Art of Concrete

ACI Spring 2012

Convention Program Book

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

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Get Your Passport Ready!

Toronto photos courtesy of Doug Brown

Table of Contents
ACI Spring 2012 Convention

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,

Ken Hover

Kenneth C. Hover
ACI President

STATE OF TEXAS
OFFICE OF THE GOVERNOR

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

Rick Perry
Governor

MICHAEL S. RAWLINGS

MAYOR

CITY OF DALLAS

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

Cantera Concrete Company

Ash Grove Cement Company

CECO Concrete Construction

Ashford Formula

Changzhou Jianlian Reinforcing Bar Conjunction Co., Ltd.

Baker Concrete Construction, Inc.

Barrier-1 Inc.

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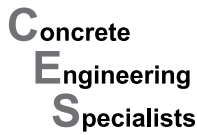

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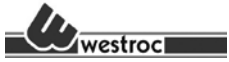

Westroc, Inc.

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.

Texas Ranger - $10,000+

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American Concrete Institute

aci-netx.com

BAKER CONCRETE CONSTRUCTION expect more

Marshall - $5,000+

ARGOS

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txi

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Deputy - $1,000+

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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.)

State Trooper - $500+

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

State Trooper - $500+ (cont.)

ACI Southern Carolina Chapter

On the Job Concrete

Red Baron Supply Co.

Structural Services, Inc.

Texas Aggregates and Concrete Association

Constable - $100+

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General Information

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 **ACI REGISTRATION**

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 presention or speaker is prohibited without the speaker's prior written consent.**

General Information

BREAKS **MARSALIS HALL**

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 **MARSALIS HALL**

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 **MARSALIS HALL**

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 **ACI Bookstore – MARSALIS HALL**

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.

General Information

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***.

General Information

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:

Saturday	2:00 pm - 6:00 pm
Sunday	7:00 am - 7:00 pm
Monday and Tuesday	7:00 am - 6:00 pm
Wednesday	7:00 am - 12:00 pm

All speakers are requested to check in at the Speaker Ready Room 1 day prior to their session to ensure that:
- 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

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.

✓ = 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.

✓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 **REUNION FH**
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

Where's That Meeting Room?

Room Name	Location
353 Aerial Queen	Third Level
357 The Central	Third Level
359 McCommas Bluff	Third Level
362 Shawnee A	Third Level
Baker	Atrium Level
Bryan-Beeman A	Atrium Level
Bryan-Beeman B	Atrium Level
Cockrell	Atrium Level
Cotton Bowl	Atrium Level
Cumberland A - L	Exhibition Level
Gaston A	Atrium Level
Gaston B	Atrium Level
Kessler	Atrium Level
Marsalis Hall	Exhibition Level
McMillan	Atrium Level
Monduel's Bar	Atrium Level
Moreno A	Atrium Level
Moreno B	Atrium Level
Pegasus A	Lobby Level
Pegasus B	Lobby Level
Parrino's Patio	Atrium Level
Reunion A - H	Lobby Level
Reunion Foyer	Lobby Level
Reverchon A	Atrium Level
Reverchon B	Atrium Level
Sanger A	Atrium Level
Sanger B	Atrium Level
Trinity Crossing Entrance	Lobby Level
Windsor	Atrium Level

Exhibitors

Exhibitor Listing as of 3/2/12

Exhibits **MARSALIS HALL**

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**.

Exhibitors

Exhibitor Listing as of 3/2/12

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**.

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**.

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**.

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**.

ERICO **Booth #14**
In 1903, the **E**lectric **R**ailway **I**mprovement **CO**mpany (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.erico.com**.

Exhibitors

Exhibitor Listing as of 3/2/12

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**.

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**.

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**.

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**.

Exhibitors

Exhibitor Listing as of 3/2/12

Fritz-Pak Corporation **Booth #24**
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. **Booth #35**
Fugro Consultants, Inc., provides geotechnical and materials engineering and testing services. For more information, visit **www.fugro.com**.

Germann Instruments, Inc. **Booth #s 17 & 18**
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 **Booth #12**
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) **Booth #4**
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**.

Exhibitors

Exhibitor Listing as of 3/2/12

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**.

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**.

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**.

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**.

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**.

Exhibitors

Exhibitor Listing as of 3/2/12

Sika Corporation **Booth #11**
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 **Booth #36**
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. **Booth #2**
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 **Booth #34**
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 **Booth #28**
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**.

Exhibitors

Exhibitor Listing as of 3/2/12

Texas Industries **Booth #43**
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 **Booth #22**
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 **Booth #19**
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 **Booth #9**
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 **Booth #1**
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**.

Exhibitors

Exhibitor Listing as of 3/2/12

Ytterberg Scientific, Inc. **Booth #40**
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**.

Exhibitor Demonstration Schedule

Monday, March 19, 2012 **MARSALIS HALL**

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

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

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

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

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

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.

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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

Daily Program

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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

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Sunday, March 18, 2012 (cont.)

8:00 am - 10:30 am

CLC	Construction Liaison	GASTON B

8:00 am - 11:00 am

TACRG1	TAC Review Group 1	REVERCHON B
TACRG2	TAC Review Group 2	SANGER A
TACRG3	TAC Review Group 3	SANGER B
TACRG4	TAC Review Group 4	MORENO A

8:00 am - 12:00 pm

562-B	Eval, Repair & Rehab - Loads	CUMBERLAND H

8:00 am - 5:00 pm

	ACI Bookstore	MARSALIS HALL
	Exhibits	MARSALIS HALL

8:30 am - 9:15 am

549-TG1	Glass Fiber-Reinforced Concrete - Spray-Up	CUMBERLAND F

8:30 am - 10:00 am

342	Bridge Evaluation	CUMBERLAND B

8:30 am - 11:30 am

MEMC	Membership	CUMBERLAND E
314	Simplified Design Buildings	CUMBERLAND I
315-B	Detailing - Constructibility	BAKER
350-C	Env, Str - Reinf & Devel	362 SHAWNEE A
408	Development and Splicing	WINDSOR
440-H	FRP - Reinforced Concrete	CUMBERLAND KL

8:30 am - 12:00 pm

301	Specifications M1	CUMBERLAND J

8:30 am - 12:30 pm

347	Formwork M2	BRYAN-BEEMAN AB

9:00 am - 11:00 am

506-A	Shotcreting - Evaluation	COTTON BOWL

9:00 am - 12:00 pm

546-C	Repair - Guide	353 AERIAL QUEEN
551	Tilt Up	COCKRELL

Daily Program

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Sunday, March 18, 2012 (cont.)

9:00 am - 5:00 pm

376	RLG Containment Structures M2	MORENO B

9:30 am - 11:00 am

341-B	Equake Res Brdgs - Pier Walls	MCMILLAN

10:00 am - 10:45 am

549-TG3	Report on Ferrocement	CUMBERLAND F

10:00 am - 11:30 am

E701	Materials for Concrete Construction	GASTON A

10:00 am - 12:00 pm

IC-Part	International Partnerships & Publications	CUMBERLAND B

10:00 am - 12:30 pm

228	Nondestructive Testing	PEGASUS A

10:00 am - 1:00 pm

421	Reinf Slabs	CUMBERLAND C

10:00 am - 5:00 pm

	Art of Concrete Student Competition	MARSALIS HALL

10:00 am - 4:00 pm

	★Guest Lounge	PARRINO'S PATIO

10:30 am - 1:30 pm

445-A	Shear & Torsn - Strut & Tie	CUMBERLAND A

11:00 am - 12:00 pm

343-A	Design	CUMBERLAND F

11:00 am - 12:30 pm

201-A	Durability - Sulfate Attack	SANGER A
341-A	Equake Res Brdgs - Columns	MCMILLAN

11:00 am - 1:00 pm

C640	Craftsman Cert	REVERCHON B
506-G	Qualifications for Projects	GASTON B
549	Thin Reinforced	COTTON BOWL

Daily Program

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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	359 MCCOMMAS BLUFF
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

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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

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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

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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

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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	PEGASUS B
	Coffee Break	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	MARSALIS HALL
	Exhibits	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

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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
The Art of Thermal Mass Modeling for Energy Conservation in Buildings, Part 1	REUNION G

Daily Program

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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

	★Guest Social	REUNION FH
211-P	Guide for Selecting Proportions for Pumpable Concrete	359 MCCOMMAS BLUFF
214	Strength Tests M2	BAKER
446	Fracture Mechanics	REVERCHON A

3:30 pm - 5:30 pm

239	Ultra-High-Performance Concrete	CUMBERLAND H

3:30 pm - 6:00 pm

544-D	FRC - Structural Uses	CUMBERLAND B

3:30 pm - 6:30 pm

350-J	Env Str - Education	362 SHAWNEE A
435	Deflection	GASTON A

4:00 pm - 5:30 pm

118	Computers	353 AERIAL QUEEN

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 Art of Thermal Mass Modeling for Energy Conservation in Buildings, Part 2	REUNION G
	The Need for Service-Life Prediction and Sustainability	REUNION B

4:30 pm - 5:30 pm

236	Material Science	BRYAN-BEEMAN B

4:30 pm - 6:30 pm

506-C	Shotcreting - Guide	CUMBERLAND C

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

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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.)

8:30 am - 10:30 am

357	Offshore & Marine	BAKER
560	Design & Constr ICFs	MORENO B

8:30 am - 10:30 am *Sessions*

	Composite and Modular Structures, Part 1	REUNION G
	Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas Containment, Part 1	REUNION A
	Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 1	REUNION B
	Quality Control and Robustness of SCC, Part 2	REUNION E
	Science and Art of Grouting and Grouting Materials, Part 1	REUNION C

8:30 am - 11:30 am

117	Tolerances	CUMBERLAND B
306	Cold Weather	CUMBERLAND E
350-G&K	Env Str - Tightness Testing/Haz Mat	353 AERIAL QUEEN
506	Shotcreting	BRYAN-BEEMAN B
548	Polymers	MORENO A

8:30 am - 3:30 pm

350-F	Env Str - Seismic	SANGER A

9:00 am - 10:30 am

332-B	Conc Mtrls and Plcmnt	MCMILLAN
332-F	Residential Concrete - Slabs	CUMBERLAND A

9:00 am - 12:00 pm

IC	International Advisory Committee	REVERCHON AB
	ASME STS Meeting	WINDSOR

9:00 am - 1:00 pm

	✓Dallas' Hallowed Haunts	TRINITY CROSSING ENTRANCE

Daily Program

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Tuesday, March 20, 2012 (cont.)

9:00 am - 5:00 pm

376-D	Design & Construction Subcommittee	SANGER B

10:00 am - 11:00 am

130-C	Structures in Service	GASTON B

10:00 am - 11:30 am

C630	Construction Inspector Cert	CUMBERLAND H

10:00 am - 12:00 pm

211-A	Proportioning - Editorial	GASTON A

10:00 am - 1:00 pm

523	Cellular Concrete	COTTON BOWL

10:00 am - 4:00 pm

	★Guest Lounge	PARRINO'S PATIO

10:30 am - 12:00 pm

325-C	Pavements - Prestressed and Precast	BAKER
332-D&E	Residential Concrete D & E	CUMBERLAND A
515	Protective Systems	MCMILLAN
544-F	FRC - Durability	CUMBERLAND J

10:30 am - 12:30 pm

236-TG4	Modeling and Simulation Methods	MORENO B

11:00 am - 12:30 pm

371	Elevated Tanks with Concrete Pedestals	BRYAN-BEEMAN A

11:00 am - 1:00 pm

CRC	Concrete Research Council	CUMBERLAND C
130	Sustainability M2	REUNION FH
327	RCC Pavements	GASTON B

Daily Program

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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

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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-I	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

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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/Sustainabilty 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

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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 (Invitation Only) — COTTON BOWL

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

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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

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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

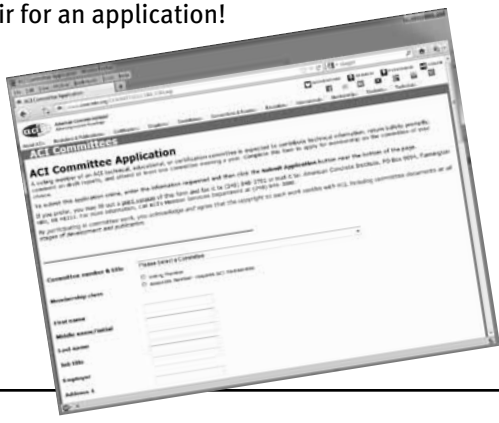
JOIN A COMMITTEE!

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!



Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
ACIFdn	ACI Foundation	Wed	9:00 am - 12:00 pm	BRYAN-BEEMAN A
BOD	Board of Direction	Thu	10:00 am - 5:00 pm	PEGASUS B
C601-A	Adhesive Anchor Installer	Mon	11:30 am - 1:00 pm	CUMBERLAND H
C601-B	Concrete Quality Technical Mgr	Wed	10:00 am - 12:30 pm	BAKER
C601-C	Masonry Testing Technician	Wed	8:30 am - 10:00 am	PEGASUS A
C601-D	Decorative Concrete Finisher	Wed	11:30 am - 1:00 pm	WINDSOR
C610	Field Technician Cert	Mon	8:30 am - 11:00 am	COTTON BOWL
C620	Laboratory Tech Cert	Tue	8:30 am - 10:00 am	COTTON BOWL
C630	Construction Inspector Cert	Tue	10:00 am - 11:30 am	CUMBERLAND H
C631	Conc Transportation Const Insp	Mon	1:00 pm - 2:30 pm	MORENO A
C640	Craftsman Cert	Sun	11:00 am - 1:00 pm	REVERCHON B
C650	Tilt-Up Constructor Cert	Sun	2:00 pm - 3:30 pm	CUMBERLAND A
C660	Shotcrete Nozzleman Cert	Mon	1:00 pm - 3:00 pm	BAKER
C680	Adhesive Anchor Installer - Joint CRSI	Tue	12:30 pm - 2:00 pm	CUMBERLAND B
CAC	Chapter Activities	Mon	2:00 pm - 5:00 pm	COCKRELL
CC	Convention Committee M2	Tue	3:00 pm - 5:00 pm	REVERCHON AB
CLC	Construction Liaison	Sun	8:00 am - 10:30 am	GASTON B
CPC	Certification Programs	Tue	2:00 pm - 5:00 pm	COCKRELL
CRC	Concrete Research Council	Tue	11:00 am - 1:00 pm	CUMBERLAND C
E701	Materials for Concrete Construction	Sun	10:00 am - 11:30 am	GASTON A
E702	Designing Concrete Structures	Mon	5:00 pm - 6:30 pm	REVERCHON A

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
E703	Concrete Construction Practices	Mon	5:00 pm - 7:00 pm	SANGER A
E706	Repair Application Procedures	Sun	8:00 am - 10:00 am	CUMBERLAND D
E707	Specification Education	Tue	11:30 am - 1:00 pm	CUMBERLAND H
EAC	Educational Activities M1	Sat	1:00 pm - 5:00 pm	BAKER
EAC	Educational Activities M2	Tue	8:00 am - 12:00 pm	CUMBERLAND D
HTC	Hot Topic	Sun	11:30 am - 1:00 pm	359 MCCOMMAS BLUFF
IC	International Advisory Committee	Tue	9:00 am - 12:00 pm	REVERCHON AB
IC-Conf	International Conferences	Mon	7:15 am - 8:30 am	REVERCHON A
IC-Part	International Partnerships & Publications	Sun	10:00 am - 12:00 pm	CUMBERLAND B
IJBRC	Intl Joints & Bearings Research	Tue	8:00 am - 9:00 am	MCMILLAN
Intl-Cert	International Certification	Sun	3:30 pm - 5:00 pm	MCMILLAN
ISO/TC 71	ISO/TC 71 Advisory Cmte	Mon	1:00 pm - 2:30 pm	MORENO B
MEMC	Membership	Sun	8:30 am - 11:30 am	CUMBERLAND E
MKTC	Marketing	Mon	2:00 pm - 4:00 pm	CUMBERLAND A
PUBC	Publications	Mon	8:30 am - 10:00 am	REVERCHON A
S801	Student Activities	Sun	8:00 am - 10:00 am	CUMBERLAND A
S802	Teaching Methods and Educational Materials	Mon	8:30 am - 10:00 am	SANGER B
S805	Collegiate Concrete Council	Sun	4:00 pm - 5:00 pm	CUMBERLAND B
S806	Young Professional Activities	Mon	10:00 am - 12:00 pm	359 MCCOMMAS BLUFF
SCO	Scholarship Council M2	Mon	2:00 pm - 3:00 pm	359 MCCOMMAS BLUFF

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
SYPAC	Student & Young Professional Activities Committee	Wed	7:00 am - 9:00 am	MORENO A
TAC	Technical Activities M1	Fri	6:30 pm - 9:00 pm	BRYAN-BEEMAN B
TAC	Technical Activities M2	Sat	7:00 am - 6:00 pm	REVERCHON A
TAC	Technical Activities M3	Sun	7:00 am - 2:00 pm	REVERCHON A
TACRG1	TAC Review Group 1	Sun	8:00 am - 11:00 am	REVERCHON B
TACRG2	TAC Review Group 2	Sun	8:00 am - 11:00 am	SANGER A
TACRG3	TAC Review Group 3	Sun	8:00 am - 11:00 am	SANGER B
TACRG4	TAC Review Group 4	Sun	8:00 am - 11:00 am	MORENO A
TCSC	TAC Construction Standards Committee	Wed	7:00 am - 10:00 am	GASTON A
TRRC	TAC Repair & Rehab	Tue	7:00 am - 8:30 am	SANGER A
TTAG	Technology Transfer Advisory Group	Tue	6:30 am - 8:30 am	CUMBERLAND J
117	Tolerances	Tue	8:30 am - 11:30 am	CUMBERLAND B
118	Computers	Mon	4:00 pm - 5:30 pm	353 AERIAL QUEEN
120	History	Tue	1:30 pm - 3:00 pm	WINDSOR
121	Quality Assurance	Sun	3:00 pm - 5:00 pm	BAKER
122	Energy Efficiency	Mon	8:30 am - 10:00 am	CUMBERLAND D
123	Research	Sun	4:00 pm - 5:00 pm	BRYAN-BEEMAN B
124	Aesthetics	Mon	12:30 pm - 2:00 pm	353 AERIAL QUEEN
130	Sustainability M1	Mon	2:00 pm - 5:00 pm	CUMBERLAND KL
130	Sustainability M2	Tue	11:00 am - 1:00 pm	REUNION FH
130-A	Materials	Mon	8:30 am - 10:00 am	CUMBERLAND F

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
130-B	Production/ Transport/ Construction	Mon	1:00 pm - 2:00 pm	CUMBERLAND A
130-C	Structures in Service	Tue	10:00 am - 11:00 am	GASTON B
130-D	Rating Systems/ Sustainabilty Tools	Tue	2:00 pm - 4:00 pm	CUMBERLAND K
130-E	Design/ Specifications/ Codes/Regulations	Mon	11:00 am - 1:00 pm	COTTON BOWL
130-F	Social Issues	Sun	12:30 pm - 2:00 pm	SANGER A
130-G	Education/ Certification	Tue	7:30 am - 9:00 am	CUMBERLAND A
131	BIM	Tue	3:00 pm - 5:00 pm	CUMBERLAND G
132	Responsibility	Sun	2:00 pm - 5:00 pm	GASTON A
201	Durability	Tue	8:00 am - 11:00 am	CUMBERLAND KL
201-A	Durability - Sulfate Attack	Sun	11:00 am - 12:30 pm	SANGER A
201-C	Durability - Condition Report	Tue	1:00 pm - 3:00 pm	CUMBERLAND G
201-D	Durability - Oversight Committee	Mon	11:30 am - 1:00 pm	MCMILLAN
207	Mass Concrete	Mon	10:00 am - 1:00 pm	CUMBERLAND B
209	Creep & Shrinkage	Mon	8:30 am - 11:30 am	REVERCHON B
211	Proportioning	Wed	8:30 am - 11:30 am	BRYAN-BEEMAN B
211-A	Proportioning - Editorial	Tue	10:00 am - 12:00 pm	GASTON A
211-C	Proportioning - No Slump	Tue	8:00 am - 10:00 am	CUMBERLAND C
211-E	Proportioning - Evaluation	Tue	11:30 am - 1:00 pm	362 SHAWNEE A
211-F	Proportioning - Submittal	Tue	2:00 pm - 4:00 pm	CUMBERLAND D
211-I	Assessing Aggregate Gradation	Tue	1:00 pm - 3:00 pm	BRYAN-BEEMAN A

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
211-N	Proportioning with Ground Limestone and Material Fillers	Tue	3:00 pm - 5:00 pm	BRYAN-BEEMAN A
211-P	Guide for Selecting Proportions for Pumpable Concrete	Mon	3:30 pm - 5:00 pm	359 MCCOMMAS BLUFF
212	Chemical Admixtures	Mon	2:00 pm - 5:00 pm	KESSLER
213	Lightweight	Tue	1:30 pm - 3:30 pm	GASTON A
213-TG	Lightweight - Editorial TG	Tue	11:30 am - 1:00 pm	CUMBERLAND E
214	Strength Tests M1	Mon	1:00 pm - 2:00 pm	REVERCHON B
214	Strength Tests M2	Mon	3:30 pm - 5:00 pm	BAKER
215	Fatigue	Mon	12:30 pm - 2:30 pm	GASTON B
216	Fire Resistance	Mon	10:00 am - 1:00 pm	MORENO B
221	Aggregates	Sun	11:30 am - 1:00 pm	BAKER
222	Corrosion	Tue	2:00 pm - 5:00 pm	CUMBERLAND F
223	Shrinkage Compensating	Tue	2:00 pm - 5:00 pm	CUMBERLAND A
223-C	Shrinkage Compensating - Constr	Tue	1:00 pm - 2:00 pm	CUMBERLAND A
223-D	Shr Compensating - Non-Reinforced Concrete or Mortar	Tue	12:00 pm - 1:00 pm	CUMBERLAND A
224	Cracking	Sun	2:30 pm - 5:00 pm	CUMBERLAND E
225	Hydraulic Cements	Mon	1:00 pm - 4:00 pm	CUMBERLAND E
228	Nondestructive Testing	Sun	10:00 am - 12:30 pm	PEGASUS A
228-A	NDT Technician Certification	Mon	1:00 pm - 3:00 pm	MCMILLAN
229	Controlled Low Strength	Tue	2:00 pm - 5:00 pm	CUMBERLAND C
230	Soil Cement	Tue	8:00 am - 9:30 am	BRYAN-BEEMAN A
231	Early Age	Mon	2:00 pm - 3:30 pm	GASTON A

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
232	Fly Ash & Natural Pozzolans	Mon	1:00 pm - 4:00 pm	BRYAN-BEEMAN B
232-A	Fly Ash - Use of Nat Pozzolans	Mon	10:00 am - 1:00 pm	BRYAN-BEEMAN A
233	Slag Cement	Tue	2:00 pm - 5:00 pm	CUMBERLAND I
234	Silica Fume	Tue	2:00 pm - 3:30 pm	CUMBERLAND B
235	Electronic Data Exchange	Tue	2:00 pm - 5:00 pm	BAKER
236	Material Science	Mon	4:30 pm - 5:30 pm	BRYAN-BEEMAN B
236-B	Material Science - Transport Mechanisms	Sun	2:00 pm - 3:30 pm	REVERCHON A
236-D	Material Science - Nanotechnology of Concrete M1	Sun	3:30 pm - 5:00 pm	CUMBERLAND C
236-D	Material Science - Nanotechnology of Concrete M2	Tue	1:00 pm - 3:00 pm	CUMBERLAND H
236-TG1	Advanced Analysis Techniques for Concrete	Tue	3:00 pm - 4:00 pm	CUMBERLAND H
236-TG2	Sustainability Engineered by Material Science	Tue	11:30 am - 12:30 pm	PEGASUS A
236-TG4	Modeling and Simulation Methods	Tue	10:30 am - 12:30 pm	MORENO B
237	SelfConsolidating Concrete	Mon	8:15 am - 11:00 am	CUMBERLAND KL
237-TG1	Self-Consolidating Concrete Task Group	Sun	1:30 pm - 3:30 pm	KESSLER
238	Workability of Fresh Concrete	Tue	8:00 am - 10:00 am	362 SHAWNEE A
239	Ultra-High-Performance Concrete	Mon	3:30 pm - 5:30 pm	CUMBERLAND H
301	Specifications M1	Sun	8:30 am - 12:00 pm	CUMBERLAND J
301	Specifications M2	Mon	1:00 pm - 5:00 pm	CUMBERLAND G
301-A	Spec - Gen Req, Definitions & Tolerances	Mon	8:30 am - 12:00 pm	BAKER

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
301-B	Spec - Formwork & Reinforcement	Sun	12:30 pm - 4:30 pm	COCKRELL
301-C	Spec - Placing Consolidating & Curing	Sun	1:00 pm - 5:00 pm	COTTON BOWL
301-D	Spec - Lightweight & Massive Concrete	Sun	1:00 pm - 5:00 pm	359 MCCOMMAS BLUFF
301-E	Spec - Prestressed Concrete	Sun	3:00 pm - 5:00 pm	BRYAN-BEEMAN A
301-F	Spec - Precast Concrete Panels	Mon	9:00 am - 12:00 pm	KESSLER
301-G	Spec - Shrink Comp Conc & Ind Floor Slabs	Sun	1:00 pm - 5:00 pm	WINDSOR
301-H	Spec - Tilt-Up Constr & Arch Conc	Sun	12:30 pm - 4:30 pm	362 SHAWNEE A
301-SC	Spec - Steering Committee	Sun	7:00 am - 8:30 am	CUMBERLAND F
302	Floor Construction	Mon	8:30 am - 1:00 pm	CUMBERLAND IJ
303	Architectural CIP	Wed	8:30 am - 10:30 am	COCKRELL
304	Measuring/Mix/ Trans/Placing	Mon	11:30 am - 1:00 pm	CUMBERLAND F
305	Hot Weather	Sun	2:00 pm - 4:00 pm	BRYAN-BEEMAN B
306	Cold Weather	Tue	8:30 am 11:30 am	CUMBERLAND E
307	Chimneys	Mon	2:00 pm - 5:00 pm	CUMBERLAND D
308	Curing	Wed	2:00 pm - 5:00 pm	BRYAN-BEEMAN B
308/213	Guide on Internal Curing	Tue	4:00 pm - 5:30 pm	CUMBERLAND H
308-A	Curing - Guide	Wed	10:30 am - 1:00 pm	MORENO B
308-B	Curing - Specifications	Wed	8:00 am - 10:30 am	MORENO B
309	Consolidation	Sun	3:00 pm - 5:00 pm	CUMBERLAND I
310	Decorative Concrete	Sun	3:00 pm - 5:00 pm	CUMBERLAND J
310-TG1	Curing Decorative Concrete	Sun	2:00 pm - 3:00 pm	BRYAN-BEEMAN A

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
311	Inspection	Mon	8:30 am - 10:00 am	353 AERIAL QUEEN
313	Bins & Silos	Mon	8:30 am - 5:00 pm	SANGER A
314	Simplified Design Buildings	Sun	8:30 am - 11:30 am	CUMBERLAND I
315	Detailing	Sun	2:00 pm - 5:00 pm	REVERCHON B
315-B	Detailing - Constructibility	Sun	8:30 am - 11:30 am	BAKER
315-BIM	Detailing - Constructibility BIM TG	Tue	5:30 pm - 8:00 pm	CUMBERLAND H
318	Building Code	Wed	8:00 am - 6:00 pm	REUNION FH
318-A	General Concrete Constr	Tue	1:30 pm - 6:00 pm	MORENO B
318-B	Reinforcement & Development M1	Mon	10:00 am - 1:00 pm	CUMBERLAND G
318-B	Reinforcement & Development M2	Tue	8:00 am - 12:30 pm	CUMBERLAND G
318-C	Serviceability/ Safety	Tue	1:30 pm - 6:00 pm	MCMILLAN
318-D	Flexure & Axial Loads	Tue	8:00 am - 12:30 pm	CUMBERLAND I
318-E	Shear & Torsion	Tue	8:00 am - 12:30 pm	COCKRELL
318-EA	Electronic Aids	Sun	2:30 pm - 3:30 pm	CUMBERLAND C
318-G	Prestressed Precast	Tue	8:00 am - 12:30 pm	CUMBERLAND F
318-H	Seismic Provisions	Tue	1:30 pm - 6:00 pm	PEGASUS A
318-L	International Liaison	Mon	8:30 am - 10:00 am	BRYAN-BEEMAN A
318-R	Code Reorganization	Tue	1:30 pm - 6:00 pm	GASTON B
318-S	Spanish Translation	Mon	2:00 pm - 3:30 pm	CUMBERLAND B
318-TGF	TGF-Foundation	Mon	5:00 pm - 6:30 pm	CUMBERLAND D
325	Pavements	Tue	3:30 pm - 5:30 pm	BRYAN-BEEMAN B
325-A	Pavements - Design	Tue	8:00 am - 10:00 am	GASTON A

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
325-C	Pavements - Prestressed and Precast	Tue	10:30 am - 12:00 pm	BAKER
325-D	Proportioning for Pavements	Tue	1:00 pm - 2:30 pm	CUMBERLAND J
325-E	Accelerated Paving	Tue	2:00 pm - 3:30 pm	COTTON BOWL
327	RCC Pavements	Tue	11:00 am - 1:00 pm	GASTON B
329	Perf Ready Mixed	Wed	10:30 am - 12:30 pm	COCKRELL
330	Parking Lots & Site Paving	Wed	1:00 pm - 4:00 pm	WINDSOR
330-TG1	Parking Lots & Site Paving TG M1	Tue	3:30 pm - 5:30 pm	GASTON A
330-TG1	Parking Lots & Site Paving TG M2	Wed	8:30 am - 11:30 am	WINDSOR
332	Residential Concrete	Tue	1:00 pm - 5:00 pm	REUNION FH
332-B	Conc Mtrls and Plcmnt	Tue	9:00 am - 10:30 am	MCMILLAN
332-D&E	Residential Concrete D & E	Tue	10:30 am - 12:00 pm	CUMBERLAND A
332-F	Residential Concrete - Slabs	Tue	9:00 am - 10:30 am	CUMBERLAND A
334	Shells	Mon	5:00 pm - 6:00 pm	CUMBERLAND F
335	Composite Hybrid	Sun	11:30 am - 1:00 pm	CUMBERLAND E
336	Footings	Sun	1:00 pm - 5:00 pm	353 AERIAL QUEEN
341	Earthquake-Resistant Bridges	Sun	3:00 pm - 5:00 pm	PEGASUS B
341-A	Equake Res Brdgs - Columns	Sun	11:00 am - 12:30 pm	MCMILLAN
341-B	Equake Res Brdgs - Pier Walls	Sun	9:30 am - 11:00 am	MCMILLAN
341-C	Equake Res Brdgs - Retrofit	Sun	8:00 am - 9:30 am	MCMILLAN
341-D	Perf Based Seismic Design	Sun	1:00 pm - 3:30 pm	MCMILLAN
342	Bridge Evaluation	Sun	8:30 am - 10:00 am	CUMBERLAND B
343	Bridge Design	Mon	10:00 am - 1:00 pm	REVERCHON A
343-A	Design	Sun	11:00 am - 12:00 pm	CUMBERLAND F

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
343-B	Bridge Deck Design	Mon	8:15 am - 9:00 am	CUMBERLAND E
345	Bridge Construction	Sun	1:30 pm - 3:30 pm	SANGER B
346	CIP Pipe	Mon	11:30 am - 1:00 pm	REVERCHON B
347	Formwork M1	Sat	9:00 am - 6:00 pm	REVERCHON B
347	Formwork M2	Sun	8:30 am - 12:30 pm	BRYAN-BEEMAN AB
347-A	Formwork - Specification	Sat	7:00 pm - 9:00 pm	WINDSOR
348	Safety	Mon	2:00 pm - 3:30 pm	362 SHAWNEE A
349	Nuclear Structures	Tue	1:30 pm - 5:00 pm	CUMBERLAND L
349-TG	ACI 349 and ACI 359 Joint Committee TG	Tue	5:00 pm - 6:00 pm	CUMBERLAND L
349-A&B	Nuclear Structures - Design & Materials	Mon	12:30 pm - 4:30 pm	CUMBERLAND C
349-C	Nuclear Str - Anchorage	Mon	8:15 am - 11:00 am	CUMBERLAND C
350	Environmental Structures	Wed	8:00 am - 5:00 pm	REVERCHON AB
350-A	Env Str - General & Concrete	Tue	11:30 am - 5:00 pm	MORENO A
350-B	Env Str - Durability	Mon	8:30 am - 1:00 pm	CUMBERLAND A
350-C	Env Str - Reinf & Devel	Sun	8:30 am - 11:30 am	362 SHAWNEE A
350-D	Env Str - Structural	Mon	8:30 am - 6:30 pm	WINDSOR
350-E	Env Str - Precast/ Prestressed	Sun	1:00 pm - 5:00 pm	GASTON B
350-F	Env Str - Seismic	Tue	8:30 am - 3:30 pm	SANGER A
350-G&K	Env Str - Tightness Testing/Haz Mat	Tue	8:30 am - 11:30 am	353 AERIAL QUEEN
350-H	Env Str - Editorial	Mon	12:30 pm - 2:00 pm	359 MCCOMMAS BLUFF
350-J	Env Str - Education	Mon	3:30 pm - 6:30 pm	362 SHAWNEE A
350-L	Env Str - Specification	Tue	4:00 pm - 6:00 pm	CUMBERLAND D

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
350-SC	Env Str - Steering Comm	Sun	11:30 am - 1:00 pm	GASTON A
351	Equip Foundations	Mon	2:30 pm - 4:30 pm	MORENO A
351-C	Equipment Foundations - Dynamic Foundations	Sun	1:00 pm - 3:00 pm	CUMBERLAND I
351-D	Design Provisions for Heavy Industrial Equipment and Machinery Concrete Support Structures	Mon	10:00 am - 12:00 pm	CUMBERLAND D
351-TG1	Spec for Cementitious Grouting Between Foundations & Equipment Bases	Sun	4:00 pm - 5:30 pm	CUMBERLAND D
351-TG2	Specification for Epoxy Grouting Between Foundations & Equipment Bases	Mon	12:00 pm - 2:00 pm	KESSLER
352	Joints	Sun	2:00 pm - 5:00 pm	PEGASUS A
355	Anchorage	Sun	1:30 pm - 5:00 pm	CUMBERLAND K
355-TG	Anchorage TG	Mon	8:30 am - 11:00 am	MORENO A
357	Offshore & Marine	Tue	8:30 am - 10:30 am	BAKER
359	Nuclear Reactors	Wed	10:00 am - 5:00 pm	PEGASUS A
359-A	Working Group on Design	Wed	8:00 am - 10:00 am	MCMILLAN
359-B	Materials, Fabrication and Examination	Wed	9:00 am - 10:00 am	BAKER
359-C	Working Group on Modernization	Tue	3:00 pm - 5:00 pm	353 AERIAL QUEEN
359-TG	ACI 349 and ACI 359 Joint Committee TG	Tue	5:00 pm - 6:00 pm	CUMBERLAND L
360	Slabs on Ground	Mon	2:00 pm - 6:30 pm	CUMBERLAND IJ
362	Parking Structures	Mon	1:00 pm - 5:00 pm	CUMBERLAND F
362-A	Parking Str - Standard	Sun	12:00 pm - 3:00 pm	CUMBERLAND H

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
363	High Strength	Wed	8:30 am - 11:30 am	COTTON BOWL
363-A	High-Strength Lightweight Concrete	Tue	3:30 pm - 5:00 pm	SANGER A
364	Rehabilitation	Mon	1:00 pm - 3:00 pm	CUMBERLAND H
364-TG1	Rehabilitation Guide	Mon	11:00 am - 12:00 pm	CUMBERLAND C
365	Service Life M1	Mon	9:00 am - 11:00 am	COCKRELL
365	Service Life M2	Mon	2:00 pm - 4:00 pm	353 AERIAL QUEEN
369	Seismic - Rehab M1	Sun	1:00 pm - 2:30 pm	CUMBERLAND C
369	Seismic - Rehab M2	Mon	2:00 pm - 6:00 pm	REVERCHON B
370	Blast and Impact Load Effects	Mon	2:30 pm - 5:00 pm	GASTON B
371	Elevated Tanks with Concrete Pedestals	Tue	11:00 am - 12:30 pm	BRYAN-BEEMAN A
372	Tanks Wrapped Wire/Strand	Tue	3:00 pm - 5:00 pm	WINDSOR
374	Seismic Design	Mon	8:15 am - 12:00 pm	GASTON A
374-TG	Protocol For Testing RC - Structural Elements	Sun	11:30 am - 1:00 pm	CUMBERLAND I
375	Design for Wind Loads	Mon	1:00 pm - 3:30 pm	REVERCHON A
376	RLG Containment Structures M1	Sat	2:00 pm - 5:00 pm	COCKRELL
376	RLG Containment Structures M2	Sun	9:00 am - 5:00 pm	MORENO B
376-A	Code, Education & Publication Subcommittee	Wed	9:00 am - 5:00 pm	MORENO A
376-B	Materials Subcommittee	Mon	1:00 pm - 5:00 pm	COTTON BOWL
376C-	Analysis Subcommittee	Mon	9:00 am - 12:00 pm	CUMBERLAND E
376-D	Design & Construction Subcommittee	Tue	9:00 am - 5:00 pm	SANGER B
408	Development and Splicing	Sun	8:30 am - 11:30 am	WINDSOR

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
408-A	Mech Splices	Sun	8:00 am - 8:30 am	359 MCCOMMAS BLUFF
421	Reinf Slabs	Sun	10:00 am - 1:00 pm	CUMBERLAND C
423	Prestressed	Mon	8:30 am - 12:30 pm	BRYAN-BEEMAN B
423/445	Adhoc Grp on Shear in Prestress Conc	Sun	3:00 pm - 5:00 pm	MORENO A
423-E	Prestress - Losses	Sun	1:00 pm - 4:00 pm	CUMBERLAND B
435	Deflection	Mon	3:30 pm - 6:30 pm	GASTON A
437	Strength Evaluation	Mon	10:30 am - 12:30 pm	353 AERIAL QUEEN
439	Steel Reinforcement	Mon	8:30 am - 10:00 am	CUMBERLAND G
439-A	Steel - Reinforcement - Wire	Sun	3:30 pm - 5:00 pm	REVERCHON A
440	Fiber-Reinforced Polymer	Tue	8:00 am - 11:00 am	REUNION FH
440-F	FRP - Repair Strengthening	Mon	3:00 pm - 6:00 pm	PEGASUS AB
440-G	FRP - Student	Mon	8:30 am - 10:00 am	PEGASUS A
440-H	FRP - Reinforced Concrete	Sun	8:30 am - 11:30 am	CUMBERLAND KL
440-I	FRP - Prestressed Concrete	Mon	10:00 am - 11:30 am	CUMBERLAND F
440-K	FRP - Material Characteristics	Sun	1:30 pm - 3:00 pm	PEGASUS B
440-L	FRP - Durability	Sun	3:00 pm - 5:00 pm	CUMBERLAND G
440-M	FRP - Repair of Masonry Str	Mon	1:30 pm - 3:00 pm	PEGASUS AB
440-TG2	FRP - Task Group Repair Material Spec	Sun	11:30 pm - 1:30 pm	SANGER B
441	Columns	Mon	11:30 am - 2:00 pm	CUMBERLAND KL
441-A	High-Strength Conc	Mon	8:00 am - 9:00 am	359 MCCOMMAS BLUFF
441-B	Lateral Reinf	Mon	9:00 am - 10:00 am	359 MCCOMMAS BLUFF

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
441-E	Columns Multi - Spiral Reinf	Sun	11:30 am - 1:00 pm	WINDSOR
444	Experimental Analysis	Tue	8:00 am - 10:00 am	CUMBERLAND H
445	Shear & Torsion	Mon	2:00 pm - 6:00 pm	SANGER B
445-A	Shear & Torsn - Strut & Tie	Sun	10:30 am - 1:30 pm	CUMBERLAND A
445-B	Shear & Torsn - Seismic Shear	Sun	8:00 am - 10:00 am	CUMBERLAND C
445-C	Shear & Torsn - Punching Shear	Sun	1:00 pm - 3:00 pm	BAKER
445-D	Shear & Torsn - Database	Sun	3:00 pm - 5:00 pm	CUMBERLAND H
445-E	Shear & Torsn - SOA Torsion	Sun	12:30 pm - 2:00 pm	MORENO A
446	Fracture Mechanics	Mon	3:30 pm - 5:00 pm	REVERCHON A
447	Finite Element Analysis M1	Mon	11:00 am - 1:30 pm	COCKRELL
447	Finite Element Analysis M2	Mon	5:00 pm - 6:30 pm	CUMBERLAND G
506	Shotcreting	Tue	8:30 am - 11:30 am	BRYAN-BEEMAN B
506-A	Shotcreting - Evaluation	Sun	9:00 am - 11:00 am	COTTON BOWL
506-B	Shotcreting - Fiber Reinforced	Sun	2:00 pm - 3:00 pm	SANGER A
506-C	Shotcreting - Guide	Mon	4:30 pm - 6:30 pm	CUMBERLAND C
506-E	Shotcreting - Specifications	Mon	12:00 pm - 2:00 pm	GASTON A
506-F	Shotcreting - Underground	Mon	3:00 pm - 4:00 pm	MCMILLAN
506-G	Qualifications for Projects	Sun	11:00 am - 1:00 pm	GASTON B
515	Protective Systems	Tue	10:30 am - 12:00 pm	MCMILLAN
522	Pervious Concrete	Tue	8:00 am - 11:00 am	PEGASUS A
523	Cellular Concrete	Tue	10:00 am - 1:00 pm	COTTON BOWL
523-A	Cellular - Autoclaved Aerated	Tue	8:30 am - 10:00 am	CUMBERLAND J

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
524	Plastering	Mon	8:30 am - 10:00 am	MORENO B
533	Precast Panels	Sun	1:00 pm - 2:30 pm	CUMBERLAND E
543	Piles	Mon	8:30 am - 11:30 am	MCMILLAN
544	Fiber-Reinforced Concrete	Tue	3:00 pm - 5:30 pm	CUMBERLAND J
544-A	FRC - Production & Applications	Mon	11:30 am - 1:00 pm	PEGASUS AB
544-B	FRC - Education	Mon	8:30 am - 10:00 am	CUMBERLAND B
544-C	FRC - Testing	Tue	1:30 pm - 3:00 pm	BRYAN-BEEMAN B
544-D	FRC - Structural Uses	Mon	3:30 pm - 6:00 pm	CUMBERLAND B
544-E	FRC - Mechanical Properties	Mon	5:00 pm - 6:30 pm	GASTON B
544-F	FRC - Durability	Tue	10:30 am - 12:00 pm	CUMBERLAND J
546	Repair	Mon	8:30 am - 11:30 am	CUMBERLAND H
546-C	Repair - Guide	Sun	9:00 am - 12:00 pm	353 AERIAL QUEEN
548	Polymers	Tue	8:30 am - 11:30 am	MORENO A
548-A	Polymers - Overlays	Mon	8:15 am - 11:00 am	362 SHAWNEE A
548-B	Polymers - Adhesives	Mon	2:30 pm - 4:30 pm	MORENO B
548-C	Structural Polymer Design	Mon	11:00 am - 12:30 pm	362 SHAWNEE A
549	Thin Reinforced	Sun	11:00 am - 1:00 pm	COTTON BOWL
549-TG1	Glass Fiber-Reinforced Concrete - Spray-Up	Sun	8:30 am - 9:15 am	CUMBERLAND F
549-TG3	Report on Ferrocement	Sun	10:00 am - 10:45 am	CUMBERLAND F
550	Precast Structures	Sun	3:00 pm - 5:00 pm	SANGER A
551	Tilt Up	Sun	9:00 am - 12:00 pm	COCKRELL
552	Cementitious Grouting	Wed	8:00 am - 9:30 am	GASTON B

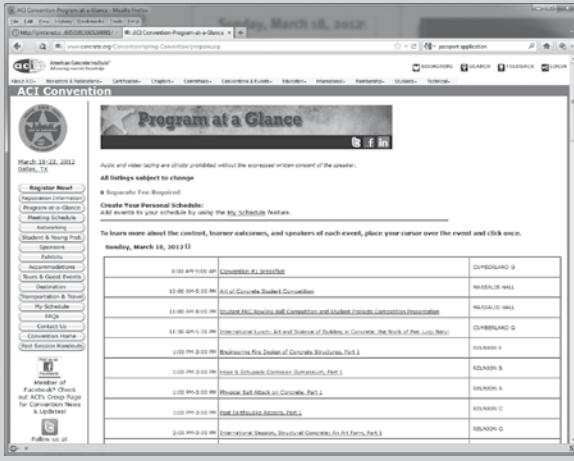
Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
555	Recycled	Mon	5:00 pm - 6:30 pm	COCKRELL
560	Design & Constr ICFs	Tue	8:30 am - 10:30 am	MORENO B
562	Eval, Repair & Rehab	Sun	1:00 pm - 5:00 pm	CUMBERLAND L
562-A	Eval, Repair & Rehab - Life Safety	Sat	4:00 pm - 6:00 pm	BRYAN-BEEMAN A
562-B	Eval, Repair & Rehab - Loads	Sun	8:00 am - 12:00 pm	CUMBERLAND H
562-C	Eval, Repair & Rehab - Structural Analysis M1	Sat	4:00 pm - 6:00 pm	WINDSOR
562-C	Eval, Repair & Rehab - Structural Analysis M2	Sat	7:00 pm - 9:00 pm	COCKRELL
562-D	Eval, Repair & Rehab - Structural Repair Design M1	Sat	10:00 am - 12:00 pm	MORENO A
562-D	Eval, Repair & Rehab - Structural Repair Design M2	Sat	1:00 pm - 4:00 pm	WINDSOR
562-E	Eval, Repair & Rehab - Durability Qlty Assurance	Sat	6:00 pm - 9:00 pm	BRYAN-BEEMAN A
562-F	Eval, Repair & Rehab - General	Sat	1:00 pm - 6:00 pm	MORENO A
563	Specs for Repair of Struct Conc in Bldgs	Tue	1:00 pm - 5:00 pm	CUMBERLAND E

Session Handouts and Presentations on Demand

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.

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.

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.

***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

Sunday, March 18, 2012
1:00 pm - 3:00 pm

Engineering Fire Design of Concrete Structures, Part 1 **REUNION E**
Sponsored by ACI Committee 216, Fire Resistance and Fire Protection of Structures

Session Moderator: Venkatesh K. Kodur
Professor
Michigan State University
East Lansing, MI

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 (cont.) **REUNION E**

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.

Sunday, March 18, 2012
1:00 pm - 3:00 pm

Hope & Schupack Corrosion Symposium, Part 1 **REUNION B**
Sponsored by ACI Committee 222, Corrosion of Metals in Concrete

Session Moderator: Mohammad S. Khan
Senior Vice President
Professional Service Industries Inc.
Herndon, VA

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

Sunday, March 18, 2012
1:00 pm - 3:00 pm

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.

Sunday, March 18, 2012
1:00 pm - 3:00 pm

Physical Salt Attack on Concrete, Part 1 **REUNION A**
Sponsored by Committee 201, Durability of Concrete

Session Co-Moderators: Mohamed T. Bassuoni
Assistant Professor
University of Manitoba
Winnipeg, MB, Canada

Harvey H. Haynes
Consulting Concrete Engineer
Haynes & Associates
Oakland, CA

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

Sunday, March 18, 2012
1:00 pm - 3:00 pm

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.) **REUNION C**

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.) **REUNION G**

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.

Sunday, March 18, 2012
3:30 pm - 5:30 pm

Engineering Fire Design of Concrete Structures, Part 2 **REUNION E**
Sponsored by ACI Committee 216, Fire Resistance and Fire Protection of Structures

Session Moderator: Venkatesh K. Kodur
Professor
Michigan State University
East Lansing, MI

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.

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4. Understand the temperature effects on properties of concrete and reinforcement.

Performance-Based Fire Engineering of Concrete Structures: Needs and Opportunities **3:30 pm**
Luke A. Bisby, Senior Research Fellow, University of Edinburgh, Edinburgh, Scotland; and **Jose L. Torerg**, University of Edinburgh

Sunday, March 18, 2012
3:30 pm - 5:30 pm

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

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

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Sunday, March 18, 2012
3:30 pm - 5:30 pm

Hope & Schupack Corrosion Symposium, Part 2 **REUNION B**
Sponsored by ACI Committee 222, Corrosion of Metals in Concrete

Session Moderator: Mohammad S. Khan
Senior Vice President
Professional Service Industries, Inc.
Herndon, VA

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.

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

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.

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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.

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.

Sunday, March 18, 2012
3:30 pm - 5:30 pm

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

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

Physical Salt Attack on Concrete, Part 2 **REUNION A**
Sponsored by ACI Committee 201, Durability of Concrete

Session Co-Moderators: Mohamed Bassuoni
Assistant Professor
University of Manitoba
Winnipeg, MB, Canada

Harvey H. Haynes
Consulting Concrete Engineer
Haynes & Associates
Oakland, CA

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.

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.

Sunday, March 18, 2012
3:30 pm - 5:30 pm

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 **REUNION C**
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.

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.

Earthquake Repair of Circular Reinforced Concrete Columns **3:30 pm**
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 **3:50 pm**
Desmond K. Bull, Technical Director, Holmes Consulting Group, Ltd., Christchurch, New Zealand

Sunday, March 18, 2012
3:30 pm - 5:30 pm

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**, Pontifica Universidad Catolíca de Valparaíso, and **Patricio Bonelli** and **Gilberto Leiva**, Universidad Santa Maria

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.

Sunday, March 18, 2012
5:45 pm - 7:00 pm

Opening Session & Awards Program **REUNION FH**

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 **REUNION FH**

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

Sunday, March 18, 2012
5:45 pm - 7:00 pm

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 **REUNION FH**

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.

Sunday, March 18, 2012
8:00 pm - 10:00 pm

123 Forum **REUNION B**
Sponsored by ACI Committee 123, Research and Current Developments

Session Moderator: Farshad Rajabipour
Assistant Professor
Pennsylvania State University
University Park, PA

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.) **REUNION B**

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.

Monday, March 19, 2012
6:30 am - 8:00 am

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.

Monday, March 19, 2012
7:00 am - 8:30 am

Speaker Development Breakfast **CUMBERLAND F**
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.

Monday, March 19, 2012
8:30 am - 10:30 am

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.

Monday, March 19, 2012
8:30 am - 10:30 am

Hope & Schupack Corrosion Symposium, Part 3 **REUNION B**
Sponsored by ACI Committee 222, Corrosion of Metals in Concrete

Session Moderator: Mohammad S. Khan
Senior Vice President
Professional Service Industries, Inc.
Herndon, VA

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.

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

Monday, March 19, 2012
8:30 am - 10:30 am

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.

Monday, March 19, 2012
8:30 am - 10:30 am

Open Paper Session **REUNION E**
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.) **REUNION E**

A Two Parameter Kinematic Theory for the Shear Behavior of Deep Beams **9:30 am**
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 **9:50 am**
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 **10:10 am**
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.

Monday, March 19, 2012
8:30 am - 10:30 am

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.

Monday, March 19, 2012
8:30 am - 10:30 am

Seismic Bridge Design Practice with Aesthetic Considerations (cont.) **REUNION G**

Application of Accelerated Bridge Construction Connections in Moderate-to-High Seismic Regions **8:30 am**
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 **8:55 am**
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 **9:20 am**
Charles Sikorsky, Research Contract Manager, California Department of Transportation, Sacramento, CA

Aesthetics Considerations in the Seismic Design and Detailing of Concrete Bridges **9:45 am**
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.

Monday, March 19, 2012
8:30 am - 10:30 am

Symposium Honoring James O. Jirsa's Contributions in Structural Concrete: A Time to Reflect, Part 1: Shear Issues **REUNION C**
Sponsored by ACI Committees 374, Performance-Based Seismic Design of Concrete Buildings; and 445, Shear and Torsion

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

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
8:30 am - 10:30 am

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, Groupo 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 **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.

Monday, March 19, 2012
8:30 am - 10:30 am

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.

Monday, March 19, 2012
11:00 am - 1:00 pm

Hope & Schupack Corrosion Symposium, Part 4 **REUNION B**
Sponsored by ACI Committee 222, Corrosion of Metals in Concrete

Session Moderator: Mohammad S. Khan
Senior Vice President
Professional Service Industries, Inc.
Herndon, VA

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 **11:00 am**
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 **REUNION G**
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.) **REUNION G**

Evaluation of Robustness and Sensitivity of SCC **12:30 pm**
Olafur Wallevik, Manager, Innovation Center Iceland, Reykjavik, Iceland

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 Honoring James O. Jirsa's Contributions in Structural Concrete: A Time to Reflect, Part 2: Bond and Development Length **REUNION C**

Sponsored by ACI Committees 374, Performance-Based Seismic Design of Concrete Buildings; and 408, Development and Splicing of Deformed Bars

Session Co-Moderators:

Roberto T. Leon
David H. Burrows Professor of Construction Engineering
Virginia Polytechnic University
Blacksburg, VA

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
11:00 am - 1:00 pm

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 **11:00 am**
Wayne S. Adaska, Director, Public Works, Portland Cement Association, Skokie, IL

Producing Roller-Compacted Concrete from a Ready Mix Plant **11:20 am**
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.

Monday, March 19, 2012
11:00 am - 1:00 pm

The Art of Concrete, Part 1 **REUNION E**
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.

Making Architectural Concrete Work **11:00 am**
James M. Shilstone Jr., Concrete Technologist, Command Alkon, Inc., Plano, TX

Natural Grey Concrete Surfaces for Visual Quality and Sustainability **12:00 pm**
Mark J. Bloschock, Senior Vice President, VRX, Inc., Plano, TX

The Art of Polishing Concrete **12:30 pm**
Tim G. Taylor, President, American Concrete Technologies, Fort Worth, TX

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
11:15 am - 4:30 pm

Exhibitor Demonstrations **MARSALIS HALL**

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.

Time	Exhibitor	Presentation/ Demonstration Title
11:15 am	Olson Engineering, Inc.	Sonic, Ultrasonic and Radar Methods for Nondestructive Evaluation (NDE) of Concrete
12:00 pm	S-FRAME Software, Inc.	Comprehensive and intuitive design of reinforced concrete beams, columns, and walls with S-CONCRETE
12:45 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
2:15 pm	Fibrwrap Construction Services, Inc.	Design and Use of Externally Bonded Fiber-Reinforced Polymers (FRPs) for Structural Strengthening
4:30 pm	SIMCO Technologies, Inc.	STADIUM® Academic Workshop and Discussion

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

BAKER™
CONCRETE CONSTRUCTION
expect more

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

Monday, March 19, 2012
1:00 pm - 2:00 pm

Chapter Forum: Adhesive Anchor Installer - Certification-Is It Right for Your Chapter? CUMBERLAND B
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 **REUNION A**

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

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 (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.

Monday, March 19, 2012
1:30 pm - 3:30 pm

The Art of Concrete, Part 2 **REUNION E**
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.

Monday, March 19, 2012
1:30 pm - 3:30 pm

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

The Art of Thermal Mass Modeling for Energy Conservation in Buildings, Part 1 (cont.) **REUNION G**

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 **REUNION FH**
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.

Monday, March 19, 2012
4:00 pm - 6:00 pm

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 **4:00 pm**
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 **4:30 pm**
Matthew D. Lovell, Assistant Professor, Rose-Hulman Institute of Technology, Terre Haute, IN

Live-Load Distribution Formulas for Prestressed Concrete Integral Abutment Bridge Girders **5:00 pm**
Murat Dicleli, Professor, Middle East Technical University, Ankara, Turkey; and **Semih Erhan**, Middle East Technical University

Analysis of Superstructures of Integral Abutment Bridges **5:30 pm**
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.

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 (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.

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.

Monday, March 19, 2012
4:00 pm - 6:00 pm

The Art of Concrete, Part 3 **REUNION E**
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.

Monday, March 19, 2012
4:00 pm - 6:00 pm

The Art of Thermal Mass Modeling for Energy Conservation in Buildings, Part 2 **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:

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

Larry Rowland
Manager—Marketing Technical Services
Lehigh Cement Company
Allentown, PA

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.) **REUNION G**

Cost-Effective, Energy-Efficient School Design **4:00 pm**
William M. McGinley, Professor, University of Louisville, Louisville, KY

Thermal Mass Simulation Accuracy and Design Considerations **4:35 pm**
Linda Lam, Associate, Transsolar, Inc., New York, NY

Natural Ventilation Cooling **5:05 pm**
David Springer, President, Davis Energy Group, Davis, CA

New York Multifamily Developer Saves Operating Costs through Energy Modeling **5:25 pm**
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.

Monday, March 19, 2012
4:00 pm - 6:00 pm

The Need for Service-Life Prediction in Understanding Sustainability **REUNION B**

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.

Monday, March 19, 2012
4:00 pm - 6:00 pm

The Need for Service-Life Prediction in Understanding Sustainability (cont.) **REUNION B**

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.*

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.

Tuesday, March 20, 2012
8:30 am - 10:30 am

Composite and Modular Structures, Part 1 **REUNION G**
Sponsored by ACI Committees 335, Composite and Hybrid Structures; and 349, Concrete Nuclear Structures

Session Co-Moderators: Gustavo J. Parra-Montesinos
Associate Professor
University of Michigan
Ann Arbor, MI

Herman L. Graves III
Senior Structural Engineer
U.S. Nuclear Regulatory Commission
Washington, DC

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

Tuesday, March 20, 2012
8:30 am - 10:30 am

Composite and Modular Structures, Part 1 (cont.) **REUNION G**

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.

Tuesday, March 20, 2012
8:30 am - 10:30 am

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.) **REUNION A**

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.

Tuesday, March 20, 2012
8:30 am - 10:30 am

Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 1 **REUNION B**

Sponsored by ACI Committees 231, Properties of Concrete at Early Ages; and 236, Material Science of Concrete

Session Co-Moderators: Joseph J. Biernacki
Associate Professor
Tennessee Technological University
Cookeville, TN

Zachary C. Grasley
Assistant Professor
Texas A&M University
College Station, TX

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.

Tuesday, March 20, 2012
8:30 am - 10:30 am

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.

Tuesday, March 20, 2012
8:30 am - 10:30 am

Quality Control and Robustness of SCC, Part 2 **REUNION E**
Sponsored by ACI Committee 237, Self-Consolidating Concrete

Session Moderator: 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.

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.) **REUNION E**

A Newly Developed Probe for Measuring the Rheology of Concrete Inside a Ready Mixed Drum **9:43 am**
Denis Beaupre, Managing Director, IBB Rheology, Quebec, QC, Canada

Effective Monitoring of Raw Materials and Concrete Performance during Production of SCC **10:07 am**
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 **REUNION G**
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.

Tuesday, March 20, 2012
11:00 am - 1:00 pm

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.

Tuesday, March 20, 2012
11:00 am - 1:00 pm

Design and Construction of Concrete Tanks for Refrigerated Liquefied Gas Containment, Part 2 (cont.) **REUNION A**

ACI 376 Code and Commentary: Construction Performance Requirements **11:00 am**
Neven Krstulovic-Opara, Lead Civil & Structural Engineer, Exxon Mobil, Houston, TX

ACI 376 Code and Commentary: Foundation Requirements **11:30 am**
Mike S. Brannan, Retired, Katy, TX

ACI 376 Code and Commentary: Commissioning **12:00 pm**
Thomas R. Howe, Principal Engineer, KBR, Houston, TX

Construction of Current LNG Projects from Around the World **12:30 pm**
Robert Nussmeier, Chief Operating Officer, Baker Concrete Construction, Houston, TX; and **Thomas R. Howe**, KBR

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

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.) **REUNION E**

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.

Tuesday, March 20, 2012
11:00 am - 1:00 pm

Science and Art of Grouting and Grouting Materials, Part 2 **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
11:00 am - 1:00 pm

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

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.

Tuesday, March 20, 2012
11:30 am - 1:00 pm

A Fracture Approach for FRP-Concrete Structures, Part 1 **REUNION B**
Sponsored by ACI Committee 440, Fiber-Reinforced Polymer Reinforcement, and Joint ACI-ASCE Committee 446, Fracture Mechanics of Concrete

Session Co-Moderators: Maria M. Lopez
Associate Professor
Pennsylvania State University
University Park, PA

Christian Carloni
Assistant Professor
University of Hartford
West Hartford, CT

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.) **REUNION B**

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

Tuesday, March 20, 2012
1:30 pm - 3:30 pm

A Fracture Approach for FRP-Concrete Structures, Part 2 REUNION B
Sponsored by ACI Committees 440, Fiber-Reinforced Polymer Reinforcement, and 446, Fracture Mechanics of Concrete

Session Co-Moderators: Christian Carloni
Assistant Professor
University Of Hartford
West Hartford, CT

Maria M. Lopez
Associate Professor
Pennsylvania State University
University Park, PA

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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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.

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

Tuesday, March 20, 2012
1:30 pm - 3:30 pm

A Fracture Approach for FRP-Concrete Structures, Part 2 (cont.) **REUNION B**

Fracture Characteristics of Notched Concrete Beams ShearStrengthened with CFRP Sheets Subjected to High Temperature **1:50 pm**
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 **2:10 pm**
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 **2:30 pm**
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 **2:50 pm**
Ahmed Godat, Postdoctoral Fellow, University of Quebec, Montreal, QC, Canada; and **Omar Chaalal**, University of Quebec

SRG Application for Structural Strengthening of RC Beams **3:10 pm**
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.

Tuesday, March 20, 2012
1:30 pm - 3:30 pm

Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 2 **REUNION C**

Sponsored by ACI Committees 231, Properties of Concrete at Early Ages; and 236, Material Science of Concrete

Session Co-Moderators:

Joseph J. Biernacki
Associate Professor
Tennessee Technological University
Cookeville, TN

Gaurav N. Sant
Assistant Professor
University of California-Los Angeles
Los Angeles, CA

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.

Tuesday, March 20, 2012
1:30 pm - 3:30 pm

Early-Age Hydration Kinetics and Temperature Effects on Concrete Durability, Part 2 (cont.) **REUNION C**

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

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

Innovations in Chemical Admixture Technology as Related to Sustainability, Part 2 **REUNION E**
Sponsored by ACI Committee 212, Chemical Admixtures

Session Co-Moderators: Bradley K. Violetta
Industry Manager
BASF Construction Chemicals
Cleveland, OH

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

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.

Influence of Polycarboxylate Ether Polymers (PCE) on Sustainability in Concrete Production **1:30 pm**
Ketan R. Sompura, Product Engineer, Sika Corporation, Lyndhurst, NJ; and **Dominik Oetiker**, Sika Corporation

Tuesday, March 20, 2012
1:30 pm - 3:30 pm

Innovations in Chemical Admixture Technology as Related to Sustainability, Part 2 (cont.) **REUNION E**

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.

Tuesday, March 20, 2012
1:30 pm - 3:30 pm

Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 1 **REUNION G**
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;

Tuesday, March 20, 2012
1:30 pm - 3:30 pm

Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 1 (cont.) **REUNION G**

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 **REUNION A**
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 **1:30 pm**
Xiaowei Dai, PhD Student, University of Texas at Austin, Austin, TX

Early-Age Hydration Kinetics and Microstructure Development in Alkali-Activated Slag Systems **1:45 pm**
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 **2:00 pm**
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.) **REUNION A**

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 Rajabipour**, 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 **REUNION E**
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 **REUNION C**
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

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Tuesday, March 20, 2012
4:00 pm - 6:00 pm

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

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Tuesday, March 20, 2012
4:00 pm - 6:00 pm

Recent Advances in ASR Test Methods and Understanding Mitigation Mechanisms, Part 2 (cont.) **REUNION G**

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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;
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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, Frederickton, 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

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

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.

Tuesday, March 20, 2012
4:00 pm - 6:00 pm

Recent Advances in the Design of Prestressed Concrete Piles in Marine Structures in Seismic Regions, Part 1 (cont.) **REUNION B**

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 **REUNION A**
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

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.

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

Tuesday, March 20, 2012
4:00 pm - 6:00 pm

Research in Progress, Part 2 (cont.) **REUNION A**

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

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Tuesday, March 20, 2012
5:30 pm - 6:30 pm

Faculty Network Reception **REUNION FOYER**

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.

Wednesday, March 21, 2012
8:30 am - 10:30 am

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 Szecsy, 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.

Wednesday, March 21, 2012
8:30 am - 10:30 am

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.) **REUNION A**

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.

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 (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 **REUNION C**

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.

Wednesday, March 21, 2012
8:30 am - 10:30 am

The Sustainable Art of Concrete (cont.) **REUNION C**

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 **REUNION E**
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

Wednesday, March 21, 2012
8:30 am - 10:30 am

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.

Thursday, March 22, 2012
8:00 am - 5:00 pm

✓ACI Troubleshooting Concrete Construction **MORENO AB**
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.

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Notes

Notes

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Thank you for attending the ACI Spring 2012 Convention!

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

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