACI Northeast Texas Chapter and the American Concrete Institute wish to thank all exhibitors for their participation in and support of the ACI Spring 2012 Convention.

Exhibit Hours
Sunday  8:00 am - 5:00 pm
Monday  8:00 am - 5:00 pm
Tuesday 8:00 am - 5:00 pm

BASF Construction Chemicals, LLC  Booth #10
BASF’s Construction Chemicals division is the worldwide supplier of chemical systems and formulations for the construction industry. The North American Construction Chemicals Division of BASF comprises four business lines that offer products and solutions primarily for commercial, residential, industrial, and infrastructure construction, improving durability, water resistance, energy efficiency, safety, and aesthetics. BASF’s innovative products and solutions help make products better. For more information, contact BASF Construction Chemicals at 800-628-9990 or visit www.masterbuilders.com.

Big River Industries, Inc.  Booth #37
Big River Industries is the nation’s largest producer of expanded clay structural lightweight aggregates. Big River’s Riverlite™ lightweight aggregates are used for structural lightweight concrete, internal curing for normalweight concrete, lightweight concrete products, and other applications, and are available throughout the South, Midwest, and Mid-Atlantic regions. For more information, visit www.oldcastle.com.

Burgess Pigment Company  Booth #5
Burgess produces OPTIPOZZ highly reactive metakaolin, a white supplementary cementitious material that contributes to strength development and durability in concrete. The use of a small percentage of OPTIPOZZ in a mixture design will decrease the ingress of harmful chemicals, improve finishability, reduce efflorescence, mitigate alkali-silica reaction, and assist in shrinkage resistance. For more information, visit www.burgesspigment.com.
Chem Systems  
**Booth #20**

Chem Systems provides a wide range of coloring options for decorative and polished concrete applications. They also provide both training and educational workshops, as well as AIA and CEU credits. For more information, visit [www.murraydecorative.com](http://www.murraydecorative.com).

CMEC  
**Booth #7**

The Construction Materials Engineering Council, Inc. (CMEC), is a not-for-profit organization whose goal is to improve the quality of production, inspection, and testing of construction materials through its many accreditation, education, and certification programs. CMEC inspects and accredits laboratories in the U.S., Canada, Honduras, Puerto Rico, and Mexico and distributes educational materials worldwide. For more information, please visit [www.cmec.org](http://www.cmec.org).

Concrete Reinforcing Steel Institute  
**Booth #21**

Founded in 1924, the Concrete Reinforcing Steel Institute (CRSI) is a national trade association that stands as the authoritative resource for information related to steel-reinforced concrete construction. CRSI industry members include manufacturers, fabricators, and placers of reinforcing bars and related products. CRSI’s professional members are involved in the research, design, and construction of reinforced concrete. Together, they form a complete network of industry information and support. For more information, please visit [www.crsi.org](http://www.crsi.org).

CRC Press/Taylor and Francis Group, LLC  
**Booth #32**

CRC Press/Taylor and Francis Group, LLC, is a premier publisher of books, journals, and electronic databases in civil and structural engineering. They invite you to buy their latest books, pick up a free sample journal, and take advantage of special show discounts ranging from 15 to 50%. For more information, visit [www.taylorandfrancis.com](http://www.taylorandfrancis.com).

ERICO  
**Booth #14**

In 1903, the Electric Railway Improvement COmpany (ERICO®) was created to supply power bonds, signal bonds, and related welding equipment to railroads, mining, and street railway industries. Today, ERICO is a premier manufacturer of engineered products designed for diverse niche applications in the electrical, mechanical, commercial, industrial, rail, and utility markets. Headquartered in Solon, OH, ERICO has a sales network serving more than 25 countries, with manufacturing and distribution facilities worldwide. For more information, visit [www.ericocom](http://www.ericocom).
**Exhibitors**

Exhibitor Listing as of 3/2/12

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**The Euclid Chemical Company**
Booth #38

The Euclid Chemical Company manufactures top-quality products that meet the demands of the concrete and masonry construction industry. They strive to be “demonstratively better” to their customers through cutting-edge research and development, technical support and service, product training, and an education-driven specification effort. For more information, visit [www.euclidchemical.com](http://www.euclidchemical.com).

**Fibrwrap Construction Services, Inc.**
Booth #29

Founded in 1988, Fibrwrap Construction, Inc., was the first certified installer of the Tyfo® Fibrwrap FRP Strengthening System. They have led the repair industry in the development and implementation of Fibrwrap® technology. Through experience gleaned from thousands of projects across North America and the world, Fibrwrap Construction, Inc., can provide cost-effective solutions to all structural repair, retrofit, and rehabilitation needs. Be sure to stop by and see a presentation on the design and use of externally bonded fiber-reinforced polymers (FRPs) for structural strengthening on Monday, March 19, 2012, at 2:15 pm. For more information, please visit [www.fclp.com](http://www.fclp.com).

**FORNEY LP**
Booth #42

FORNEY is the leading manufacturer of testing equipment for the construction industry. A new product innovator since 1916, FORNEY offers thousands of products for the concrete, asphalt, and soil industries. In the test labs of departments of transportation, universities, and civil engineers, FORNEY helps make the world a safer place. For more information, please visit [www.forneyonline.com](http://www.forneyonline.com).

**FORTA Corporation**
Booth #15

FORTA Corporation has revolutionized the basic idea of using fibers in building materials. By combining space-age synthetic materials with unique designs and shapes, FORTA offers the international construction market a valuable fiber reinforcement product that controls cracking and adds long-term durability to a wide variety of concrete applications. Coupled with a dedicated and knowledgeable management, staff, and workforce, FORTA Corporation will continue to lead the way in building a better concrete future. For more information, visit [www.forta-ferro.com](http://www.forta-ferro.com).
Fritz-Pak Corporation
Fritz-Pak Corporation manufactures and sells concrete admixtures that make better concrete and easier, safer construction practices. Fritz-Pak also educates construction professionals about better construction practices and the correct use of admixtures and supplies the construction industry with advanced concrete admixtures in easy-to-use presentations. Fritz-Pak supplies products to decorative concrete contractors, pool contractors, concrete precasters, ready mix producers, concrete pumpers, and insulating concrete forms (ICFs) contractors. For more information, visit www.fritzpak.com.

Fugro Consultants, Inc.
Fugro Consultants, Inc., provides geotechnical and materials engineering and testing services. For more information, visit www.fugro.com.

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

Grace Construction Products
Headquartered in Cambridge, MA, Grace Construction Products is a worldwide leading manufacturer of concrete admixtures and fibers; liquid pigments for colored concrete; cement processing additives; concrete masonry products; air and vapor barriers; roofing underlayments; self-adhered window, door, and deck flashings; structural waterproofing systems; and fire protection products. For more information, visit www.graceconstruction.com.

Headed Reinforcement Corp. (HRC)
HRC is known in the industry for delivering practical coupler and T-head solutions without reducing the capacity of the reinforcing steel for ultimate strength and ductility. HRC products are designed to exceed the tensile properties of the reinforcing steel used. For more information, visit www.hrc-usa.com.
Exhibitors
Exhibitor Listing as of 3/2/12

Headwaters Resources  Booth #8
Headwaters Resources is America’s largest manager and marketer of coal combustion products, including fly ash, which improves concrete performance even as it creates benefits for the environment. For more information, visit www.headwaters.com.

Holcim (US) Inc.  Booth #3
Holcim (US) Inc. is one of the nation’s leading manufacturers and suppliers of cement and mineral components. Holcim (US) Inc. is a supplier of both bulk and packaged portland and masonry cements, bulk slag cement, and Envirocore© products that support the construction industry. For more information, visit www.holcim.com.

Hughes Brothers, Inc.  Booth #27
Hughes Brothers, Inc., manufactures fiber-reinforced polymer (FRP) reinforcement under the trade name Aslan FRP. Aslan FRP products include FRP reinforcing bar for concrete reinforcement in corrosive or electrically sensitive environments, glass FRP dowel bars for load transfer between slabs, and structural strengthening materials for externally bonded and near-surface-mount strengthening of existing structures. For more information, visit www.hughesbros.com.

International Accreditation Service (IAS)  Booth #39
IAS is a nonprofit corporation that accredits fabricators, inspection agencies, and testing laboratories. IAS accreditation provides independent verification for code officials and specifies that a program or institution meets established quality standards and is competent to carry out specific tasks. IAS is a subsidiary of the International Code Council. For more information, visit www.iasonline.org.

ITW READ HEAD  Booth #31
As the company that invented concrete anchoring technology, ITW RED HEAD® holds a unique place in the history of construction and building. The RED HEAD brand has become synonymous with the anchoring product category it invented. For more information, visit www.itwredhead.com.
Exhibitors
Exhibitor Listing as of 3/2/12

Kryton International Inc. Booth #6
Kryton International Inc. takes the risk out of concrete waterproofing. Inventors of the crystalline waterproofing admixture, waterproofing concrete structures since 1973, Kryton has the most complete system, which has undergone more testing and received more approvals than any other system. Kryton is the leader in products for waterproofing, repairing, and protecting concrete. Be sure to stop by and see a presentation on sustainable concrete construction practices with crystalline admixtures and a profile on the GreenSite Project of the Year winner, Industrial Category—TreePeople Cistern on Monday, March 19, 2012, at 12:45 pm. For more information, visit www.kryton.com.

Olson Engineering, Inc. Booth #30
Olson Engineering, Inc., specializes in nondestructive evaluation (NDE), infrastructure condition assessment and repair, structural health monitoring, and geophysical and vibration engineering. Olson Instruments manufactures ultrasonic, sonic, and seismic instruments for pavements, foundations, and structures; performs seismic surface wave, crosshole, downhole, reflection, and refraction tests; and distributes IDS radar systems in the U.S. Be sure to stop by and see a presentation on sonic, ultrasonic, and radar methods for nondestructive evaluation of concrete on Monday, March 19, 2012 at 11:15 am. For more information, visit www.olsonengineering.com.

Proceq USA, Inc. Booth #16
Proceq USA, Inc., a global leader in portable nondestructive testing (NDT) instruments for concrete structures, will be displaying its latest innovations in NDT instruments. New products include the Resipod concrete surface resistivity meter and the new portable, handheld Handy Search ground-penetrating radar. Other instruments on display will include Proceq’s range of reinforcing bar detection equipment, ultrasonic testing instruments, corrosion analysis instruments, pulloff adhesion testing equipment, and uniformity/strength evaluations of structures with the complete range of Original Schmidt concrete test hammers. For more information, visit www.proceq.com.
**QuakeWrap Inc.**  
Booth #13  
QuakeWrap Inc. is a multi-award-winning leading designer, supplier, and installer of quality, innovative fiber-reinforced polymer products for repairing and strengthening structures. The company is also a pioneer research and development firm committed to providing economical solutions and unparalleled service to engineers, architects, and owners. For more information, visit [www.quakewrap.com](http://www.quakewrap.com).

**Raven Industries**  
Booth #33  
Raven Industries is a manufacturer of underslab vapor barriers, Radon/VOC/methane barriers, and other polyethylene films. They also produce barrier film for foam coverage during bridge construction. For more information, visit [www.ravenind.com](http://www.ravenind.com).

**Riteks, Inc.**  
Booth #26  
Riteks Construction Products offers a full range of high-quality chemical admixtures for ready mix, precast and dry-cast industries. Riteks is committed to ongoing innovations, including the latest generation polycarboxylate technologies. Ritek's product line includes: water reducers, accelerators, retarders, air entrainers and a wide range of specialty admixtures. For more information, visit [www.riteks.com](http://www.riteks.com).

**RMD Kwikform**  
Booth #25  
RMD Kwikform is a specialist in concrete formwork, shoring, and providing unique engineering solutions. Their exhibit will consist of picture, video, literature, and product displays. For more information, go to [www.rmdkwikform.com](http://www.rmdkwikform.com).

**S-FRAME Software Inc.**  
Booth #23  
Since 1981, structural engineers worldwide have chosen to use S-FRAM®, S-CONCRETE®, and S-STEEL® on simple and complex projects in terms of geometry, material models, loading conditions, and analysis and design requirements because of the products' depth of capabilities, ease of use, accuracy, and detailed reports and the dedication of the customer support staff. S-FRAME's mission is to provide easy-to-use, accurate, and reliable structural engineering analysis and design solutions through their suite of tools. **Be sure to stop by and see a presentation on comprehensive and intuitive design of reinforced concrete beams, columns, and walls with S-CONCRETE on Monday, March 19, 2012, at 12:00 pm.** For more information, visit [www.s-frame.com](http://www.s-frame.com).
Sika Corporation

Sika Corporation, based out of Lyndhurst, NJ, is a global technology leader with over 100 years of experience in concrete materials and restoration technology. Sika has a long history of developing and producing a wide range of high-performance products and systems that cover, seal, bond, strengthen, reinforce, repair, and protect construction projects from roof to floor. For more information, visit www.sika.com.

Silica Fume Association

The Silica Fume Association provides high-performance concrete information to the construction industry, a valuable material for today’s sustainable concrete mixtures. Silica fume is available waste material used in today’s sustainable concrete mixtures. For more information, visit www.silicafume.org.

SIMCO Technologies, Inc.

SIMCO Technologies, Inc., offers integrated solutions for the optimum design and maintenance of concrete infrastructure. STADIUM®, its leading-edge service-life predictive software, reliably predicts concrete degradation kinetics and time to initiate reinforcing steel corrosion. SIMCO Technologies solutions serve all parties vested in developing safe, sustainable, and cost-effective concrete structures. Be sure to stop by and see the STADIUM® Academic Workshop and Presentation on Monday, March 19, 2012, at 4:30 pm. For more information, visit www.simcotechnologies.com.

STRUCTURAL

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

Tekla

Tekla Structures is Building Information Modeling (BIM) software that enables the creation and management of accurately detailed, highly constructable 3D structural models regardless of material or structural complexity. Tekla models can be used to cover the entire building process from conceptual design to fabrication, erection and construction management. For more information, visit www.tekla.com.
Texas Industries
Texas Industries (TXI) is a construction material manufacturer that will be displaying cement slurry for soil stabilization and reclamation projects. For more information, visit www.txi.com.

Tourney Consulting Group, LLC
Tourney Consulting Group, LLC (TCG) is a consulting and laboratory company that focuses on durability and cost-effective service life solutions for concrete structures. TCG conducts service life engineering on new and existing structures. TCG’s laboratory is AASHTO-approved, Army-Corp.-validated, STADIUM-certified, and CCRL-compliant. For more information, visit www.tourneyconsulting.com.

U.S. Concrete
U.S. Concrete is the value-added provider of sustainable and innovative concrete solutions that meets engineering and architectural challenges, reduces labor and materials cost, and contributes to green building projects. U.S. Concrete introduces Aridus® Rapid Drying Concrete, the first concrete solution for preventing floor covering failures. For more information, visit www.us-concrete.com.

Vector Corrosion Technologies
Vector Corrosion Technologies offers a portfolio of solutions for concrete corrosion repair and protection. Innovative solutions include electrochemical chloride extraction, cathodic protection, and an array of galvanic protection systems, including embedded galvanic anodes, galvanic jackets, and activated arc-spray zinc metalizing. Vector also provides evaluation, repair, and mitigation services for post-tension corrosion and temperature-resistant composite strengthening systems. For more information, call 813-830-7566 or visit www.vector-corrosion.com.

Xypex Chemical Corporation
Xypex Chemical Corporation’s unique chemical treatment is specifically designed to waterproof and protect concrete structures. Available as a surface treatment, additive, or repair material, Xypex develops a crystalline barrier deep within the pores and capillary tracts of the concrete matrix. The concrete is permanently sealed and protected against the penetration of water and other aggressive liquids from any direction, even under extreme hydrostatic pressure. It has been proven in over 70 countries for more than 40 years! For more information, visit www.xypex.com.
Ytterberg Scientific, Inc.  
For nearly 100 years, the name Ytterberg has been directly associated with leading products, processes, and service in the concrete flooring industry. Ytterberg’s customers are always looking for ways to save time and money. The FloorPro® with TruFlat® software allows you to do both. Ytterberg has developed revolutionary tolerance instruments that have become world-famous and ensure that you effectively supply the best reports on the market today. Stop by Ytterberg’s booth to see the instruments and how they work! For more information, visit www.flatfloors.com.

Exhibitors Demonstration Schedule

Monday, March 19, 2012  
Olson Engineering, Inc.  
Sonic, Ultrasonic, and Radar Methods for Nondestructive Evaluation (NDE) of Concrete  
11:15 am

S-FRAME Software Inc.  
Comprehensive and intuitive design of reinforced concrete beams, columns, and walls with S-CONCRETE  
12:00 pm

Kryton International Inc.  
Sustainable concrete construction practices with crystalline admixtures and a profile on the GreenSite Project of the Year winner, Industrial Category—TreePeople Cistern  
12:45 pm

Fibrwrap Construction Services, Inc.  
Design and Use of Externally Bonded Fiber-Reinforced Polymers (FRPs) for Structural Strengthening  
2:15 pm

SIMCO Technologies, Inc.  
STADIUM® Academic Workshop and Discussion  
4:30 pm

Additional demonstrations may be added following the printing of the convention program book. Please see an updated schedule in the demo area.
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

✓ = Separate fee required  ★ = Guest-only event  TG = Task Group

Friday, March 16, 2012

6:30 pm - 9:00 pm
TAC  Technical Activities M1  BRYAN-BEEMAN B

Saturday, March 17, 2012

7:00 am - 6:00 pm
TAC  Technical Activities M2  REVERCHON A

9:00 am - 6:00 pm
347  Formwork M1  REVERCHON B

10:00 am - 12:00 pm
562-D  Eval, Repair & Rehab - Structural Repair Design M1  MORENO A

1:00 pm - 4:00 pm
562-D  Eval, Repair & Rehab - Structural Repair Design M2  WINDSOR

1:00 pm - 5:00 pm
EAC  Educational Activities M1  BAKER

1:00 pm - 6:00 pm
562-F  Eval, Repair & Rehab - General  MORENO A

2:00 pm - 5:00 pm
376  RLG Containment Structures M1  COCKRELL

2:00 pm - 5:00 pm
Afternoon Soda Break  MARSALIS HALL

2:00 pm - 6:00 pm
ACI Registration  MARSALIS HALL
ACI Bookstore  MARSALIS HALL
Speaker Ready Room  357 THE CENTRAL

4:00 pm - 6:00 pm
562-A  Eval, Repair & Rehab - Life Safety  BRYAN-BEEMAN A
562-C  Eval, Repair & Rehab - Structural Analysis M1  WINDSOR

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Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

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Saturday, March 17, 2012 (cont.)

6:00 pm - 9:00 pm
562-E Eval, Repair and Rehab - Durability
Qlty Assurance BRYAN-BEEMAN A

7:00 pm - 9:00 pm
347-A Formwork - Specification WINDSOR
562-C Eval, Repair & Rehab - Structural Analysis M2 COCKRELL

Sunday, March 18, 2012

7:00 am - 8:30 am
301-SC Spec - Steering Committee CUMBERLAND F

7:00 am - 10:00 am
★Guest Hospitality PEGASUS B
Coffee Break MARSALIS HALL

7:00 am - 2:00 pm
TAC Technical Activities M3 REVERCHON A

7:00 am - 7:00 pm
Speaker Ready Room 357 THE CENTRAL

7:30 am - 5:00 pm
ACI Registration MARSALIS HALL

8:00 am - 8:30 am
408-A Mech Splices 359 MCCOMMAS BLUFF

8:00 am - 9:00 am
 Convention #1 Breakfast CUMBERLAND G
★Guest Overview PEGASUS B

8:00 am - 9:30 am
341-C Equake Res Brdgs - Retrofit MCMILLAN

8:00 am - 10:00 am
E706 Repair Application Procedures CUMBERLAND D
S801 Student Activities CUMBERLAND A
445-B Shear & Torsn - Seismic Shear CUMBERLAND C
## Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

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### Sunday, March 18, 2012 (cont.)

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>8:00 am - 10:30 am</td>
<td>CLC Construction Liaison</td>
<td>GASTON B</td>
</tr>
<tr>
<td>8:00 am - 11:00 am</td>
<td>TACRG1 TAC Review Group 1</td>
<td>REVERCHON B</td>
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<tr>
<td></td>
<td>TACRG2 TAC Review Group 2</td>
<td>SANGER A</td>
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<tr>
<td></td>
<td>TACRG3 TAC Review Group 3</td>
<td>SANGER B</td>
</tr>
<tr>
<td></td>
<td>TACRG4 TAC Review Group 4</td>
<td>MORENO A</td>
</tr>
<tr>
<td>8:00 am - 12:00 pm</td>
<td>562-B Eval, Repair &amp; Rehab - Loads</td>
<td>CUMBERLAND H</td>
</tr>
<tr>
<td>8:00 am - 5:00 pm</td>
<td>ACI Bookstore</td>
<td>MARSALIS HALL</td>
</tr>
<tr>
<td></td>
<td>Exhibits</td>
<td>MARSALIS HALL</td>
</tr>
<tr>
<td>8:30 am - 9:15 am</td>
<td>549-TG1 Glass Fiber-Reinforced Concrete - Spray-Up</td>
<td>CUMBERLAND F</td>
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<tr>
<td>8:30 am - 10:00 am</td>
<td>342 Bridge Evaluation</td>
<td>CUMBERLAND B</td>
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<tr>
<td>8:30 am - 11:30 am</td>
<td>MEMC Membership</td>
<td>CUMBERLAND E</td>
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<tr>
<td></td>
<td>314 Simplified Design Buildings</td>
<td>CUMBERLAND I</td>
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<tr>
<td></td>
<td>315-B Detailing - Constructibility</td>
<td>BAKER</td>
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<td></td>
<td>350-C Env, Str - Reinf &amp; Devel</td>
<td>362 SHAWNEE A</td>
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<td></td>
<td>408 Development and Splicing</td>
<td>WINDSOR</td>
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<td></td>
<td>440-H FRP - Reinforced Concrete</td>
<td>CUMBERLAND KL</td>
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<tr>
<td>8:30 am - 12:00 pm</td>
<td>301 Specifications M1</td>
<td>CUMBERLAND J</td>
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<tr>
<td>8:30 am - 12:30 pm</td>
<td>347 Formwork M2</td>
<td>BRYAN-BEEMAN AB</td>
</tr>
<tr>
<td>9:00 am - 11:00 am</td>
<td>506-A Shotcreting - Evaluation</td>
<td>COTTON BOWL</td>
</tr>
<tr>
<td>9:00 am - 12:00 pm</td>
<td>546-C Repair - Guide</td>
<td>353 AERIAL QUEEN</td>
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<td></td>
<td>551 Tilt Up</td>
<td>COCKRELL</td>
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</tbody>
</table>
### Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

- ✓ = Separate fee required
- ★ = Guest-only event
- TG = Task Group

#### Sunday, March 18, 2012 (cont.)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am - 5:00 pm</td>
<td>376 RLG Containment Structures M2</td>
<td>MORENO B</td>
</tr>
<tr>
<td>9:30 am - 11:00 am</td>
<td>341-B Equake Res Brdgs - Pier Walls</td>
<td>MCMILLAN</td>
</tr>
<tr>
<td>10:00 am - 10:45 am</td>
<td>549-TG3 Report on Ferrocement</td>
<td>CUMBERLAND F</td>
</tr>
<tr>
<td>10:00 am - 11:30 am</td>
<td>E701 Materials for Concrete Construction</td>
<td>GASTON A</td>
</tr>
<tr>
<td>10:00 am - 12:00 pm</td>
<td>IC-Part International Partnerships &amp; Publications</td>
<td>CUMBERLAND B</td>
</tr>
<tr>
<td>10:00 am - 12:30 pm</td>
<td>228 Nondestructive Testing</td>
<td>PEGASUS A</td>
</tr>
<tr>
<td>10:00 am - 1:00 pm</td>
<td>421 Reinf Slabs</td>
<td>CUMBERLAND C</td>
</tr>
<tr>
<td>10:00 am - 5:00 pm</td>
<td>Art of Concrete Student Competition</td>
<td>MARSALIS HALL</td>
</tr>
<tr>
<td>10:00 am - 4:00 pm</td>
<td>★ Guest Lounge</td>
<td>PARRINO’S PATIO</td>
</tr>
<tr>
<td>10:30 am - 1:30 pm</td>
<td>445-A Shear &amp; Torsn - Strut &amp; Tie</td>
<td>CUMBERLAND A</td>
</tr>
<tr>
<td>11:00 am - 12:00 pm</td>
<td>343-A Design</td>
<td>CUMBERLAND F</td>
</tr>
<tr>
<td>11:00 am - 12:30 pm</td>
<td>201-A Durability - Sulfate Attack</td>
<td>SANGER A</td>
</tr>
<tr>
<td>11:00 am - 1:00 pm</td>
<td>341-A Equake Res Brdgs - Columns</td>
<td>MCMILLAN</td>
</tr>
<tr>
<td>11:00 am - 1:00 pm</td>
<td>C640 Craftsman Cert</td>
<td>REVERCHON B</td>
</tr>
<tr>
<td></td>
<td>506-G Qualifications for Projects</td>
<td>GASTON B</td>
</tr>
<tr>
<td></td>
<td>549 Thin Reinforced</td>
<td>COTTON BOWL</td>
</tr>
</tbody>
</table>
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Sunday, March 18, 2012 (cont.)

11:00 am - 5:00 pm
Student FRC Bowling Ball Competition  MARSALIS HALL

11:30 am - 1:00 pm
HTC  Hot Topic  MARSALIS HALL
221  Aggregates  BAKER
335  Composite Hybrid  CUMBERLAND E
350-SC  Env Str - Steering Comm  GASTON A
374-TG  Protocol for Testing RC - Structural Elements  CUMBERLAND I
441-E  Columns Multi-Spiral Reinf  WINDSOR

11:30 am - 1:30 pm
440-TG2  FRP - Task Group Repair Material Spec  SANGER B
✓ International Lunch  CUMBERLAND G

11:30 am - 3:00 pm
Afternoon Soda Break  MARSALIS HALL

12:00 pm - 3:00 pm
362-A  Parking Str - Standard  CUMBERLAND H

12:30 pm - 2:00 pm
130-F  Social Issues  SANGER A
445-E  Shear & Torsn - SOA Torsion  MORENO A

12:30 pm - 4:30 pm
301-B  Spec - Formwork & Reinforcement  COCKRELL
301-H  Spec - Tilt-Up Constr & Arch Conc  362 SHAWNEE A

1:00 pm - 2:30 pm
369  Seismic - Rehab M1  CUMBERLAND C
533  Precast Panels  CUMBERLAND E

1:00 pm - 3:00 pm
351-C  Equipment Foundations - Dynamic Foundations  CUMBERLAND I
445-C  Shear & Torsn - Punching Shear  BAKER
# Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

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## Sunday, March 18, 2012 (cont.)

### 1:00 pm - 3:00 pm Sessions

- **Engineering Fire Design of Concrete Structures, Part 1**  
  **REUNION E**
- **Hope & Schupack Corrosion Symposium, Part 1**  
  **REUNION B**
- **Physical Salt Attack on Concrete, Part 1**  
  **REUNION A**
- **Post-Earthquake Repairs, Part 1**  
  **REUNION C**

### 1:00 pm - 3:30 pm

- **341-D**  
  Perf Based Seismic Design  
  **MCMILLAN**

### 1:00 pm - 4:00 pm

- **423-E**  
  Prestress - Losses  
  **CUMBERLAND B**

### 1:00 pm - 5:00 pm

- **301-C**  
  Spec - Placing Consolidating & Curing  
  **COTTON BOWL**
- **301-D**  
  Spec - Lightweight & Massive Concrete  
  **359 MCCOMMAS BLUFF**
- **301-G**  
  Spec - Shrink Comp Conc & Ind Floor Slabs  
  **WINDSOR**
- **336**  
  Footings  
  **353 AERIAL QUEEN**
- **350-E**  
  Env Str - Precast/Prestressed  
  **GASTON B**
- **562**  
  Eval, Repair & Rehab  
  **CUMBERLAND L**
- **Discover Dallas City Tour**  
  **TRINITY CROSSING ENTRANCE**

### 1:30 pm - 3:00 pm

- **440-K**  
  FRP - Material Characteristics  
  **PEGASUS B**

### 1:30 pm - 3:30 pm

- **237-TG1**  
  Self-Consolidating Concrete Task Group  
  **KESSLER**
- **345**  
  Bridge Construction  
  **SANGER B**

### 1:30 pm - 5:00 pm

- **355**  
  Anchorage  
  **CUMBERLAND K**

### 2:00 pm - 3:00 pm

- **310-TG1**  
  Curing Decorative Concrete  
  **BRYAN-BEEMAN A**
- **506-B**  
  Shotcreting - Fiber Reinforced  
  **SANGER A**
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Sunday, March 18, 2012 (cont.)

2:00 pm - 3:00 pm Sessions
International Session, Structural Concrete:
An Art Form, Part 1 REUNION G

2:00 pm - 3:30 pm
236-B Material Science - Transport Mechanisms REVERCHON A
C650 Tilt-up Construction Cert CUMBERLAND A

2:00 pm - 4:00 pm
305 Hot Weather BRYAN-BEEMAN B

2:00 pm - 5:00 pm
132 Responsibility GASTON A
315 Detailing REVERCHON B
352 Joints PEGASUS A

2:30 pm - 3:30 pm
318-EA 318 Electronic Aids CUMBERLAND C

2:30 pm - 5:00 pm
224 Cracking CUMBERLAND E

3:00 pm - 5:00 pm
121 Quality Assurance BAKER
301-E Spec - Post-Tensioned Concrete BRYAN-BEEMAN A
309 Consolidation CUMBERLAND I
310 Decorative Concrete CUMBERLAND J
341 Earthquake-Resistant Bridges PEGASUS B
423/445 Adhoc Grp on Shear in Prestress Conc MORENO A
440-L FRP - Durability CUMBERLAND G
445-D Shear & Torsn - Database CUMBERLAND H
550 Precast Structures SANGER A

3:30 pm - 5:00 pm
Intl-Cert International Certification MCMILLAN
236-D Material Science - Nanotechnology of Concrete M1 CUMBERLAND C
439-A Steel Reinforcement - Wire REVERCHON A
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Sunday, March 18, 2012 (cont.)

3:30 pm - 5:30 pm Sessions
   Engineering Fire Design of Concrete Structures, Part 2 REUNION E
   Hope & Schupack Corrosion Symposium, Part 2 REUNION B
   International Session, Structural Concrete: An Art Form, Part 2 REUNION G
   Physical Salt Attack on Concrete, Part 2 REUNION A
   Post-Earthquake Repairs, Part 2 REUNION C

4:00 pm - 5:00 pm
   S805 Collegiate Concrete Council CUMBERLAND B
   123 Research BRYAN-BEEMAN B

4:00 pm - 5:30 pm
   351-TG1 Spec for Cementitious Grouting Between Foundations & Equipment Bases CUMBERLAND D

5:45 pm - 7:00 pm
   Opening Session & Awards Program REUNION FH

7:00 pm - 8:00 pm
   Opening Reception MARSALIS HALL

8:00 pm - 10:00 pm
   123 Forum REUNION B

9:00 pm - 10:30 pm
   Student and Young Professional Networking Event MONDUEL'S BAR
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Monday, March 19, 2012

6:30 am - 8:00 am
Workshop for Technical Committee Chairs
REUNION FH

7:00 am - 8:30 am
Speaker Development Breakfast
CUMBERLAND F

7:00 am - 10:00 am
★ Guest Hospitality
Coffee Break
PEGASUS B
MARSALIS HALL

7:00 am - 6:00 pm
Speaker Ready Room
357 THE CENTRAL

7:15 am - 8:30 am
IC-Conf International Conferences
REVERCHON A

7:30 am - 5:00 pm
ACI Registration
MARSALIS HALL

8:00 am - 9:00 am
441-A High - Strength Conc
359 MCCOMMAS BLUFF

8:00 am - 12:30 pm
✓ High Fashion on
the High Plains
TRINITY CROSSING ENTRANCE

8:00 am - 5:00 pm
ACI Bookstore
Exhibits
MARSALIS HALL
MARSALIS HALL

8:15 am - 9:00 am
343-B Bridge Deck Design
CUMBERLAND E

8:15 am - 11:00 am
237 Self-Consolidating Concrete
CUMBERLAND KL
349-C Nuclear Str - Anchorage
CUMBERLAND C
548-A Polymers - Overlays
362 SHAWNEE A

8:15 am - 12:00 pm
374 Seismic Design
GASTON A
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Monday, March 19, 2012 (cont.)

8:30 am - 10:00 am
PUBC  Publications                  REVERCHON A
S802  Teaching Methods and
      Educational Materials          SANGER B
122   Energy Efficiency             CUMBERLAND D
130-A  Materials                   CUMBERLAND F
311   Inspection                   353 AERIAL QUEEN
318-L  International Liaison       BRYAN-BEEMAN A
439   Steel Reinforcement          CUMBERLAND G
440-G  FRP - Student               PEGASUS A
524   Plastering                   MORENO B
544-B  FRC - Education             CUMBERLAND B

8:30 am - 10:30 am
ACI Career Fair for Student & Young Professionals MARSALIS HALL

8:30 am - 10:30 am Sessions
Hope & Schupack Corrosion Symposium, Part 3 REUNION B
Open Paper Session REUNION E
Seismic Bridge Design Practice with Aesthetic Considerations REUNION G
Symposium Honoring James O. Jirsa's Contributions in Structural Concrete: A Time to Reflect, Part 1: Shear Issues REUNION C
Symposium on Integrated Cement-Based Pavement Solutions, Part 1: Concrete Pavements in Texas REUNION A

8:30 am - 11:00 am
C610  Field Technician Cert COTTON BOWL
355-TG  Anchorage TG MORENO A

8:30 am - 11:30 am
209  Creep & Shrinkage REVERCHON B
543  Piles MCMILLAN
546  Repair CUMBERLAND H
Daily Program

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Monday, March 19, 2012 (cont.)

8:30 am - 12:00 pm
301-A Spec - Gen Req, Definitions & Tolerances  BAKER

8:30 am - 12:30 pm
423 Prestressed  BRYAN-BEEMAN B

8:30 am - 1:00 pm
302 Floor Construction  CUMBERLAND IJ
350-B Env Str - Durability  CUMBERLAND A

8:30 am - 5:00 pm
313 Bins & Silos  SANGER A

8:30 am - 6:30 pm
350-D Env Str - Structural  WINDSOR

9:00 am - 10:00 am
441-B Lateral Reinf 359 MCCOMMAS BLUFF

9:00 am - 11:00 am
365 Service Life M1  COCKRELL

9:00 am - 12:00 pm
301-F Spec - Precast Concrete Panels  KESSLER
376-C Analysis Subcommittee  CUMBERLAND E

10:00 am - 11:30 am
440-I FRP - Prestressed Concrete  CUMBERLAND F

10:00 am - 12:00 pm
351-D Design Provisions for Heavy Industrial
Equipment and Machinery Concrete
Support Structures  CUMBERLAND D
S806 Young Professional Activities 359 MCCOMMAS BLUFF

10:00 am - 1:00 pm
207 Mass Concrete  CUMBERLAND B
216 Fire Resistance  MORENO B
232-A Fly Ash - Use of Nat Pozzolans  BRYAN-BEEMAN A
318-B Reinforcement & Development M1  CUMBERLAND G
343 Bridge Design  REVERCHON A
Daily Program

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Monday, March 19, 2012 (cont.)

10:00 am - 4:00 pm
★ Guest Lounge

PARRINO’S PATIO

10:30 am - 12:30 pm
437 Strength Evaluation
353 AERIAL QUEEN

11:00 am - 12:00 pm
364-TG1 Rehabilitation Guide
CUMBERLAND C

11:00 am - 12:30 pm
548-C Structural Polymer Design
362 SHAWNEE A

11:00 am - 1:00 pm
130-E Design/Specifications/Codes/ Regulations
COTTON BOWL

11:00 am - 1:00 pm Sessions

Hope & Schupack Corrosion
Symposium, Part 4

REUNION B

Quality Control and Robustness of SCC, Part 1

REUNION G

Symposium Honoring James O. Jirsa’s Contributions in Structural Concrete: A Time to Reflect, Part 2: Bond and Development Length

REUNION C

Symposium on Integrated Cement-Based Pavement Solutions, Part 2: Roller-Compacted Concrete Pavements

REUNION A

The Art of Concrete, Part 1

REUNION E

11:00 am - 1:30 pm
447 Finite Element Analysis M1
COCKRELL

11:15 am - 4:30 pm
Exhibitor Demonstrations
MARSALIS HALL
Daily Program

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Monday, March 19, 2012 (cont.)

11:30 am - 1:00 pm
C601-A  Adhesive Anchor Installer  CUMBERLAND H
201-D  Durability - Oversight Committee  MCMILLAN
304  Measuring/Mix/Trans/Placing  CUMBERLAND F
346  CIP Pipe  REVERCHON B
544-A  FRC - Production & Applications  PEGASUS AB

11:30 am - 1:30 pm
✓ Student Lunch  REUNION FH

11:30 am - 2:00 pm
441  Columns  CUMBERLAND KL

11:30 am - 3:00 pm
Afternoon Soda Break  MARSALIS HALL

12:00 pm - 2:00 pm
351-TG2  Specification for Epoxy Grouting Between Foundations & Equipment Bases  KESSLER
506-E  Shotcreting - Specifications  GASTON A

12:30 pm - 2:00 pm
124  Aesthetics  353 AERIAL QUEEN
350-H  Env Str - Editorial  359 MCCOMMAS BLUFF

12:30 pm - 2:30 pm
215  Fatigue  GASTON B

12:30 pm - 4:30 pm
349-A&B  Nuclear Structures - Design & Materials  CUMBERLAND C

1:00 pm - 2:00 pm
130-B  Production/Transport/Construction  CUMBERLAND A
214  Strength Tests M1  REVERCHON B
Chapter Forum: “Adhesive Anchor Installer - Certification—Is It Right for Your Chapter?”  CUMBERLAND B
Daily Program

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Monday, March 19, 2012 (cont.)

1:00 pm - 2:30 pm
C631 Conc Transportation Const Insp MORENO A
ISO/TC 71 ISO/TC 71 Advisory Cmte MORENO B

1:00 pm - 3:00 pm
C660 Shotcrete Nozzleman Cert BAKER
228-A NDT Technician Certification MCMILLAN
364 Rehabilitation CUMBERLAND H

1:00 pm - 3:30 pm
375 Design for Wind Loads REVERCHON A

1:00 pm - 4:00 pm
225 Hydraulic Cements CUMBERLAND E
232 Fly Ash & Natural Pozzolans BRYAN-BEEMAN B

1:00 pm - 5:00 pm
301 Specifications M2 CUMBERLAND G
362 Parking Structures CUMBERLAND F
376-B Materials Subcommittee COTTON BOWL
✓John Fitzgerald Kennedy Tour TRINITY CROSSING ENTRANCE

1:30 pm - 3:00 pm
440-M FRP - Repair of Masonry Str PEGASUS AB

1:30 pm - 3:30 pm Sessions

Workshopping your Presentation REUNION B

Symposium Honoring James O. Jirsa’s Contributions in Structural Concrete: A Time to Reflect, Part 3:
Seismic Strengthening and Repair of Concrete Structures REUNION C

Symposium on Integrated Cement-Based Pavement Solutions, Part 3: Sustainable Aspects of Soil Cement Pavements REUNION A

The Art of Concrete, Part 2 REUNION E


48
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Monday, March 19, 2012 (cont.)

2:00 pm - 3:00 pm
SCO Scholarship Council M2 359 MCCOMMAS BLUFF

2:00 pm - 3:30 pm
231 Early Age GASTON A
318-S Spanish Translation CUMBERLAND B
348 Safety 362 SHAWNEE A

2:00 pm - 4:00 pm
MKTC Marketing CUMBERLAND A
365 Service Life M2 353 Aerial Queen

2:00 pm - 5:00 pm
CAC Chapter Activities COCKRELL
130 Sustainability M1 CUMBERLAND KL
212 Chemical Admixtures KESSLER
307 Chimneys CUMBERLAND D

2:00 pm - 6:00 pm
369 Seismic - Rehab M2 REVERCHON B
445 Shear & Torsion SANGER B

2:00 pm - 6:30 pm
360 Slabs on Ground CUMBERLAND IJ

2:30 pm - 4:30 pm
351 Equip Foundations MORENO A
548-B Polymers - Adhesives MORENO B

2:30 pm - 5:00 pm
370 Blast and Impact Load Effects GASTON B

3:00 pm - 4:00 pm
506-F Shotcreting - Underground MCMILLAN

3:00 pm - 6:00 pm
440-F FRP - Repair Strengthening PEGASUS AB
# Daily Program

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**Monday, March 19, 2012 (cont.)**

### 3:30 pm - 5:00 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>3:30 pm - 5:00 pm</td>
<td>★ Guest Social</td>
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<tr>
<td></td>
<td>REUNION FH</td>
</tr>
<tr>
<td>211-P</td>
<td>Guide for Selecting Proportions for Pumpable Concrete</td>
</tr>
<tr>
<td></td>
<td>359 MCCOMMAS BLUFF</td>
</tr>
<tr>
<td>214</td>
<td>Strength Tests M2</td>
</tr>
<tr>
<td>446</td>
<td>Fracture Mechanics</td>
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<td>REVERCHON A</td>
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### 3:30 pm - 5:30 pm

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>3:30 pm - 5:30 pm</td>
<td>Ultra-High-Performance Concrete</td>
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<td>CUMBERLAND H</td>
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### 3:30 pm - 6:00 pm

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>3:30 pm - 6:00 pm</td>
<td>FRC - Structural Uses</td>
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<td>CUMBERLAND B</td>
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### 3:30 pm - 6:30 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>3:30 pm - 6:30 pm</td>
<td>Env Str - Education</td>
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<tr>
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<td>362 SHAWNEE A</td>
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<tr>
<td>435</td>
<td>Deflection</td>
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<td>GASTON A</td>
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### 4:00 pm - 5:30 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:00 pm - 5:30 pm</td>
<td>Computers</td>
</tr>
<tr>
<td></td>
<td>353 AERIAL QUEEN</td>
</tr>
</tbody>
</table>

### 4:00 pm - 6:00 pm **Sessions**

- Integral Abutment Bridges: Design, Performance, Evaluation, and Maintenance  REUNION A
- Symposium Honoring James Jirsa's Contributions in Structural Concrete: A Time to Reflect, Part 4: Joints  REUNION C
- The Art of Concrete, Part 3  REUNION E
- The Need for Service-Life Prediction and Sustainability  REUNION B

### 4:30 pm - 5:30 pm

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:30 pm - 5:30 pm</td>
<td>Material Science</td>
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<td>BRYAN-BEEMAN B</td>
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### 4:30 pm - 6:30 pm

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<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:30 pm - 6:30 pm</td>
<td>Shotcreting - Guide</td>
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<td>CUMBERLAND C</td>
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</tbody>
</table>
Daily Program

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Monday, March 19, 2012 (cont.)

5:00 pm - 6:00 pm
334 Shells CUMBERLAND F

5:00 pm - 6:30 pm
E702 Designing Concrete Structures REVERCHON A
318-TGF TGF - Foundation CUMBERLAND D
447 Finite Element Analysis M2 CUMBERLAND G
544-E FRC - Mechanical Properties GASTON B
555 Recycled COCKRELL

5:00 pm - 7:00 pm
E703 Concrete Construction Practices SANGER A

6:00 pm - 7:00 pm
Women in ACI Reception MORENO AB

6:00 pm - 8:00 pm
✓ Reception in Honor of James O. Jirsa REUNION FOYER

Tuesday, March 20, 2012

6:30 am - 8:30 am
TTAG Technology Transfer Advisory Group CUMBERLAND J

7:00 am - 8:00 am
EAC Chair Training CUMBERLAND D

7:00 am - 8:30 am
TRRC TAC Repair & Rehab SANGER A

7:00 am - 10:00 am
★ Guest Hospitality PEGASUS B
Coffee Break MARSALIS HALL

7:00 am - 6:00 pm
Speaker Ready Room 357 THE CENTRAL

7:30 am - 9:00 am
130-G Education/Certification CUMBERLAND A
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

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Tuesday, March 20, 2012 (cont.)

7:30 am - 5:00 pm
ACI Registration MARSALIS HALL

8:00 am - 9:00 am
IJBRC Intl Joints & Bearings Research MCMILLAN
International Chapter Forum REVERCHON AB

8:00 am - 9:30 am
230 Soil Cement BRYAN-BEEMAN A

8:00 am - 10:00 am
211-C Proportioning-No Slump CUMBERLAND C
238 Workability of Fresh Concrete 362 SHAWNEE A
325-A Pavements - Design GASTON A
444 Experimental Analysis CUMBERLAND H

8:00 am - 11:00 am
201 Durability CUMBERLAND KL
440 Fiber-Reinforced Polymer REUNION FH
522 Pervious Concrete PEGASUS A

8:00 am - 12:00 pm
EAC Educational Activities M2 CUMBERLAND D

8:00 am - 12:30 pm
318-B Reinforcement & Development M2 CUMBERLAND G
318-D Flexure & Axial Loads CUMBERLAND I
318-E Shear & Torsion COCKRELL
318-G Prestressed Precast CUMBERLAND F

8:00 am - 4:00 pm
✓ Cowtown & Culture TRINITY CROSSING ENTRANCE

8:00 am - 5:00 pm
ACI Bookstore MARSALIS HALL
Exhibits MARSALIS HALL

8:30 am - 10:00 am
C620 Laboratory Tech Cert COTTON BOWL
523-A Cellular - Autoclaved Aerated CUMBERLAND J
**Daily Program**

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**Tuesday, March 20, 2012 (cont.)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:30 am - 10:30 am</td>
<td>357 Offshore &amp; Marine</td>
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<tr>
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<td>560 Design &amp; Constr ICFs</td>
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<tr>
<td>8:30 am - 10:30 am</td>
<td><strong>Sessions</strong></td>
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<tr>
<td></td>
<td>Composite and Modular Structures, Part 1</td>
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<td>Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas</td>
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<td>Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 1</td>
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<td>Quality Control and Robustness of SCC, Part 2</td>
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<td></td>
<td>Science and Art of Grouting and Grouting Materials, Part 1</td>
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<tr>
<td>8:30 am - 11:30 am</td>
<td>117 Tolerances</td>
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<td>306 Cold Weather</td>
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<td>350-G&amp;K Env Str - Tightness Testing/Haz Mat</td>
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<td>353 AERIAL QUEEN</td>
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<td>506 Shotcreting</td>
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<td>548 Polymers</td>
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<tr>
<td>8:30 am - 3:30 pm</td>
<td>350-F Env Str - Seismic</td>
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<tr>
<td>9:00 am - 10:30 am</td>
<td>332-B Conc Mtrls and Plcment</td>
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<td>332-F Residential Concrete - Slabs</td>
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<td>9:00 am - 12:00 pm</td>
<td>IC International Advisory Committee</td>
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<tr>
<td></td>
<td>ASME STS Meeting</td>
</tr>
<tr>
<td>9:00 am - 1:00 pm</td>
<td>✔Dallas’ Hallowed Haunts                                                             TRINITY CROSSING</td>
</tr>
<tr>
<td></td>
<td>ENTRANCE</td>
</tr>
</tbody>
</table>

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### Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

- ✓ = Separate fee required  
- ★ = Guest-only event  
- TG = Task Group

#### Tuesday, March 20, 2012 (cont.)

<table>
<thead>
<tr>
<th>Time</th>
<th>Event Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 am - 5:00 pm</td>
<td>376-D Design &amp; Construction Subcommittee</td>
<td>SANGER B</td>
</tr>
<tr>
<td>10:00 am - 11:00 am</td>
<td>130-C Structures in Service</td>
<td>GASTON B</td>
</tr>
<tr>
<td>10:00 am - 11:30 am</td>
<td>C630 Construction Inspector Cert</td>
<td>CUMBERLAND H</td>
</tr>
<tr>
<td>10:00 am - 12:00 pm</td>
<td>211-A Proportioning - Editorial</td>
<td>GASTON A</td>
</tr>
<tr>
<td>10:00 am - 1:00 pm</td>
<td>523 Cellular Concrete</td>
<td>COTTON BOWL</td>
</tr>
<tr>
<td>10:00 am - 4:00 pm</td>
<td>★ Guest Lounge</td>
<td>PARRINO'S PATIO</td>
</tr>
<tr>
<td>10:30 am - 12:00 pm</td>
<td>325-C Pavements - Prestressed and Precast</td>
<td>BAKER</td>
</tr>
<tr>
<td>10:30 am - 12:30 pm</td>
<td>327-TG4 Modeling and Simulation Methods</td>
<td>MORENO B</td>
</tr>
<tr>
<td>11:00 am - 12:30 pm</td>
<td>371 Elevated Tanks with Concrete Pedestals</td>
<td>BRYAN-BEEMAN A</td>
</tr>
<tr>
<td>11:00 am - 1:00 pm</td>
<td>310 Sustainability M2</td>
<td>REUNION FH</td>
</tr>
<tr>
<td></td>
<td>327 RCC Pavements</td>
<td>GASTON B</td>
</tr>
<tr>
<td></td>
<td>515 Protective Systems</td>
<td>MCMILLAN</td>
</tr>
<tr>
<td></td>
<td>544-F FRC - Durability</td>
<td>CUMBERLAND J</td>
</tr>
</tbody>
</table>
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.

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Tuesday, March 20, 2012 (cont.)

11:00 am - 1:00 pm Sessions

Composite and Modular Structures, Part 2  REUNION G

Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas Containment, Part 2  REUNION A

Innovations in Chemical Admixture Technology as Related to Sustainability, Part 1  REUNION E

Science and Art of Grouting and Grouting Materials, Part 2  REUNION C

11:30 am - 12:30 pm

236-TG2  Sustainability Engineered by Material Science  PEGASUS A

11:30 am - 1:00 pm

E707  Specification Education  CUMBERLAND H
211-E  Proportioning - Evaluation  362 SHAWNEE A
213-TG  Lightweight - Editorial TG  CUMBERLAND E

11:30 am - 1:00 pm Sessions

A Fracture Approach for FRP-Concrete Structures, Part 1  REUNION B

11:30 am - 1:30 pm

✓ Contractors' Day Lunch  PEGASUS B

11:30 am - 3:00 pm

Afternoon Soda Break  MARSALIS HALL

11:30 am - 5:00 pm

350-A  Env Str - General & Concrete  MORENO A

12:00 pm - 1:00 pm

223-D  Shr Compensating - Non-Reinforced Concrete or Mortar  CUMBERLAND A

12:30 pm - 2:00 pm

C680  Adhesive Anchor Installer - Joint CRSI  CUMBERLAND B

1:00 pm - 2:00 pm

223-C  Shrinkage Compensating - Constr  CUMBERLAND A
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Tuesday, March 20, 2012 (cont.)

1:00 pm - 2:30 pm
325-D  Proportioning for Pavements  CUMBERLAND J

1:00 pm - 3:00 pm
201-C  Durability - Condition Report  CUMBERLAND G
211-L  Assessing Aggregate Gradation  BRYAN-BEEMAN A
236-D  Material Science - Nanotechnology of Concrete M2  CUMBERLAND H

1:00 pm - 5:00 pm
332  Residential Concrete  REUNION FH
563  Specs Repair of Struct Conc in Bldgs  CUMBERLAND E

1:30 pm - 3:00 pm
120  History  WINDSOR
544-C  FRC - Testing  BRYAN-BEEMAN B

1:30 pm - 3:30 pm
213  Lightweight  GASTON A

1:30 pm - 3:30 pm Sessions
  A Fracture Approach for FRP-Concrete Structures, Part 2  REUNION B
  Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 2  REUNION C
  Innovations in Chemical Admixture Technology as Related to Sustainability, Part 2  REUNION E
  Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 1  REUNION G
  Research in Progress, Part 1  REUNION A

1:30 pm - 5:00 pm
349  Nuclear Structures  CUMBERLAND L

1:30 pm - 6:00 pm
318-A  General Concrete Constr  MORENO B
318-C  Serviceability/Safety  MCMILLAN
318-H  Seismic Provisions  PEGASUS A
318-R  Code Reorganization  GASTON B
Daily Program
All schedule and location changes will be posted daily in MARSALIS HALL.
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Tuesday, March 20, 2012 (cont.)

2:00 pm - 3:30 pm
234  Silica Fume  CUMBERLAND B
325-E Accelerated Paving  COTTON BOWL

2:00 pm - 4:00 pm
130-D  Rating Systems/Sustainability Tools  CUMBERLAND K
211-F  Proportioning - Submittal  CUMBERLAND D

2:00 pm - 5:00 pm
CPC  Certification Programs  COCKRELL
222  Corrosion  CUMBERLAND F
223  Shrinkage Compensating  CUMBERLAND A
229  Controlled Low Strength  CUMBERLAND C
233  Slag Cement  CUMBERLAND I
235  Electronic Data Exchange  BAKER

3:00 pm - 4:00 pm
236-TG1  Advanced Analysis Techniques for Concrete  CUMBERLAND H

3:00 pm - 5:00 pm
CC  Convention Committee M2  REVERCHON AB
131  BIM  CUMBERLAND G
211-N  Proportioning with Ground Limestone and Material Fillers  BRYAN-BEEMAN A
359-C  Working Group on Modernization  353 AERIAL QUEEN
372  Tanks Wrapped Wire/Strand  WINDSOR

3:00 pm - 5:30 pm
544  Fiber-Reinforced Concrete  CUMBERLAND J

3:30 pm - 5:00 pm
363-A  High-Strength Lightweight Concrete  SANGER A

3:30 pm - 5:30 pm
325  Pavements  BRYAN-BEEMAN B
330-TGI  Parking Lots & Site Paving TG M1  GASTON A

4:00 pm - 5:30 pm
308/213  Guide on Internal Curing  CUMBERLAND H

4:00 pm - 6:00 pm
350-L  Env Str - Specification  CUMBERLAND D
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
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Tuesday, March 20, 2012 (cont.)

4:00 pm - 6:00 pm Sessions
Contractors’ Day Session: Design Build Experiences REUNION E

Introduction of Revised Specification for Shotcrete and Other Shotcrete Development REUNION C

Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 2 REUNION G

Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures in Seismic Regions, Part 1 REUNION B

Research in Progress, Part 2 REUNION A

5:00 pm - 6:00 pm
349-TG ACI 349 and ACI 359 Joint Committee TG CUMBERLAND L
359-TG ACI 349 and ACI 359 Joint Committee TG CUMBERLAND L

5:00 pm - 6:30 pm
TAC Anniversary Reception COTTON BOWL
(Invitation Only)

5:30 pm - 6:30 pm
Faculty Network Reception REUNION FOYER

5:30 pm - 8:00 pm
315-BIM Detailing - Constructibility BIM TG CUMBERLAND H

6:00 pm - 10:00 pm
Concrete Mixer GILLEY’S DALLAS
(depart Trinity Crossing entrance)

Wednesday, March 21, 2012

7:00 am - 9:00 am
SYPAC Student & Young Professional Activities Committee MORENO A
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
✓ = Separate fee required  ★ = Guest-only event  TG = Task Group

Wednesday, March 21, 2012 (cont.)

7:00 am - 10:00 am
TCSC  TAC Construction Standards Committee  GASTON A

7:00 am - 10:00 am
★ Guest Hospitality  PEGASUS B
Coffee Break  MARSALIS HALL

7:00 am - 12:00 pm
Speaker Ready Room  357 THE CENTRAL

8:00 am - 9:30 am
552  Cementitious Grouting  GASTON B

8:00 am - 10:00 am
359-A  Working Group on Design  MCMILLAN

8:00 am - 10:30 am
308-B  Curing - Specifications  MORENO B

8:00 am - 12:00 pm
ACI Bookstore  MARSALIS HALL
ACI Registration  MARSALIS HALL
✓ Lone Star Sports Legends—Nowhere Else but Texas!  TRINITY CROSSING ENTRANCE

8:00 am - 5:00 pm
350  Environmental Structures  REVERCHON AB

8:00 am - 6:00 pm
318  Building Code  REUNION FH

8:30 am - 10:00 am
C601-C  Masonry Testing Technician  PEGASUS A

8:30 am - 10:30 am
303  Architectural CIP  COCKRELL
Daily Program

All schedule and location changes will be posted daily in MARSALIS HALL.
✔ = Separate fee required   ★ = Guest-only event   TG = Task Group

Wednesday, March 21, 2012 (cont.)

8:30 am - 10:30 am **Sessions**
Architectural Concrete in Hot Weather REUNION G
Concrete Columns in High-Rise Buildings REUNION A
Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures in Seismic Regions, Part 2 REUNION B
The Sustainable Art of Concrete REUNION C
Total Water Control REUNION E

8:30 am - 11:30 am
211 Proportioning BRYAN-BEEMAN B
330-TG1 Parking Lots & Paving Sites TG M2 WINDSOR
363 High Strength COTTON BOWL

9:00 am - 10:00 am
359-B Materials, Fabrication and Examination BAKER

9:00 am - 12:00 pm
ACIFdn ACI Foundation BRYAN-BEEMAN A

9:00 am - 5:00 pm
376-A Code, Education & Publication Subcommittee MORENO A

10:00 am - 12:30 pm
C601-B Concrete Quality Technical Mgr BAKER

10:00 am - 4:00 pm
★ Guest Lounge PARRINO'S PATIO

10:00 am - 5:00 pm
359 Nuclear Reactors PEGASUS A

10:30 am - 12:30 pm
329 Perf Ready Mixed COCKRELL

10:30 am - 1:00 pm
308-A Curing - Guide MORENO B
Daily Program

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Wednesday, March 21, 2012 (cont.)

11:30 am - 1:00 pm
C601-D  Decorative Concrete Finisher  WINDSOR

1:00 pm - 4:00 pm
330  Parking Lots & Site Paving  WINDSOR

2:00 pm - 5:00 pm
308  Curing  BRYAN-BEEMAN B
Virtual Cement & Concrete Testing  PEGASUS B

Thursday, March 22, 2012

8:00 am - 5:00 pm
✓ACI Troubleshooting Concrete Construction  MORENO AB

10:00 am - 5:00 pm
BOD  Board of Direction  PEGASUS B
ACI committees are recognized for providing widely accepted standards of practice for nearly every facet of the concrete industry thanks to the participation of professionals across the concrete industry.

ACI’s technical committees are classified as follows:
100’s – General
200’s – Materials
300’s – Design and Construction
400’s – Concrete Reinforcement and Structural Analysis
500’s – Specialized Applications and Repair

Help shape the codes and standards of the concrete industry and JOIN A COMMITTEE!

If you are interested in joining a committee, visit http://www.concrete.org/COMMITTEES/COM_JOIN.asp and fill out the online application or ask the committee chair for an application!
<table>
<thead>
<tr>
<th>Code</th>
<th>Committee</th>
<th>Day</th>
<th>Time</th>
<th>Room Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACIFdn</td>
<td>ACI Foundation</td>
<td>Wed</td>
<td>9:00 am - 12:00 pm</td>
<td>BRYAN- BEEMAN A</td>
</tr>
<tr>
<td>BOD</td>
<td>Board of Direction</td>
<td>Thu</td>
<td>10:00 am - 5:00 pm</td>
<td>PEGASUS B</td>
</tr>
<tr>
<td>C601-A</td>
<td>Adhesive Anchor Installer</td>
<td>Mon</td>
<td>11:30 am - 1:00 pm</td>
<td>CUMBERLAND H</td>
</tr>
<tr>
<td>C601-B</td>
<td>Concrete Quality Technical Mgr</td>
<td>Wed</td>
<td>10:00 am - 12:30 pm</td>
<td>BAKER</td>
</tr>
<tr>
<td>C601-C</td>
<td>Masonry Testing Technician</td>
<td>Wed</td>
<td>8:30 am - 10:00 am</td>
<td>PEGASUS A</td>
</tr>
<tr>
<td>C601-D</td>
<td>Decorative Concrete Finisher</td>
<td>Wed</td>
<td>11:30 am - 1:00 pm</td>
<td>WINDSOR</td>
</tr>
<tr>
<td>C610</td>
<td>Field Technician Cert</td>
<td>Mon</td>
<td>8:30 am - 11:00 am</td>
<td>COTTON BOWL</td>
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<tr>
<td>C620</td>
<td>Laboratory Tech Cert</td>
<td>Tue</td>
<td>8:30 am - 10:00 am</td>
<td>COTTON BOWL</td>
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<tr>
<td>C630</td>
<td>Construction Inspector Cert</td>
<td>Tue</td>
<td>10:00 am - 11:30 am</td>
<td>CUMBERLAND H</td>
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<tr>
<td>C631</td>
<td>Conc Transportation Const Insp</td>
<td>Mon</td>
<td>1:00 pm - 2:30 pm</td>
<td>MORENO A</td>
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<tr>
<td>C640</td>
<td>Craftsman Cert</td>
<td>Sun</td>
<td>11:00 am - 1:00 pm</td>
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<tr>
<td>C650</td>
<td>Tilt-Up Constructor Cert</td>
<td>Sun</td>
<td>2:00 pm - 3:30 pm</td>
<td>CUMBERLAND A</td>
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<tr>
<td>C660</td>
<td>Shotcrete Nozzleman Cert</td>
<td>Mon</td>
<td>1:00 pm - 3:00 pm</td>
<td>BAKER</td>
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<td>C680</td>
<td>Adhesive Anchor Installer - Joint CRSI</td>
<td>Tue</td>
<td>12:30 pm - 2:00 pm</td>
<td>CUMBERLAND B</td>
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<tr>
<td>CAC</td>
<td>Chapter Activities</td>
<td>Mon</td>
<td>2:00 pm - 5:00 pm</td>
<td>COCKRELL</td>
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<tr>
<td>CC</td>
<td>Convention Committee M2</td>
<td>Tue</td>
<td>3:00 pm - 5:00 pm</td>
<td>REVERCHON AB</td>
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<tr>
<td>CLC</td>
<td>Construction Liaison</td>
<td>Sun</td>
<td>8:00 am - 10:30 am</td>
<td>GASTON B</td>
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<tr>
<td>CPC</td>
<td>Certification Programs</td>
<td>Tue</td>
<td>2:00 pm - 5:00 pm</td>
<td>COCKRELL</td>
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<tr>
<td>CRC</td>
<td>Concrete Research Council</td>
<td>Tue</td>
<td>11:00 am - 1:00 pm</td>
<td>CUMBERLAND C</td>
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<tr>
<td>E701</td>
<td>Materials for Concrete Construction</td>
<td>Sun</td>
<td>10:00 am - 11:30 am</td>
<td>GASTON A</td>
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<tr>
<td>E702</td>
<td>Designing Concrete Structures</td>
<td>Mon</td>
<td>5:00 pm - 6:30 pm</td>
<td>REVERCHON A</td>
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<tr>
<td>Code</td>
<td>Committee</td>
<td>Day</td>
<td>Time</td>
<td>Room Name</td>
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<tr>
<td>E703</td>
<td>Concrete Construction Practices</td>
<td>Mon</td>
<td>5:00 pm - 7:00 pm</td>
<td>SANGER A</td>
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<tr>
<td>E706</td>
<td>Repair Application Procedures</td>
<td>Sun</td>
<td>8:00 am - 10:00 am</td>
<td>CUMBERLAND D</td>
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<tr>
<td>E707</td>
<td>Specification Education</td>
<td>Tue</td>
<td>11:30 am - 1:00 pm</td>
<td>CUMBERLAND H</td>
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<tr>
<td>EAC</td>
<td>Educational Activities M1</td>
<td>Sat</td>
<td>1:00 pm - 5:00 pm</td>
<td>BAKER</td>
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<tr>
<td>EAC</td>
<td>Educational Activities M2</td>
<td>Tue</td>
<td>8:00 am - 12:00 pm</td>
<td>CUMBERLAND D</td>
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<tr>
<td>HTC</td>
<td>Hot Topic</td>
<td>Sun</td>
<td>11:30 am - 1:00 pm</td>
<td>359 MCCOMMAS BLUFF</td>
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<tr>
<td>IC</td>
<td>International Advisory Committee</td>
<td>Tue</td>
<td>9:00 am - 12:00 pm</td>
<td>REVERCHON AB</td>
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<tr>
<td>IC-Conf</td>
<td>International Conferences</td>
<td>Mon</td>
<td>7:15 am - 8:30 am</td>
<td>REVERCHON A</td>
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<tr>
<td>IC-Part</td>
<td>International Partnerships &amp; Publications</td>
<td>Sun</td>
<td>10:00 am - 12:00 pm</td>
<td>CUMBERLAND B</td>
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<tr>
<td>IJBC</td>
<td>Intl Joints &amp; Bearings Research</td>
<td>Tue</td>
<td>8:00 am - 9:00 am</td>
<td>MCMILLAN</td>
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<tr>
<td>Intl-Cert</td>
<td>International Certification</td>
<td>Sun</td>
<td>3:30 pm - 5:00 pm</td>
<td>MCMILLAN</td>
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<tr>
<td>ISO/TC 71</td>
<td>ISO/TC 71 Advisory Cmte</td>
<td>Mon</td>
<td>1:00 pm - 2:30 pm</td>
<td>MORENO B</td>
</tr>
<tr>
<td>MEMC</td>
<td>Membership</td>
<td>Sun</td>
<td>8:30 am - 11:30 am</td>
<td>CUMBERLAND E</td>
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<tr>
<td>MKTC</td>
<td>Marketing</td>
<td>Mon</td>
<td>2:00 pm - 4:00 pm</td>
<td>CUMBERLAND A</td>
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<tr>
<td>PUBC</td>
<td>Publications</td>
<td>Mon</td>
<td>8:30 am - 10:00 am</td>
<td>REVERCHON A</td>
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<tr>
<td>S801</td>
<td>Student Activities</td>
<td>Sun</td>
<td>8:00 am - 10:00 am</td>
<td>CUMBERLAND A</td>
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<tr>
<td>S802</td>
<td>Teaching Methods and Educational Materials</td>
<td>Mon</td>
<td>8:30 am - 10:00 am</td>
<td>SANGER B</td>
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<tr>
<td>S805</td>
<td>Collegiate Concrete Council</td>
<td>Sun</td>
<td>4:00 pm - 5:00 pm</td>
<td>CUMBERLAND B</td>
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<tr>
<td>S806</td>
<td>Young Professional Activities</td>
<td>Mon</td>
<td>10:00 am - 12:00 pm</td>
<td>359 MCCOMMAS BLUFF</td>
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<tr>
<td>SCO</td>
<td>Scholarship Council M2</td>
<td>Mon</td>
<td>2:00 pm - 3:00 pm</td>
<td>359 MCCOMMAS BLUFF</td>
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</tbody>
</table>
# Numerical Committee Meeting Listing

<table>
<thead>
<tr>
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<th>Committee</th>
<th>Day</th>
<th>Time</th>
<th>Room Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYPAC</td>
<td>Student &amp; Young Professional Activities Committee</td>
<td>Wed</td>
<td>7:00 am - 9:00 am</td>
<td>MORENO A</td>
</tr>
<tr>
<td>TAC</td>
<td>Technical Activities M1</td>
<td>Fri</td>
<td>6:30 pm - 9:00 pm</td>
<td>BRYAN-BEEMAN B</td>
</tr>
<tr>
<td>TAC</td>
<td>Technical Activities M2</td>
<td>Sat</td>
<td>7:00 am - 6:00 pm</td>
<td>REVERCHON A</td>
</tr>
<tr>
<td>TAC</td>
<td>Technical Activities M3</td>
<td>Sun</td>
<td>7:00 am - 2:00 pm</td>
<td>REVERCHON A</td>
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<tr>
<td>TACRGr1</td>
<td>TAC Review Group 1</td>
<td>Sun</td>
<td>8:00 am - 11:00 am</td>
<td>REVERCHON B</td>
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<tr>
<td>TACRGr2</td>
<td>TAC Review Group 2</td>
<td>Sun</td>
<td>8:00 am - 11:00 am</td>
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<tr>
<td>TACRGr3</td>
<td>TAC Review Group 3</td>
<td>Sun</td>
<td>8:00 am - 11:00 am</td>
<td>SANGER B</td>
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<tr>
<td>TACRGr4</td>
<td>TAC Review Group 4</td>
<td>Sun</td>
<td>8:00 am - 11:00 am</td>
<td>MORENO A</td>
</tr>
<tr>
<td>TCSC</td>
<td>TAC Construction Standards Committee</td>
<td>Wed</td>
<td>7:00 am - 10:00 am</td>
<td>GASTON A</td>
</tr>
<tr>
<td>TRRC</td>
<td>TAC Repair &amp; Rehab</td>
<td>Tue</td>
<td>7:00 am - 8:30 am</td>
<td>SANGER A</td>
</tr>
<tr>
<td>TTAG</td>
<td>Technology Transfer Advisory Group</td>
<td>Tue</td>
<td>6:30 am - 8:30 am</td>
<td>CUMBERLAND J</td>
</tr>
<tr>
<td>117</td>
<td>Tolerances</td>
<td>Tue</td>
<td>8:30 am - 11:30 am</td>
<td>CUMBERLAND B</td>
</tr>
<tr>
<td>118</td>
<td>Computers</td>
<td>Mon</td>
<td>4:00 pm - 5:30 pm</td>
<td>353 AERIAL QUEEN</td>
</tr>
<tr>
<td>120</td>
<td>History</td>
<td>Tue</td>
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<td>236-TG1</td>
<td>Advanced Analysis Techniques for Concrete</td>
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<td>Sustainability Engineered by Material Science</td>
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## Numerical Committee Meeting Listing

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<td>Inspection</td>
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<td>Bins &amp; Silos</td>
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<td>SANGER A</td>
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<td>Simplified Design Buildings</td>
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<td>Shear &amp; Torsion</td>
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<td>Proportioning for Pavements</td>
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<td>Accelerated Paving</td>
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<td>329</td>
<td>Perf Ready Mixed</td>
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<td>330</td>
<td>Parking Lots &amp; Site Paving</td>
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<td>332</td>
<td>Residential Concrete</td>
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<td>Residential Concrete - Slabs</td>
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<td>Shells</td>
<td>Mon</td>
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<td>Composite Hybrid</td>
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<td>336</td>
<td>Footings</td>
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<td>Earthquake-Resistant Bridges</td>
<td>Sun</td>
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<td>341-A</td>
<td>Equake Res Brdgs - Columns</td>
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<td>Perf Based Seismic Design</td>
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<td>Bridge Evaluation</td>
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<td>Bridge Design</td>
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<td>343-A</td>
<td>Design</td>
<td>Sun</td>
<td>11:00 am - 12:00 pm</td>
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## Numerical Committee Meeting Listing

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<thead>
<tr>
<th>Code</th>
<th>Committee</th>
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<th>Time</th>
<th>Room Name</th>
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<tr>
<td>343-B</td>
<td>Bridge Deck Design</td>
<td>Mon</td>
<td>8:15 am - 9:00 am</td>
<td>CUMBERLAND E</td>
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<td>345</td>
<td>Bridge Construction</td>
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<td>CIP Pipe</td>
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<td>Formwork M1</td>
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<tr>
<td>347</td>
<td>Formwork M2</td>
<td>Sun</td>
<td>8:30 am - 12:30 pm</td>
<td>BRYAN-BEEMAN AB</td>
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<td>347-A</td>
<td>Formwork - Specification</td>
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<td>348</td>
<td>Safety</td>
<td>Mon</td>
<td>2:00 pm - 3:30 pm</td>
<td>362 SHAWNEE A</td>
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<tr>
<td>349</td>
<td>Nuclear Structures</td>
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<td>1:30 pm - 5:00 pm</td>
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<td>349-A&amp;B</td>
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<td>Mon</td>
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<td>349-C</td>
<td>Nuclear Str - Anchorage</td>
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<td>Env Str - General &amp; Concrete</td>
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<td>Env Str - Durability</td>
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<td>8:30 am - 11:30 am</td>
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<td>Env Str - Structural</td>
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<td>8:30 am - 6:30 pm</td>
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<td>Env Str - Precast/ Prestressed</td>
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<td>Env Str - Education</td>
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<td>Joints</td>
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<td>Materials, Fabrication and Examination</td>
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<td>Rehabilitation Guide</td>
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<td>Elevated Tanks with Concrete Pedestals</td>
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<td>408-A</td>
<td>Mech Splices</td>
<td>Sun</td>
<td>8:00 am - 8:30 am</td>
<td>359 MCCOMMAS BLUFF</td>
</tr>
<tr>
<td>421</td>
<td>Reinf Slabs</td>
<td>Sun</td>
<td>10:00 am - 1:00 pm</td>
<td>CUMBERLAND C</td>
</tr>
<tr>
<td>423</td>
<td>Prestressed</td>
<td>Mon</td>
<td>8:30 am - 12:30 pm</td>
<td>BRYAN-BEEMAN B</td>
</tr>
<tr>
<td>423/445</td>
<td>Adhoc Grp on Shear in Prestress Conc</td>
<td>Sun</td>
<td>3:00 pm - 5:00 pm</td>
<td>MORENO A</td>
</tr>
<tr>
<td>423-E</td>
<td>Prestress - Losses</td>
<td>Sun</td>
<td>1:00 pm - 4:00 pm</td>
<td>CUMBERLAND B</td>
</tr>
<tr>
<td>435</td>
<td>Deflection</td>
<td>Mon</td>
<td>3:30 pm - 6:30 pm</td>
<td>GASTON A</td>
</tr>
<tr>
<td>437</td>
<td>Strength Evaluation</td>
<td>Mon</td>
<td>10:30 am - 12:30 pm</td>
<td>353 AERIAL QUEEN</td>
</tr>
<tr>
<td>439</td>
<td>Steel Reinforcement</td>
<td>Mon</td>
<td>8:30 am - 10:00 am</td>
<td>CUMBERLAND G</td>
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<tr>
<td>439-A</td>
<td>Steel - Reinforcement - Wire</td>
<td>Sun</td>
<td>3:30 pm - 5:00 pm</td>
<td>REVERCHON A</td>
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<tr>
<td>440</td>
<td>Fiber-Reinforced Polymer</td>
<td>Tue</td>
<td>8:00 am - 11:00 am</td>
<td>REUNION FH</td>
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<tr>
<td>440-F</td>
<td>FRP - Repair Strengthening</td>
<td>Mon</td>
<td>3:00 pm - 6:00 pm</td>
<td>PEGASUS AB</td>
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<tr>
<td>440-G</td>
<td>FRP - Student</td>
<td>Mon</td>
<td>8:30 am - 10:00 am</td>
<td>PEGASUS A</td>
</tr>
<tr>
<td>440-H</td>
<td>FRP - Reinforced Concrete</td>
<td>Sun</td>
<td>8:30 am - 11:30 am</td>
<td>CUMBERLAND KL</td>
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<tr>
<td>440-I</td>
<td>FRP - Prestressed Concrete</td>
<td>Mon</td>
<td>10:00 am - 11:30 am</td>
<td>CUMBERLAND F</td>
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<tr>
<td>440-K</td>
<td>FRP - Material Characteristics</td>
<td>Sun</td>
<td>1:30 pm - 3:00 pm</td>
<td>PEGASUS B</td>
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<tr>
<td>440-L</td>
<td>FRP - Durability</td>
<td>Sun</td>
<td>3:00 pm - 5:00 pm</td>
<td>CUMBERLAND G</td>
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<tr>
<td>440-M</td>
<td>FRP - Repair of Masonry Str</td>
<td>Mon</td>
<td>1:30 pm - 3:00 pm</td>
<td>PEGASUS AB</td>
</tr>
<tr>
<td>440-TG2</td>
<td>FRP - Task Group Repair Material Spec</td>
<td>Sun</td>
<td>11:30 pm - 1:30 pm</td>
<td>SANGER B</td>
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<tr>
<td>441</td>
<td>Columns</td>
<td>Mon</td>
<td>11:30 am - 2:00 pm</td>
<td>CUMBERLAND KL</td>
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<tr>
<td>441-A</td>
<td>High-Strength Conc</td>
<td>Mon</td>
<td>8:00 am - 9:00 am</td>
<td>359 MCCOMMAS BLUFF</td>
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<tr>
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<td>Lateral Reinf</td>
<td>Mon</td>
<td>9:00 am - 10:00 am</td>
<td>359 MCCOMMAS BLUFF</td>
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<tr>
<td>441-E</td>
<td>Columns Multi - Spiral Reinf</td>
<td>Sun</td>
<td>11:30 am - 1:00 pm</td>
<td>WINDSOR</td>
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<tr>
<td>444</td>
<td>Experimental Analysis</td>
<td>Tue</td>
<td>8:00 am - 10:00 am</td>
<td>CUMBERLAND H</td>
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<tr>
<td>445</td>
<td>Shear &amp; Torsion</td>
<td>Mon</td>
<td>2:00 pm - 6:00 pm</td>
<td>SANGER B</td>
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<tr>
<td>445-A</td>
<td>Shear &amp; Torsn - Strut &amp; Tie</td>
<td>Sun</td>
<td>10:30 am - 1:30 pm</td>
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<tr>
<td>445-B</td>
<td>Shear &amp; Torsn - Seismic Shear</td>
<td>Sun</td>
<td>8:00 am - 10:00 am</td>
<td>CUMBERLAND C</td>
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<tr>
<td>445-C</td>
<td>Shear &amp; Torsn - Punching Shear</td>
<td>Sun</td>
<td>1:00 pm - 3:00 pm</td>
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<tr>
<td>445-D</td>
<td>Shear &amp; Torsn - Database</td>
<td>Sun</td>
<td>3:00 pm - 5:00 pm</td>
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<td>445-E</td>
<td>Shear &amp; Torsn - SOA Torsion</td>
<td>Sun</td>
<td>12:30 pm - 2:00 pm</td>
<td>MORENO A</td>
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<tr>
<td>446</td>
<td>Fracture Mechanics</td>
<td>Mon</td>
<td>3:30 pm - 5:00 pm</td>
<td>REVERCHON A</td>
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<tr>
<td>447</td>
<td>Finite Element Analysis M1</td>
<td>Mon</td>
<td>11:00 am - 1:30 pm</td>
<td>COCKRELL</td>
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<tr>
<td>447</td>
<td>Finite Element Analysis M2</td>
<td>Mon</td>
<td>5:00 pm - 6:30 pm</td>
<td>CUMBERLAND G</td>
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<tr>
<td>506</td>
<td>Shotcreting</td>
<td>Tue</td>
<td>8:30 am - 11:30 am</td>
<td>BRYAN-BEEMAN B</td>
</tr>
<tr>
<td>506-A</td>
<td>Shotcreting - Evaluation</td>
<td>Sun</td>
<td>9:00 am - 11:00 am</td>
<td>COTTON BOWL</td>
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<tr>
<td>506-B</td>
<td>Shotcreting - Fiber Reinforced</td>
<td>Sun</td>
<td>2:00 pm - 3:00 pm</td>
<td>SANGER A</td>
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<tr>
<td>506-C</td>
<td>Shotcreting - Guide</td>
<td>Mon</td>
<td>4:30 pm - 6:30 pm</td>
<td>CUMBERLAND C</td>
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<tr>
<td>506-E</td>
<td>Shotcreting - Specifications</td>
<td>Mon</td>
<td>12:00 pm - 2:00 pm</td>
<td>GASTON A</td>
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<tr>
<td>506-F</td>
<td>Shotcreting - Underground</td>
<td>Mon</td>
<td>3:00 pm - 4:00 pm</td>
<td>MCMILLAN</td>
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<tr>
<td>506-G</td>
<td>Qualifications for Projects</td>
<td>Sun</td>
<td>11:00 am - 1:00 pm</td>
<td>GASTON B</td>
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<tr>
<td>515</td>
<td>Protective Systems</td>
<td>Tue</td>
<td>10:30 am - 12:00 pm</td>
<td>MCMILLAN</td>
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<tr>
<td>522</td>
<td>Pervious Concrete</td>
<td>Tue</td>
<td>8:00 am - 11:00 am</td>
<td>PEGASUS A</td>
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<tr>
<td>523</td>
<td>Cellular Concrete</td>
<td>Tue</td>
<td>10:00 am - 1:00 pm</td>
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<tr>
<td>523-A</td>
<td>Cellular - Autoclaved Aerated</td>
<td>Tue</td>
<td>8:30 am - 10:00 am</td>
<td>CUMBERLAND J</td>
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<tr>
<td>524</td>
<td>Plastering</td>
<td>Mon</td>
<td>8:30 am - 10:00 am</td>
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<tr>
<td>533</td>
<td>Precast Panels</td>
<td>Sun</td>
<td>1:00 pm - 2:30 pm</td>
<td>CUMBERLAND E</td>
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<tr>
<td>543</td>
<td>Piles</td>
<td>Mon</td>
<td>8:30 am - 11:30 am</td>
<td>MCMILLAN</td>
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<tr>
<td>544</td>
<td>Fiber-Reinforced Concrete</td>
<td>Tue</td>
<td>3:00 pm - 5:30 pm</td>
<td>CUMBERLAND J</td>
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<tr>
<td>544-A</td>
<td>FRC - Production &amp; Applications</td>
<td>Mon</td>
<td>11:30 am - 1:00 pm</td>
<td>PEGASUS AB</td>
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<tr>
<td>544-B</td>
<td>FRC - Education</td>
<td>Mon</td>
<td>8:30 am - 10:00 am</td>
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<tr>
<td>544-C</td>
<td>FRC - Testing</td>
<td>Tue</td>
<td>1:30 pm - 3:00 pm</td>
<td>BRYAN-BEEMAN B</td>
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<tr>
<td>544-D</td>
<td>FRC - Structural Uses</td>
<td>Mon</td>
<td>3:30 pm - 6:00 pm</td>
<td>CUMBERLAND B</td>
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<tr>
<td>544-E</td>
<td>FRC - Mechanical Properties</td>
<td>Mon</td>
<td>5:00 pm - 6:30 pm</td>
<td>GASTON B</td>
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<tr>
<td>544-F</td>
<td>FRC - Durability</td>
<td>Tue</td>
<td>10:30 am - 12:00 pm</td>
<td>CUMBERLAND J</td>
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<tr>
<td>546</td>
<td>Repair</td>
<td>Mon</td>
<td>8:30 am - 11:30 am</td>
<td>CUMBERLAND H</td>
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<tr>
<td>546-C</td>
<td>Repair - Guide</td>
<td>Sun</td>
<td>9:00 am - 12:00 pm</td>
<td>353 AERIAL QUEEN</td>
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<tr>
<td>548</td>
<td>Polymers</td>
<td>Tue</td>
<td>8:30 am - 11:30 am</td>
<td>MORENO A</td>
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<tr>
<td>548-A</td>
<td>Polymers - Overlays</td>
<td>Mon</td>
<td>8:15 am - 11:00 am</td>
<td>362 SHAWNEE A</td>
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<tr>
<td>548-B</td>
<td>Polymers - Adhesives</td>
<td>Mon</td>
<td>2:30 pm - 4:30 pm</td>
<td>MORENO B</td>
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<tr>
<td>548-C</td>
<td>Structural Polymer Design</td>
<td>Mon</td>
<td>11:00 am - 12:30 pm</td>
<td>362 SHAWNEE A</td>
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<tr>
<td>549</td>
<td>Thin Reinforced</td>
<td>Sun</td>
<td>11:00 am - 1:00 pm</td>
<td>COTTON BOWL</td>
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<tr>
<td>549-TG1</td>
<td>Glass Fiber-Reinforced Concrete - Spray-Up</td>
<td>Sun</td>
<td>8:30 am - 9:15 am</td>
<td>CUMBERLAND F</td>
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<tr>
<td>549-TG3</td>
<td>Report on Ferrocement</td>
<td>Sun</td>
<td>10:00 am - 10:45 am</td>
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<tr>
<td>550</td>
<td>Precast Structures</td>
<td>Sun</td>
<td>3:00 pm - 5:00 pm</td>
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<tr>
<td>551</td>
<td>Tilt Up</td>
<td>Sun</td>
<td>9:00 am - 12:00 pm</td>
<td>COCKRELL</td>
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<tr>
<td>552</td>
<td>Cementitious Grouting</td>
<td>Wed</td>
<td>8:00 am - 9:30 am</td>
<td>GASTON B</td>
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<tr>
<td>Code</td>
<td>Committee</td>
<td>Day</td>
<td>Time</td>
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<tr>
<td>555</td>
<td>Recycled</td>
<td>Mon</td>
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<tr>
<td>560</td>
<td>Design &amp; Constr ICFs</td>
<td>Tue</td>
<td>8:30 am - 10:30 am</td>
<td>MORENO B</td>
</tr>
<tr>
<td>562</td>
<td>Eval, Repair &amp; Rehab</td>
<td>Sun</td>
<td>1:00 pm - 5:00 pm</td>
<td>CUMBERLAND L</td>
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<tr>
<td>562-A</td>
<td>Eval, Repair &amp; Rehab - Life Safety</td>
<td>Sat</td>
<td>4:00 pm - 6:00 pm</td>
<td>BRYAN-BEEMAN A</td>
</tr>
<tr>
<td>562-B</td>
<td>Eval, Repair &amp; Rehab - Loads</td>
<td>Sun</td>
<td>8:00 am - 12:00 pm</td>
<td>CUMBERLAND H</td>
</tr>
<tr>
<td>562-C</td>
<td>Eval, Repair &amp; Rehab - Structural Analysis M1</td>
<td>Sat</td>
<td>4:00 pm - 6:00 pm</td>
<td>WINDSOR</td>
</tr>
<tr>
<td>562-C</td>
<td>Eval, Repair &amp; Rehab - Structural Analysis M2</td>
<td>Sat</td>
<td>7:00 pm - 9:00 pm</td>
<td>COCKRELL</td>
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<tr>
<td>562-D</td>
<td>Eval, Repair &amp; Rehab - Structural Repair Design M1</td>
<td>Sat</td>
<td>10:00 am - 12:00 pm</td>
<td>MORENO A</td>
</tr>
<tr>
<td>562-D</td>
<td>Eval, Repair &amp; Rehab - Structural Repair Design M2</td>
<td>Sat</td>
<td>1:00 pm - 4:00 pm</td>
<td>WINDSOR</td>
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<tr>
<td>562-E</td>
<td>Eval, Repair &amp; Rehab - Durability Qlty Assurance</td>
<td>Sat</td>
<td>6:00 pm - 9:00 pm</td>
<td>BRYAN-BEEMAN A</td>
</tr>
<tr>
<td>562-F</td>
<td>Eval, Repair &amp; Rehab - General</td>
<td>Sat</td>
<td>1:00 pm - 6:00 pm</td>
<td>MORENO A</td>
</tr>
<tr>
<td>563</td>
<td>Specs for Repair of Struct Conc in Bldgs</td>
<td>Tue</td>
<td>1:00 pm - 5:00 pm</td>
<td>CUMBERLAND E</td>
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</tbody>
</table>
Did you miss a presentation or want a copy of a session handout? Handouts and presentations are available from speakers who have elected to provide and post them to the ACI Web site.

Go to www.aciconvention.org/handouts to download or print a copy of the handouts for the sessions you plan to attend.

Session Disclaimer
The information presented represents the views and recommendations of the individual speaker(s) and does not necessarily represent the views of ACI or its committees. The audience is expected to exercise judgment as to the appropriate application of the information.
Sunday, March 18, 2012
8:00 am - 9:00 am

Convention #1 Breakfast
CUMBERLAND G
Sponsored by the ACI Convention Committee

Session Moderator: Kari L. Yuers
President & CEO
Kryton International Inc.
Vancouver, BC, Canada

First-time convention attendees are invited to join Kari Yuers, Chair of the ACI Convention Committee, for a continental breakfast and a brief session to orient you to the week ahead. Attendees will have the opportunity to meet other convention attendees and learn about what an ACI convention has to offer.
Sunday, March 18, 2012
8:00 am - 9:00 am

★ Guest Overview

PEGASUS B

Acquaint yourself with the week ahead and preview the tours at the ACI Fall 2012 Convention in Toronto, ON, Canada, and the ACI Spring 2013 Convention in Minneapolis, MN.

★ = Guest-only event

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Sunday, March 18, 2012
10:00 am - 5:00 pm

Art of Concrete Student Competition  MARSALIS HALL
Sponsored by ACI Committee S801, Student Activities, and the ACI Northeast Texas Chapter

The Art of Concrete Student Competition, sponsored by the ACI Northeast Texas Chapter, will debut during the ACI Spring 2012 Convention. The objective is to explore the artistic nature of concrete and display its many varieties of form, function, and/or beauty through a work of art. This competition is open to individual undergraduate or graduate students or those students on cooperative or internship work assignments. Entries are limited to one entry per individual. Students may present their original work of art via sculpture, painting, drawing, photography, or scale mode not to exceed 48 in. and a maximum weight of 150 lb (68 kg). Twenty entries will be selected to be displayed during the convention. Attendees will then have the opportunity to vote for their favorite piece. The winners will be announced during the Student Lunch on Monday, March 19.
Sunday, March 18, 2012
11:00 am - 5:00 pm

Student FRC Bowling Ball Competition
MARSALIS HALL
Sponsored by ACI Committee S801, Student Activities

Session Moderator: Walter Flood IV
Manager - Engineer,
Flood Testing Labs, Inc.
Chicago, IL

Cheer on your favorite school and roll into the spring convention with the Fiber-Reinforced Concrete Bowling Ball Competition! Students will rock and roll their concrete submissions until their inevitable destruction. Forming skills will be challenged, as bowling balls need to be not only strong but also meet weight and size requirements and roll straight! The testing device is graciously provided by FORNEY.

FORNEY
Sunday, March 18, 2012
11:30 am - 1:30 pm

✓ International Lunch

CUMBERLAND G

$30 U.S. per person
Sponsored by the ACI International Committee

Speaker: Mario A. Chiorino
Emeritus Professor of Structural Analysis
Politecnico di Torino
Turin, Italy

Topic: Art and Science of Building in Concrete:
The Work of Pier Luigi Nervi

Pier Luigi Nervi is one of the greatest and most inventive structural engineers of the 20th century. With his masterpieces scattered the world over, Nervi contributed to create a glorious period for structural architecture. Nikolaus Pevsner described him as “the most brilliant artist in reinforced concrete of our time.” The true art of Nervi is his ability to combine imagination and techniques to create spaces that border on poetry. He converts his inspiration into a design that enhances the engineer’s vision through his original and innovative contributions. His struggle for freedom in design, which in those times was confined by the lack of modern computerized structural analyses, was also the principal justification for his keen interest in experimental research on mechanical scale models.

In addition to discussing Nervi’s basic philosophy of structures, in conjunction with the convention theme “Art of Concrete” and with regard for the current debates on the relations between structure and form, the lecture will review some of Nervi’s most significant works. Special attention will be paid to those in North America, including St. Mary’s Cathedral in San Francisco, the George Washington Bus Station in New York, and Place Victoria Tower in Montreal. A preview will be provided of the international exhibition “Pier Luigi Nervi: Architecture as Challenge,” which is expected to tour in North America in 2013. It is co-sponsored by ACI in recognition of Nervi’s ACI Honorary Membership.

PREREGRISTRATION 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.

✓ = separate fee required
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Fire represents a significant hazard in built infrastructure. Therefore, the provision of appropriate fire safety measures to structural members is a major safety requirement in building design. Current fire resistance provisions are based on prescriptive-based approaches. Recent research and development efforts have focused on developing rational design approaches, innovative mixture designs, constitutive models for high temperature material properties, and advanced computational techniques for enhancing the fire resistance of concrete structures. In this session, findings from recent and developing activities on the fire performance of concrete (reinforced and prestressed) and masonry systems will be presented through eight presentations. Papers dealing with performance-based design approaches and practical case studies are given preference. Overall, the session is expected to benefit practicing engineers and lead to a wider use of innovative design approaches and materials in building applications.

By attending this session, attendees will be able to:
1. Apply rational approaches for the fire design of concrete structures;
2. Recognize the importance of structural fire safety in buildings;
3. Explain the various methods to assess the fire resistance of concrete structures; and
4. Understand the temperature effects on properties of concrete and reinforcement.

Introduction to ACI 216 Committee and Current Committee Activities
1:00 pm
Venkatesh K. Kodur, Professor, Michigan State University, East Lansing, MI
Sunday, March 18, 2012
1:00 pm - 3:00 pm

Engineering Fire Design of Concrete Structures, Part 1

On the Fire Behavior of Tunnel Linings Made of Structural Shotcrete
1:20 pm
Patrick Bamonte, Assistant Professor, Milan University of Technology, Milan, Italy; and Pietro G. Gambarova, Milan University of Technology

Behavior and Design of RC Bearing Walls under Fire
1:40 pm
Kevin A. Mueller, Graduate Research Assistant, University of Notre Dame, South Bend, IN; Yahya Kurama and Michael J. McGinnis, University of Notre Dame

Strain Modeling of Traditional and Self-Compacting Concrete during and after Fire
2:00 pm
Emmanuel Annerel, Postdoctoral Researcher, Ghent University, Ghent, Belgium; and Luc Taerwe, Ghent University

Fire Response of RC Beams Reinforced with FRP Rebars
2:20 pm
Baolin Yu, Graduate Research Assistant, Michigan State University, East Lansing, MI; and Venkatesh K. Kodur, Michigan State University

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The Hope & Schupack Corrosion Symposium is in honor of two distinguished members of ACI Committee 222, Brian Hope and Morris Schupack, who have made great contributions in the field of metal corrosion in concrete. Engineers, scientists, researchers, inspectors, technicians, academics, and materials manufacturers and suppliers will benefit from this symposium, which will highlight our past accomplishments and present a direction for the future. Subject areas covered in this symposium include, but are not limited to, the following: 1) mechanism of corrosion of reinforcing steel in concrete; 2) identifying, investigating, and quantifying corrosion; 3) corrosion control measures for new and existing structures; and 4) innovative materials and testing techniques.

By attending the Hope & Schupack Corrosion Symposium, attendees will be able to:
1. Demonstrate an understanding of the mechanism of reinforcing steel corrosion and how to evaluate existing structures experiencing reinforcing steel corrosion;
2. Recognize examples of the types of corrosion-induced deterioration and evaluations that can be performed on existing structures using a variety of tools and techniques;
3. Explain the various methods to assess the current condition of structures experiencing reinforcing steel corrosion; and
4. Specify corrosion control measures for new and existing structures.

Tribute to Brian Hope, PhD, P. Eng., FACI  
1:00 pm  
Carolyn M. Hansson, Professor, University of Waterloo, Waterloo, ON, Canada

Morris Schupack’s Contributions to the Field of Corrosion of Metals in Concrete  
1:25 pm  
Andrea J. Schokker, Professor and Head of Civil Engineering, the University of Minnesota-Duluth, Duluth, MN
Hope & Schupack Corrosion Symposium, Part 1 (cont.)  REUNION B

Admixed Chlorides in Cementitious Materials: History, Impacts, and Standardization  1:55 pm
David Trejo, Professor, Oregon State University, Corvallis, OR; and Richard Weyers, Virginia Polytechnic University

The Formation and Stability of the Protective Passive Films Formed on the New Generation of Stainless Steel Rebar Alloys  2:45 pm
Brad P. Bergsma, Doctoral Candidate, University of Waterloo, Waterloo, ON, Canada; and Carolyn M. Hansson, University of Waterloo

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The focus of these presentations is on concrete deterioration due to the crystallization of salts (for example, sodium sulfate and sodium carbonate) in pores near drying faces/evaporative zones. The scope involves theoretical, experimental, and modeling aspects and field case studies from geographic locations, such as hot, arid environments, where this damage mechanism is a significant concern. This session should be of particular interest to concrete practitioners and researchers.

By attending this session, attendees will be able to:
1. Recognize situations in the field showing physical salt attack;
2. Explain the mechanisms causing physical salt attack;
3. Evaluate field problems and identify physical salt attack; and
4. Differentiate physical salt attack from damage caused by chemical sulfate attack.

**Principles of Salt Damage in Concrete—Overview**  
1:00 pm  
George Scherer, Professor, Princeton University, Princeton, NJ

**Physical Salt Attack on Concrete Influenced by Ambient Environmental Conditions**  
1:35 pm  
Harvey H. Haynes, Consulting Concrete Engineer, Haynes & Associates, Oakland, CA

**Interaction of Physical and Chemical Sulfate Attack on Concrete**  
2:03 pm  
Mohamed T. Bassuoni, Assistant Professor, University of Manitoba, Winnipeg, MB, Canada

**Laboratory and Field Deterioration of Concretes due to Physical Salt Attack**  
2:31 pm  
Thano Drimalas, Research Associate, University of Texas at Austin, Austin, TX
Post-Earthquake Repairs, Part 1
REUNION C
Sponsored by ACI Committees 369, Seismic Repair and Rehabilitation, and 546, Repair of Concrete

Session Co-Moderators: Pete Barlow
President
Contech Group, Inc.
Seattle, WA

Thomas Kang
Assistant Professor
Seoul National University
Seoul, Korea

This session will focus on case histories of rapid repair projects, challenges facing owners with a damaged structure, and the repairs required to use a structure after a seismic event. Emphasis is placed on projects with challenging timelines or conditions that have necessitated the use of unique technologies or approaches to facilitate the repairs.

By attending this session, attendees will be able to:
1. Assess specific experience in post-earthquake repair;
2. Review case histories of rapid repair projects involving earthquake-damaged concrete structures;
3. Identify the repairs required to use for a damaged structure after a seismic event and the method best suited for that structure; and
4. Perform projects under challenging time constraints or conditions that necessitate the use of unique technologies or approaches to facilitate the repairs.

Post-Earthquake Repair and Structural Characterization of a Parking Structure in Christchurch, New Zealand 1:00 pm
Hannah Clarke, Structural Engineer, Powell Fenwick Consultants Ltd., Christchurch, New Zealand; José Restrepo, University of California-San Deigo; and Matthew Schoettler, University of California-Berkeley

FRP Laminates for Post-Earthquake Repair of Columns in 2 Hours 1:25 pm
Mohammad Ehsani, President, QuakeWrap Inc., Tucson, AZ
Sunday, March 18, 2012
1:00 pm - 3:00 pm

Post-Earthquake Repairs, Part 1 (cont.)

Repair of Structural Walls Severely Damaged after Chilean 2010 Earthquake 1:50 pm
Fernando Yanez, Director, Material Testing Laboratory (IDEM), University of Chile Plaza, Santiago, Chile

Repair of Concrete Bridges Damaged in Chile by the February 27, 2010, M8.8 Chile Earthquake 2:15 pm
Daniel Ortiz, Structural Engineer, TECNOAV S.A., Santiago, Chile;
Pablo Fuertes, Fibrwrap Construction; and Alejandro Farias, Tiempo Nuevo Ltda.

Seismic Retrofit Using Externally Applied Post-Tensioning Tendons 2:35 pm
Kenneth B. Bondy, Consulting Structural Engineer, West Hills, CA

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Sunday, March 18, 2012
2:00 pm - 3:00 pm

International Session, Structural Concrete:
An Art Form, Part 1

REUNION G

Sponsored by the ACI International Committee

Session Co-Moderators: Mario A. Chiorino
Emeritus Professor of Structural Analysis
Politecnico di Torino
Turin, Italy

Ramon L. Carrasquillo
President
Carrasquillo Associates Ltd.
Austin, TX

Tying into the convention theme, this session will review the work of some eminent pioneers and present protagonists of the art of concrete construction, followed by a discussion of the recent trend to merge architecture and structural engineering. Emphasis is placed on new visions and instruments in the domains of morphogenesis and the computational optimization of structures. The session is also tied into the International Lunch Lecture, which is devoted to the presentation of Pier Luigi Nervi's work.

By attending this session, attendees will be able to:
1. Demonstrate how structural design provisions can accommodate unusual architectural requirements, resulting in safe structures;
2. Explain alternatives available to perform quality control during construction of architectural facilities;
3. Describe the challenges posed to conventional construction when achieving state-of-the-art architectural concrete construction; and
4. Illustrate repairs and remediation procedures to correct flaws in the aesthetic appearance and finish of architectural concrete.
Sunday, March 18, 2012
2:00 pm - 3:00 pm

International Session, Structural Concrete:
An Art Form, Part 1 (cont.)

Felix Candela: Strength and Elegance in Structural Engineering 2:00 pm
Maria Garlock, Associate Professor, Princeton University, Princeton, NJ

Santiago Calatrava’s Poetic Marriage of Structure and Form 2:30 pm
José M. Izquierdo-Encarnación, Principal, Porticus, San Juan, PR

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Fire represents a significant hazard in built infrastructure. Therefore, the provision of appropriate fire safety measures to structural members is a major safety requirement in building design. Current fire resistance provisions are based on prescriptive-based approaches. Recent research and development efforts have focused on developing rational design approaches, innovative mixture designs, constitutive models for high temperature material properties, and advanced computational techniques for enhancing the fire resistance of concrete structures. In this session, findings from recent and developing activities on the fire performance of concrete (reinforced and prestressed) and masonry systems will be presented through eight presentations. Papers dealing with performance-based design approaches and practical case studies are given preference. Overall, the session is expected to benefit practicing engineers and lead to a wider use of innovative design approaches and materials in building applications.

By attending this session, attendees will be able to:
1. Apply rational approaches for the fire design of concrete structures;
2. Recognize the importance of structural fire safety in buildings;
3. Explain the various methods to assess the fire resistance of concrete structures; and
4. Understand the temperature effects on properties of concrete and reinforcement.

Performance-Based Fire Engineering of Concrete Structures: Needs and Opportunities

Luke A. Bisby, Senior Research Fellow, University of Edinburgh, Edinburgh, Scotland; and Jose L. Torerg, University of Edinburgh
Monday, March 18, 2012
3:30 pm - 5:30 pm

Engineering Fire Design of Concrete Structures, Part 2
(cont.)

Effective Strategies for Enhancing Fire Performance of High-Strength Concrete Columns
3:55 pm
Wasim Khaliq, Student, Michigan State University, East Lansing, MI; and Venkatesh K. Kodur, Michigan State University

Reliability of Precast, Prestressed & Reinforced Concrete Beams Exposed to Fire
4:20 pm
Christopher Eamon, Student, Wayne State University, Farmington Hills, MI; and Elin Jensen, Lawrence Technological University

Deformation Characteristics of Concrete throughout the Fire Burning and Decay Phases
4:55 pm
Meenakashi Joshi, Student, Lawrence Technological University, Southfield, MI; and Elin Jensen, Lawrence Technological University

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The Hope & Schupack Corrosion Symposium is in honor of two distinguished members of ACI Committee 222, Brian Hope and Morris Schupack, who have made great contributions in the field of metal corrosion in concrete. Engineers, scientists, researchers, inspectors, technicians, academics, and materials manufacturers and suppliers will benefit from this symposium, which will highlight our past accomplishments and present a direction for the future. Subject areas covered in this symposium include, but are not limited to, the following: 1) mechanism of corrosion of reinforcing steel in concrete; 2) identifying, investigating, and quantifying corrosion; 3) corrosion control measures for new and existing structures; and 4) innovative materials and testing techniques.

By attending the Hope & Schupack Corrosion Symposium, attendees will be able to:
1. Demonstrate an understanding of the mechanism of reinforcing steel corrosion and how to evaluate existing structures experiencing reinforcing steel corrosion;
2. Recognize examples of the types of corrosion-induced deterioration and evaluations that can be performed on existing structures using a variety of tools and techniques;
3. Explain the various methods to assess the current condition of structures experiencing reinforcing steel corrosion; and
4. Specify corrosion control measures for new and existing structures.

**Numerical Study of Pore Solution Chemistry in Surface Crevices of Carbon Steel Reinforcing Bar**

3:30 pm

O. Burkan Isgor, Associate Professor, Carleton University, Ottawa, ON, Canada; Kosta Karadakis and Pouria Ghods, Carleton University
Sunday, March 18, 2012
3:30 pm - 5:30 pm

Hope & Schupack Corrosion Symposium, Part 2 (cont.)  REUNION B

Effects of Anti-Icing Agents on the Durability of Concrete 4:00 pm
Carolyn M. Hansson, Professor, University of Waterloo, Waterloo, ON, Canada; and Mark J. Cremasco, University of Waterloo

The Influence of Welding and Chromating on the Corrosion of Galvanized Lath Reinforcement in Cement Stucco 4:30 pm
Matthew J. Hunt, Graduate Student, University of Waterloo, ON, Canada; Carolyn M. Hansson, Mark J. Cremasco, Sangkwan J. Lee, and Brad P. Bergsma, University of Waterloo

High-Strength Stainless Prestressing Steels: Preliminary Studies of Mechanical Behavior and Corrosion Resistance 5:00 pm
Robert D. Moser, Research Civil Engineer, U.S. Army Engineer Research and Development Center, Vicksburg, MS; and Lawrence F. Kahn, Preet M. Singh, and Kimberly E. Kurtis, Georgia Institute of Technology

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Sunday, March 18, 2012
3:30 pm - 5:30 pm

International Session, Structural Concrete:
An Art Form, Part 2

REUNION G

Sponsored by the ACI International Committee

Session Co-Moderators: Ramon L. Carrasquillo
President
Carrasquillo Associates Ltd.
Austin, TX

Mario A. Chiorino
Emeritus Professor of Structural Analysis
Politecnico di Torino
Turin, Italy

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4. Illustrate repairs and remediation procedures to correct flaws in the aesthetic appearance and finish of architectural concrete.

Concrete and the Mexican Architecture
3:30 pm
Roberto Stark, Consultant, Mexico City, Mexico

Bridge of Life: Concrete in Panama—Then and Now
4:00 pm
Cesar A. Constantino, Senior Director – Process & Quality, Titan America LLC, Deerfield Beach, FL; and Patrick Dillon, Ensitu S.A.
International Session, Structural Concrete:
An Art Form, Part 2 (cont.)

Reunion G

Art, Architecture, and Concrete in North Texas
4:30 pm
W. Mark Gunderson, Architect and Principal, W. Mark Gunderson Architect, Fort Worth, TX

Form-Finding and Computational Optimization in Structural Engineering and Architecture
5:00 pm
Mario Sassone, Assistant Professor, Politecnico di Torino, Turin, Italy

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4. Differentiate physical salt attack from damage caused by chemical sulfate attack.

Physical Salt Attack from Sodium Sulfate 3:30 pm
R. Doug Hooton, Professor, University of Toronto, Toronto, ON, Canada

Salt Attack in Aggressive Environment 4:00 pm
Mohammed Maslehuddin, Senior Research Engineer, King Fahd University, Dhahran, Saudi Arabia; and Omar S. Al-Amoudi, King Fahd University

Case Studies of Physical Salt Attack in the Southwestern United States 4:30 pm
David A. Rothstein, Petrographer, DRP Consulting Inc., Boulder, CO; Ramon L. Carrasquillo, Carrasquillo Associates Ltd.; and Orville R. Werner, CTL-Thompson Materials Engineers Inc.
Physical Salt Attack on Concrete, Part 2 (cont.)  REUNION A

Diagnosing Physical Salt Attack Versus Chemical Sulfate Attack  5:00 pm
Robert C. O’Neill, President, Micro-Chem Laboratories, Murphys, CA

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Sunday, March 18, 2012
3:30 pm - 5:30 pm

Post-Earthquake Repairs, Part 2
Sponsored by ACI Committees 369, Seismic Repair and Rehabilitation; and 546, Repair of Concrete

Session Co-Moderators:
Thomas Kang
Assistant Professor
Seoul National University
Seoul, Korea

Pete Barlow
President
Contech Group, Inc.
Seattle, WA

This session will focus on case histories of rapid repair projects, challenges facing owners with a damaged structure, and the repairs required to use a structure after a seismic event. Emphasis is placed on projects with challenging timelines or conditions that have necessitated the use of unique technologies or approaches to facilitate the repairs.

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3. Identify the repairs required to use for a damaged structure after a seismic event and the method best suited for that structure; and
4. Perform projects under challenging time constraints or conditions that necessitate the use of unique technologies or approaches to facilitate the repairs.

Earthquake Repair of Circular Reinforced Concrete Columns
Sarah E. Witt, Senior Project Engineer, FYFE Company LLC, San Diego, CA; and Rudolf Seracino, North Carolina State University

The Performance of Concrete Structures in the Canterbury Earthquakes: Lessons to Be Learned and the Future of Concrete Buildings
Desmond K. Bull, Technical Director, Holmes Consulting Group, Ltd., Christchurch, New Zealand
Post-Earthquake Repairs, Part 2 (cont.)  

**REUNION C**

Repair of R/C Buildings Damaged in Viña del Mar during the 27 February M8.8 Maule Earthquake  
4:10 pm
José Restrepo, Professor of Structural Engineering, University of California San Diego, La Jolla, CA; Jorge Federico Carvallo, Pontificia Universidad Católica de Valparaíso, and Patricio Bonelli and Gilberto Leiva, Universidad Santa María

Emergency Repairs for Concrete Buildings Immediately after the February 2011 Christchurch Earthquake  
4:30 pm
Kenneth J. Elwood, Associate Professor, University of British Columbia, Vancouver, BC, Canada; Kam Weng Yuen, Beca Engineering; and David Hopkins, University of British Columbia

Seismic Repair of Reinforced Concrete Columns through Transverse Prestressing  
4:50 pm
Murat Saatcioglu, Vice Dean, University of Ottawa, Ottawa, ON, Canada; and Majid Yarandi, Esso

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Opening Session & Awards Program

The ACI Spring 2012 Convention officially begins during the Opening Session. ACI will recognize over 100 individuals and groups for their contributions to ACI and the concrete industry.

HONORARY MEMBERSHIP
Michael P. Collins
Bernardo Deschapelles
Neil M. Hawkins
Thomas T. C. Hsu
José M. Izquierdo-Encarnación

FELLOW
Emilio Beltranena
Michael Carey Brown
Kenneth J. Elwood
Josef Farbiarz
Michael Christopher Forde
Shawn P. Gross
James H. Hanson
Jin-Keun Kim
Sue Lane
Zongjin Li
Maria del Mar Lopez de Murphy
Adolfo B. Matamoros
Daniel J. McCarthy
Arthur W. McKinney
Javeed A. Munshi
Suzanne Dow Nakaki
Michelle R. Nokken
Michael J. Paul
Victor Pizano-Thomen
Santiago Pujol
D. V. Reddy
Christopher J. Robinson
George Michael Robinson
Joseph C. Sanders
J. Edward Sauter
Martha G. VanGeem
Nadim I. Wehbe
Jeffrey S. West
Sunday, March 18, 2012
5:45 pm - 7:00 pm

Opening Session & Awards Program

50-YEAR MEMBER
James P. Archibald
Loyer Arze
James Carpenter
José F. Chacon Toral
Eduardo G. De-Zayas
Octavio A. Espinosa I
David W. Fowler
Timothy Fowler
Sigmund A. Freeman
Richard W. Furlong
John Gardner
Howard C. Graff
Sidney A. Guralnick
David P. Gustafson
George Charles Hoff
Richard R. Imper
Harold Jobse
F. Wayne Klaiber
James S. Lai
LeLong Lucien
Joaquin Marin
Thomas Moske
Tarun R. Naik
Joseph Nyzen
William S. Phelan
Mark M. Porat
Edwin C. Rossow
Robert E. Shewmaker
Robert A. Shoolbred
Earnest Taylor
John R. Wilson

PERSONAL AWARDS
ARTHUR R. ANDERSON MEDAL
Terence C. Holland

ROGER H. CORBETTA CONCRETE CONSTRUCTOR AWARD
William M. Klorman
Opening Session & Awards Program

REUNION FH

JOE W. KELLY AWARD
Andrea J. Schokker

HENRY L. KENNEDY AWARD
Claude Bédard

HENRY C. TURNER MEDAL
Robert G. Smith

DISTINGUISHED ACHIEVEMENT AWARD
Cement Council of Texas

PAPER AWARDS

WASON MEDAL FOR MOST MERITORIOUS PAPER
Hai H. Dinh, Gustavo J. Parra-Montesinos, and James K. Wight

WASON MEDAL FOR MATERIALS RESEARCH
Mike Benjamin Otieno, Mark G. Alexander, and Hans Beushausen

ACI CONSTRUCTION AWARD
Eric S. Peterson

CHESTER PAUL SIESS AWARD FOR EXCELLENCE IN STRUCTURAL RESEARCH
Kyoung-Kyu Choi and Hong-Gun Park

ACI DESIGN AWARD
Denis Mitchell, William D. Cook, and Ting Peng

MISCELLANEOUS AWARDS

CHAPTER ACTIVITIES AWARD
Susanne Flood
Darlene C. Lane
J. R. Maurice Marcil
Lawrence H. Taber

ACI YOUNG MEMBER AWARD FOR PROFESSIONAL ACHIEVEMENT
Arturo Gaytan Covarrubias
Eric P. Koehler
Aleksandra Radlińska
Sunday, March 18, 2012
5:45 pm - 7:00 pm

Opening Session & Awards Program

REUNION FH

DELMAR L. BLOEM DISTINGUISHED SERVICE AWARD
Will Hansen
Donald F. Meinheit
Matthew Offenberg

CERTIFICATION PROGRAMS AWARD
Casimir J. Bognacki
Jon W. Delony
Butch Wyatt

WALTER P. MOORE, JR. FACULTY ACHIEVEMENT AWARD
John T. Kevern

2011 EXCELLENT CHAPTERS
Arizona
Central & Southern Mexico
Georgia
Greater Miami Valley
India
Iran
Kansas
Missouri
Nebraska
New Jersey
New Mexico
Northeast Texas
Peru
San Diego International
Southern California

2011 OUTSTANDING CHAPTERS
Carolinas
Concrete Industry Board, New York City
Greater Michigan
Indiana
Intermountain
Las Vegas
Louisiana
Northeast Mexico
Northern California and Western Nevada
Ontario
Pittsburgh Area
San Antonio
Sunday, March 18, 2012
5:45 pm - 7:00 pm

Opening Session & Awards Program

ACI EXCELLENT UNIVERSITY AWARD
Aria University of Sciences and Sustainability
Arizona State University
Auburn University
Florida International University
Middle Tennessee State University
Missouri University of Science & Technology
New Jersey Institute of Technology
North Carolina State University
Southern Illinois University-Edwardsville
Texas State University-San Marcos
United States Military Academy
Universidad Autónoma de Nuevo León
University of Arkansas at Fayetteville
University of Central Florida
University of Florida
University of Houston
University of Kansas
University of Louisiana at Lafayette
University of Minnesota Duluth
University of Missouri-Kansas City
University of Texas at Austin
Villanova University

ACI OUTSTANDING UNIVERSITY AWARD
British Columbia Institute of Technology
Cleveland State University
Escuela Colombia de Ingeniería Julio Garavito
Instituto Tecnológico de La Paz
Purdue University
Rose-Hulman Institute of Technology
San Jose State University
Tennessee Technological University
Trine University
Universidad Rafael Landivar de Quetzaltenango
University of Colorado Denver
University of Michigan
University of Puerto Rico, Mayaguez Campus
University of Toronto
Valparaiso University
Sunday, March 18, 2012
7:00 pm - 8:00 pm

Opening Reception

MARSALIS HALL
Sponsored by the ACI Northeast Texas Chapter

After the Opening Session, meet your colleagues and friends for a beverage from the cash bar and light refreshments in the exhibit area. This is an opportunity to expand your network and learn more about the products and services offered by the exhibitors.
Some level of cracking in concrete is inevitable. Cracks can form as a result of service loads (for example, flexure and shear) or restrained volume changes of concrete (for example, shrinkage and thermal contraction). Concrete cracks when tensile stresses exceed its tensile strength. Reinforced concrete is designed to crack; otherwise, the steel would not carry nearly enough stress, resulting in a very inefficient design.

So, the concrete will crack, but what level of cracking and what crack widths are acceptable? How do cracks affect the safety and serviceability of a structure? How do they impact durability? Can we account for cracking in service-life prediction models? Is there a threshold crack width that separates safe from unsafe cracks? And should design codes specify a maximum allowable crack width?

A panel of experts will debate these questions and the effectiveness of available strategies to control cracking in concrete. Examples of such strategies include proper reinforcement design, including a discussion of the sufficiency of existing code requirements; methods to reduce shrinkage and thermal contraction; proper mixture proportioning; proper placement and curing practices; fiber reinforcement; expansive additives; and alternative cementitious materials.

The forum will include a short presentation by each of the panelists, followed by an interactive discussion with the audience.

**Bridge Deck Cracking—What We Know and What We Can Do About It**

**8:00 pm**

**David Darwin**, Distinguished Professor, University of Kansas, Lawrence, KS
Sunday, March 18, 2012
8:00 pm - 10:00 pm

123 Forum (cont.)

Cracking: Effect on Durability and Effective Mitigation Strategies 8:10 pm
W. Jason Weiss, Professor, Purdue University, West Lafayette, IN

Corrosion in Cracked Concrete 8:20 pm
O. Burkan Isgor, Associate Professor, Carleton University, Ottawa, ON, Canada

Effect of Cracking on Deflection Control 8:30 pm
Andrew Scanlon, Professor, Pennsylvania State University, University Park, PA

Benefits of Fiber Reinforcement 8:40 pm
Cliff N. MacDonald, Director of Engineering, FORTA Corporation, Inver Grove Heights, MN

Questions, Answers, and Discussion 8:50 pm

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Sunday, March 18, 2012
9:00 pm - 10:30 pm

Student and Young Professional Networking Event

MONDUEL’S BAR

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

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

REUNION FH

Sponsored by the ACI Technical Activities Committee (TAC)

Session Moderator: David A. Lange
Professor
University of Illinois
Urbana, IL

ACI Technical Committee Chairs are expected to attend this breakfast workshop to meet with fellow Chairs, TAC members, and ACI staff and 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.
Speaker Development Breakfast

Sponsored by ACI Committee S802, Teaching Methods and Educational Materials

Session Moderator: James Hanson
Associate Professor
Rose-Hulman Institute of Technology
Terre Haute, IN

Speaker: Tyler Ley
Assistant Professor
Oklahoma State University
Stillwater, OK

Topic: Using Physical Props and Experiential Learning to Improve Presentations and Learning

This session provides an informal venue for attendees to learn how to become better presenters at ACI conventions, other conferences, client meetings, and in school. Meet people from across the ACI spectrum who share your desire to learn and grow in this area.

Have you ever tried to explain something complicated to an audience and they just did not get it? One way to overcome this is to use models or props to allow your audience to experience the subject through kinetic learning. This presentation will give insight into how to develop kinetic learning; a number of proven examples will be displayed from topics in structural and materials engineering.
ACI Career Fair for Students & Young Professionals

MARSALIS HALL

Sponsored by the ACI Student and Young Professional Activities Committee

The all-new Career Fair for Students & Young Professionals provides students with an excellent opportunity to network with potential employers. Interested students and young professionals are required to register for this event prior to the convention using the convention registration form. Preregistered attendees are also required to upload their résumés to the ACI Career Center prior to the event and bring hard copies to the event.
The Hope & Schupack Corrosion Symposium is in honor of two distinguished members of ACI Committee 222, Brian Hope and Morris Schupack, who have made great contributions in the field of metal corrosion in concrete. Engineers, scientists, researchers, inspectors, technicians, academics, and materials manufacturers and suppliers will benefit from this symposium, which will highlight our past accomplishments and present a direction for the future. Subject areas covered in this symposium include, but are not limited to, the following: 1) mechanism of corrosion of reinforcing steel in concrete; 2) identifying, investigating, and quantifying corrosion; 3) corrosion control measures for new and existing structures; and 4) innovative materials and testing techniques.

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3. Explain the various methods to assess the current condition of structures experiencing reinforcing steel corrosion; and
4. Specify corrosion control measures for new and existing structures.

Inverse Model Assisted Monitoring of Corrosion in Reinforced Concrete Members 
8:30 am
O. Burkan Isgor, Associate Professor, Carleton University, Ottawa, ON, Canada; and Philippe Marinier, Carleton University
Hope & Schupack Corrosion Symposium, Part 3 (cont.)  REUNION B

Passive Sensors for Detecting Corrosion in Concrete Structures  9:00 am
Ali Abu Yosef, Graduate Student, University of Texas at Austin, Austin, TX; Praveenkumar Pasupathy, Sharon L. Wood, and Dean P. Neikirk, University of Texas

A Novel Passive and Wireless Corrosion Sensor for Concrete  9:30 am
Tyler Ley, Assistant Professor, Oklahoma State University, Stillwater, OK; and Nicholas Materer and Allen Apblett, Oklahoma State University

Economical Tests for Assessing Corrosion Performance of Steel in Concrete  10:00 am
Ceki Halmen, Assistant Professor, University of Missouri Kansas City, Kansas City, MO; Ken Reinschmidt, Texas A&M University; and David Trejo, Oregon State University

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Open Paper Session

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators: Sulapha Peethamparan
Assistant Professor
Clarkson University
Potsdam, NY

Jinying Zhu
Assistant Professor
University of Texas
Austin, TX

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

By attending this session, attendees will be able to:
1. Recognize new and emerging materials for civil infrastructures;
2. Demonstrate the various methods to assess the current conditions of structures and how to repair them;
3. Discuss recent techniques, research methods, and procedures related to the structural and material aspects of concrete; and
4. Explain the behavior of various high-performance cementitious composites.

Alkali Silicate Powder Activation of Slag: Reaction Mechanisms, Products, and Resultant Properties 8:30 am
Deepak Ravikumar, Graduate Student, Clarkson University, Potsdam, NY; and Narayanan Neithalath, Arizona State University

Actual Repair of a Damaged Building, Constraints and Challenges—Case Study 8:50 am
Mohamed N. Darwish, Professor of Engineering, Alexandria University, Alexandria, Egypt

A Rapid Test to Determine Alkali-Silica Reactivity of Aggregates Using Autoclaved Concrete Prisms 9:10 am
Eric R. Giannini, Graduate Research Assistant, University of Texas at Austin, Austin, TX; and Kevin J. Folliard, University of Texas at Austin
Monday, March 19, 2012
8:30 am - 10:30 am

Open Paper Session (cont.)

A Two Parameter Kinematic Theory for the Shear Behavior of Deep Beams
Boyan I. Mihaylov, Postdoctoral Fellow, University of Toronto, Toronto, ON, Canada; and Evan C. Bentz and Michael P. Collins, University of Toronto

Relating Compressive Strength to Heat Release in Mortars
Dale P. Bentz, Chemical Engineer, National Institute of Standards and Technology, Gaithersburg, MD; and W. Jason Weiss, Igor De la Varga, and Tim Barrett, Purdue University

Application of High-Performance Fiber-Reinforced Cementitious Composites (HPFRCC) in Interior Beam-Column Connections for Enhanced Seismic Resistance
Mohamed Maalej, Professor, University of Sharjah, Sharjah, United Arab Emirates; and Salahuddin Qudah, Dubai Zoning Authority

*The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.*
Seismic Bridge Design Practice with Aesthetic Considerations

REUNION G

Sponsored by ACI Committee 341, Earthquake-Resistant Concrete Bridges

Session Co-Moderators:  Rigoberto Burgueno
Associate Professor
Michigan State University
East Lansing, MI

Vinicio Suarez
Professor
Universidad Tecnica Particular de Loja
Guayaquil, Ecuador

Modern seismic bridge design requirements often relegate aesthetic considerations to a secondary level. Such an approach can restrict aesthetic possibilities to simple solutions or may result in a hazardous situation if aesthetic modifications negatively affect response characteristics. A proper balance can be reached if aesthetic and seismic considerations are treated in a unified manner. Newer possibilities are also feasible with improved understanding of failure mechanisms and the use of high-performance materials. Those with an interest in bridge engineering are invited to hear agency representatives, designers, and researchers discuss how current and emerging approaches are realizing the aesthetic potential of concrete while meeting the demand for improved seismic performance in bridge design.

By attending this session, attendees will be able to:
1. Discuss the application of accelerated bridge construction in seismic regions to satisfy robustness and improved construction quality;
2. Generalize the implications of aesthetic considerations in the seismic retrofitting of landmark bridges;
3. Describe how aesthetics have been given consideration when advancing the seismic design practice; and
4. Contrast the seismic requirements and detailing aspects that affect aesthetic metrics from different departments of transportation.
Seismic Bridge Design Practice with Aesthetic Considerations (cont.)

Application of Accelerated Bridge Construction Connections in Moderate-to-High Seismic Regions  
Markus Wernli, Project Engineer, BergerABAM, Seattle, WA

The Seismic Retrofit and Twinning of the Rafael Mendoza Bridge Spanning the Daule and Babahoyo Rivers in Guayaquil, Ecuador, Based on Aesthetic Considerations  
Otton Lara, President, Ecuadorian Society of Earthquake Engineering, Guayaquil, Ecuador; Roupen Donikian, TY Lin International; and Carlos Lara, CONSULSISMICA

Advancements of Seismic Design with Emphasis on Aesthetics  
Charles Sikorsky, Research Contract Manager, California Department of Transportation, Sacramento, CA

Aesthetics Considerations in the Seismic Design and Detailing of Concrete Bridges  
Shukre J. Despradel, Structural Engineer, Infinity Engineers, Tampa, FL

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
During the last 45 years, Professor James O. Jirsa has had a long and distinguished career as a Professor of Civil Engineering and as a student advisor at the University of Nebraska, Rice University, and the University of Texas at Austin. He has been at the forefront of structural engineering by making outstanding contributions to concrete research and design. Most notably, his contributions to reinforced concrete include his work in slabs, shear, bond and development length, and the seismic strengthening of reinforced concrete elements and systems. An ACI Honorary Member, Jirsa is a Past President of the Institute, a former Board member, and a Past Chair of many technical committees, including the Technical Activities Committee (TAC); ACI Subcommittee 318-F, New Materials, Products, and Ideas; and Joint ACI-ASCE Committees 352, Joints and Connections in Monolithic Concrete Structures, and 408, Development and Splicing of Deformed Bars; and has been a member of ACI Committee 318, Structural Concrete Building Code since 1982. Students, researchers, practicing engineers, and contractors are expected to attend. The material presented will cover state-of-the-art information in the aforementioned areas.
Symposium Honoring James O. Jirsa’s Contributions in Structural Concrete: A Time to Reflect, Part 1: Shear Issues (cont.)  REUNION C

By attending this series of sessions, attendees will be able to:
1. Explain state-of-the-art approaches for the design of structural concrete;
2. Demonstrate different rehabilitation schemes for building and bridge structural systems;
3. Specify experiments and nonlinear analyses for improving earthquake safety; and
4. Recognize the role of large-scale testing in the development of building code provisions.

Introduction 8:30 am
José A. Pincheira, Associate Professor, University of Wisconsin, Madison, WI

Young Jirsa’s Yen 8:35 am
Mete A. Sozen, Kettlehut Distinguished Professor, Purdue University, West Lafayette, IN

Experimental Investigation of a Full-Scale R/C Flat-Plate Structure Subjected to Cyclic Lateral Loads 8:58 am
Damon P. Fick, Assistant Professor, South Dakota School of Mines and Technology, Rapid City, SD; and Michael E. Kreger and Mete A. Sozen, Purdue University

Precast Prestressed Concrete Solutions for Elevated Viaducts in Moderate and High Seismic Zones, The Mexican Experience 9:21 am
José Ma. Riobóo-Martín, President, Grupo Riobóo, Mexico City, Mexico

Lausanne’s New Driverless Metro – A Challenging Multidisciplinary Engineering Project 9:44 am
Marc Badoux, Deputy Director, Transports Publics dela region laussanoise, Lausanne, Switzerland

The Art of Designing Two-Way Slabs 10:07 am
W. Gene Corley, Senior Vice President, CTLGroup, Skokie, IL

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
8:30 am - 10:30 am

Symposium on Integrated Cement-Based Pavement Solutions, Part 1: Concrete Pavements in Texas \hspace{1cm} REUNION A
Sponsored by ACI Committee 325, Concrete Pavements

Session Co-Moderators:  
Steven L. Tritsch
Chief Engineer
CMC Americas
Lenexa, KS

David Pittman
Director, Geotechnical and Structures Laboratory
U.S. Army Corps of Engineers
Vicksburg, MS

The state-of-the-art in concrete paving in Texas from a state, local, and U.S. Army Corps of Engineers’ perspective will be discussed in this session. The Texas Department of Transportation has over 16,400 lane-miles of concrete pavement under its jurisdiction: 12,400 lane-miles of continuously reinforced concrete pavement (CRCP) and 4000 lane-miles of jointed concrete pavement (JCP). The city of Garland constructs many of its streets from concrete and maintains its own concrete recycling center. Under the 2005 Base Realignment and Closure Act, the U.S. Army Corps of Engineers has been involved in significant projects—valued at $4.78 billion—at Fort Bliss, Fort Sam Houston, Fort Hood, and Laughlin Air Force Base in Texas. This session will conclude with an overview of the challenges of and solutions for constructing 226 lane-miles of new concrete pavement for the DFW Connector—a $1 billion design-build project now under contract.

By attending this session, attendees will be able to:
1. Understand why concrete pavements are designed in Texas;
2. Gain knowledge of concrete pavement construction practices;
3. See how a local government entity supports concrete sustainability; and
4. Ascertain the complexities of a multi-jurisdictional construction project.
Symposium on Integrated Cement-Based Pavement Solutions, Part 1: Concrete Pavements in Texas (cont.)

REUNION A

Corps of Engineers Pavements in Texas
8:30 am
Ronald L. Harris, Senior Engineering Technician, U.S. Army Corps of Engineers, Killeen, TX

Concrete Streets in Garland: Design, Construction, and Performance
8:55 am
Steven Oliver, Director of Streets, City of Garland, Garland, TX

Texas Department of Transportation’s Concrete Pavement Perspective
9:20 am
Elizabeth Lukefahr, Concrete Engineer, Texas Department of Transportation, Austin, TX

Design and Construction of Concrete Pavements on the DFW Connector Project
9:45 am
J. Mauricio Ruiz, Project Manager, The Transtec Group, Inc., Austin, TX; and Robert O. Rasmussen, The Transtec Group, Inc.

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The Hope & Schupack Corrosion Symposium is in honor of two distinguished members of ACI Committee 222, Brian Hope and Morris Schupack, who have made great contributions in the field of metal corrosion in concrete. Engineers, scientists, researchers, inspectors, technicians, academics, and materials manufacturers and suppliers will benefit from this symposium, which will highlight our past accomplishments and present a direction for the future. Subject areas covered in this symposium include, but are not limited to, the following: 1) mechanism of corrosion of reinforcing steel in concrete; 2) identifying, investigating, and quantifying corrosion; 3) corrosion control measures for new and existing structures; and 4) innovative materials and testing techniques.

By attending the Hope & Schupack Corrosion Symposium, attendees will be able to:
1. Demonstrate an understanding of the mechanism of reinforcing steel corrosion and how to evaluate existing structures experiencing reinforcing steel corrosion;
2. Recognize examples of the types of corrosion-induced deterioration and evaluations that can be performed on existing structures using a variety of tools and techniques;
3. Explain the various methods to assess the current condition of structures experiencing reinforcing steel corrosion; and
4. Specify corrosion control measures for new and existing structures.

When Bad Things Happen to Good Unbonded PT Buildings

Dylan Freytag, Project Engineer, WDP & Associates PC, Austin, TX;
Kenneth B. Bondy; and Keith E. Kesner and Randall W. Poston, WDP & Associates PC
Monday, March 19, 2012
11:00 am - 1:00 pm

Hope & Schupack Corrosion Symposium, Part 4 (cont.)  REUNION B

Corrosion Control Measures for Prestressed Concrete Tanks
11:35 am
Daniel J. McCarthy, Senior Project Engineer, Preload Inc., Hauppauge, NY; and Gerard C. Feldmann, Structural Engineers, Inc.

Twenty (20) Years of Cathodic Protection in the Field on Reinforced Concrete Structures
12:15 pm
David W. Whitmore, President, Vector Construction Ltd., Winnipeg, MB, Canada

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
11:00 am - 1:00 pm

Quality Control and Robustness of SCC, Part 1
Sponsored by ACI Committee 237, Self-Consolidating Concrete

Session Co-Moderators: Peter H. Billberg
Senior Researcher
Swedish Cement and Concrete Research Institute
Stockholm, Sweden

Joseph A. Daczko
Product Line Manager
BASF Construction Chemicals
Beachwood, OH

The first part of this session focuses on the material characteristic of robustness, which is defined as the insensitivity of self-consolidating concrete’s (SCC’s) fresh properties to material changes or batching errors during production. The second part of this session examines the effective use of existing and new concrete production equipment and monitoring techniques to consistently produce quality SCC.

By attending this session, attendees will be able to:
1. Describe the rheology of SCC;
2. Explain how sensitive SCC can be to varying properties of its constituent materials;
3. Employ the tools necessary to increase SCC robustness; and
4. Identify the benefits of increased SCC use.

Robustness of SCC from a Mix Design Perspective 11:00 am
Nicolas Roussel, Senior Researcher, IFSTTAR, Paris, France; and Coralie Brumaud, IFSTTAR

Use of Viscosity-Modifying Admixtures to Enhance Robustness of SCC 11:30 am
Kamal H. Khayat, Professor, Missouri University of Science and Technology, Rolla, MO

Fresh Property Responses of Powder-, VMA-, and Combination-Type SCC to Varying Aggregate Moisture 12:00 pm
Peter H. Billberg, Senior Researcher, Swedish Cement and Concrete Research Institute, Stockholm, Sweden
Monday, March 19, 2012
11:00 am - 1:00 pm

Quality Control and Robustness of SCC, Part 1 (cont.)

Evaluation of Robustness and Sensitivity of SCC
Olafur Wallevik, Manager, Innovation Center Iceland, Reykjavik, Iceland
During the last 45 years, Professor James O. Jirsa has had a long and distinguished career as a Professor of civil engineering and as a student advisor at the University of Nebraska, Rice University, and the University of Texas at Austin. He has been at the forefront of structural engineering by making outstanding contributions to concrete research and design. Most notably, his contributions to reinforced concrete include his work in slabs, shear, bond and development length, and the seismic strengthening of reinforced concrete elements and systems. An ACI Honorary Member, Jirsa is a Past President of the Institute, a former Board member, and a Past Chair of many technical committees, including the Technical Activities Committee (TAC); ACI Subcommittee 318-F, New Materials, Products, and Ideas; and Joint ACI-ASCE Committees 352, Joints and Connections in Monolithic Concrete Structures, and 408, Development and Splicing of Deformed Bars; and has been a member of ACI Committee 318, Structural Concrete Building Code since 1982. Students, researchers, practicing engineers, and contractors are expected to attend. The material presented will cover state-of-the-art information in the aforementioned areas.
Symposium Honoring James O. Jirsa’s Contributions in Structural Concrete: A Time to Reflect, Part 2: Bond and Development Length (cont.)

REUNION C

By attending this series of sessions, attendees will be able to:
1. Explain state-of-the-art approaches for the design of structural concrete;
2. Demonstrate different rehabilitation schemes for building and bridge structural systems;
3. Specify experiments and nonlinear analyses for improving earthquake safety; and
4. Recognize the role of large-scale testing in the development of building code provisions.

The Hand of God is in the Details 11:00 am
John E. Breen, Nasser I. Al-Rashid Chair Emeritus in Civil Engineering, University of Texas at Austin, Austin, TX

Comparative Bond Studies of NSC Beam-Column Joints Confined with Stirrups, Steel Fibers, or FRP Sheets 11:10 am
Bilal S. Hamad, Professor, American University of Beirut, Beirut, Lebanon; and Hussein Mallat, American University of Beirut

Towards a Rational Theory of Bond 11:32 am
Robert J. Frosch, Professor of Civil Engineering, Purdue University, West Lafayette, IN

Bridging the Gap between Design Provisions for the Development of Reinforcing Bars and for Anchorages 11:54 am
Rolf Eligehausen, Professor, University of Stuttgart, Stuttgart, Germany

Variation of Tensile Force with Localized Damage in Grouted Post-Tensioned Tendons 12:16 pm
Sharon L. Wood, Professor and Department Chair of Civil Engineering, University of Texas at Austin, Austin, TX

JOJ—Steady High-Quality Research on Reinforcing Bar Behavior 12:38 pm
Donald F. Meinheit, Affiliated Consultant, Wiss, Janney, Elstner Associates, Inc., Chicago, IL

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
11:00 am - 1:00 pm

Symposium on Integrated Cement-Based Pavement Solutions,
Part 2: Roller-Compacted Concrete Pavements
REUNION A
Sponsored by ACI Committees 230, Soil Cement; 325, Concrete Pavements; and 327, Roller-Compacted Concrete Pavements

Session Moderator: Wayne S. Adaska
Director, Public Works
Portland Cement Association
Skokie, IL

The use of roller-compacted concrete (RCC) has extended beyond heavy-duty pavements. It is now being used for streets, county roads, department of transportation (DOT) highway shoulders, and parking lots. Improvements in mixture design and construction techniques have resulted in a smoother, tighter surface. Ready mixed concrete producers are teaming with asphalt paving contractors to provide another pavement option for streets, local roads, and parking facilities. This session will cover design and construction aspects, including several case studies. It should be of interest to designers, paving contractors, DOT officials, and ready mixed concrete producers.

By attending this session, attendees will be able to:
1. Apply principles learned to use RCC with confidence;
2. Recognize the most important factors to consider when constructing RCC;
3. Avoid the common problems associated with RCC design and construction; and
4. Determine whether RCC is appropriate for a particular pavement application.

Overview of Roller-Compacted Concrete Pavements:
Applications, Design, and Construction
Wayne S. Adaska, Director, Public Works, Portland Cement Association, Skokie, IL

Producing Roller-Compacted Concrete from a Ready Mix Plant
Frank Lennox, Manager of Marketing Services, Buzzi Unicem USA, Chattanooga, TN
Monday, March 19, 2012
11:00 am - 1:00 pm

Symposium on Integrated Cement-Based Pavement Solutions, Part 2: Roller-Compacted Concrete Pavements (cont.)  REUNION A

A Contractor’s Perspective on Roller-Compacted Concrete  11:40 am
Matthew J. Munsick, Project Manager, Morgan Corporation, Piedmont, SC

U.S. Army Corps of Engineers Experience with Roller-Compacted Concrete Pavements  12:00 pm
David W. Pittman, Director, Geotechnical and Structural Laboratory, U.S. Army Corps of Engineers, Vicksburg, MS

Port of Houston’s Bayport Terminal Uses RCC for Integrated Pavement Solution Approach  12:20 pm
Matthew W. Singel, Specialty Pavements Engineer, Cement Council of Texas, Hurst, TX

Use of Roller-Compacted Concrete for Low-Volume Roads  12:40 pm
Christopher R. Tull, President, CRT Concrete Consulting, LLC, Fishers, IN

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
This session focuses on the aesthetic features of concrete, including its use in buildings, bridges, and flatwork. The presentation will emphasize success in the design, specification, and supply of architectural concrete. The session will highlight several prominent DFW buildings that incorporate architectural concrete features.

By attending this session, attendees will be able to:
1. Specify the nine-step architectural concrete process, from construction documents to care and maintenance;
2. Implement a visual quality program to provide successful and repeatable natural grey concrete surfaces;
3. Demonstrate how dry polishing and decorative concrete can be achieved; and
4. Identify a number of exceptional architectural concrete structures in North Central Texas.
Exhibitors will demonstrate the capabilities of their companies on Monday, March 19, from 11:15 am to 4:30 pm. Presentations may demonstrate equipment operation, introduce new products, demonstrate software capabilities, or describe the services provided by each participating company. These presentations may include PowerPoint shows, videos, and hands-on workshops. Each demonstration will conclude with a question-and-answer period. Attendees representing all areas of the concrete industry will find the demonstrations interesting and educational. Learn more about the products and services offered by the following companies.

<table>
<thead>
<tr>
<th>Time</th>
<th>Exhibitor</th>
<th>Presentation/Demonstration Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15 am</td>
<td>Olson Engineering, Inc.</td>
<td>Sonic, Ultrasonic and Radar Methods for Nondestructive Evaluation (NDE) of Concrete</td>
</tr>
<tr>
<td>12:00 pm</td>
<td>S-FRAME Software, Inc.</td>
<td>Comprehensive and intuitive design of reinforced concrete beams, columns, and walls with S-CONCRETE</td>
</tr>
<tr>
<td>12:45 pm</td>
<td>Kryton International, Inc.</td>
<td>Sustainable concrete construction practices with crystalline admixtures and a profile on the GreenSite Project of the Year winner, Industrial Category—TreePeople Cistern</td>
</tr>
<tr>
<td>2:15 pm</td>
<td>Fibrwrap Construction Services, Inc.</td>
<td>Design and Use of Externally Bonded Fiber-Reinforced Polymers (FRPs) for Structural Strengthening</td>
</tr>
<tr>
<td>4:30 pm</td>
<td>SIMCO Technologies, Inc.</td>
<td>STADIUM® Academic Workshop and Discussion</td>
</tr>
</tbody>
</table>

Additional demonstrations may be added following the printing of the convention program book. Please see an updated schedule in the demo area.
Monday, March 19, 2012
11:30 am - 1:30 pm

Student Lunch
$40 U.S. per person
FREE to students who preregister
Sponsored by Baker Concrete Construction Company, Inc.

Coordinated by the ACI Northeast Texas Chapter and ACI Committee S801, Student Activities

Speaker: Dale P. Bentz
Chemical Engineer
National Institute of Standards and Technology
Gaithersburg, MD

Dale P. Bentz of the National Institute of Standards and Technology will deliver a presentation titled “Giving Back to the Global Community: An Attainable Responsibility and Privilege.” Awards for the Student Fiber-Reinforced Concrete (FRC) Bowling Ball Competition, the Art of Concrete Student Competition, and the Student Project Competition will also be presented.

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.

= separate fee required
Chapter Forum: Adhesive Anchor Installer - Certification-Is It Right for Your Chapter?  
Sponsored by the ACI Chapter Activities Committee

At every spring convention, the ACI Chapter Activities Committee (CAC) holds a Chapter Forum to explore topics of interest to chapter officers. This year, Mike Morrison, ACI Manager, Certification Business Development, will present an update and overview of the new ACI/CRSI Adhesive Anchor Installer Certification Program, which is available to ACI chapters.

This program is in response to recommendations by the National Transportation Safety Board 2006 report related to installation of adhesive concrete anchors in the Boston Central Artery/Tunnel “Big Dig” Project. ACI, in partnership with the Concrete Reinforcing Steel Institute, developed this program to certify the installers of adhesive anchors used in concrete. This type of concrete anchor is recognized as an important structural connection in many applications, and the design, use, and installation procedures are intertwined to ensure proper performance. Installer certification will be required when the 2011 ACI 318 Building Code for Reinforced Concrete is adopted into local building codes. ACI is working with local chapters to help with the launch of this important new certification program. Find out if this program is right for your chapter.
Monday, March 19, 2012
1:30 pm - 3:30 pm

Workshopping Your Presentation

REUNION B

Sponsored by ACI Committee S802, Teaching Methods and Educational Materials

Session Co-Moderators:  
Mauricio Lopez  
Assistant Professor  
Pontificia Universidad Católica de Chile  
Santiago, Chile

James H. Hanson  
Associate Professor  
Rose-Hulman Institute of Technology  
Terre Haute, IN

Opening Doors Using Pervious Concrete  1:30 pm
John Kevern, Assistant Professor of Civil Engineering, University of Missouri-Kansas City, Kansas City, MO

Presenting for College Students  2:00 pm
Heather Brown, Associate Professor, Middle Tennessee State University, Murfreesboro, TN

Presenting for a Technical Audience  2:20 pm
Scott Erickson, Principal, Evolution Paving Resources, Salem, OR

Presenting for Customers  2:40 pm
Diep Tu, Director of Engineering, Florida Concrete and Production Association, Orlando, FL

Presenting for a Non-Technical Audience  3:00 pm
Chris Carroll, Assistant Professor, University of Louisiana at Lafayette, Lafayette, LA

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
1:30 pm - 3:30 pm

Symposium Honoring James O. Jirsa’s Contributions in Structural Concrete: A Time to Reflect, Part 3: Seismic Strengthening and Repair of Concrete Structures

REUNION C

Sponsored by ACI Committees 369, Seismic Repair and Rehabilitation; and 374, Performance-Based Seismic Design of Concrete Buildings

Session Co-Moderators: Robert J. Frosch
Professor of Civil Engineering
Purdue University
West Lafayette, IN

Jorge N. Bastos
Professor of Architecture, Urbanism and Design
Universidade Técnica de Lisboa
Lisbon, Portugal

During the last 45 years, Professor James O. Jirsa has had a long and distinguished career as a Professor of civil engineering and as a student advisor at the University of Nebraska, Rice University, and the University of Texas at Austin. He has been at the forefront of structural engineering by making outstanding contributions to concrete research and design. Most notably, his contributions to reinforced concrete include his work in slabs, shear, bond and development length, and the seismic strengthening of reinforced concrete elements and systems. An ACI Honorary Member, Jirsa is a Past President of the Institute, a former Board member, and a Past Chair of many technical committees, including the Technical Activities Committee (TAC); ACI Subcommittee 318-F, New Materials, Products, and Ideas; and Joint ACI-ASCE Committees 352, Joints and Connections in Monolithic Concrete Structures, and 408, Development and Splicing of Deformed Bars; and has been a member of ACI Committee 318, Structural Concrete Building Code since 1982. Students, researchers, practicing engineers, and contractors are expected to attend. The material presented will cover state-of-the-art information in the aforementioned areas.
Monday, March 19, 2012
1:30 pm - 3:30 pm

Symposium Honoring James O. Jirsa’s Contributions in Structural Concrete: A Time to Reflect, Part 3: Seismic Strengthening and Repair of Concrete Structures (cont.) REUNION C

By attending this series of sessions, attendees will be able to:
1. Explain state-of-the-art approaches for the design of structural concrete;
2. Demonstrate different rehabilitation schemes for building and bridge structural systems;
3. Specify experiments and nonlinear analyses for improving earthquake safety; and
4. Recognize the role of large-scale testing in the development of building code provisions.

Lessons on Seismic Rehabilitation of Concrete Buildings Learned from Recent Earthquakes 1:30 pm
Shunsuke Sugano, Emeritus Professor, Hiroshima University, Tokyo, Japan

Belling the Cat 1:54 pm
Jack P. Moehle, Professor, University of California-Berkeley, Berkeley, CA

Structural Rehabilitation and Monitoring of a 28-Story Building 2:18 pm
Ugur Ersoy, Professor of Civil Engineering, Bogazici University, Istanbul, Turkey; and Tugrul Tankut, Guney Ozcebe, and Ahmet Turer, Middle East Technical University

Collaborative Research—A Success Story: Strengthening Concrete Buildings for Seismic Performance 2:42 pm
Loring A. Wyllie, Senior Principal, Degenkolb Engineers, San Francisco, CA

Strengthening of Lightly-Reinforced, Low-Rise Walls with Steel Fiber-Reinforced Concrete (SFRC) 3:06 pm
Sergio M. Alcocer, Coordinator for Innovation and Development, National University of Mexico, Mexico City, Mexico; and José A. Pincheira, University of Wisconsin

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
1:30 pm - 3:30 pm

Symposium on Integrated Cement-Based Pavement Solutions, Part 3: Sustainable Aspects of Soil Cement Pavements

Sponsored by ACI Committees 230, Soil Cement; 325, Concrete Pavements; and 327, Roller-Compacted Concrete Pavements

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

Bruce W. Ramme
Vice President
We Energies
Milwaukee, WI

This session will highlight the different types of soil cement technology available to the construction community, from rehabilitating failed asphalt pavements to constructing new reservoirs. A new ACI TechNote publication will provide an overview of the technologies, and experts will provide a perspective from actual project experience. The session will focus on how this method of construction is one of the most sustainable available when compared with the alternatives.

By attending this session, attendees will be able to:
1. Explain the sustainable benefits of soil cement;
2. Recognize the range of construction methods and applications for soil cement;
3. Identify laboratory and field-testing methods that are useful for the quality control of soil cement; and
4. Identify various cementitious materials available for use in the production of soil cement.

Soil-Cement: A Sustainable Approach for Construction 1:30 pm
Bruce W. Ramme, Vice President, We Energies, Milwaukee, WI

Reducing the Carbon Footprint: Environmental Life-Cycle Analysis of Full-Depth Reclamation 1:54 pm
Jan R. Prusinski, Executive Director, Cement Council of Texas, Hurst, TX
Symposium on Integrated Cement-Based Pavement Solutions, Part 3: Sustainable Aspects of Soil Cement Pavements (cont.)

REUNION A

The Warren H. Brock Reservoir: Soil, Cement, and Salad  2:18 pm
Katie J. Bartojay, Civil Engineer, U.S. Bureau of Reclamation, Denver, CO

Sustainable Pavement Reclamation in Fort Worth  2:43 pm
Matthew W. Singel, Specialty Pavements Engineer, Cement Council of Texas, Hurst, TX; and Najib Fares, City of Fort Worth

Full-Depth Reclamation with Cement: Lessons Learned in Texas  3:07 pm
Tom Scullion, Senior Research Engineer and Program Manager, Texas Transportation Institute, College Station, TX

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The Art of Concrete, Part 2

Sponsored by the ACI Northeast Texas Chapter

Session Moderator: Meghan Morales
Senior Associate
Wiss, Janney, Elstner Associates, Inc.
Irving, TX

This session focuses on the aesthetic features of concrete, including its use in buildings, bridges, and flatwork. The presentation will emphasize success in the design, specification, and supply of architectural concrete. The session will highlight several prominent DFW buildings that incorporate architectural concrete features.

By attending this session, attendees will be able to:
1. Specify the nine-step architectural concrete process, from construction documents to care and maintenance;
2. Implement a visual quality program to provide successful and repeatable natural grey concrete surfaces;
3. Demonstrate how dry polishing and decorative concrete can be achieved; and
4. Identify a number of exceptional architectural concrete structures in North Central Texas.

Color, Pattern, and Texture: A Concrete Surface

Design System 1:30 pm
Scott Balch, President, Bomanite Texas, Dallas, TX

Masterworks of Architectural Concrete in Dallas and Fort Worth 2:30 pm
W. Mark Gunderson, Architect and Principal, W. Mark Gunderson Architect, Fort Worth, TX

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The Art of Thermal Mass Modeling for Energy Conservation in Buildings, Part 1

REUNION G

Sponsored by ACI Committees 122, Energy Efficiency of Concrete and Masonry Systems; 130, Sustainability of Concrete; and 236, Material Science of Concrete

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

Stephen S. Szoke
Director of Codes and Standards
Portland Cement Association
Skokie, IL

Energy efficiency concerns are driving material selection decisions as designers and building developers embrace green building strategies like never before. This session reviews the design process as it relates to energy modeling tools and how thermal mass and construction system selection are integrated into the design process. It identifies and describes appropriate simulation tools that integrate concrete and masonry construction into building design to optimize energy efficiency. Case studies that address computer modeling programs and thermal mass will be presented. The energy modeling process and several modeling methods will be explained. Specific attention will be given to how and where thermal mass was integrated into the design.

By attending this session, attendees will:
1. Gain an understanding of how thermal mass is addressed in building design, codes, and standards;
2. Be introduced to the key role of energy modeling programs in the building design and material selection process;
3. Learn how building simulation software treats thermal mass systems for energy storage, load reduction, and load shifting to systems using forced air and R-values;
4. Be able to discuss the use of thermal mass to achieve high energy efficiency in buildings with leading industry experts;
5. Differentiate simulation software by its ease of use in thermal mass systems; and
6. Identify opportunities to promote and expand the use of appropriate energy modeling techniques.
Monday, March 19, 2012
1:30 pm - 3:30 pm


Thermal Mass Modeling—How We Got Where We Are 1:30 pm
Jeff S. Haberl, Professor, Texas A&M University, College Station, TX

Building Code Treatment of Thermal Mass in Energy Modeling 2:10 pm
Stephen V. Skalko, Manager of Regional Codes and Standards, Portland Cement Association, Skokie, IL

The State-of-the-Art in Building Modeling Software 2:30 pm
Jian M. Zhang, Commercial Building Energy Analyst, Pacific Northwest National Laboratory, Richland, WA

Implications for Building Energy Modelers and Their Needs 3:00 pm
Medger Marceau, Building Science Consultant, Morrison Hershfield, Bellevue, WA

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
3:30 pm - 5:00 pm

★ Guest Social
Hosted by Mrs. Deb Hover

All registered guests are invited to join Mrs. Deb Hover for light refreshments. This is a wonderful opportunity to get to know other registered guests and enjoy a refreshing break! A local storyteller and musician will be there to entertain you with some tall Texas tales. A guest name badge is required to attend this event.

★ = Guest-only event
Integral Abutment Bridges: Design, Performance, Evaluation, and Maintenance

REUNION A

Sponsored by ACI Committees 342, Evaluation of Concrete Bridges and Bridge Elements; and 343, Concrete Bridge Design

Session Moderator: Riyadh Hindi
Associate Professor
Saint Louis University
Saint Louis, MO

This session will provide a forum for practicing engineers and researchers to share and discuss the state-of-the-art practices for the design, performance, evaluation, and maintenance of integral abutment bridges.

The main objective is to discuss the past successes and failures and the present research trends and future directions for integral abutment bridges. Current design practices and detailing, performance, and maintenance issues related to integral abutment bridges will be discussed, including the applicability of current AASHTO-LRDF specifications. This session is suitable for practitioners, researchers, and students.

Integral Bridge Design at the Virginia Department of Transportation
Edward J. Hoppe, Senior Research Scientist, Virginia Center for Transportation Innovation & Research, Charlottesville, VA

Extended Monitoring of an Integral Abutment Bridge:
SR 18 over the Mississinewa River Bridge
Matthew D. Lovell, Assistant Professor, Rose-Hulman Institute of Technology, Terre Haute, IN

Live-Load Distribution Formulas for Prestressed Concrete Integral Abutment Bridge Girders
Murat Dicleli, Professor, Middle East Technical University, Ankara, Turkey; and Semih Erhan, Middle East Technical University

Analysis of Superstructures of Integral Abutment Bridges
Riyadh Hindi, Associate Professor, Saint Louis University, Saint Louis, MO

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
4:00 pm - 6:00 pm

Symposium Honoring James O. Jirsa’s Contributions in Structural Concrete: A Time to Reflect, Part 4: Joints  REUNION C
Sponsored by ACI Committees 352, Joints and Connections in Monolithic Concrete Structures; and 374, Performance-Based Seismic Design of Concrete Buildings

Session Co-Moderators:  José A. Pincheira
Associate Professor
University of Wisconsin
Madison, WI

Sergio M. Alcocer
Coordinator for Innovation and Development
National University of Mexico
Mexico City, Mexico

During the last 45 years, Professor James O. Jirsa has had a long and distinguished career as a Professor of civil engineering and as a student advisor at the University of Nebraska, Rice University, and the University of Texas at Austin. He has been at the forefront of structural engineering by making outstanding contributions to concrete research and design. Most notably, his contributions to reinforced concrete include his work in slabs, shear, bond and development length, and the seismic strengthening of reinforced concrete elements and systems. An ACI Honorary Member, Jirsa is a Past President of the Institute, a former Board member, and a Past Chair of many technical committees, including the Technical Activities Committee (TAC); ACI Subcommittee 318-F, New Materials, Products, and Ideas; and Joint ACI-ASCE Committees 352, Joints and Connections in Monolithic Concrete Structures, and 408, Development and Splicing of Deformed Bars; and has been a member of ACI Committee 318, Structural Concrete Building Code since 1982. Students, researchers, practicing engineers, and contractors are expected to attend. The material presented will cover state-of-the-art information in the aforementioned areas.
By attending this series of sessions, attendees will be able to:
1. Explain state-of-the-art approaches for the design of structural concrete;
2. Demonstrate different rehabilitation schemes for building and bridge structural systems;
3. Specify experiments and nonlinear analyses for improving earthquake safety; and
4. Recognize the role of large-scale testing in the development of building code provisions.

Historical Development of Design Provisions for Reinforced Concrete Beam-to-Column Connections 4:00 pm
James K. Wight, Professor, University of Michigan, Ann Arbor, MI; and Gustavo Parra-Montesinos, University of Michigan

Beam-Column Joint Performance in the Feb. 22, 2011, Christchurch Earthquake: Lessons for USA Practice 4:23 pm
Roberto T. Leon, David H. Burrows Professor of Construction Engineering, Virginia Polytechnic University, Blacksburg, VA; and Stefano Pampanin and Weng Y. Kam, University of Canterbury

Experimental Examination of ACI 318 STM Provisions 4:46 pm
Oguzhan Bayrak, Professor, University of Texas at Austin, Austin, TX; Robin G. Tuchscherer, Northern Arizona University; and David B. Birrcher, International Bridge Technologies, Inc.

On the Role of Nonlinear Analysis in the Seismic Performance Assessment of Buildings 5:09 pm
Gregory G. Deierlein, John A. Blume Professor of Engineering, Stanford University, Stanford, CA

Lessons Learned from the 2011 Tohoku, Japan, Earthquake 5:32 pm
Shunsuke Otani, Professor Emeritus, University of Tokyo, Tokyo, Japan

Closing 5:55 pm
Sergio M. Alcocer, Coordinator for Innovation and Development, National University of Mexico, Mexico City, Mexico

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The Art of Concrete, Part 3  
Sponsored by the ACI Northeast Texas Chapter

Session Moderator:  
Meghan Morales  
Senior Associate  
Wiss, Janney, Elstner Associates, Inc.  
Irving, TX

This session focuses on the aesthetic features of concrete, including its use in buildings, bridges, and flatwork. The presentations will emphasize success in the design, specification, and supply of architectural concrete. The session will highlight several prominent DFW buildings that incorporate architectural concrete features.

By attending this session, attendees will be able to:
1. Specify the nine-step architectural concrete process, from construction documents to care and maintenance;
2. Implement a visual quality program to provide successful and repeatable natural grey concrete surfaces;
3. Demonstrate how dry polishing and decorative concrete can be achieved; and
4. Identify a number of exceptional architectural concrete structures in North Central Texas.

**Beneath the Aluminum Skin of the Wyly Theatre**  
**4:00 pm**  
Jeff Wagner, Director and Superintendent, McCarthy Building Company, Dallas, TX

**Dallas Cowboy Stadium**  
**5:00 pm**  
Craig Abbott, Project Manager, Manhattan Construction, Dallas, TX

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Energy efficiency concerns are driving material selection decisions as designers and building developers embrace green building strategies like never before. This session reviews the design process as it relates to energy modeling tools and how thermal mass and construction system selection are integrated into the design process. It identifies and describes appropriate simulation tools that integrate concrete and masonry construction into building design to optimize energy efficiency. Case studies that address computer modeling programs and thermal mass will be presented. The energy modeling process and several modeling methods will be explained. Specific attention will be given to how and where thermal mass was integrated into the design.

By attending this session, attendees will:
1. Gain an understanding of how thermal mass is addressed in building design, codes, and standards;
2. Be introduced to the key role of energy modeling programs in the building design and material selection process;
3. Learn how building simulation software treats thermal mass systems for energy storage, load reduction, and load shifting to systems using forced air and R-values;
4. Be able to discuss the use of thermal mass to achieve high energy efficiency in buildings with leading industry experts;
5. Differentiate simulation software by its ease of use in thermal mass systems; and
6. Identify opportunities to promote and expand the use of appropriate energy modeling techniques.
Monday, March 19, 2012
4:00 pm - 6:00 pm

The Art of Thermal Mass Modeling for Energy Conservation in Buildings, Part 2 (cont.)

Cost-Effective, Energy-Efficient School Design
William M. McGinley, Professor, University of Louisville, Louisville, KY

Thermal Mass Simulation Accuracy and Design Considerations
Linda Lam, Associate, Transsolar, Inc., New York, NY

Natural Ventilation Cooling
David Springer, President, Davis Energy Group, Davis, CA

New York Multifamily Developer Saves Operating Costs through Energy Modeling
James Farny, Program Manager of Masonry/Specs Products, Portland Cement Association, Skokie, IL

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The Need for Service-Life Prediction in Understanding Sustainability

Sponsored by ACI Committees 130, Sustainability of Concrete; and 365, Service Life Prediction

Session Moderator: Tracy D. Marcotte
Project Manager
CVM Engineers
Oaks, PA

For the safe and effective use of new and existing concrete structures in service, thoughtful service-life prediction is fundamental to achieving sustainability. Without service-life prediction, it is not possible to make informed decisions about durable materials and systems and optimize the seemingly disparate success indicators of the “triple bottom line” (that is, achieving social, economical, and environmental goals). Although service-life concepts have been used since early builders observed that certain materials and designs lasted longer than others, these have been, until recently, largely qualitative and empirical. Modern service-life prediction models have sought to incorporate the best understanding of the mechanisms and kinetics of many degradation processes of concrete, with the aim of making quantitative predictions. With these improvements in prediction, it is becoming easier to evaluate system and materials choices for durability and better understand the financial, social, and environmental costs for a given new structure or the rehabilitation program of a structure in service.

This session will explore state-of-the-art service-life prediction modeling processes and how they are applied to new and existing structures. Particular attention will be paid to the current state-of-the-art modeling techniques as well as simplified models that address only one degradation mechanism. Attendees will benefit from observing how these predictions are used in real-world scenarios by engineers, designers, and educators to guide sustainable choices as we move at least one step closer to true sustainability.
The Need for Service-Life Prediction in Understanding Sustainability (cont.)

By attending this session, attendees will be able to:
1. Understand issues concerning selecting materials and rating sustainability for reinforcing steel;
2. Understand the range of service-life prediction modeling software programs and their ability to provide useful information in different scenarios;
3. Implement the steps needed to harmonize the sustainability goals for a single structure or a series of structures; and
4. Recognize the regional challenges of sustainability, such as varying constraints from country to country or region to region and the differing definitions of success.

Introduction 4:00 pm
Tracy D. Marcotte, Project Manager, CVM Engineers, Oaks, PA

Service-Life Predictions—Using Software Models 4:05 pm
Paul G. Tourney, Vice President, Tourney Consulting Group, LLC, Kalamazoo, MI

Life-365 Consortium: Verification and Validation Processes Update 4:28 pm
Mark A. Ehlen, Consultant, Life-365 Consortium, Albuquerque, NM

Challenges in Applying Service-Life Prediction to Make “Sustainable” Decisions 4:51 pm
Tracy D. Marcotte, Project Manager, CVM Engineers, Oaks, PA

Corrosion Prevention Strategies and Sustainable Construction 5:14 pm
David B. McDonald, Managing Director, Epoxy Interest Group of CRSI, Schaumburg, IL

Middle Eastern Perspectives of Service Life and Sustainability 5:37 pm
Mohamad Nagi, Director of the Infrastructure Sustainability and Assessment Center, American University in Dubai, Dubai, United Arab Emirates; and Elias Saqan, American University of Dubai

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Monday, March 19, 2012
6:00 pm - 7:00 pm

Women in ACI Reception  MORENO AB

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. A cash bar and light hors d’oeuvres will be served.
Monday, March 19, 2012
6:00 pm - 8:00 pm

✓ Reception in Honor of James O. Jirsa
REUNION FOYER
$10 U.S. per person

Please join other ACI attendees in honoring James O. Jirsa, ACI Past President, for his numerous contributions and accomplishments. Jirsa most recently served on the ACI Board of Direction and has chaired and served on many ACI committees over the years. He is also a past member of the ACI International Committee. His research interests include the behavior and design of reinforced concrete structures, including the anchorage and development of reinforcement, detailing, durability, and rehabilitation of structures in seismic zones. Please join us in recognition of James O. Jirsa’s outstanding, long-time dedication to the concrete industry.

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.

✓ = Separate fee required
Tuesday, March 20, 2012
8:00 am - 9:00 am

International Chapter Forum
REVERCHON AB
Sponsored by the ACI International Advisory Committee

The International Advisory Committee will hold an International Chapter Forum to explore topics of interest to officers and members of international chapters. If you are affiliated with an international chapter, you are invited to attend.

Luke Snell, Chair of the International Advisory Committee, will provide an overview of chapter benefits, opportunity for sponsoring/hosting certification programs, and handout material that will be of benefit to your international chapter.
The objective of this session is to present the latest methods of analysis and design, applicable codes and standards, connections, testing, construction, and inspection of composite or steel plate-reinforced concrete modular structures or components.

By attending this session, attendees will be able to:
1. Identify the benefits of composite and modular construction;
2. Identify issues related to the design, construction, and analysis of composite and modular concrete structures;
3. Recognize and understand existing national and international codes and standards for the design of composite and modular structures; and
4. Learn about current research efforts to model and evaluate the performance and behavior of composite and modular structures under various load conditions.

Analytical Study on the Behavior of Reinforced Concrete Panel Covered with Steel Plate Subjected to Non-Deformable Projectiles 8:30 am
Himat Solanki, Structural Engineer, Sarasota County Government, Sarasota, FL; Anand Mehta, Road and Bridge Department; and Khusali Modi, Building Department

Accurate Modeling of Modular Composite Floor Panels 8:50 am
Hunter Brown, Civil Engineer, Bechtel Power Corporation, Frederick, MD; Lisa M. Anderson, Bechtel National, Inc.; and Jim Ryan, Bechtel Power Corporation
Composite and Modular Structures, Part 1 (cont.)

Effect of Delamination of Active Constraint Layer
Damping on Smart Composite Plate 9:10 am
Rajeev Chaturvedi, Scientist, Indian Institute of Technology, Kharagpur, India

Modeling of Steel-Concrete Composite Wall Elements
Subject to In-Plane and Out-of-Plane Loads 9:30 am
Trevor Hrynyk, PhD Student, University of Toronto, Toronto, ON, Canada; and Frank Vecchio, University of Toronto

Large-Scale Testing and Analysis of Reinforced Concrete Coupling Beams with Embedded Structural Steel Sections 9:50 am
Christopher J. Motter, Graduate Student, University of California-Los Angeles, Los Angeles, CA; and John Wallace, University of California-Los Angeles

Comparative Assessment of Structural Performance of S/C and R/C Structural Walls for Nuclear Energy Facility Structures 10:10 am
Bozidar Stojadinovic, Professor, Institute of Structural Engineering, Department of Civil, Environmental and Geomatic Engineering, Swiss Federal Institute of Technology, Zürich, Switzerland

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas Containment, Part 1

REUNION A

Sponsored by ACI Committee 376, Concrete Structures for Refrigerated Liquefied Gas Containment

Session Co-Moderators: Charles S. Hanskat
Principal
Concrete Engineering Group, LLC
Northbrook, IL

Neven Krstulovic-Opara
Lead Civil & Structural Engineer
Exxon Mobil
Houston, TX

This comprehensive session on the design and construction of concrete tanks for refrigerated liquefied gas containment with a primary focus on large-scale LNG tanks. The sessions will start with an introduction to concrete LNG and RLG tanks and move into detailed coverage of the provisions of the new ACI 376 Code Requirements for Design and Construction of Concrete Structures for the Containment of Refrigerated Liquefied Gases and Commentary. Finally, the session will include presentations on the construction of several concrete LNG tanks around the world.

By attending this session, attendees will be able to:
1. Recognize the specific regulatory constraints that impact siting, design, construction, and operation of concrete refrigerated liquefied gas RLG containment structures;
2. Use the new ACI 376 Code and Commentary for the design and construction of concrete RLG containment structures;
3. Identify the impact that containment of extremely low temperature has on concrete and other construction materials;
4. Identify the seismic loading conditions required for concrete RLG facilities; and
5. Discover the requirements for the start-up and commissioning of RLG containment structures.
Tuesday, March 20, 2012
8:30 am - 10:30 am

Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas Containment, Part 1 (cont.)

Introduction to Concrete RLG Tanks and the ACI 376 Code
8:30 am

Charles S. Hanskat, Principal, Concrete Engineering Group, LLC, Northbrook, IL

ACI 376 Code and Commentary: Material Requirements
9:00 am

Dale Berner, President, Ben C. Gerwick Inc., Oakland, CA

ACI 376 Code and Commentary: Design Requirements
9:30 am

George C. Hoff, President, Hoff Consulting LLC, Clinton, MS

ACI 386 Code and Commentary: Seismic Requirements
10:00 am

Praveen K. Malhotra, Principal, StrongMotions, Inc., Sharon, MA

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The durability of concrete is most clearly linked to properties that develop at early ages as driven by the progress of chemical reactions (that is, hydration kinetics) and environmental conditions (that is, placement temperature). As a result, precise measurement and prediction of early-age behavior is necessary to accurately describe the service life of materials. Unfortunately, the properties that develop initially may be altered over the life span of the material as a result of mechanical loading and the chemistry of the environment. As such, it is important to determine the evolution of properties over time and their relation to concrete performance. This session attempts to correlate experimental and modeling approaches that can link complex chemo-physical processes to describe how the progress of chemical reactions and material property development in concretes may be coupled to develop predictive life-cycle performance models for concrete structures. Emphasis is on the recent advances in this important area of research and should be of great interest to both the academic and industrial community. Those involved in sustainable materials design and development and those who specify materials to be used in construction should attend. The attendees will learn more about material property development in concretes and how material processing and placement conditions can have a considerable impact on determining the overall durability of the material.
Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 1 (cont.) REUNION B

By attending this session, attendees will be able to:
1. Explain the current state-of-the-art understanding of the formation and growth of reaction products during cement and cementitious material hydration;
2. Describe the effect of temperature on cement and cementitious material hydration;
3. Recognize how new models might be used for predicting the hydration kinetics of cementitious materials or the service life of concrete; and
4. Identify the effect of system chemistry and kinetics on certain durability problems.

Nature vs. Nurture: Understanding Your Concrete's Personality 8:30 am
Ryan Henkensiefken, Technical Services Supervisor, US Concrete Technologies, San Jose, CA

Simulating Solution Chemistry and Phase Evolution in Early-Age Cement Pastes 8:54 am
Jeffrey W. Bullard, Materials Research Engineer, National Institute of Standards and Technology, Gaithersburg, MD; and JeanLoup Traore, Steven G. Satterfield, and Judith E. Terrill, National Institute of Standards and Technology

Use of Mic Modeling Platform to Study Early Hydration Kinetics 9:18 am
Adita Kumar, Student, École Polytechnique Fédérale de Lausanne Lausanne, Switzerland; Shashank Bishnoi, Laval University; and Karen Scrivener, École Polytechnique Fédérale de Lausanne

Modeling Constrained Growth of Hydration Products 9:43 am
George W. Scherer, Professor, Princeton University, Princeton, NJ

A New Explanation of Cement Hydration Kinetics 10:07 am
Xueyu Pang, PhD Student, Columbia University, New York, NY; and Christian Meyer, Columbia University

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The first part of this session focuses on the material characteristic of robustness, which is defined as the insensitivity of self-consolidating concrete’s (SCC’s) fresh properties to material changes or batching errors during production. The second part of this session examines the effective use of existing and new concrete production equipment and monitoring techniques to consistently produce quality SCC.

By attending this session, attendees will be able to:
1. Describe the rheology of SCC;
2. Explain how sensitive SCC can be to varying properties of its constituent materials;
3. Employ the tools necessary to increase SCC robustness; and
4. Identify the benefits of increased SCC use.

The Effective Use of Moisture Meters and Probes to Control the Water Content During SCC Production 8:30 am
Tim Statler, Owner, Statler International, Petoskey, MI

The Effective Use of Batch Control and Mixing Systems during Production of SCC 8:54 am
Max Hoene, President, Advanced Concrete Technologies, Greenland, NH

The Use of the Viscoprobe to Control SCC Rheology during Production 9:18 am
Niel S. Nielsen, Manager, Convi ApS, Odense, Denmark
Tuesday, March 20, 2012
8:30 am - 10:30 am

 Quality Control and Robustness of SCC, Part 2 (cont.)

A Newly Developed Probe for Measuring the Rheology of Concrete Inside a Ready Mixed Drum

Denis Beaupre, Managing Director, IBB Rheology, Quebec, QC, Canada

Effective Monitoring of Raw Materials and Concrete Performance during Production of SCC

Joseph A. Daczko, Product Line Manager, BASF Construction Chemicals, Beachwood, OH

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Tuesday, March 20, 2012
8:30 am - 10:30 am

Science and Art of Grouting and Grouting Materials, Part 1
REUNION C
Sponsored by ACI Committees 238, Workability of Fresh Concrete; and 552, Cementitious Grouting

Session Co-Moderators: Kamal H. Khayat
Professor
Missouri University of Science and Technology
Rolla, MO

Mohammed Sonebi
Associate Professor
Queen’s University-Belfast
Belfast, UK

The proper design and application of cement-based grouts is moving away from an art toward a complex interdisciplinary science. The proper design and testing of cement grouts have marked effects on the performance of the grouted formation. Case studies presented in these sessions will highlight recent innovations in the area of cement grouting formulations, new quality control testing procedures, and innovative grouting materials. The sessions should be of interest to concrete technologists, materials suppliers, structural and geotechnical engineers, geologists, and contractors dealing with grouting. Highlighted case studies include injection grouting of underground water pipes; grouting of long tunnel linings, dams, and bridges; and waste containments.

By attending this session, attendees will be able to:
1. Recognize different types of novel grouting materials that can be used to reinforce existing structures;
2. Interpret new quality control testing procedures that can be used in grouting;
3. Illustrate performance-based specifications required to design various types of grouting materials; and
4. Specify emerging technologies in civil infrastructures.
Tuesday, March 20, 2012
8:30 am - 10:30 am

Science and Art of Grouting and Grouting Materials, Part 1 (cont.)  
REUNION C

Effect of Mix Constituents on Grout Penetrability  
8:30 am  
James Warner, Consulting Engineer, James Warner Consulting Engineers, Mariposa, CA

Fresh Grout Flow Test Methods  
8:55 am  
Chiara F. Ferraris, Research Scientist, National Institute of Standards and Technology, Gaithersburg, MD

Influence of Metakaolin and Type of Viscosity-Modifying Admixtures on Rheology of Grouts  
9:20 am  
Mohammed Sonebi, Associate Professor, Queen’s University, Belfast, UK

Performance Evaluation of Cement Grout for Underwater Anchorages  
9:45 am  
Ammar Yahia, Associate Professor, University of Sherbrooke, Sherbrooke, QC, Canada

Long-Term Shrinkage of Cement-Based Grout Containing Admixtures  
10:05 am  
Akthem Al-Manaseer, Professor, San Jose State University, San Jose, CA

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Tuesday, March 20, 2012
11:00 am - 1:00 pm

Composite and Modular Structures, Part 2

Sponsored by ACI Committees 335, Composite and Hybrid Structures; and 349, Concrete Nuclear Structures

Session Co-Moderators: Herman L. Graves III
Senior Structural Engineer
U.S. Nuclear Regulatory Commission
Washington, DC

Gustavo J. Parra-Montesinos
Associate Professor
University of Michigan
Ann Arbor, MI

The objective of this session is to present the latest methods of analysis and design, applicable codes and standards, connections, testing, construction, and inspection of composite or steel plate-reinforced concrete modular structures or components.

By attending this session, attendees will be able to:
1. Identify the benefits of composite and modular construction;
2. Identify issues related to the design, construction, and analysis of composite and modular concrete structures;
3. Recognize and understand existing national and international codes and standards for the design of composite and modular structures; and
4. Learn about current research efforts to model and evaluate the performance and behavior of composite and modular structures under various load conditions.

Fused Coupling Beams in Coupled Core Walls 11:00 am

Steven J. Mitchell, Graduate Student, University of Cincinnati, Cincinnati, OH; and Gian A. Rassati and Bahram M. Shahrooz, University of Cincinnati

Out-of-Plane Behavior of SC Composite Beams 11:20 am

Kadir Sener, PhD Candidate, Purdue University, West Lafayette, IN; Keith Coogler, Westinghouse Electric Corporation; and Amit H. Varma and Kai Zhang, Purdue University
Tuesday, March 20, 2012
11:00 am - 1:00 pm

Composite and Modular Structures, Part 2 (cont.)  REUNION G

Design of Steel-Plate Composite (SC) Walls for Combined Force and Moment Demands  11:40 am
Amit H. Varma, Associate Professor, Purdue University, West Lafayette, IN; Sanjeev R. Malushte, Bechtel Power Corporation; and Zhichao Lai and Kadir Sener, Purdue University

AP1000 Structural Module Design  12:00 pm
Keith L. Coogler, Senior Engineer, Westinghouse Electric Company, Cranberry Township, PA; and Carlos Cantarero and Richard Orr, Westinghouse Electric Company

Performance-Based Design of SSC Wall in Fire  12:20 pm
Ilhwan Moon, Specialist, KEPCO E&C, Inc., Gyeonggido, Korea; and Nam Yong Jee, Won Ki Kim, and Chang Jun Bang, Central Research Institute

Standards and Technical Bases for Analysis and Design of Steel Plate and Concrete Composite Modular Structures  12:40 pm
José A. Pires, Senior Structural Engineer, U.S. Nuclear Regulatory Commission, Washington, DC; and Herman L. Graves III and Bret A. Tegeler, U.S. Nuclear Regulatory Commission

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas Containment, Part 2

REUNION A

Sponsored by ACI Committee 376, Concrete Structures for Refrigerated Liquefied Gas Containment

Session Co-Moderators: Charles S. Hanskat
Principal
Concrete Engineering Group, LLC
Northbrook, IL

Neven Krstulovic-Opara
Lead Civil & Structural Engineer
Exxon Mobil
Houston, TX

This comprehensive session on the design and construction of concrete tanks for refrigerated liquefied gas containment with a primary focus on large-scale LNG tanks. The sessions will start with an introduction to concrete LNG and RLG tanks and move into detailed coverage of the provisions of the new ACI 376 Code Requirements for Design and Construction of Concrete Structures for the Containment of Refrigerated Liquefied Gases and Commentary. Finally, the session will include presentations on the construction of several concrete LNG tanks around the world.

By attending this session, attendees will be able to:
1. Recognize the specific regulatory constraints that impact siting, design, construction, and operation of concrete refrigerated liquefied gas RLG containment structures;
2. Use the new ACI 376 Code and Commentary for the design and construction of concrete RLG containment structures;
3. Identify the impact that containment of extremely low temperature has on concrete and other construction materials;
4. Identify the seismic loading conditions required for concrete RLG facilities; and
5. Discover the requirements for the startup and commissioning of RLG containment structures.
Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas Containment, Part 2 (cont.)  

ACI 376 Code and Commentary: Construction  
Performance Requirements  
Neven Krstulovic-Opara, Lead Civil & Structural Engineer, Exxon Mobil, Houston, TX  

ACI 376 Code and Commentary: Foundation Requirements  
Mike S. Brannan, Retired, Katy, TX  

ACI 376 Code and Commentary: Commissioning  
Thomas R. Howe, Principal Engineer, KBR, Houston, TX  

Construction of Current LNG Projects from Around the World  
Robert Nussmeier, Chief Operating Officer, Baker Concrete Construction, Houston, TX; and Thomas R. Howe, KBR
Innovations in Chemical Admixture Technology as Related to Sustainability, Part 1

REUNION E

Sponsored by ACI Committee 212, Chemical Admixtures

Session Co-Moderators:

David B. Stokes
Concrete Technology Manager
FMC Corporation
Bessemer City, NC

Bradley K. Violetta
Industry Manager
BASF Construction Chemicals
Cleveland, OH

The presentations in this session will focus on how new developments in chemical admixtures contribute to sustainable construction. When considering the lifetime environmental impact of a building material from extraction, production, construction, operation, demolition, and recycling, concrete is an excellent choice for sustainable construction. Data and project profiles demonstrate how chemical admixtures reduce the environmental impact of concrete during production, assist in producing ecologically friendly concrete technologies for sustainable structures, and/or decrease environmental burden by increasing the service life of structures.

By attending this session, attendees will be able to:
1. Understand core concepts of sustainability in concrete construction;
2. Recognize aspects of sustainability in concrete construction that are impacted by the use of chemical admixtures;
3. Explain how the use of chemical admixtures can lessen the environmental effects from concrete construction; and
4. Propose suitable admixture technologies for use in concrete construction projects to enhance overall sustainability.
Tuesday, March 20, 2012
11:00 am - 1:00 pm

Innovations in Chemical Admixture Technology as Related to Sustainability, Part 1 (cont.)

Chemical Admixtures of the Future for Sustainable Concrete Construction 11:00 am
Ara A. Jeknavorian, Research Fellow, WR Grace & Co., Cambridge, MA

Using Chemical Admixtures and Advanced Methodologies to Produce and Quantify Sustainable Concrete 11:30 am
Mark A. Bury, Senior Product Manager, BASF Construction Chemicals, Beachwood, OH; and David Green, BASF Construction Chemicals

Chemical Admixtures and Concrete Sustainability-Mix Optimization for Constructability 12:00 pm
Tim Cost, Senior Technical Service Engineer, Holcim (US), Inc., Canton, MS

The Port Authority of NY and NJ Use of Admixtures to Produce Sustainable and Green Concrete 12:30 pm
Casimir Bognacki, Chief of Materials, The Port Authority of New York and New Jersey, Jersey City, NJ

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Science and Art of Grouting and Grouting Materials, Part 2

Sponsored by ACI Committees 238, Workability of Fresh Concrete; and 552, Cementitious Grouting

Session Co-Moderators: Kamal H. Khayat
Professor
Missouri University of Science
and Technology
Rolla, MO

Mohammed Sonebi
Associate Professor
Queen’s University Belfast
Belfast, UK

The proper design and application of cement-based grouts is moving away from an art toward a complex interdisciplinary science. The proper design and testing of cement grouts have marked effects on the performance of the grouted formation. Case studies presented in these sessions will highlight recent innovations in the area of cement grouting formulations, new quality control testing procedures, and innovative grouting materials. The sessions should be of interest to concrete technologists, materials suppliers, structural and geotechnical engineers, geologists, and contractors dealing with grouting. Highlighted case studies include injection grouting of underground water pipes; grouting of long tunnel linings, dams, and bridges; and waste containments.

By attending this session, attendees will be able to:
1. Recognize different types of novel grouting materials that can be used to reinforce existing structures;
2. Interpret new quality control testing procedures that can be used in grouting;
3. Illustrate performance-based specifications required to design various types of grouting materials; and
4. Specify emerging technologies in civil infrastructures.
Tuesday, March 20, 2012
11:00 am - 1:00 pm

Science and Art of Grouting and Grouting Materials, Part 2 (cont.)

Grouting an Immersed Tube Tunnel 11:00 am
Peter T. Yen, Principal Engineer, Bechtel National Inc., San Francisco, CA

Cementitious Grout for Closing SRS High-Level Waste Tanks 11:25 am
Christine A. Langton, Senior Scientist, Savannah River Nuclear Solutions National Lab, Aiken, SC

Specifications and Testing of Self-Consolidating Mortar Designated for Annular Space Grouting 11:50 am
Kamal H. Khayat, Professor, Missouri University of Science and Technology, Rolla, MO

Rapid-Set Grouts for Bridge Repair 12:15 pm
Jacques Bertrand, President, Ambex Concrete Technologies Inc., Laval, QC, Canada

Preplaced Aggregate Concrete is Alive and Well 12:35 pm
Patrick Watson, Senior Technical Product Specialist, BASF Construction Chemicals, Sun Prairie, WI

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The purpose of this session is to highlight the use of the framework of fracture mechanics to evaluate the performance of reinforced concrete (RC) structures strengthened with fiber-reinforced polymer (FRP) composites. Joint ACI-ASCE Committee 446, Fracture Mechanics of Concrete, is particularly interested in the applications of fracture mechanics. This collaboration with ACI Committee 440, Fiber-Reinforced Polymer Reinforcement, will produce a state-of-the-art document that will be extremely useful to review and update technical publications of both committees and discuss new issues related to the application of FRP composites.

By attending this session, attendees will be able to:
1. Understand how researchers use the framework of fracture mechanics to characterize the debonding mechanism of FRP systems used for the repair of concrete structures;
2. Recognize the importance of the research developments presented in advancing the knowledge of the fundamental behavior of FRP systems;
3. Explain the experimental and analytical approaches used by different researchers to assess the shear and flexural capacity of RC members strengthened with FRP composites; and
4. Specify areas of knowledge in need of further development so FRP repair systems can be more widely used by the design community in civil infrastructures.
Tuesday, March 20, 2012
11:30 am - 1:00 pm

A Fracture Approach for FRP-Concrete Structures, Part 1 (cont.)

Prediction of FRP Debonding Using the Global-Energy-Balance Approach 11:30 am
Chris J. Burgoyne, Lecturer, University of Cambridge, Cambridge, UK; and Mithila Achintha and Garfield X. Guan, University of Cambridge

Material Characterization of the Concrete-Epoxy Interface under FRP U-Wraps 11:48 am
Maria M. Lopez, Associate Professor, Pennsylvania State University, University Park, PA; and Jaeha Lee, Korea Institute of Nuclear Safety

Application of Fracture Mechanics to Debonding of FRP from RC Members 12:06 pm
Christian Carloni, Assistant Professor, University of Hartford, West Hartford, CT; and Kolluru V. Subramaniam, Indian Institute of Technology

Fracture Mechanics Approaches to Debonding Behavior of Reinforced Concrete Members with Externally-Bonded Fiber-Reinforced Polymer Laminates 12:24 pm
Yang Yang, PhD Student, Missouri University of Science and Technology, Rolla, MO; and Corey Grace and Lesley H. Sneed, Missouri University of Science and Technology

The Coupled Effect of Peeling and Shear Stresses on the FRP-Concrete Interface Behavior 12:42 pm
Christian Carloni, Assistant Professor, University of Hartford, West Hartford, CT; and Claudio Mazzotti and Marco Savoia, University of Bologna

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Tuesday, March 20, 2012
11:30 am - 1:30 pm

✓ Contractors’ Day Lunch
PEGASUS B
$43 U.S. per person
Hosted by the ACI Northeast Texas Chapter and the Construction Liaison Committee

Speaker: Luis C. Ferreira
Communications Specialist
Panama Canal Authority
Miami, FL

Topic: Infrastructure and Design of the Panama Canal

Join other ACI attendees and contractors for the Contractors’ Day Lunch. Enjoy a special presentation from Luis C. Ferreira, who works for the Panama Canal Authority in the Expansion Program. He will speak about the infrastructure and design of the Panama Canal expansion and the challenges of managing mega-infrastructure projects.

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.

✓ = Separate fee required
The scope of this session is to highlight the use of the framework of fracture mechanics to evaluate the performance of reinforced concrete (RC) structures strengthened with fiber-reinforced polymer (FRP) composites. Joint ACI-ASCE Committee 446, Fracture Mechanics of Concrete, is particularly interested in the applications of fracture mechanics. This collaboration with ACI Committee 440, Fiber-Reinforced Polymer Reinforcement, will produce a state-of-the-art document that will be extremely useful to review and update technical publications of both committees and discuss new issues related to the application of FRP composites.

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4. Specify areas of knowledge in need of further development so FRP repair systems can be more widely used by the design community in civil infrastructures.

Fracture Approaches to Debonding in FRP Systems for Double-Sided Flexural Upgrade

1:30 pm

Oded Rabinovitch, Associate Professor, Technion—Israel Institute of Technology, Haifa, Israel
A Fracture Approach for FRP-Concrete Structures, Part 2 (cont.)

Fracture Characteristics of Notched Concrete Beams Shear Strengthened with CFRP Sheets Subjected to High Temperature

Yail J. Kim, Assistant Professor, North Dakota State University, Fargo, ND; KyoungKyu Choi, Soongsil University; and Amer Hmidan and Siamak Yazdani, North Dakota State University

Shear Behavior of RC Structural Members Strengthened with FRP Materials: A Three-Dimensional Numerical Approach

Carlo Pellegrino, University of Padova, Padova, Italy; and Tommaso D’Antino, PhD Candidate, University of Padova, Padova, Italy; and Carlo Pellegrino, Valentina Salomoni, and Gianluca Mazzucco, University of Padova

Shear Strength of FRP Reinforced Concrete Beams without Stirrups: Verification of Fracture Mechanics Formulation

Fabio Matta, Assistant Professor, University of South Carolina, Columbia, SC; Mohamed ElBatanouny, Aaron K. Larosche, Michael A. Sutton, and Paul H. Ziehl, University of South Carolina; and Paolo Mazzoleni and Emanuele Zappa, Politecnico di Milano

Effect of the Fracture Energy of the FRP/Concrete Interfacial Behavior on Beams Strengthened in Shear with EB-FRP

Ahmed Godat, Postdoctoral Fellow, University of Quebec, Montreal, QC, Canada; and Omar Chaalal, University of Quebec

SRG Application for Structural Strengthening of RC Beams

Enrico Garbin, PhD, University of Padova, Padova, Italy; and Francesca da Porto, Elena Stievanin, and Maria R. Valluzzi, University of Padova

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
The durability of concrete is most clearly linked to properties that develop at early ages as driven by the progress of chemical reactions (that is, hydration kinetics) and environmental conditions (that is, placement temperature). As a result, precise measurement and prediction of early-age behavior is necessary to accurately describe the service life of materials. Unfortunately, the properties that develop initially may be altered over the life span of the material as a result of mechanical loading and the chemistry of the environment. As such, it is important to determine the evolution of properties over time and their relation to concrete performance. This session attempts to correlate experimental and modeling approaches that can link complex chemo-physical processes to describe how the progress of chemical reactions and material property development in concretes may be coupled to develop predictive life-cycle performance models for concrete structures. Emphasis is on the recent advances in this important area of research and should be of great interest to both the academic and industrial community. Those involved in sustainable materials design and development and those who specify materials to be used in construction should attend. The attendees will learn more about material property development in concretes and how material processing and placement conditions can have a considerable impact on determining the overall durability of the material.
Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 2 (cont.)

By attending this session, attendees will be able to:
1. Explain the current state-of-the-art understanding of the formation and growth of reaction products during cement and cementitious material hydration;
2. Describe the effect of temperature on cement and cementitious material hydration;
3. Recognize how new models might be used for predicting the hydration kinetics of cementitious materials or the service life of concrete; and
4. Identify the effect of system chemistry and kinetics on certain durability problems.

Effect of Temperature on Hydration Kinetics and Microstructure of Cementitious Systems 1:30 pm
Jeffrey J. Thomas, Senior Research Scientist, Shlumberger-Doll Research, Cambridge, MA

Viscosity Modifiers in Lightweight Aggregates: A Technology to Reduce Early-Age Cracking and Enhance Durability 1:54 pm
Dale P. Bentz, Chemical Engineer, National Institute of Standards and Technology, Gaithersburg, MD; and Kenneth Snyder, National Institute of Standards and Technology

Early-Age Relaxation Modeling of Concrete 2:18 pm
Benjamin E. Byard, Student, University of Tennessee-Chattanooga, Soddy Daisy, TN; and Anton K. Schindler, Auburn University

The Effects of Temperature on Glass Hydration in Cementitious Systems 2:43 pm
Mohammadreza Mirzahosseini, PhD Student, Kansas State University, Manhattan, KS; and Kyle A. Riding, Kansas State University

Hydration Kinetics in Alkali Silicate Powder and Liquid Activated Slag Binders 3:07 pm
Deepak Ravikumar, Doctoral Student, Clarkson University, Potsdam, NY; and Narayanan Neithalath, Arizona State University

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The presentations in this session will focus on how new developments in chemical admixtures contribute to sustainable construction. When considering the lifetime environmental impact of a building material from extraction, production, construction, operation, demolition, and recycling, concrete is an excellent choice for sustainable construction. Data and project profiles demonstrate how chemical admixtures reduce the environmental impact of concrete during production, assist in producing ecologically friendly concrete technologies for sustainable structures, and/or decrease environmental burden by increasing the service life of structures.

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3. Explain how the use of chemical admixtures can lessen the environmental effects from concrete construction; and
4. Propose suitable admixture technologies for use in concrete construction projects to enhance overall sustainability.

Influence of Polycarboxylate Ether Polymers (PCE) on Sustainability in Concrete Production

Ketan R. Sompura, Product Engineer, Sika Corporation, Lyndhurst, NJ; and Dominik Oetiker, Sika Corporation
Innovations in Chemical Admixture Technology as Related to Sustainability, Part 2 (cont.)

Hydration-Controlling Admixture Technology Provides Sustainable Concrete Performance for 25 Years

2:00 pm

Robert J. Ryan, Product Line Manager, BASF Construction Chemicals, Cleveland, OH; and Joseph A. Daczko, BASF Construction Chemicals

The Role of Innovative Waterproofing Admixtures in Sustainable Concrete

2:30 pm

Rishi Gupta, Director of Research, British Columbia Institute of Technology, Burnaby, BC, Canada; and Alireza Biparva and Alexandra Emlyn, Kryton International, Inc.

Combinations of Polycarboxylate Ethers and Lignosulfonates in Chemical Admixtures for Special Performance

3:00 pm

Deepak S. Kanitkar, Deputy General Manager, Chembond Chemicals Ltd., Mumbai, India

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 1

Sponsored by ACI Committees 201, Durability of Concrete; and 236, Material Science of Concrete

Session Co-Moderators: Anol K. Mukhopadhyay
Research Scientist
Texas Transportation Institute
College Station, TX

Farshad Rajabipour
Assistant Professor
Pennsylvania State University
University Park, PA

The requirements for an ideal ASR test method are that it should be rapid, reliable, and capable of determining the influence of aggregate reactivity, alkali availability, and exposure conditions. None of the currently available or commonly used methods meet all of these criteria. The current approach of ASR testing and the mitigation of the damaging effects of ASR depends heavily on accelerated mortar-bar methods and the formulation of prescriptive mixture designs.

While this approach has resulted in significant advances that avoid damaging ASR in structures, it was found to be insufficient in some cases. The concrete prism test has been considered to be the best index for field performance, but the test duration imposes a major drawback. There is growing demand for a rapid, reliable ASR test method. The recent advances in understanding current test methods and new test methods and approaches to test method development will be presented. The use of nondestructive evaluation (NDE) as a tool to better understand test results will also be highlighted.

Although the main chemical reactions that result in deleterious ASR are well known, the mechanisms by which supplementary cementitious materials mitigate ASR are not well understood. An improved understanding of the way mitigation techniques can control ASR will be presented. The results of long-term exposure of concrete with ASR mitigation techniques will also be discussed.

By attending this session, attendees will be able to:
1. Recognize the need for a rapid, reliable test method to detect ASR through proper understanding of the challenges and possible solutions for improving testing methods;
Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 1 (cont.)

2. Identify the most promising alternative ASR test methods;
3. Examine how NDE techniques applied to ASR test methods can improve understanding of the reaction and the test method itself; and
4. Evaluate ASR mitigation options with improved understanding of mitigation mechanisms to ensure long-term effectiveness.

Alkali-Aggregate Reaction: What Our Current Approach Tells Us and What It Doesn’t 1:30 pm
Toy S. Poole, Senior Principal Scientist, CTLGroup, Austin, TX

A Proposed New Test Method for Determining ASR Potential: The Concrete Cylinder Test 1:50 pm
Andy Naranjo, Transportation Engineer, Texas Department of Transportation, Austin, TX

Relations between ASR Expansion and Average Water Content in Mortar Bars Exposed to Dry Ambient Atmospheres 2:10 pm
Mitsunori Kawamura, Professor Emeritus, Kanazawa University, Kanazawa, Ishikawa, Japan; and Hiroyuki Kagimoto, University of Tokyo

Developing a Rapid ASR Test Method Based on Determining ASR Activation Energy from Aggregate-Solution Tests 2:30 pm
Anol K. Mukhopadhyay, Research Scientist, Texas Transportation Institute, College Station, TX; and Kai-Wei Liu, Texas A&M University

Can Acoustic Emission Detect Alkali Silica Reaction Earlier than Other Tests? 2:50 pm
W. Jason Weiss, Professor, Purdue University, West Lafayette, IN; Javier Castro and Robert Spragg, Purdue University; and Mohammad Pour-Ghaz, North Carolina State University

Microwave Detection of ASR Gel in Mortars 3:10 pm
Kimberly E. Kurtis, Professor, Georgia Institute of Technology, Atlanta, GA; and K. M. Donnell and Reza Zoughi, University of Missouri

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Tuesday, March 20, 2012
1:30 pm - 3:30 pm

Research in Progress, Part 1
Sponsored by ACI Committee 123, Research and Recent Developments

Session Co-Moderators: Thomas Schumacher
Assistant Professor
University of Delaware
Newark, DE

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

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

By attending this session, attendees will be able to:
1. Recognize ongoing concrete research projects from a wide range of research topics;
2. Discuss recent techniques, research methods, and procedures related to structural and material aspects of concrete research;
3. Describe emerging ideas in concrete research; and
4. Summarize recent technical information related to concrete structures and materials research.

James Instruments Awardee Presentation: Signal Amplification by Using Parabolic Reflector in Air-Coupled Impact-Echo Test
Xiaowei Dai, PhD Student, University of Texas at Austin, Austin, TX

Early-Age Hydration Kinetics and Microstructure Development in Alkali-Activated Slag Systems
Berhan S. Gebregziabiher, Graduate Student, Clarkson University, Potsdam, NY; and Sulapha Peethamparan, Clarkson University

Analysis of Heavy Metal Leaching from Coal Combustion Fly Ash (CCFA) Waste Materials Integrated into Sustainable Concrete Products
Carolyn Rose Desrochers, Graduate Student, Villanova University, Villanova, PA; and Brian Chaplin and Aleksandra Radlinska, Villanova University
Tuesday, March 20, 2012
1:30 pm - 3:30 pm

Research in Progress, Part 1 (cont.)

Development of Texas’ First Natural Calcium Sulfate Field Exposure Site 2:15 pm
Chris Clement, PhD Candidate, University of Texas at Austin, Austin, TX

Early-Age Characterization of Ternary Blends Containing Limestone Powder 2:30 pm
Kirk E. Vance, PhD Student, Arizona State University, Tempe, AZ; Narayanan Neithalath, Arizona State University; and Gaurav N. Sant, University of California, Los Angeles

Effects of Pickling on Corrosion Resistance of Duplex Stainless Steels 2:45 pm
James D. Lafikes, Graduate Student, University of Kansas, Lawrence, KS; Scott Storm, Thornton-Tomasetti; Javier Balma, Walter P Moore; Jianxin Ji, Premier Engineering Consultants; and Matt O’Reilly, David Darwin, Deane E. Ackers, JoAnn P. Browning, and Carl E. Locke Jr., University of Kansas

Mechanisms of Mitigating Alkali-Silica Reaction (ASR)
by Recycled Glass Powder 3:00 pm
Seyed M. H. Shafaatian, PhD Candidate, Pennsylvania State University, University Park, PA; and Farshad RajabiPouri, Pennsylvania State University

Nanoindentation Study on Interfacial Transition Zones in Recycled Aggregate Concrete 3:15 pm
Wengui Li, Co-supervised PhD Candidate, Northwestern University, Evanston, IL, and Tongji University, Shanghai, China; Surendra P. Shah, Northwestern University; Jianzhuang Xiao, Tongji University; and Zhihui Sun, University of Louisville

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Tuesday, March 20, 2012
4:00 pm - 6:00 pm

Contractors’ Day Session: Design Build Experiences
Sponsored by the ACI Northeast Texas Chapter

Session Co-Moderators: Gabriel Ojeda
President
Fritz-Pak Corporation
Mesquite, TX

Dionne Ojeda
National Sales Manager
Fritz-Pak Corporation
Mesquite, TX

Cowboy Stadium Construction—The Excitement Builds 4:00 pm
Craig Abbott, Project Manager, Manhattan Construction, Dallas, TX

Parkland Hospital Expansion—Growing Pains 4:30 pm
Kay Keyes, Public Relations, Bara Construction, Dallas, TX

North Texas Connector—Largest Stimulus Money Project in the United States 5:00 pm
Mark Bouma, Project Manager, North Texas Transit Authority, Plano, TX

Perot Museum of Nature and Science Expansion 5:30 pm
Jay Rodriguez, Project Manager, Balfour Beatty, Dallas, TX
Tuesday, March 20, 2012
4:00 pm - 6:00 pm

Introduction of Revised Specification for Shotcrete
and Other Shotcrete Development
Sponsored by ACI Committee 506, Shotcreting

Session Moderator: Lawrence J. Totten
President
Johnson Western Gunite Company
San Leandro, CA

This session will introduce the revised “Specification for Shotcrete”
and discuss coordination of the guide to the specification. Other
ACI Committee 506, Shotcreting, projects will also be discussed.

By attending this session, attendees will be able to:
1. Describe the new “Specification for Shotcrete” and the upcoming
   revised “Guide to Shotcrete”;
2. Recognize the difficulty of a one-size-fits-all acceptance criteria
   for shotcrete;
3. Explain the reorganization of the new “Specification for Shotcrete”
   and “Guide to Shotcrete” and the current direction for acceptance
   of shotcrete; and
4. Specify current and anticipated research on shotcrete properties
   and potential acceptance testing.

Background Behind the Revisions to ACI 506.2,
Specification for Shotcrete
4:00 pm
Philip T. Seabrook, Director, Phiz Engineering Ltd., Vancouver,
BC, Canada

Guide to Shotcrete
4:30 pm
Lars F. Balck, Senior Vice President, The CROM Corporation,
Asheville, NC

Evaluating/Assessing Encapsulation of Reinforcing
in Shotcrete
4:55 pm
James A. Ragland, Principal Consulting Engineer, Ragland, Aderman,
& Associates, Inc., Baton Rouge, LA

Service-Life Prediction of Shotcrete
5:15 pm
Louis-Samuel Bolduc, Engineer, CEP Forensic Consulting Inc.,
Quebec, QC, Canada; and Patrick Power, Laval University

The American Institute of Architects (AIA) has approved
this session for 2 Learning Units. ACI is an AIA/CES
Registered Provider.
Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 2

REUNION G

Sponsored by ACI Committees 201, Durability of Concrete; and 236, Material Science of Concrete

Session Co-Moderators: Jason H. Ideker
Assistant Professor
Oregon State University
Corvallis, OR

Anol K. Mukhopadhyay
Research Scientist
Texas Transportation Institute
College Station, TX

The requirements for an ideal ASR test method are that it should be rapid, reliable, and capable of determining the influence of aggregate reactivity, alkali availability, and exposure conditions. None of the currently available or commonly used methods meet all of these criteria. The current approach of ASR testing and the mitigation of the damaging effects of ASR depends heavily on accelerated mortar-bar methods and the formulation of prescriptive mixture designs.

While this approach has resulted in significant advances that avoid damaging ASR in structures, it was found to be insufficient in some cases. The concrete prism test has been considered to be the best index for field performance, but the test duration imposes a major drawback. There is growing demand for a rapid, reliable ASR test method. The recent advances in understanding current test methods and new test methods and approaches to test method development will be presented. The use of nondestructive evaluation (NDE) as a tool to better understand test results will also be highlighted.

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Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 2 (cont.) REUNION G

By attending this session, attendees will be able to:
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4. Evaluate ASR mitigation options with improved understanding of mitigation mechanisms to ensure long-term effectiveness.

Impact of Calcium on ASR: Distribution, Movement, Availability, and Age 4:00 pm
Michael D. A. Thomas, Professor, University of New Brunswick, Fredericton, NB, Canada

Understanding the Role of SCMs in Mitigating Alkali-Silica Reaction 4:20 pm
Karen L. Scrivener, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland; and Theodore Chappex, École Polytechnique Fédérale de Lausanne

Mitigating Alkali-Silica Reaction through Crack Control 4:40 pm
Gabriel Jen, Graduate Research Assistant, University of California, Berkeley, Berkeley, CA; and Claudia P. Ostertag, University of California, Berkeley

Study of ASR by Recycled Glass Sand: The Role of Cracks and Surfaces 5:00 pm
Farshad Rajabipour, Assistant Professor, Pennsylvania State University, University Park, PA; and Hamed Maraghechi, Pennsylvania State University

Mitigating ASR in Concrete Containing Reactive Recycled Concrete Aggregates 5:20 pm
Matthew P. Adams, Graduate Research Assistant, Oregon State University, Corvallis, OR; and Jason H. Ideker, Oregon State University

20-Year Performance of ASR Mitigation at the Kingston Outdoor Exposure Site 5:40 pm
R. Doug Hooton, Professor, University of Toronto, Toronto, ON, Canada; and Carole-Anne Macdonald and Chris Rogers, Ministry of Transportation
Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures in Seismic Regions, Part 1

REUNION B

Sponsored by ACI Committees 357, Offshore and Marine Concrete Structures; and 543, Concrete Piles

Session Co-Moderators: Carlos E. Ospina
Project Manager
BergerABAM Inc.
Houston, TX

Rudolph P. Frizzi
Senior Principal
Langan Engineering & Environmental Services
Elmwood Park, NJ

This session highlights the recent advances in the analysis, design, detailing, and lateral load testing of prestressed concrete piles as part of piers, wharves, and marine infrastructure located in seismic regions. The recent earthquakes in Haiti, Chile, and Japan caused considerable damage to marine infrastructure. The session presentations cover a wide spectrum of aspects related to the analysis, design, detailing, and lateral load testing of prestressed concrete piles in marine infrastructure to increase our knowledge about their response to seismic actions.

By attending this session, attendees will be able to:
1. Identify critical issues for the seismic modeling, analysis, and design of piers and wharves supported on prestressed concrete piles;
2. Explain different processes to investigate and assess seismic design challenges for marine structures in seismically sensitive regions;
3. Present case studies that highlight challenges to seismic design and construction in marine environments, along with solutions to the challenges; and
4. Recognize and implement the latest ACI guidance on seismic design, manufacture, and installation of concrete piles.
Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures in Seismic Regions, Part 1 (cont.)  

Improved Pile-to-Wharf Connections to Reduce Seismic Damage of Wharves 4:00 pm

Dawn E. Lehman, Associate Professor, University of Washington, Seattle, WA; and Charles W. Roeder, University of Washington

Analysis and Large-Scale Testing of Pile Supported Wharves for Design Code Improvements 4:30 pm

Carlos A. Blandon, Professor, Antioquia School of Engineering, Antioquia, Colombia; and José I. Restrepo, University of California-San Diego

Displacement-Based Procedures for Seismic Design of Pile-Supported Wharves at the Port of Los Angeles and the Port of Long Beach 5:00 pm

Omar A. Jaradat, Project Engineer, Moffatt & Nichol, Long Beach, CA; and M. J. Priestley, University of California-San Diego

Seismic Performance of Prestressed Concrete Pile-to-Wharf Connections 5:30 pm

Stuart Stringer, Engineer in Training, BergerABAM, Inc., Federal Way, WA; and Robert Harn, BergerABAM, Inc.

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Tuesday, March 20, 2012
4:00 pm - 6:00 pm

Research in Progress, Part 2

Sponsored by ACI Committee 123, Research and Current Developments

Session Co-Moderators: Thomas Schumacher
Assistant Professor
University of Delaware
Newark, DE

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

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3. Describe emerging ideas in concrete research; and
4. Summarize recent technical information related to concrete structures and materials research.

Fatigue Assessment for Failed Bridge Deck Closure Pour 4:00 pm
Elias Rivera, Graduate Student, Virginia Polytechnic University, Blacksburg, VA; and William J. Wright, Richard E. Weyers, and Carin. L. Roberts-Wollmann, Virginia Polytechnic University

Flexural Behavior of New Composite Girders Consisting of Hybrid CFRP/GFRP and Ultra-High-Performance Fiber-Reinforced Concrete 4:15 pm
Nguyen Duc Hai, Postdoctoral Research Scholar, Marshall University, Huntington, WV; Hiroshi Mutsuyoshi, Saitama University; and Wael A. Zatar, Marshall University

Stresses, Deflections, and Twist in Precast Prestressed Concrete Beams during Lifting 4:30 pm
Razvan Cojocaru, Graduate Student, Virginia Polytechnic University, Blacksburg, VA; and Christopher Moen, Virginia Polytechnic University
Use of Fiber-Reinforced Cement Composites to Improve Seismic Performance of Hollow Bridge Columns 4:45 pm
Myoungsu Shin, Assistant Professor, Ulsan National Institute of Science and Technology, Ulsan, Korea; and Youn-Young Choi, Ulsan National Institute of Science and Technology

Flexural Capacity of Reinforced Concrete Beams Affected by Alkali-Silica Reaction and Delayed Ettringite Formation 5:00 pm
Brian Hanson, Graduate Student, University of Texas at Austin, Austin, TX; and Oguzhan Bayrak and Eric R. Giannini, University of Texas at Austin

A Fresh Look at Impulse Response as a Form of NDT for Concrete Bridge Decks 5:15 pm
Daniel J. Clem, Graduate Student, University of Delaware, Newark, DE; and Thomas Schumacher, University of Delaware

Ultimate Strength and Detailing Considerations for Continuous Members with Unbonded Tendons 5:30 pm
Marc Maguire, Research Associate, Virginia Polytechnic University, Blacksburg, VA; and William Collins, Kedar Halbe, and Carin Roberts-Wollmann, Virginia Polytechnic University

Accelerating Bridge Construction Using the Precast Inverted T-Beam Concept 5:45 pm
Matt Mercer, Graduate Student, Virginia Polytechnic University, Blacksburg, VA; and Fatmir Menkulasi, Virginia Polytechnic University

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Tuesday, March 20, 2012
5:30 pm - 6:30 pm

Faculty Network Reception

Faculty members and students are invited to attend this informal reception. During this time, you will have an opportunity to exchange ideas and network. Light hors d’oeuvres and a cash bar will be available.
Tuesday, March 20, 2012
6:00 pm - 10:00 pm

Concrete Mixer

GILLEY’S DALLAS
Sponsored by the ACI Northeast Texas Chapter

Dust off your cowboy boots and pack your western wear! Join other ACI convention attendees at the world-renowned Gilley’s Dallas for a special evening of food, drinks, and great company. Don’t miss the live band, country-western dancing, bull riding, armadillo races, and photos with longhorns at this unique Concrete Mixer!

Note: Those who ride the mechanical bull at Gilley’s will be required to sign a liability release form before doing so.

Buses will be available to take attendees from the Hyatt Regency Dallas to Gilley’s and back beginning at 5:30 pm at the Trinity Crossing Entrance of the Hyatt Regency. It is not recommended that you walk to Gilley’s. Parking is available, however, you are encouraged to take the complimentary bus. Buses will run until 10:00 pm.
Architectural Concrete in Hot Weather

REUNION G

Sponsored by ACI Committee 305, Hot Weather Concreting

Session Co-Moderators: Jonathan Poole
Senior Engineer and Manager
CTLGroup
Austin, TX

G. Terry Harris
Manager of Technical Services—North America
W.R. Grace & Co.
Green Cove Springs, FL

Hot weather concreting presents unique problems for design and construction. These problems can be exaggerated on projects that include architectural concrete.

By attending this session, attendees will be able to:
1. Understand challenges encountered in the planning and execution of hot weather concreting activities for architectural structures;
2. Describe examples of different design and construction methodologies implemented to achieve the required concrete performance and structure aesthetics in recent hot weather architectural concrete projects;
3. Identify different materials and concreting methods to improve the performance of architectural concrete in hot weather conditions; and
4. Develop alternative approaches to successfully place architectural concrete in hot weather conditions.

Hot Weather Concrete Specification Choices to Achieve Architectural Concrete Results

8:30 am

Richard Szeczy, President, Texas Aggregates and Concrete Association, Austin, TX
Wednesday, March 21, 2012
8:30 am - 10:30 am

Architectural Concrete in Hot Weather (cont.)
REUNION G

NEOS Building Plaza Rehabilitation—Architectural Concrete under Hot Weather Conditions
9:00 am
Fernando I. Buxo, President, Techno Engineering, Luquillo, PR

National Zoo Asia Trail/Elephant Trails
9:30 am
William Thompson, Technical Services Manager, Vulcan Materials Company, Springfield, VA

Architectural SCC—Salvador Dalí Museum Project—St. Petersburg, FL
10:00 am
Jeffrey O’Leary, Director of Technical Services, Vulcan Materials Company, Jacksonville, FL

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Concrete Columns in High-Rise Buildings

REUNION A
Sponsored by Joint ACI-ASCE Committee 441, Reinforced Concrete Columns

Session Co-Moderators: Mahmoud E. Kamara  
Senior Structural Engineer  
Portland Cement Association  
Skokie, IL

Mustafa Mahamid  
Structural Engineer  
GRAEF  
Chicago, IL

Designers face a different set of requirements—one that is beyond strength and serviceability requirements—when designing columns in tall buildings. Designers face challenges such as optimizing column size under the heavy loads of tall buildings, long-term time-dependent deformations, using high-strength and high-performance concrete, and the effect of the second-order deformation.

This session is intended to address issues that concern engineers involved in the design and construction of tall buildings. Researchers and professionals involved in code development will also benefit from the topics discussed.

By attending this session, attendees will be able to:
1. Identify issues related specifically to design of columns in tall buildings;
2. Recognize the importance of and how to account for creep deformation when designing columns in tall buildings;
3. Explain the importance of confinements in enhancing the ductility for columns; and
4. Recognize the different options to model and analyze columns in tall buildings.
Wednesday, March 21, 2012
8:30 am - 10:30 am

Concrete Columns in High-Rise Buildings (cont.)

Confinement Analysis for Circular and Rectangular Concrete Columns in Tall Buildings
8:30 am
Hayder Rasheed, Professor, Kansas State University, Manhattan, KS

Deformation Compatibility of Columns in High-Rise Buildings
8:55 am
John M. Hochwalt, Design Engineer, KPFF Consulting Engineers, Seattle, WA

History and Efficiency of High-Strength Concrete Columns in High-Rise Buildings
9:20 am
Lawrence Novak, Director—Building Structures, Portland Cement Association, Skokie, IL

Reinforced Concrete Columns in Tall Buildings: Design Issues
9:45 am
Mustafa Mahamid, Structural Engineer, GRAEF, Chicago, IL

Observations in Shear Wall Strength in Tall Buildings
10:10 am
Daniel Antoniak, Manager, Technical Services, Structurepoint LLC, Skokie, IL

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Wednesday, March 21, 2012
8:30 am - 10:30 am

Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures in Seismic Regions, Part 2

REUNION B

Sponsored by ACI Committees 357, Offshore and Marine Concrete Structures; and 543, Concrete Piles

Session Co-Moderators: Carlos E. Ospina
Project Manager
BergerABAM, Inc.
Houston, TX

Rudolph P. Frizzi
Senior Principal
Langan Engineering & Environmental Services
Elmwood Park, NJ

This session highlights the recent advances in the analysis, design, detailing, and lateral load testing of prestressed concrete piles as part of piers, wharves, and marine infrastructure located in seismic regions. The recent earthquakes in Haiti, Chile, and Japan caused considerable damage to marine infrastructure. The session presentations cover a wide spectrum of aspects related to the analysis, design, detailing, and lateral load testing of prestressed concrete piles in marine infrastructure to increase our knowledge about their response to seismic actions.

By attending this session, attendees will be able to:
1. Identify critical issues for the seismic modeling, analysis, and design of piers and wharves supported on prestressed concrete piles;
2. Explain different processes to investigate and assess seismic design challenges for marine structures in seismically sensitive regions;
3. Present case studies that highlight challenges to seismic design and construction in marine environments, along with solutions to the challenges; and
4. Recognize and implement the latest ACI guidance on seismic design, manufacture, and installation of concrete piles.
Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures in Seismic Regions, Part 2 (cont.) REUNION B

Special Considerations for the Seismic Analysis and Design of Piers, Wharves, and Container Yards Supported on Prestressed Concrete Piles 8:30 am
Carlos E. Ospina, Project Manager, BergerABAM Inc., Houston, TX; and Jhon P. Smith, Seattle University

Analysis of Platform Structure in Seismic Region Having a Prestressed Piling Fender System for Vessel Collision 9:00 am
Khushali Modi, Assistant Structural Engineer Manager, Gujarat International, Gujarat, India; and Gaurav Mistry, Nirma University

Seismic Aspects of ACI 543R-12, “Design, Manufacture, and Installation of Concrete Piles” 9:30 am
Rudolph Frizzi, Senior Principal, Langan Engineering & Environmental Services, Elmwood Park, NJ; and Ramin Golesorkhi, Treadwell & Rollo

Analysis of Pretensioned Concrete Piles 10:00 am
William L. Gamble, Professor, University of Illinois, Urbana, IL

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Wednesday, March 21, 2012
8:30 am - 10:30 am

The Sustainable Art of Concrete

Sponsored by ACI Committees 124, Concrete Aesthetics; and 130, Sustainability of Concrete

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

Daniel Dorfmueller
President
d. p. dorfmueller co. inc.
Lebanon, OH

This session will highlight the artistic use and application of concrete in Dallas and around the world. Speakers will review projects where decorative and architectural concrete have been used as a beautiful, functional, sustainable, and versatile material. Attendees of this session will learn best practices for using concrete to create durable, long-lasting, and artistic flatwork, sculpture, and resilient structures. ACI members, building designers, project owners, contractors, and green building professionals will benefit from attending this program. Attendees of this session will learn valuable lessons in the use and application of concrete that is aesthetically pleasing and functional. Participants will acquire in-depth understanding on how specific projects met sustainability goals with beautiful concrete. The session will explain the comparable environmental impacts of concrete and illustrate how to make the case for using decorative and artistic concrete in high-visibility applications.
By attending this session, attendees will be able to:

1. Discover how the artistic application of concrete has been used to construct durable works that are beautiful and functional;
2. Compare different placement practices to achieve resilient architectural finishes;
3. Correctly inventory the primary environmental impacts of concrete and strategies for reducing those impacts without sacrificing aesthetic appeal;
4. Identify the work of distinguished artists in concrete; and
5. Understand the key sustainable benefits concrete delivers as an artistic medium.

Concrete, Environment, and Harmony 8:30 am
Daniel Dorfmueller, President, d.p. dorfmueller co. inc., Lebanon, OH

Contemporary Works of Art in Concrete—Both Folk and Professional Creations 9:00 am
Mary Hurd, Engineer/Writer/Editor, Engineered Publications, Farmington Hills, MI

Artistic Expressions in Concrete 9:30 am
Joseph Nasvik, Senior Editor, Hanley-Wood LLC, Chicago, IL

Polishing Concrete Delivers Beautiful, Resilient, and Sustainable Floors 10:00 am
Larry Rowland, Manager of Marketing and Technical Services, Lehigh Cement Company, Allentown, PA

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
Wednesday, March 21, 2012
8:30 am - 10:30 am

Total Water Control
Sponsored by ACI Committee 121, Quality Assurance Systems for Concrete

Session Co-Moderators:
Ryan K. Riehle
President/CEO
BuildWays Corporation
Pittsburgh, PA

Thomas G. Tyler
Resident Engineering Director
Skanska USA
Darien, CT

The presentations will focus on practical aspects and technologies to improve concrete water control during production, delivery, and finishing and the impact of water control on concrete production costs, project costs, and overall job quality.

By attending this session, attendees will be able to:
1. Determine sources of mixing water variation and the potential benefits of a water management plan;
2. Select the means to reduce mixing water variation;
3. Estimate the costs versus benefits;
4. Launch the plan; and
5. Evaluate the effectiveness of the controls once in place.

Controlling Total Water Content during Transit 8:30 am
Eric P. Koehler, Technology Director, Verifi LLC, West Chester, OH

Next Generation Water Meter System 9:00 am
James M. Shilstone Jr., Concrete Technologist, Command Alkon, Inc., Plano, TX

Mixing Water Control 9:30 am
Karthik H. Obla, Managing Director of Research and Materials Engineering, National Ready Mixed Concrete Association, Silver Spring, MD
Total Water Control (cont.) REUNION E

Water Control of Ready-Mixed Concrete during Batching and Delivery 10:00 am

Godwin Q. Amekuedi, Director, Quality Assurance, ARGOS USA RMX, Raleigh, NC

The American Institute of Architects (AIA) has approved this session for 2 Learning Units. ACI is an AIA/CES Registered Provider.
ACI Troubleshooting Concrete Construction

7:45 am Registration; coffee, and pastries available
$597 Nonmember registration fee
$457 ACI national member registration fee
$125 Full-time students (with proof of enrollment)

Speakers:
Kim Basham
President
KB Engineering, LLC
Cheyenne, WY

Charles Nmai
Manager of Engineering Services
BASF Construction Chemicals, LLC
Cleveland, OH

This is a 1-day seminar for contractors, design engineers, specifiers, government agencies, and material suppliers. This seminar will provide attendees with solutions to problems with concrete. The seminar will cover placing reinforcement, preventing most cracks, making functional construction joints, vibrating concrete properly, detecting delaminations, and identifying causes of deteriorating concrete. Complimentary publications include: ACI 301, “Specifications for Structural Concrete”; 302.IR, “Guide for Concrete Floor and Slab Construction”; 303R, “Guide to Cast-in-Place Architectural Concrete Practice”; 303.1, “Standard Specification for Cast-in-Place Architectural Concrete”; 308R, “Guide to Curing Concrete”; 309.2R, “Identification and Control of Visible Effects of Consolidation on Formed Concrete Surfaces”; and seminar lecture notes.

= Separate fee required
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Future ACI Conventions

**Fall 2012**
**Forming Our Future**
October 21-25, 2012
Sheraton Centre
Toronto, ON, Canada

**Spring 2013**
**Responsibility in Concrete Construction**
April 14-18, 2013
Hilton & Minneapolis Convention Center,
Minneapolis, MN

**Fall 2013**
**Innovation in Conservation**
October 20-24, 2013
Hyatt & Phoenix Convention Center
Phoenix, AZ