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ACI Fall 2007 Convention

October 14-18, 2007
El Conquistador Resort & Spa
Fajardo, Puerto Rico

American Concrete Institute
Board of Direction

Los Angeles, CA

SOUTHERN CALIFORNIA CHAPTER
Est. 1958
Our 50th Anniversary
aci
American Concrete Institute®
Advancing concrete knowledge

ACI Spring 2008 Convention

Design and Construction Compatibility

March 30-April 3, 2008
Hyatt Regency Century Plaza
Los Angeles, CA

For more information about the ACI Spring 2008 Convention, go to www.concrete.org.

President's Welcome

ACI Members and Guests—Welcome to Puerto Rico and the ACI Fall 2007 Convention!

We have been given the perfect opportunity to experience a destination that carries us far away from the traffic and chaos of our everyday lives. This island destination flawlessly combines its captivating history and high-spirited culture with the gorgeous landscape and serene beauty you can find nowhere else but Puerto Rico.

While you are enjoying the Caribbean cuisine and relaxing with your friends and colleagues, we also suggest that you experience many of the tours and programs that the ACI Puerto Rico Chapter has arranged. Enjoy a walk through the El Yunque rainforest, shop the local outlets, and tour Las Cabezas de San Juan and Old San Juan City. My wife, Diane, looks forward to meeting ACI guests at Sunday's afternoon Guest Tea.

Tours aside, this convention has so much to offer you! Whether you are earning Professional Development Hours, attending committee meetings, or sitting in on technical sessions, so much knowledge and experience can be shared and expounded upon.

Convention highlights include the Opening Session and Hardy Cross Lecture Series, the Opening Reception, a Mega Contractors' Day that includes five sessions and an afternoon lunch, and lastly, a Concrete Mixer that will emulate a Puerto Rican carnival.

Diane and I look forward to greeting you in Puerto Rico. We hope your convention and trip to Puerto Rico is productive and memorable! Thank you for your support and contributions to ACI.

Kind Regards,

David Darwin
ACI President

Governor's Welcome

ANÍBAL ACEVEDO VILÁ
GOVERNOR
COMMONWEALTH OF PUERTO RICO

**MESSAGE FROM THE GOVERNOR
OF THE COMMONWEALTH OF PUERTO RICO,
THE HONORABLE ANÍBAL ACEVEDO VILÁ,
ON THE OCCASION OF THE
AMERICAN CONCRETE INSTITUTE'S 2007 CONVENTION
IN FAJARDO, PUERTO RICO**

Welcome to Puerto Rico!

I am delighted to have the opportunity to extend, on behalf of our people, our warmest hospitality to all the participants in the American Concrete Institute's (ACI) 2007 Convention in Fajardo. We are honored that you have chosen "Puerto Rico Bridges the Americas" as this year's convention theme.

Over the past 50 years, the use of concrete in construction in Puerto Rico has transformed our island's landscape, providing a wide range of advantages, including safer and more secure housing for our people. Today, our expertise and materials in concrete production are sought throughout the Caribbean region.

For over 100 years, ACI has led the way in promoting the use and development of more effective technologies and products in the concrete industry. At this Convention, you will have a special opportunity to learn key information about the latest innovations in the field and establish contacts with an extraordinary group of people from all over the world who share your interests in construction.

American Concrete Institute's Convention schedule is truly impressive. It combines informative conferences, workshops and exhibits with leisurely moments where you will have the chance to visit some of most renowned sites like the El Yunque rainforest and, of course, the Old San Juan, one of the oldest and most spectacular Spanish colonial settlements in the Americas. I encourage you to discover them and to learn more about our diverse culture and friendly people who will help make this an unforgettable experience.

Best wishes on a successful Convention!

Aníbal Acevedo Vilá

LA FORTALEZA

Get More than ever before!

To give ACI members more of the tools, information, and contacts needed to excel, the American Concrete Institute proudly announces new benefits available to members. When coupled with existing member benefits, ACI membership includes:

- Concrete Knowledge Center—Instant access to help using ACI 318
- Free CEUs Online
- Free Downloads of ACI Documents and Archived Papers
- Periodical Options
- Membership Directory
- Career Center

Visit the ACI Bookstore located in the Atrium Lobby of the El Conquistador Resort & Spa to learn more about what's included in ACI membership.

American Concrete Institute®
Now offering more value to members!

Students!

ACI offers free student electronic membership. For details on the connections, resources, and opportunities available to students, visit:

www.students.concrete.org

American Concrete Institute®
Student E-Membership

ACI Sustaining Members

ALJANS

Buzzi Unicem USA

Allen Engineering Corp.

Cemex Inc.

Owner of FACE Consultants Profiling

ALLFLAT

Concrete Engineering Specialists

Ash Grove Cement Co.

Concrete Reinforcing
Steel Institute

Ashford Formula

Construction Materials
Engineering Council (CMEC)

Baker Concrete Construction, Inc.

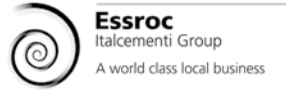
BASF Admixtures, Inc.

CTL Group

BCS

Dayton Superior

Boral Material Technologies, Inc.

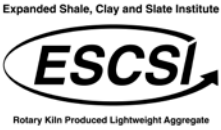


Essroc Italcementi Group

ACI Sustaining Members

The Euclid Chemical Co.

Keystone Structural Concrete, Ltd.



Expanded Shale,
Clay & Slate Institute

Kleinfelder, Inc.

Future Tech Consultants

Lafarge North America

Lehigh Portland Cement Co.

W.R. Grace & Co.

Lithko Contracting, Inc.

Ground Heaters, Inc.

Meadow Burke

Headwaters Resources, Inc.

W. R. Meadows, Inc.

Holcim (US) Inc.

Municipal Testing Lab

ICS Penetron

ACI Sustaining Members

Nox-crete Products Group

Omya Canada, Inc.

Oztec

PNA Construction Technologies Inc.

Portland Cement Association

Precast/Prestressed Concrete Institute

ProMix Technologies

CONCRETE SYSTEMS

SI Concrete Systems

Seretta Construction, Inc.

Sika Corp.

S. K. Ghosh Associates Inc.

Spurlino Materials

St. Lawrence Cement Co.

Structural Preservation Systems

Structural Services, Inc.

Tru Wall Concrete, Inc.

Westroc, Inc.

Sustaining Members listed as of 8/30/07

Convention Sponsors

Sponsors are listed as of 9/6/07.

The ACI Puerto Rico Chapter wishes to thank the following organizations for their donations to make the ACI Fall 2007 Convention a success.

Naranjito Cable Stayed Bridge

CEMEX
Puerto Rico Department of Transportation
RUMS of Puerto Rico

Teodoro Moscoso Bridge

CARMELO
Puerto Rico Tourism Company

San Antonio Bridge

BASF Construction Chemicals, LLC
Instituto de Ingenieros Civiles de Puerto Rico

Martin Peña Bridge

Caribe Tecno
CMA, Architects & Engineers, LLP
CSA Group
Del Valle Group
Elefante Rojo/Concretaras de Puerto Rico
ESSROC
Fuentes Concrete Piles
Master Concrete
Puerto Rico Convention Bureau
R.B. Construction Corp.

Convention Sponsors

Sponsors are listed as of 9/6/07.

Norzagaray Bridge

Asociación de Productores de Hormigón Premezclado de PR
Behar-Ybarra & Associates
Desarrollos Metropolitanos
Empresas Terrassa
Iglesias, Vazquez & Assoc.
Portland Cement Association
Sika Corp.
W. R. Grace & Co.

Los Frailes Bridge

BetterRoads Asphalt Corp.
Bird Construction
The Euclid Chemical Co.
Salmons Technologies, Inc.

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ACI Puerto Rico Chapter Convention Committee

Co-Chairs
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PORTICUS

Carlos A. Lázaro
Ing. Carlos A. Lázaro León & Assoc., CSP

Contractors' Day
José D. Pérez-Muñiz
Caribe Tecno

Exhibits
Madeline Valentín
Exhibitors Sales & Marketing

Finance/Fundraising
Melba Figueroa
CARMELO

Golf Tournament
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Villegas Ingenieros CSP

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Ildefonso Burgos

Student Program
Ricardo Valentín
BASF Construction Chemicals LLC

Technical Program
Angel Herrera
Angel Herrera, PE

Treasurer
René Di Cristina
Empresas Díaz

Basic words/phrases in Spanish

Good day	Buenos días	(BWEH-nohss DEE-ahss)
Good-bye	Adiós	(ah-DYOHSS)
Yes	Sí	(SEE)
No	No	(NOH)
Please	Por favor	(POHR fah-VOR)
Thank you	Gracias	(GRAH-syahss)
Excuse me	Perdón	(pehr-DOHN)
My name is	Me llamo…..	(meh YAH-moh)
Where is	Dónde está	(DOHN-deh ehss-TAH)
Spanish	Español	(EHS-pah-NYOL)

General Information

ACI Registration **Atrium Lobby**

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	8:00 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  on their name badge. Please welcome them to the convention!

The coqui frog (pronounced ko-kee) is known for its unique song it sings especially after rain or dark. Inspiring poems, stories, and artwork, this tiny frog has been the love of Puerto Rico for many generations.

Schedule Changes **Atrium Lobby**

Cancellations, additions, and location changes to the convention schedule will be posted daily on a plasma screen in the Atrium Lobby.

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 El Conquistador operator through extension 8-8.

Beverage Breaks **Exhibit Area – Grand Caribbean Foyer**

Beverages will be available at the following times:

Saturday	Punch & Soda: 2:00 pm – 5:00 pm
Sunday	Coffee: 7:30 am – 10:30 am
	Punch & Soda: 1:00 pm – 3:00 pm
	*Rum Garden: 3:00 pm – 5:00 pm

General Information

Monday & Tuesday	Coffee: 7:30 am – 10:30 am
	Punch & Soda: 1:00 pm – 4:00 pm
	*Rum Garden: 4:00 pm – 6:00 pm
Wednesday	Coffee: 7:30 am – 10:30 am

* The daily Rum Garden is sponsored by RUMS of Puerto Rico.

ACI Water Bottle
Containers of ice water will be available all day for you to refill your ACI water bottle received with your registration materials.

Alcohol Policy
Non-alcoholic beer and soft drinks are available at all ACI-sponsored receptions. The legal drinking age in Puerto Rico is 18; however, some pubs and other entertainment locations will not allow you to drink if you are under the age of 21.

ACI Bookstore **Atrium Lobby**
Visit the ACI Bookstore 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

Career Center **ACI Bookstore—Atrium Lobby**
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 resumé and to view, apply for, and save available jobs. 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—Atrium Lobby**
To learn MORE about the new ACI membership benefits and how to become a member, visit the ACI Bookstore in the Atrium Lobby.

Cyber Café and
Wireless Hot Spot **Grand Caribbean Foyer**
Stay connected to home and work! Take advantage of the Cyber Café and FREE wireless hot spot available during the following hours:

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

General Information

A FREE wireless hot spot will be available in the Grand Caribbean & Atlantic Foyers. To access the wireless connection, look for ACI Cybercafé 1 or ACI Cybercafé 2 in your network connections.

Session Handouts on Demand **Cyber Café—Grand Caribbean Foyer**

Session handouts are now available via the ACI website. Stop by the Cyber Café or go to **www.concrete.org** to download or print a copy of the handouts for the sessions you plan to attend.

Local Information and ACI Puerto Rico Chapter **Atrium Lobby**

ACI Puerto Rico Chapter members will be happy to answer questions. Stop by their information desk during the following hours:

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

Sun Warning

The sun in Puerto Rico is extremely strong. Be sure to wear sunscreen with SPF 30 or higher every day. Individual packets of sunscreen will be available at the ACI registration desk and the ACI Puerto Rico Chapter desk.

Dine Arounds **Atrium Lobby**

On Monday, October 15, 2007, ACI attendees will have an opportunity to visit Old San Juan. ACI has reserved seats at the following restaurants in Old San Juan at 7:00 pm and 8:00 pm.

311 Troi Cent Onze – French
Baru – Spanish tapas
El Patio de Sam – international **Il Perugino** – Italian
Fratelli – Italian
Il Perugino – Italian
La Mallorquina – Spanish and international
Marmalade – French
Old Harbor Brewery Steak and Lobster House
Tamarind Steakhouse
Tantra – Indian

- If you have requested a reservation in advance, please see the Dine Around Information Table to obtain your confirmation.
- If you have not already made a reservation, please go to the Dine Around Information Table located in the Atrium Lobby to select an available restaurant during the following times:

Saturday	2:00 pm – 6:00 pm
Sunday	7:30 am – 5:00 pm
Monday	8:00 am – 3:00 pm

General Information

Dine Around Transportation
Shuttles will depart from the El Conquistador main entrance. Return shuttles will stop at the Fajardo Inn, Wyndham Rio Mar, and El Conquistador. Complimentary shuttles will go to/from Old San Juan at the following times:

To Old San Juan	To Hotels
5:30 pm	9:00 pm
6:00 pm	10:00 pm
6:30 pm	11:00 pm
7:00 pm	12:00 am
7:30 pm	
8:00 pm	

Please note: Old San Juan is one hour (one-way) from the El Conquistador. Please keep this in mind when confirming reservations.

Be sure to refer to the map of Old San Juan between pages 24 and 25 for restaurant locations.

Hotel Restaurants & Lounges

*= advance reservations recommended

El Conquistador Resort & Spa

***Strip House** – Steakhouse

Monday – Thursday	5:00 pm – 12:00 am
Friday & Saturday	5:00 pm – 1:00 am
Sunday	5:00 pm – 11:00 pm

***Ristorante Otellos** – Northern Italian Cuisine
Monday – Sunday Dinner only

***Blossoms** – Sushi Bar, Hunan, and Szechwan
Monday – Sunday Dinner only

***Stingray Café** – Caribbean-infused seafood cuisine
Monday – Sunday Dinner only

Café Bella Vista – Pizza, sandwiches, and salads
Open for lunch and dinner

Café Caribe – Coffee shop with sandwiches, traditional American dishes, and Caribbean specialties
Open for breakfast, lunch, and dinner

General Information

El Conquistador Restaurants—cont.
Casitas Café – A la carte breakfast

The Golf Grill – Serving lunch and cocktails
Open based on occupancy of hotel and use of the golf course

Las Brisas Restaurant – Buffet and a la carte breakfast
7:00 am – 11:00 am daily

Ventana Del Caribe
Open for lunch only

Ballyhoo Bar & Grill – Shrimp, conch fritters, quesadillas, and burgers
Open for lunch and dinner

Virgin Burgers – 50's style outdoor café with burgers and shakes, sandwiches, salads, and tropical drinks
Lunch only

Splash Bar – Swim-up bar with sandwiches, burgers, salads, and tropical drinks
Lunch only

Iguana's – Burgers, chicken, seafood, snacks, and tropical drinks (located on Palomino Island)

David's Cookies – Coffee, pastries, desserts, and sandwiches

Sweet Corner Café – Coffee, pastries, desserts, and sandwiches

Golden Door Spa Café – Light fare choices, fruit smoothies, and energy drinks

Fajardo Inn
The Star Fish Restaurant – Seafood and international food

Breakfast	6:30 am – 10:30 am
Dinner	6:00 pm – 10:00 pm

The Blue Iguana Mexican Grill & Bar – Mexican and grilled food

Lunch and dinner	11:00 am – 11:00 pm

Wyndham Rio Mar
Aqua Luna – Seafood

Dinner	6:00 pm – 10:00 pm

General Information

Club Coqui – Sandwiches and snacks poolside
Lunch 11:00 am – 4:00 pm

Cobitos – Caribbean specialties
Lunch 11:00 am – 4:00 pm

Iguana's Pub – Sandwiches and salads
Lunch 11:00 am – 5:00 pm

Marabella – Continental cuisine
Open for breakfast, lunch, and dinner until 10:00 pm

Palio – Italian
Dinner only 6:00 pm – 10:00 pm

The Grille Room – Steak and seafood
Dinner only 6:00 pm – 10:00 pm

Shimas – Asian bistro and sushi bar
Dinner only 6:00 pm – 10:00 pm

Transportation

Hotel Shuttles

Complimentary shuttles will run to and from the El Conquistador every 30 minutes during the following times:

Saturday	6:30 am – 10:30 pm
Sunday	5:00 am – 9:30 pm
Monday	5:30 am – 10:30 pm
Tuesday	5:30 am – 11:00 pm
Wednesday	6:00 am – 9:00 pm

Fajardo Inn – Shuttles depart from the main lobby. The Fajardo Inn is approximately ten minutes one way from the El Conquistador. ACI suggests departing at least 30 minutes prior to the event you wish to attend if staying at the Fajardo Inn.

Wyndham Rio Mar – Shuttles depart from the El Yunque Foyer. The Wyndham Rio Mar is approximately 20-30 minutes one way from the El Conquistador. ACI suggests departing at least 60 minutes prior to the event you wish to attend if staying at the Wyndham Rio Mar.

El Conquistador – Shuttles depart from the main entrance.

General Information

Airport Transportation
Airport transportation is available through the hotel in which you are staying. **Advance reservations are required**.

El Conquistador – See the concierge to make arrangements for your return shuttle **at least 24 hours in advance** of departure. The shuttle is $40 roundtrip per person for ACI attendees and will be added to your room bill.

Wyndham Rio Mar – See the Wyndham Rio Mar concierge to make arrangements **at least 24 hours in advance** of departure. The shuttle is $69 roundtrip per person and will be added to your room bill.

Fajardo Inn – Purchase your return ticket at ACI registration **at least 48 hours in advance** of departure.

All attendees are encouraged to depart your hotel at least three hours in advance of your flight.

Professional Development Hours (PDHs)
You can earn PDHs by participating in the sessions in Puerto Rico. Simply fill out the PDH form found in your registration packet, or between pages 148 and 149, and submit it to your local registration board. PDHs are a nationally recognized unit of record in noncredit professional development programs.

Speaker Ready Room **Salon 8**
The Speaker Ready Room is available to moderators, speakers, and committee Chairs during the following hours:

Saturday – Tuesday	7:00 am – 7:00 pm
Wednesday	7:00 am – 3:00 pm

All speakers are requested to check in at the Speaker Ready Room one day prior to their session to ensure that:
- **ACI has downloaded their presentation on the network in the session rooms**
- **Speakers' session handouts are downloaded onto the ACI website**

ACI Spring 2008 Convention Information **Atrium Lobby**
The ACI Los Angeles Chapter will be available to answer your questions about Los Angeles and activities at the spring convention. Mark your calendars for March 30 – April 3, 2008!

Where's That Meeting Room?

Lobby Level	Abbreviation
Atrium Lobby	Atrium Lobby
Casa Blanca Lounge	Casa Blanca
Ceiba A	Ceiba A
Ceiba B	Ceiba B
Club Lounge	Club Lounge
Culebra A	Culebra A
Culebra B	Culebra B
Grand Atlantic Ballroom	Atlantic Ballroom
Grand Atlantic Ballroom, Salon 1	Atlantic Salon 1
Grand Atlantic Ballroom, Salon 2	Atlantic Salon 2
Grand Atlantic Ballroom, Salon 3	Atlantic Salon 3
Grand Caribbean Ballroom	Caribbean Ballroom
Grand Caribbean Ballroom, Salon 1	Salon 1
Grand Caribbean Ballroom, Salon 2	Salon 2
Grand Caribbean Ballroom, Salon 3	Salon 3
Grand Caribbean Ballroom, Salon 4	Salon 4
Grand Caribbean Ballroom, Salon 5	Salon 5
Grand Caribbean Ballroom, Salon 6	Salon 6
Grand Caribbean Ballroom, Salon 7	Salon 7
Grand Caribbean Ballroom, Salon 8	Salon 8
Icaco A	Icaco A
Icaco B	Icaco B
Las Croabas A	Las Croabas A
Las Croabas B	Las Croabas B
Main Entrance & Porte Couchere	Main Entrance & Porte Couchere
Palmas A	Palmas A
Palmas B	Palmas B
Palominito A	Palominito A
Palominito B	Palominito B
Siete Mares A	Siete Mares A
Siete Mares B	Siete Mares B
Vieques A	Vieques A
Vieques B	Vieques B

Where's That Meeting Room?

Mezzanine Level	**Abbreviation**
Boardroom 1	Boardroom 1
Boardroom 3	Boardroom 3
Boardroom 4	Boardroom 4
Mirador Level	
El Faro Terrace	El Faro Terrace
Flamboyan A	Flamboyan A
Flamboyan B	Flamboyan B
Gardenia	Gardenia
Magnolia Ballroom	Magnolia
Magnolia Ballroom Foyer	Magnolia Foyer
Mirador Terrace	Mirador Terrace
Orchidea	Orchidea
Pablo Casals Ballroom	Pablo Casals
Poinsettia A	Poinsettia A
Poinsettia B	Poinsettia B
Poinsettia C	Poinsettia C
Violeta	Violeta

Introducing ACI's Career Center

ACI's Online Career Center brings together great job opportunities and great candidates.

This job search engine is specifically targeted to the concrete industry.

- **Easy online job management**
- **Resume searching access**
- **Company awareness**
- **FREE Student Internships**

Don't miss this unique opportunity to be seen by an exclusive audience of the industry's best and brightest! Visit **www.concrete.org** or stop by the Career Center at the ACI Bookstore in the Atrium Lobby.

American Concrete Institute®
Now offering more value to members!

Exhibitors

Exhibitors listed as of 9/6/07

Please check the ACI Puerto Rico Chapter Desk for an updated listing of exhibitors.

Exhibits **Grand Caribbean Foyer**

The ACI Puerto Rico Chapter and the American Concrete Institute wish to thank all exhibitors for their participation and support of the ACI Fall 2007 Convention.

Exhibit Hours

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

Exhibitor Listing

ADAPT Corporation **Booth #59**

ADAPT Corporation is a world-renowned developer of structural concrete design software. ADAPT specializes in software for reinforced concrete and post-tensioned floor systems, beams, and mat foundations. The exhibit will highlight the latest developments in rebar design technology—3D FEM, crack section analysis, Dynamic Rebar Design® (DRD), and Revit Integration.

BASF Construction Chemicals, LLC **Booth #40 & 44**

The admixture systems business of BASF Construction Chemicals is a leading provider of innovative additives for specialty concrete used in ready mixed, precast, manufactured concrete products; underground construction; and paving markets throughout the NAFTA region. The company's respected Master Builders brand products are used to improve the placing, pumping, finishing, appearance, and performance characteristics of concrete. Contact BASF Construction Chemicals at 787-258-2737, visit www.basf-admixtures.com or www.basfbuildingsystems.com.

Boral Material Technologies, Inc. **Booth #3**

Boral Material Technologies, Inc. (BMTI), is a leading marketer of fly ash and all coal combustion products. With more than four decades of experience marketing fly ash to the concrete industry, Boral is a pioneer in the development of new construction material technologies. Ready mixed concrete producers and contractors improve their operations with the aid of BMTI's supply reliability, technical expertise, and sales and service support.

Exhibitors

Exhibitors listed as of 9/6/07

Burgess Pigment Company **Booth #33**
Burgess Pigment Company is the manufacturer of Optipozz, a pozzolanic metakaolin used to improve compressive and flexural strength, durability, chemical resistance, and trowelability of high-strength mixture designs.

Business Contractor & Investment (BCI) **Booth #49**
BCI, Inc. is an employment agency founded and established under the laws of the Commonwealth of Puerto Rico and certified by the Labor Department to provide technical and professional services. We are human resources specialists who became business partners with contractor's agencies to help them meet their business goals in their personnel recruitment.

Buzzi Unicem USA **Booth #2**
Buzzi Unicem USA is the fourth largest cement company in the United States. Buzzi Unicem is the manufacturer of Qwix and Ultimax rapid-hardening cement products.

CARMELO **Booth #53 & 57**
CARMELO is a manufacturer of construction materials, a recycler and distributor of fly ash, a researcher and developer of sustainable products and processes, and a provider of technical services. The company is committed to using its knowledge and experience to collaborate with customers to help them succeed. Founded in 1955 as a concrete masonry manufacturer, Carmelo employs more than 300 people in six municipalities on the island of Puerto Rico to serve its principal products; aggregates; as well as concrete products, industrialized mortars, and recycling and distributing fly ash to the construction and agricultural industry.

Cardared Caribbean Corp. **Booth #42**
Cardared Caribbean Corporation handles sales and services of construction drains, tower cranes, lift and solar light systems, electric lights for roads or buildings and everything for PVC plumbing and cement mixers.

Carolina Stalite Company **Booth #45**
Stalite is a high-performance lightweight aggregate manufactured by expanding slate in a rotary kiln at high temperatures. Lightweight concrete produced using Stalite has reduced density that improves structural efficiency and reduces handling costs for precast elements, has enhanced durability, and a design compressive strengths of 10,000 psi or more.

Exhibitors

Exhibitors listed as of 9/6/07

CEMEX **Booth #37 & 41**

As a growing global building-solutions company, CEMEX produces, distributes, and markets cement, ready mixed concrete, aggregates, and related building materials in more than 50 countries. They work to provide products of consistently high quality and reliable service to customers and communities around the world. CEMEX advances the well-being of those they serve through their unwavering focus on continuous improvement and their efforts to promote a sustainable future. For more information, visit www.cemex.com.

CIECO **Booth #62, 63, 66, 67**

Concreteras de Puerto Rico **Booth #60**

Concreteras de Puerto Rico is a dynamic ready-mix company supplying the construction industry with the highest quality concrete products and excellent customer service and technical support.

ConsPro Corporation/
Bull-Bond Manufacturing Corporation **Booth #65**

ConsPro Corporation is a dynamic and innovative company specializing in the distribution of high-quality building materials to the construction industry in Puerto Rico and the Caribbean. They exclusively handle the distribution of BULL-BOND® products and carry specialized materials from local and U.S.-based companies. ConsPro is praised for its excellent technical support and customer service.

Dayton Superior **Booth #25**

Dayton Superior offers a specialty line of chemical solutions including underlayments, bond breakers, and release agents for use in concrete construction. Green and earth-friendly products are available.

Degussa Corporation **Booth #61**

Degussa Corporation manufacturers the Protectosil® line of building protection products that include: high-performance water repellents, corrosion inhibitors, anti-graffiti coatings, and stay-clean technologies. Its corrosion inhibitor, Protectosil® CIT, has been used on many structures throughout Puerto Rico and the Caribbean. Stop by their booth to learn how their products can help to protect your structure and save you money.

Exhibitors

Exhibitors listed as of 9/6/07

Departamento de Transportacion y Obras Publicas de PR **Booth #64 & 68**

The Department of Transportation and Public Works of the Commonwealth of Puerto Rico has been in charge of developing the transportation infrastructure since 1952. Under its umbrella, several public corporations provide many valuable services to the island. These include the Highway and Transportation Authority, Ports Authority, Metropolitan Bus Authority, Maritime Transportation Authority, Drivers Service Directorate, and Public Works Department.

Diversified Green Energy **Booth #34**

Diversified Green Energy supplies photovoltaic (PV) technology products for outdoor illumination. The PV technology uses solar cells or solar photovoltaic arrays to convert energy from the sun into electricity. Their solar-powered outdoor lighting systems are used for streets, parking lots, security perimeters, and recreational areas.

Excend, Inc. **Booth #30**

Excend, Inc.'s, DUCON is a new micro-concrete with up to 29,000 psi compressive strength, 11,000 psi flexural strength, and amazing ductility. It is excellent for blast and seismic resistance and structural and architectural use.

FORTA Corporation **Booth #29**

FORTA Corporation was founded in 1978. FORTA is the oldest synthetic fiber reinforcement producer in the country. FORTA Corporation has grown to become a worldwide leader in synthetic fiber research and development. The most recent innovation is FORTA Ferro, a macro-synthetic fiber that allows for a higher replacement level of conventional steel reinforcement.

Geophysical Survey Systems, Inc. (GSSI) **Booth #21**

Geophysical Survey Systems, Inc.(GSSI), the world leader in ground-penetrating radar (GPR), exhibits the most advanced GPR products used for the nondestructive inspection of concrete. GSSI easily and accurately locates rebar, post-tension cables, metallic and nonmetallic conduits, and other embedded objects. Effortlessly inspect floors, walls, decks, slabs, tunnels, balconies, and garages.

Exhibitors

Exhibitors listed as of 9/6/07

Germann Instruments, Inc. **Booth #35 & 36**
Germann Instruments, Inc., has been the leader in nondestructive testing (NDT) of concrete structures. Their cutting-edge innovative product line presents systems for resistance to chloride penetration, chloride content, air entrainment, maturity, compressive and tensile strength, corrosion rate, gas and water permeation, reinforcing bar location, autogenous shrinkage, ultrasonic 3-D imaging, shear wave tomography, and rheology.

Iber Lumber, Inc./Kryton International **Booth #46**
Kryton International has been a worldwide leader in the manufacturing and distribution of crystalline concrete waterproofing systems since 1973. Their products are distributed in more than 40 countries, and their goals are to create concrete waterproofing, repair, and protection systems that perform as promised, identify real-life challenges within the construction industry, and develop creative solutions.

Innovative Building Systems **Booth #55**
Innovative Building Systems (IBS) is a research and development company and manufacturer of GFRC Architectural precast products for the building industry, established in San Juan, Puerto Rico and manufacturing facilities in Santo Domingo, Dominican Republic. Products range from civil (retaining walls) architectural panels, urban furniture, landscaping and building ornaments to the IBS construction system, US Patent 7,185,467.

International Concrete Repair Institute **Booth #17**
The mission of the International Concrete Repair Institute (ICRI) is to be a leading resource for education and information to improve the quality of repair, restoration, and protection of concrete and other structures in accordance with consensus criteria. For more information about the benefits of membership, stop by the booth or go to www.icri.org.

Intertrade Caribe Corporation **Booth #5**
For the past 30 years, Intertrade Caribe Corporation has distinguished itself as the most innovative company in the sales and distribution of construction specialized products in Puerto Rico. Due to their vast experience, rigorous training, and practices, they have obtained the exclusive distribution of globally recognized brands such as SIKA, BONSAL, Albion, TNEMEC, CURECRETE, Backer Rod, STONHARD, and NOMACO.

Exhibitors

Exhibitors listed as of 9/6/07

J.C. Caribe, Inc. **Booth #27 & 28**

J.C. Caribe, Inc., is a concrete and accessories distributor representing manufacturers of cementitious products, chemical products, waterstops, formliners, stucco products, tilt-up systems, highway products, and other forming systems. Established in 1984, J.C. Caribe, Inc., was previously a BURKE CONCRETE owned company.

Maccaferri, Inc. **Booth #56**

Maccaferri Group has been globally active in fiber-reinforced concrete solutions for more than 25 years. Wirand Steel Fibers and Fibromac Synthetic Fibers for concrete reinforcement provide solutions such as linings for tunnels, industrial floors, and precast elements for structural engineering. Visit www.maccaferri-usa.com for more information.

MALA **Booth #14**

MALA is the world leader in ground-penetrating radar (GPR) technologies for many subsurface, industrial, and nondestructive testing applications. MALA offers the CX10 & CX11 concrete imaging system for imaging reinforcing bar, post-tension cable, and other embedded features. MALA leads in the concrete imaging field for live cables and conduits and boasts the highest-frequency, highest-resolution transducer available for any competing systems.

Morris & Associates **Booth #13**

Morris & Associates have been engineering custom refrigeration equipment for over 60 years. Morris designs modular concrete cooling systems for ready mixed and on-site batching facilities. Modular configurations include water chilling, aggregate cooling, and ice equipment. Take the guesswork out of concrete cooling—make, store, weigh, and automate ice batching from a single container.

Olson Engineering, Inc. **Booth #10**

Olson Engineering, Inc., has become an industry leader in nondestructive evaluation and internal condition assessment of civil structures and infrastructure. Olson Instruments is a pioneer in research and development of nondestructive evaluation and testing software and hardware. Visit their booth for more information and a hands-on demonstration.

Exhibitors

Exhibitors listed as of 9/6/07

OMYA Canada, Inc. **Booth #22**
OMYA is the leading producer of calcium carbonate worldwide, supplying the paper, paint, plastic, food, and pharmaceutical industries with major applications in the industrial markets and particularly in concrete, ready mixed, and building material applications.

Panexus Corporation **Booth #50 & 51**
Panexus Corporation is committed to improving new and existing concrete and repairing deteriorating concrete. Panexus offers chemical admixtures, curing compounds, release, cementitious products, toppings, grouts, epoxies, neoprene pads, waterstops, fiber and full technical support and services to meet the needs of their customers. Stop by the booth to learn more or visit www.panexus.com.

Parex **Booth #38**
Parex is a leading exterior insulation and finish system (EIFS) and architectural coatings manufacturer with 20 years of experience in the U.S. construction market. Parex offers products designed for commercial and residential construction and for interior and exterior use. Parex works with local distributors to offer efficient and timely service.

Polysteel **Booth #39**
Polysteel insulating concrete forms (ICFs) provide a superior construction technology that delivers cost-effective, high-performance structures that are safer, quieter, more comfortable, energy efficient, structurally secure, and environmentally more responsible than any building system available on the market today.

Polytechnic University of Puerto Rico **Booth #19**
Polytechnic University of Puerto Rico is a private, nonprofit educational institution founded in 1966, which offers a college education in the field of engineering. The institution offers Bachelor's degrees in civil, chemical, electrical, computer, mechanical, industrial, and environmental engineering; land surveying; and architecture. Graduate programs are offered in engineering, management, and landscape architecture.

Exhibitors

Exhibitors listed as of 9/6/07

Proceq USA **Booth #26**
Proceq USA offers a complete range of portable concrete testing instruments for nondestructive site investigations. Products include the Original SCHMIDT Concrete Test Hammer, Profometer 5+ Rebar Detection System, as well as a host of other products for ultrasonic pulse velocity, corrosion analysis, resistivity, permeability, and pulloff/bond strength test applications.

QuakeWrap Inc. **Booth #18**
QuakeWrap Inc.'s award-winning technology provides solutions for the repair and strengthening of structures using fiber-reinforced polymers (FRPs) at a fraction of the time and cost of conventional methods. Within one integrated process, their highly-skilled engineers and construction crew create innovative solutions specifically tailored to clients. Applications include beams, columns, walls, tanks, pipes, and underwater pipes. Please visit their website at www.QuakeWrap.com.

Routledge/Taylor & Francis Group **Booth #47**
Routledge/Taylor & Francis Group publishes a wide array of books and journals in engineering. Please visit the Routledge display to browse titles of interest and take advantage of the 20% convention discount.

Sensors & Software, Inc. **Booth #48**
Sensors & Software, Inc., is recognized worldwide as the leading manufacturer of cutting-edge ground-penetrating radar (GPR) systems, and sells and rents a wide range of subsurface imaging products. Conquest systems are designed for quick evaluation of concrete. Conquest delivers fast, real-time imaging for people who need to evaluate, drill, or cut structures on the spot. Locate reinforcing bar, conduits, post-tension cables, and reinforcing wire mesh easily and transfer data to a PC for further enhancement or inclusion in reports. Contact Sensors & Software at 1-800-267-6013 or 1-905-624-8909, email at sales@sensoft.ca or visit their website at www.sensoft.ca.

Exhibitors

Exhibitors listed as of 9/6/07

Sika Corp. **Booth #4**

Sika Corp. Construction Products Division, Lyndhurst NJ, is a technology leader with over 90 years of experience in concrete materials and restoration technology. Sika's product line includes concrete admixtures, sealants, adhesives, corrosion inhibitors and total corrosion management products, specialty mortars, epoxy resins, structural strengthening systems, grouts, anchoring adhesives, resinous flooring and wood floor adhesive systems, and installation products. Full service sales and technical offices support customers nationwide. Please visit the Sika Corporation Construction Products Division website at www.sikaconstruction.com.

St. Lawrence Cement Co. **Booth #58**

St. Lawrence Cement Co. manufactures portland cement, Gran CEM, and slag cement. St. Lawrence Cement is proud to promote the second annual Holcim Awards for sustainable construction competition.

Transpo Industries, Inc. **Booth #52**

Transpo Industries, Inc., is a manufacturer and distributor of "Smart Solutions" for the transportation industry. Their polymer concrete materials for roads and bridge deck rehabilitation/preservation are fast-setting, long-lasting, and water/corrosion-resistant. Precast polymer concrete products include barrier panels for roads, tunnels, and bridge rails as well as ADA-compliant detectable warning tiles.

Vector Corrosion Technologies **Booth #1**

Vector Corrosion Technologies provides products and services for concrete corrosion protection. Vector's innovative solutions include electrochemical chloride extraction, impressed current cathodic protection, and an array of galvanic protection systems, including embedded galvanic anodes, galvanic jackets, and activated arc-spray zinc metalizing. Vector also provides corrosion evaluation and mitigation of post-tension corrosion. Contact Vector at 813-830-7566 or visit www.vector-corrosion.com.

Exhibitors

Exhibitors listed as of 9/6/07

W.R. Grace & Co. **Booth #54**

W.R. Grace's quality building materials can be found in nearly every major project around the globe and are being specified more often because they offer long-term value. Grace Construction Products delivers a level of service and support for its products that is unique in the industry, offering highly skilled personnel around the world to assist customers in the use of Grace products. As a result, the world's most important structures stand protected from the ravages of water, fire, erosion, corrosion, and time.

Xypex Chemical Corporation **Booth #43**

Xypex Chemical Corporation manufactures high-performance products for the protection and waterproofing of concrete.

Special Events
Saturday, October 13, 2007

✓Golf Tournament **Meet at Golf Course**
9:00 am – 3:00 pm
$195 U.S. per person

The ACI Puerto Rico Chapter is hosting a golf tournament. There will be a shotgun start at 9:00 am. The format of play is a scramble. Tournament fees include a continental breakfast, green fees, cart, cooler with bottled water and sodas, beverages on holes 16 & 6, cocktails and lunch served following the tournament, raffled items, awards, and lots of pampering from local players. Club and shoe rentals are available, but limited.

Sunday, October 14, 2007

First-Time Convention Attendee Breakfast **Flamboyan A**
7:00 am – 8:00 am
Sponsored by the ACI Convention Committee
Session Moderator: Debrethan R. Orsak

First-time convention attendees are invited to join Debby Orsak, ACI Convention Committee member, 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.

Student Concrete Cube Competition honoring Raymundo Rivera-Villarreal **Pablo Casals**
12:30 pm – 4:30 pm
Sponsored by Committee E801, Student Activities, and the ACI Puerto Rico Chapter
Session Moderator: John J. Myers

The objective is to produce a concrete cube that achieves, as closely as possible, target design strength and a target mass as specified in the rules. Don't miss this exciting competition! Stop by and cheer on your favorite team!

✓Separate Fee Required

Special Events
Sunday, October 14, 2007

Opening Session and Hardy Cross Lecture Series **Atlantic Salons 1 & 2**
5:00 pm – 6:00 pm

The convention officially kicks off at the Opening Session where Mete Sozen will deliver the Hardy Cross Lecture Series. Hardy Cross wished that the analysis of a structure for continuity would be less complicated than the determination of anchorage and stirrup spacing. In our time, we find that his wish has been achieved by turning it on its head. The determination of bar anchorage and stirrup spacing have become more complicated than Cross's approach to analysis. It has been said that it took an age to understand Aristotle and another age to forget him. Hardy Cross may have been forgotten even before he was understood. In this talk, we remember him with the hope that remembrance will encourage understanding of what he meant by "All analyses are based on some assumptions which are not quite in accordance with the facts. From this, however, it does not follow that the conclusions of the analysis are not very close to the facts." We ponder what he meant by "very close" and what he meant by "facts."

Opening Reception—Welcome to Puerto Rico!
Approximately 6:00 pm – 9:00 pm
Main Pool & Trellises – weather permitting
Grand Caribbean Foyer & Terrace – inclement weather
Following the Opening Session, meet your colleagues, friends, and exhibitors for beverages and a hearty taste of Puerto Rico hosted by the ACI Puerto Rico Chapter and RUMS of Puerto Rico.

PLEASE USE THE DRINK TICKETS FOUND IN YOUR REGISTRATION PACKET FOR BEVERAGES THIS EVENING. Beverages are courtesy of RUMS of Puerto Rico.

RUMS of PUERTO RICO
THE RUM CAPITAL OF THE WORLD

Special Events
Monday, October 15, 2007

Workshop for Technical Committee Chairs **Atlantic Salon 1**
6:30 am – 8:15 am
Sponsored by the Technical Activities Committee
Session Moderator: Kenneth B. Bondy

ACI Technical Committee Chairs are encouraged to attend this breakfast workshop for an opportunity to meet with fellow Chairs, TAC members, and ACI staff. There will be table discussions and short presentations on recent developments of interest to ACI technical committee Chairs.

Speaker Skills Training Breakfast **Magnolia**
7:00 am – 8:30 am
Sponsored by Committee E802, Teaching Methods and Educational Materials
Session Moderator: James Hanson

This session explores the objectives of a presentation at an ACI convention session or committee meeting. From these objectives comes a discussion of how to plan an effective presentation. A continental breakfast will also be served.

Special Events
Monday, October 15, 2007

✓**Student Lunch** **Atlantic Salon 1**
12:00 pm – 2:00 pm
$40 U.S. per person
Session Moderator: John J. Myers
Sponsored by the ACI Puerto Rico Chapter and ACI Committee E801, Student Activities

Speaker: Ramón L. Carrasquillo
President
Carrasquillo Associates LTD
Austin, TX

Topic: Are You an Engineer?

This presentation explores the way of life of an engineer as viewed from a student's perspective, which is mostly troubled by unanswered questions, confusion, and short-term battles lost as the student maneuvers through school. The speaker will address questions and topics such as "Do students learn at school?" "What makes an engineer?" and "Things you are not taught at engineering school but you need to know to be an engineer." This presentation will compare the black and white world of an engineering student with the gray world of a practicing engineer. In this presentation, Dr. Carrasquillo will describe the difference between an engineering way of life and an engineering job. How you find satisfaction in life by practicing your own engineering is the question to be answered by each of us.

Following lunch, awards will be presented to the winners of the Student Concrete Cube Competition. The Student Lunch is FREE for students who preregister. **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.*

Special Events
Monday, October 15, 2007

Women in ACI Reception **Mirador Terrace – weather permitting**
5:00 pm – 6:00 pm **Magnolia Foyer – inclement weather**

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 through networking and socializing. A hosted bar and light hors d'oeuvres will be served.

123 Forum: Do We Know What the Chloride Threshold is for Reinforcing Steel Corrosion? **Salon 4**
7:30 pm – 10:00 pm
Sponsored by Committee 123, Research and Current Developments
Session Moderator: Mohammad S. Khan

Following its long tradition, ACI Committee 123 brings industry experts together in Puerto Rico to debate on another subject and to share their views with ACI convention attendees. The debate this time is whether we know the chloride threshold for reinforcing steel corrosion. Currently, ACI itself does not have consistent chloride threshold in its various documents. This leads to some basic questions:

- Do we have a good understanding of what a chloride threshold is?
- What factors within the concrete and outside the concrete define a chloride threshold?
- Should there be a common chloride threshold for different concrete mixture proportions and concrete constituent types or different chloride thresholds for different variations present in concrete, at least the major ones?
- What role does alkalinity (or pH) of concrete play in establishing a chloride threshold for reinforced concrete?
- Does the chloride threshold change or remain constant during the service life of concrete structures?
- Is there a need to develop a rapid test procedure for determining the chloride threshold of reinforced concrete?

Our panelists in Puerto Rico will address these and many other questions you might have.

Special Events
Tuesday, October 16, 2007

✓**Contractors' Day Lunch** **Atlantic Salon 1**
12:00 pm – 2:00 pm
$45 U.S. per person

Hosted by the Construction Liaison Committee, ACI Puerto Rico Chapter, and AGC of Puerto Rico

Speaker: Carlos González-Miranda
Secretary
Department of Transportation and Public Works
San Juan, PR

Topic: Concrete and Transportation: Infrastructure Development in Puerto Rico

Puerto Rico's modern infrastructure development is based on the use of concrete. Short- and long-range strategic development projects throughout the island are presented.

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.*

Special Events
Tuesday, October 16, 2007

Faculty Network Reception **El Faro Terrace – weather permitting**
5:00 pm – 6:00 pm **Las Brisas Restaurant – inclement weather**

Faculty members and students are invited to attend this informal reception where you'll have a chance to exchange ideas and network. Light hors d'oeuvres and beverages will be available.

Concrete Mixer – **Main Entrance & Porte Couchere**
A Puerto Rican Carnival
6:00 pm – 10:00 pm
Sponsored by the ACI Puerto Rico Chapter and RUMS of Puerto Rico

Every year, each town celebrates patron saint festivals (fiestas patronales) in honor of the town's patron saint. The festivities include religious processions because they were originated as a Spanish Catholic tradition. However, they have adopted from the Taino Indians and other elements of African origin. **This is the Concrete Mixer you don't want to miss!** Enjoy a feast in a recreated town square, complete with colorful displays of pride and joy, games, regional food, and live entertainment.

PLEASE USE THE DRINK TICKETS FOUND IN YOUR REGISTRATION PACKET FOR BEVERAGES THIS EVENING. Beverages are courtesy of RUMS of Puerto Rico.

Special Events
Wednesday, October 17, 2007

✓**International Lunch** **Atlantic Salon 2**
12:00 pm – 2:00 pm
$49 U.S. per person

Hosted by the International Committee

Speaker: Alberto Aleman Zubieta
Administrator
Panama Canal Authority
Miami, FL

Topic: The Expansion of the Panama Canal

In 1998, after serving as PCC administrator for two years, Aleman was appointed administrator of the Panama Canal Authority (ACP), the new Panamanian entity that would assume complete responsibility for the waterway following the Canal transfer on December 31, 1999. For the next two years, Aleman served as both Panama Canal Commission and Panama Canal Authority administrator, thus ensuring that decisions made under the Commission would be honored by the ACP.

As head of the Canal organization, Mr. Aleman is responsible for maximizing efficiency in the management, operation and maintenance of the Panama Canal. He is committed to transforming the Canal organization into a world leader in maritime industry services, cornerstone of the global transportation system and model of excellence, integrity and transparency in conduct.

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

Tours and Guest Events
Sunday – Wednesday
October 14 – 17, 2007

- **Tour tickets may be purchased until 24 hours prior to the event based on availability.**
- **All tours depart from the Atrium Lobby at the El Conquistador.**

Guest Hospitality

Continental Breakfast	7:00 am – 10:00 am	
	Sunday	**Salon 4**
	Monday – Wednesday	**Club Lounge**
Guest Suite	7:00 am – 5:00 pm	
	Sunday – Wednesday	**Club Lounge**

Sunday, October 14, 2007

Guest Overview **Salon 4**

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 Spring 2008 Convention in Los Angeles, CA, and the Fall 2008 Convention in St. Louis, MO.

✓**El Yunque, Tropical Rainforest Tour**
$58 U.S. per person
9:00 am – 1:00 pm

This tour will also be offered on Wednesday.

After sightseeing the suburbs of Fajardo, you will travel toward the east coast 20 to 25 minutes and arrive at the grandiose rainforest of El Yunque. El Yunque is the largest rainforest in the United States and home to the coqui frog as well as the Puerto Rican parrot and numerous other species.

© 2004 Puerto Rico Convention Bureau (PRCB)

The tour will start at the visitor center and the gift shop. Following this, there will be a short walk through the rainforest on a paved walkway.

It is recommended that you wear comfortable walking shoes and clothes that dry quickly. You may also want to bring a rain jacket, sunscreen, bottled water, and a camera.

✓Separate Fee Required

Tours and Guest Events
Sunday, October 14, 2007

- **Tour tickets may be purchased until 24 hours prior to the event based on availability.**
- **All tours depart from the Atrium Lobby at the El Conquistador.**

Las Cabezas de San Juan
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✓**Las Cabezas de San Juan**
(also known as Faro Dos Cabezas)
$52 U.S. per person
9:00 am – 12:30 pm

Transport yourself into nature's gift of seven different ecological systems while you glide through the mangroves, view the contrast of the dry forest, and stroll on the boardwalk trails. See manatees, ospreys, and sea turtles from a restored nineteenth century lighthouse.

Attendees are recommended to wear comfortable clothing, walking shoes, sunscreen, and a hat for this tour.

YOU MUST HAVE PRE-REGISTERED TO ATTEND THIS TOUR. DUE TO SECURITY REQUIREMENTS OF THE VENUE, REGISTRATION FOR THIS TOUR WILL NOT BE OFFERED ON SITE.

Guest Tea **Las Brisas Restaurant**
2:00 pm – 4:00 pm

Please join Mrs. Diane Darwin for afternoon tea. This is a wonderful opportunity to get to know other guests and enjoy a refreshing break from the Puerto Rican sun.

✓Separate Fee Required

Tours and Guest Events
Monday, October 15, 2007

- **Tour tickets may be purchased until 24 hours prior to the event based on availability.**
- **All tours depart from the Atrium Lobby at the El Conquistador.**

✓Old San Juan City Tour
$81 U.S. per person
9:00 am – 5:00 pm

The Old San Juan City Tour begins by visiting San Cristobal Castle, which is the largest fortress in the western hemisphere and its visitors center. Observe the beautiful plazas and El Morro Fortress. Visitors will enjoy the Paseo la Princesa driveway, where lunch will be served at the Puerto Rico Tourism Company. Further on, you will visit and tour La Fortaleza, the official home of Puerto Rico's elected governor and oldest executive mansion still in use in America. The tour ends as Plaza de Armas for shopping.

For those wishing to stay in Old San Juan and meet other attendees for dinner, the Dine Around drop-off point is at Plaza Colon.

It is highly recommended that you wear comfortable clothing, walking shoes, sunscreen, and a hat. Please note: Old San Juan is approximately 60 minutes one-way from the El Conquistador.

El Morro Fortress

✓Separate Fee Required

Tours and Guest Events
Tuesday, October 16, 2007

- **Tour tickets may be purchased until 24 hours prior to the event based on availability.**
- **All tours depart from the Atrium Lobby at the El Conquistador.**

✓Shopping at Belz Factory Outlets
$41 U.S. per person
9:30 am – 1:30 pm

This tour will also be offered on Wednesday
The Belz Factory Outlets are located approximately 30 minutes from the El Conquistador Resort & Spa. Belz is the new home of shopping for designer clothing, electronics, jewelry, shoes, toys, and much more. DKNY, Guess, Nautica, Ralph Lauren, and Liz Claiborne are among some of the shops to enjoy.

Tours and Guest Events
Wednesday, October 17, 2007

- **Tour tickets may be purchased until 24 hours prior to the event based on availability.**
- **All tours depart from the Atrium Lobby at the El Conquistador.**

✓**El Yunque, Tropical Rainforest Tour**
$58 U.S. per person
9:00 am – 1:00 pm

See page 43 for description

✓**Shopping at Belz Factory Outlets**
$41 U.S. per person
9:30 am – 1:30 pm

See page 46 for description

Notes

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required *Theme Session TG = Task Group

Saturday, October 13, 2007

7:00 am – 6:00 pm

TAC	Technical Activities M2	Salons 6 & 7

8:00 am – 12:00 pm

EAC	Educational Activities M1	Flamboyan A

9:00 am – 3:00 pm

	✓Golf Tournament	

1:00 pm – 6:00 pm

301	Specifications M1	Salon 5

2:00 pm – 6:00 pm

	Registration	Atrium Lobby

7:30 pm – 10:00 pm

347-A	Formwork-Specification	Boardroom 1

Sunday, October 14, 2007

6:00 am – 7:30 am

301-SC	Spec-Steering Committee	Poinsettia A

7:00 am – 8:00 am

First-time Convention Attendee Breakfast		Flamboyan A

7:00 am – 1:00 pm

TAC	Technical Activities M3	Magnolia

7:30 am – 5:00 pm

	Registration	Atrium Lobby

8:00 am – 9:00 am

546-A	Repair-Underwater	Siete Mares B

8:00 am – 9:30 am

C660-TG	Examiner TG	Boardroom 1
301	Specifications M2	Casa Blanca
341-D	Equake Res Brdgs-Perf Based Seismic Design	Icaco B
342	Bridge Evaluation	Vieques A
373	Prestressed/Tendons	Siete Mares A
549-A	Thin Reinforced-Premix GFRC	Poinsettia A

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Sunday, October 14, 2007—cont.

8:00 am – 10:00 am

E706	Repair Application Procedures	Palmas B
E801	Student Activities	Boardroom 4

8:00 am – 10:30 am

551	Tilt-Up	Icaco A

8:00 am – 11:00 am

CLC	Construction Liaison	Poinsettia C
MEMC	Membership	Flamboyan B
TAC-RG1	TAC Review Group 1	Magnolia
TAC-RG2	TAC Review Group 2	Violeta
TAC-RG3	TAC Review Group 3	Orchidea
201-C	Durability-Condition Report	Las Croabas B
315-B	Detailing-Constructibility	Palominito B
350-C	Env Str-Reinf & Devel	Ceiba A
408	Bond & Development	Salon 2
445-B	Shear & Torsn-Seismic Shear	Ceiba B
533	Precast Panels	Palmas A

8:00 am – 12:30 pm

347	Formwork	Las Croabas A

8:00 am – 3:00 pm

376	RLG Containment Structures M1 – Main Meeting	Salon 1

8:00 am – 4:45 pm

355	Anchorage	Poinsettia B

8:30 am – 9:45 am

440-H	FRP-Reinforced Concrete	Salon 3

9:00 am – 10:00 am

546-B	Repair-Material Selection Guide	Siete Mares B

9:00 am – 12:30 pm

	✓Las Cabezas de San Juan Tour	Depart Atrium Lobby

9:00 am – 1:00 pm

	✓El Yunque, Tropical Forest Tour	Depart Atrium Lobby

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Sunday, October 14, 2007—cont.

9:30 am – 11:00 am

IC-Part	International Partnerships Committee	Boardroom 1
318-TG2	Notation & Editorial TG	Siete Mares A
341-A	Equake Res Brdgs-Columns	Icaco B
506-A	Shotcreting-Evaluation	Vieques B

9:30 am – 12:30 pm

228	Nondestructive Testing	Vieques A
549	Thin Reinforced	Casa Blanca

10:00 am – 11:00 am

546-C	Repair-Guide	Siete Mares B

10:00 am – 11:30 am

E701	Materials for Concrete Construction	Boardroom 4

10:00 am – 1:00 pm

421	Reinf Slabs	Palmas B

10:30 am – 12:00 pm

C650	Tilt-Up Constructor Certification	Icaco A

10:30 am – 1:30 pm

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

11:00 am – 12:30 pm

C631	Conc Transportation Const Insp	Poinsettia C
HTC	Hot Topic	Flamboyan A
SCO	Scholarship Council	Gardenia
221	Aggregates	Flamboyan B
341-B	Equake Res Brdgs-Pier Walls	Icaco B
350-SC	Env Str-Steering Comm	Boardroom 1
439-C	Steel Reinf-Mech Bar Develop	Palominito B
506-G	Shotcreting-Qualification of Nozzlemen	Vieques B
548-TG	Polymers-TG	Siete Mares A

11:00 am – 3:00 pm

423	Prestressed	Salon 2

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Sunday, October 14, 2007—cont.

11:30 am – 1:00 pm

335	Composite Hybrid	Boardroom 4

11:30 am – 4:45 pm

562	Eval, Repair & Rehab	Poinsettia A

12:30 pm – 4:30 pm

Student Concrete Cube Competition in honor of Raymundo Rivera-Villarreal		Pablo Casals

12:30 pm – 4:45 pm

301-A	Spec-Gen Req., Definitions & Tolerances	Siete Mares B
301-C	Spec-Placing Consolidating & Curing	Siete Mares A
301-D	Spec-Lightweight & Massive Concrete	Ceiba B
301-E	Spec-Prestressed Concrete	Ceiba A
301-G	Spec-Shrink Comp Conc & Ind Floor Slabs	Las Croabas B
301-H	Spec-Tilt-Up Constr & Arch Conc	Las Croabas A

1:00 pm – 3:00 pm

IC-Conf	International Conferences	Flamboyan A
445-C	Shear & Torsn-Punching Shear	Palmas B

1:00 pm – 4:00 pm

BAC-SD	Board Advisory Committee on Sustainable Develop	Magnolia

1:00 pm – 4:45 pm

305	Hot Weather	Icaco B

1:00 pm – 5:00 pm

440-M	FRP-Repair of Masonry Str	Casa Blanca

1:30 pm – 3:00 pm

341-C	Equake Res Brdgs-Retrofit	Boardroom 4
345	Bridge Construction	Salon 3
370	Dynamic & Vibratory Effects	Vieques A
439-A	Steel Reinf-Wire	Icaco A
506-B	Shotcreting-Fiber Reinforced	Vieques B

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Sunday, October 14, 2007—cont.

Sessions

1:30 pm – 4:30 pm

*The Art of Bridges	Salon 7
Deflection and Stiffness Issues in FRC and Thin Structural Elements—Part 1	Atlantic Salon 3
Design and Applications of Textile Reinforced Concrete	Salon 5
Durability of Marine Environments	Salon 4
Emerging Technologies in Civil Infrastructure Applications	Salon 6

1:30 pm – 4:45 pm

315	Detailing	Poinsettia C
336	Footings	Palominito B
352	Joints	Palominito A
562-A	Eval, Repair & Rehab-Life Safety	Gardenia
562-B	Eval, Repair & Rehab-Loads	Violeta
562-C	Eval, Repair & Rehab-Structural Analysis	Orchidea
562-D	Eval, Repair & Rehab-Structural Repair Design	Boardroom 3
562-E	Eval, Repair & Rehab-Durability Quality Assur	Boardroom 1

2:00 pm – 3:30 pm

236-B	Material Science-Permeation Methods	Palmas A

2:00 pm – 4:45 pm

RCC	Responsibility	Flamboyan B

3:00 pm – 4:45 pm

E601	Seminar Oversight Committee	Vieques B
IC-Cert	International Certification	Flamboyan A
121	Quality Assurance	Salon 1
123	Research	Salon 2
224	Cracking	Boardroom 4
341	Earthquake-Resistant Bridges	Salon 3
423-445	Adhoc Grp on Shear in Prestress Conc	Vieques A
445-E	Shear & Torsn-SOA Torsion	Palmas B

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Sunday, October 14, 2007—cont.

3:30 pm – 4:45 pm

201-A	Durability-Sulfate Attack	Palmas A
309	Consolidation	Icaco A

5:00 pm – 6:00 pm

	Opening Session and Hardy Cross Lecture Series	Atlantic Salons 1 & 2

6:00 pm – 9:00 pm

	Opening Reception – Welcome to Puerto Rico!	Main Pool & Trellises (weather permitting) Grand Caribbean Foyer & Terrace (inclement weather)

Monday, October 15, 2007

6:30 am – 8:15 am

	Workshop for Technical Committee Chairs	Atlantic Salon 1

7:00 am – 8:30 am

	Speaker Skills Training Breakfast	Magnolia

8:00 am – 5:00 pm

	Registration	Atrium Lobby

8:00 am – 10:00 am

PUBC	Publications	Flamboyan A

8:15 am – 9:30 am

440-K	FRP-Material Characteristics	Gardenia

8:30 am – 10:00 am

E802	Teaching Methods and Educational Materials	Boardroom 4
118	Computers	Flamboyan B
124	Aesthetics	Palmas B
215	Fatigue	Ceiba A
325-A	Pavements-Design	Violeta
506-C	Shotcreting-Guide	Boardroom 3
523-A	Cellular-Autoclaved Aerated	Las Croabas A
524	Plastering	Icaco B
544-B	FRC-Education	Icaco A

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Monday, October 15, 2007—cont.

8:30 am – 11:30 am

CAC	Chapter Activities	Poinsettia C
C610	Field Technician Cert	Poinsettia A
237	Self-Consolidating Concrete	Palominito A
311	Inspection	Culebra A
350-G&K	Env Str-Tightness Testing/Haz Mat	Orchidea
351-A	Equip Fdns-Static Fdns	Vieques B
355-TG	Anchorage TG	Vieques A
437	Strength Evaluation	Salon 3
522	Pervious Concrete	Palominito B
546	Repair	Casa Blanca
548-A	Polymers-Overlays	Las Croabas B

8:30 am – 12:30 pm

374	Seismic Design	Salon 1

8:30 am – 1:00 pm

301-B	Spec-Formwork & Reinforcement	Siete Mares B
301-F	Spec-Precast Concrete Panels	Siete Mares A
302	Floor Construction	Pablo Casals
350-B	Env Str-Durability	Culebra B

8:30 am – 6:30 pm

350-D	Env Str-Structural	Ceiba B

Sessions

9:00 am – 12:00 pm

Research in Progress	Salon 5
Fabrication Technologies for Thin Cementitious Products—Part 1	Salon 4
Deflection and Stiffness Issues in FRC and Thin Structural Elements—Part 2	Atlantic Salon 3
Structural Implications of Concrete Shrinkage and Creep of Concrete—Part 1	Atlantic Salon 2
Internal Curing of High-Performance Concretes: Laboratory and Field Experiences—Part 1	Salons 6 & 7

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Monday, October 15, 2007—cont.

9:00 am – 1:00 pm

365	Service Life	Magnolia

9:00 am – 5:00 pm

	✓Old San Juan City Tour	Depart Atrium Lobby

10:00 am – 11:30 am

325-C	Pavements – Prestressed and Precast	Violeta
544-E	FRC-Mechanical Properties	Boardroom 1

10:00 am – 12:00 pm

439	Steel Reinforcement	Icaco A

10:00 am – 12:30 pm

506-E	Shotcreting-Specifications	Boardroom 3

10:00 am – 1:00 pm

207	Mass Concrete	Las Croabas A
216	Fire Resistance	Boardroom 4
232-A	Fly Ash-Use of Nat Pozzolans	Ceiba A
318-TG6	Piles TG	Palmas B
343	Bridge Design	Flamboyan A
362-A	Parking Str-Standard	Icaco B
523	Cellular Concrete	Flamboyan B

11:00 am – 12:30 pm

440-D	Research Development and Applications	Salon 2

11:30 am – 1:00 pm

201-D	Durability-Oversight Committee	Las Croabas B
211-D	Proportioning-High Strength	Gardenia
304	Measuring/Mix/Trans/Placing	Poinsettia A
346	CIP Pipe	Boardroom 1
544-A	FRC-Production & Applications	Culebra A
548-C	Polymers-Str Design & Analysis	Palmas A

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Monday, October 15, 2007—cont.

11:30 am – 2:00 pm

364-A	Rehabilitation-Evaluation	Violeta
441	Columns	Palominito A
447	Finite Element Analysis	Palominito B
552	Cementitious Grouting	Orchidea

12:00 pm – 2:00 pm

444	Experimental Analysis	Poinsettia C
	✓Student Lunch	Atlantic Salon 1

1:00 pm – 2:30 pm

548-B	Polymers-Sulfur Concrete	Las Croabas B

1:00 pm – 3:00 pm

C660	Shotcrete Nozzleman Cert	Palmas B

1:00 pm – 5:00 pm

MKTC	Marketing	Flamboyan A
TAC-Code	TAC Code Relationship	Boardroom 1

1:00 pm – 6:30 pm

350-E	Env Str-Precast/Prestressed	Ceiba A

1:30 pm – 3:00 pm

440-TG	FRP-Specifications-TG	Icaco A

1:30 pm – 3:30 pm

ITG-5	Precast Shear Walls for High Seismic Applications	Salon 1
ITG-6	High-Strength Steel Reinforcement	Boardroom 3

2:00 pm – 3:00 pm

Convention Moderator Question and Answer	Palominito B

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Monday, October 15, 2007—cont.

2:00 pm – 3:30 pm

231	Early Age	Flamboyan B
314	Simplified Design Buildings	Casa Blanca
325-D	Proportioning for Pavements	Violeta

2:00 pm – 5:00 pm

232	Fly Ash & Natural Pozzolans	Magnolia
327	RCC Pavements	Siete Mares B
349-C	Nuclear Str-Anchorage	Los Croabas A
351	Equip Foundations	Vieques B
362	Parking Structures	Icaco B
364	Rehabilitation	Palominito A
365-A	Service Life-Std Model Development	Siete Mares A
369	Seismic Rehab	Poinsettia A
376	RLG Containment Structures M2 – Main Meeting	Vieques A

Sessions

2:00 pm – 5:00 pm

*Towards Better Bridge Design and Analysis: Lessons Learned From Recent Strong Earthquakes	Atlantic Salon 3
Developing Innovative Solutions Through Research for Design of Precast/Prestressed Concrete Structures	Salon 5
Fabrication Technologies for Thin Cementitious Products—Part 2	Salon 4
Internal Curing of High-Performance Concretes: Laboratory and Field Experiences—Part 2	Salons 6 & 7
Structural Implications of Concrete Shrinkage and Creep of Concrete—Part 2	Atlantic Salon 2

2:00 pm – 6:00 pm

445	Shear & Torsion	Poinsettia C

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Monday, October 15, 2007—cont.

2:00 pm – 6:30 pm

212	Chemical Admixtures	Culebra A
301	Specifications M3	Pablo Casals
360	Slabs on Ground	Salon 2

2:30 pm – 5:00 pm

506-F	Shotcreting-Underground	Las Croabas B

3:00 pm – 6:00 pm

375	Design for Wind Loads	Boardroom 4

3:30 pm – 5:00 pm

IC-Pub	International Pubs/Website	Gardenia
122	Thermal Properties	Boardroom 3
214	Strength Tests	Flamboyan B

3:30 pm – 5:30 pm

446	Fracture Mechanics	Salon 1

3:30 pm – 6:30 pm

325	Pavements	Salon 3
350-J	Env Str-Education	Orchidea
440-F	FRP-Repair Strengthening	Casa Blanca
544-D	FRC-Structural Uses	Icaco A

5:00 pm – 6:00 pm

Women in ACI Reception

Mirador Terrace (weather permitting)
Magnolia Foyer (inclement weather)

5:00 pm – 6:30 pm

E702	Designing Concrete Structures	Flamboyan B
SDC	Strategic Development Council	El Faro Terrace
236	Material Science	Magnolia
318-L	International Liaison	Palmas A
334	Shells	Boardroom 1
435	Deflection	Palominito A
555	Recycled	Poinsettia A

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Monday, October 15, 2007—cont.

5:00 pm – 7:00 pm

E703	Concrete Construction Practices	Gardenia

5:30 pm – 12:00 am

Dine Arounds in Old San Juan – see pages 17 & 18 –registration required

7:30 pm – 10:00 pm

	123 Forum: Do We Know What the Chloride Threshold is for Reinforcing Steel Corrosion?	Salon 4

Tuesday, October 16, 2007

7:00 am – 11:00 am

EAC	Educational Activities M2	Flamboyan B

7:30 am – 5:00 pm

	Registration	Atrium Lobby

8:00 am – 9:30 am

C620	Laboratory Tech Cert	Poinsettia A
TTTC	TAC Technology Transfer	Boardroom 1
225	Hydraulic Cements	Poinsettia C
332-E	Residential Concrete-Above Grade Walls	Siete Mares A
548	Polymers	Ceiba A

8:00 am – 10:00 am

230	Soil Cement	Ceiba B
238	Workability of Fresh Concrete	Vieques B
440-L	FRP-Durability	Salon 2

8:00 am – 11:00 am

117	Tolerances	Boardroom 4
201	Durability	Magnolia
306	Cold Weather	Culebra A
357	Offshore & Marine	Culebra B
506	Shotcreting	Casa Blanca

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Tuesday, October 16, 2007—cont.

8:00 am – 11:30 am

IC	International Committee	Pablo Casals

8:00 am – 12:30 pm

318-B	Reinforcement & Development	Palmas A
318-C	Serviceability/Safety	Palmas B
318-D	Flexure & Axial Loads	Las Croabas A
318-G	Prestressed Precast	Las Croabas B
376	RLG Containment Structures M3	Salon 1

8:00 am – 1:00 pm

349-A&B	Nuclear Str-Design & Materials	Palominito B

8:00 am – 5:00 pm

350-F	Env Str-Seismic	Palominito A

9:00 am – 11:00 am

236-D	Material Science – Nanotechnology of Concrete	Icaco B

9:00 am – 12:00 pm

TRRC	TAC Repair & Rehab	Icaco A

Sessions

9:00 am – 12:00 pm

*Improving the Durability of Concrete Bridges—Part 1	Atlantic Salon 3
*Hot Topic Session: Concrete Finishes: Meeting Architects' Expectations at Reasonable Costs	Salon 5
Residential Concrete—A to Z Guidelines	Salon 4
Self-Consolidating Concrete for Precast Prestressed Applications—Part 1	Salons 6&7
Structural Implications of Concrete Shrinkage and Creep of Concrete—Part 3	Atlantic Salon 2

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Tuesday, October 16, 2007—cont.

9:30 am – 11:00 am

C630	Construction Inspector Cert	Poinsettia A
332-B	Residential Concrete-Materials & Conc Requirements	Siete Mares A
332-D	Residential Concrete-Footings & Foundation Walls	Siete Mares B
350-H	Env Str-Editorial	Violeta

9:30 am – 11:30 am

211-A	Proportioning-Editorial	Ceiba A

9:30 am – 12:30 pm

371	Elevated Tanks with Concrete Pedestals	Boardroom 3

9:30 am – 1:30 pm

	✓Shopping at Belz Factory Outlets	Depart Atrium Lobby

10:00 am – 11:30 am

503	Adhesives	Vieques A

10:00 am – 12:00 pm

440-E	FRP-Prof Education	Ceiba B

10:30 am – 12:00 pm

544-F	FRC-Durability	Vieques B

11:00 am – 12:30 pm

CRC	Concrete Research Council	Magnolia
223-D	Shr Compensating-Non Reinforced Concrete or Mortar	Flamboyan B
332-C	Residential Concrete-Production & Placement	Siete Mares A
332-F	Residential Concrete-Slabs	Siete Mares B
348	Safety	Poinsettia B

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Tuesday, October 16, 2007—cont.

11:00 am – 1:30 pm

515	Protective Systems	Poinsettia C
550	Precast Structures	Culebra B

11:30 am – 1:00 pm

211-E	Proportioning-Evaluation	Orchidea

11:30 am – 3:30 pm

350-A	Env Str-General & Concrete	Vieques A

12:00 pm – 1:30 pm

C640	Craftsman Cert	Poinsettia A

12:00 pm – 2:00 pm

	✓Contractors' Day Lunch	Atlantic Salon 1

1:00 pm – 4:00 pm

440	Fiber Reinforced Polymer	Pablo Casals

1:30 pm – 3:00 pm

120	History	Magnolia
213	Lightweight	Poinsettia C
234	Silica Fume	Boardroom 4
544-C	FRC-Testing	Vieques B

1:30 pm – 3:30 pm

372	Prestressed/Wire Wrapped	Icaco A

1:30 pm – 5:00 pm

CPC	Certification Programs	Poinsettia A
222	Corrosion	Flamboyan A
229	Controlled Low Strength	Boardroom 1
235	Electronic Data Exchange	Culebra B
310	Decorative Concrete	Ceiba A
349	Nuclear Structures	Salon 2
563	Specs Repair of Struct Conc in Buildings	Icaco B

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Tuesday, October 16, 2007—cont.

1:30 pm – 6:00 pm

233	Ground Slag	Salon 1
318-A	General Concrete Constr	Palmas A
318-E	Shear & Torsion	Palmas B
318-F	New Mat. Products & Ideas	Las Croabas A

1:30 pm – 6:30 pm

318-H	Seismic Provisions	Palominito B

2:00 pm – 5:00 pm

TTCC	TAC Tolerances Coord. Comm.	Gardenia
209	Creep & Shrinkage	Orchidea
223	Shrinkage Compensating	Flamboyan B
332	Residential Concrete	Casa Blanca

Sessions

2:00 pm – 5:00 pm

*Improving the Durability of Concrete Bridges—Part 2	Atlantic Salon 3
Formwork: Challenges and Opportunities for the Contractor	Atlantic Salon 2
Open Paper Session	Salon 3
Self-Consolidating Concrete for Precast Prestressed Applications—Part 2	Salons 6 & 7
State-of-the-Art Cement and Concrete Applications	Salon 4
State-of-the-Art Concrete Repair Techniques	Salon 5

3:00 pm – 5:00 pm

CC	Convention Committee M2	Poinsetta B
363-A	High Strength-State-of-the-Art Report	Boardroom 4

3:00 pm – 6:00 pm

350-L	Env Str-Specification	Ceiba B

3:30 pm – 6:00 pm

544	Fiber Reinforced Concrete	Magnolia

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Tuesday, October 16, 2007—cont.

5:00 pm – 6:00 pm

	Faculty Network Reception	El Faro Terrace (weather permitting) Las Brisas Restaurant (inclement weather)

6:00 pm – 10:00 pm

	Concrete Mixer – A Puerto Rican Carnival	Main Entrance & Porte Couchere

Wednesday, October 17, 2007

7:00 am – 10:00 am

ACI/ASCE	ACI/ASCE Coordination	Culebra B
TSC	TAC Specifications	Flamboyan A

7:30 am – 9:30 am

BAC-SYP	BAC-Student & Young Professionals	Poinsettia B

8:00 am – 12:00 pm

	Registration	Atrium Lobby

8:30 am – 10:00 am

C601-C	Masonry Testing Technician	Culebra A

8:30 am – 11:00 am

308-B	Curing-Specifications	Palmas B

8:30 am – 11:30 am

211	Proportioning	Magnolia
303	Architectural CIP	Palmas A
330-TG	Parking Lots & Paving Sites TG	Pablo Casals
363	High-Strength	Poinsettia A
560	Design & Constr ICFs	Flamboyan B

8:30 am – 1:00 pm

318	Building Code M1	Atlantic Salon 3

8:30 am – 4:30 pm

359	Nuclear Reactors	Boardroom 1

8:30 am – 5:00 pm

376	RLG Containment Structures M4	Vieques B

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ Separate fee required ***Theme Session** **TG = Task Group**

Wednesday, October 17, 2007—cont.

8:30 am – 6:30 pm

350	Environmental Structures	Atlantic Salon 1

9:00 am – 12:00 pm

ACIFdn	ACI Foundation	Gardenia

Sessions

9:00 am – 12:00 pm

*International Session: Structural Concrete in the Americas	Salons 6 & 7
25th Anniversary Session for 228 NDT of Concrete—Building on the Past for the Future of NDT of Concrete—Part 1	Salon 4
New Developments in Understanding Steel Reinforcement Corrosion Thresholds in Concrete	Salon 5

9:00 am – 1:00 pm

✓El Yunque, Tropical Forest Tour	Depart Atrium Lobby

9:30 am – 1:30 pm

✓Shopping at Belz Factory Outlets	Depart Atrium Lobby

10:00 am – 11:30 am

C601-B	Certified Quality Technical Mgr	Culebra A

11:00 am – 1:00 pm

308-A	Curing-Guide	Palmas B

11:30 am – 1:00 pm

C601-D	Decorative Concrete Finisher	Culebra A

12:00 pm – 2:00 pm

✓International Lunch	Atlantic Salon 2

1:00 pm – 4:00 pm

330	Parking Lots & Site Paving	Pablo Casals

2:00 pm – 5:00 pm

308	Curing	Magnolia

Program at a Glance

All schedule and location changes will be posted daily in the Atrium Lobby.

✓ **Separate fee required** ***Theme Session** **TG = Task Group**

Wednesday, October 17, 2007 —cont.

Sessions

2:00 pm – 5:00 pm

25th Anniversary Session for 228 NDT of Concrete—Building on the Past for the Future of NDT of Concrete—Part 2 — Salon 4

ICFs—Hazard-Resistant Structures — Salon 5

Proportioning: New Technologies — Salons 6 & 7

2:00 pm – 6:30 pm

318 Building Code M2 — Atlantic Salon 3

7:00 pm – 10:00 pm

TAC-RG5 Review of Public Comments — Culebra A

Thursday, October 18, 2007

10:00 am – 5:00 pm

BOD Board of Direction — Magnolia

Notes

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
ACI/ASCE	ACI/ASCE Coordination	Wed	7:00 am – 10:00 am	Culebra B
ACIFdn	ACI Foundation	Wed	9:00 am – 12:00 pm	Gardenia
BAC-SD	Board Advisory Committee on Sustainable Develop	Sun	1:00 pm – 4:00 pm	Magnolia
BAC-SYP	BAC-Student & Young Professionals	Wed	7:30 am – 9:30 am	Poinsettia B
BOD	Board of Direction	Thu	10:00 am – 5:00 pm	Magnolia
C601-B	Certified Quality Technical Mgr	Wed	10:00 am – 11:30 am	Culebra A
C601-C	Masonry Testing Technician	Wed	8:30 am – 10:00 am	Culebra A
C601-D	Decorative Concrete Finisher	Wed	11:30 am – 1:00 pm	Culebra A
C610	Field Technician Cert	Mon	8:30 am – 11:30 am	Poinsettia A
C620	Laboratory Tech Cert	Tue	8:00 am – 9:30 am	Poinsettia A
C630	Construction Inspector Cert	Tue	9:30 am – 11:00 am	Poinsettia A
C631	Conc Transportation Const Insp	Sun	11:00 am – 12:30 pm	Poinsettia C
C640	Craftsman Cert	Tue	12:00 pm – 1:30 pm	Poinsettia A
C650	Tilt-Up Constructor Certification	Sun	10:30 am – 12:00 pm	Icaco A
C660	Shotcrete Nozzleman Cert	Mon	1:00 pm – 3:00 pm	Palmas B
C660-TG	Examiner TG	Sun	8:00 am – 9:30 am	Boardroom 1
CAC	Chapter Activities	Mon	8:30 am – 11:30 am	Poinsettia C
CC	Convention Committee M2	Tue	3:00 pm – 5:00 pm	Poinsettia B
CLC	Construction Liaison	Sun	8:00 am – 11:00 am	Poinsettia C
CPC	Certification Programs	Tue	1:30 pm – 5:00 pm	Poinsettia A
CRC	Concrete Research Council	Tue	11:00 am – 12:30 pm	Magnolia
E601	Seminar Oversight Committee	Sun	3:00 pm – 4:45 pm	Vieques B
E701	Materials for Concrete Construction	Sun	10:00 am – 11:30 am	Boardroom 4
E702	Designing Concrete Structures	Mon	5:00 pm – 6:30 pm	Flamboyan B
E703	Concrete Construction Practices	Mon	5:00 pm – 7:00 pm	Gardenia
E706	Repair Application Procedures	Sun	8:00 am – 10:00 am	Palmas B

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
E801	Student Activities	Sun	8:00 am – 10:00 am	Boardroom 4
E802	Teaching Methods and Educational Materials	Mon	8:30 am – 10:00 am	Boardroom 4
EAC	Educational Activities M1	Sat	8:00 am – 12:00 pm	Flamboyan A
EAC	Educational Activities M2	Tue	7:00 am – 11:00 am	Flamboyan B
HTC	Hot Topic	Sun	11:00 am – 12:30 pm	Flamboyan A
IC	International Committee	Tue	8:00 am – 11:30 am	Pablo Casals
IC-Cert	International Certification	Sun	3:00 pm – 4:45 pm	Flamboyan A
IC-Conf	International Conferences	Sun	1:00 pm – 3:00 pm	Flamboyan A
IC-Part	International Partnerships Committee	Sun	9:30 am – 11:00 am	Boardroom 1
IC-Pub	International Pubs/ Website	Mon	3:30 pm – 5:00 pm	Gardenia
ITG-5	Precast Shear Walls for High Seismic Applications	Mon	1:30 pm – 3:30 pm	Salon 1
ITG-6	High-Strength Steel Reinforcement	Mon	1:30 pm – 3:30 pm	Boardroom 3
MEMC	Membership	Sun	8:00 am – 11:00 am	Flamboyan B
MKTC	Marketing	Mon	1:00 pm – 5:00 pm	Flamboyan A
PUBC	Publications	Mon	8:00 am – 10:00 am	Flamboyan A
RCC	Responsibility	Sun	2:00 pm – 4:45 pm	Flamboyan B
SCO	Scholarship Council	Sun	11:00 am – 12:30 pm	Gardenia
SDC	Strategic Development Council	Mon	5:00 pm – 6:30 pm	El Faro Terrace
TAC	Technical Activities M1	Fri	6:30 pm – 9:30 pm	Salons 6 & 7
TAC	Technical Activities M2	Sat	7:00 am – 6:00 pm	Salons 6 & 7
TAC	Technical Activities M3	Sun	7:00 am – 1:00 pm	Magnolia
TAC-Code	TAC Code Relationship	Mon	1:00 pm – 5:00 pm	Boardroom 1
TAC-RG1	TAC Review Group 1	Sun	8:00 am – 11:00 am	Magnolia
TAC-RG2	TAC Review Group 2	Sun	8:00 am – 11:00 am	Violeta
TAC-RG3	TAC Review Group 3	Sun	8:00 am – 11:00 am	Orchidea
TAC-RG5	Review of Public Comments	Wed	7:00 pm – 10:00 pm	Culebra A
TRRC	TAC Repair & Rehab	Tue	9:00 am – 12:00 pm	Icaco A
TSC	TAC Specifications	Wed	7:00 am – 10:00 am	Flamboyan A
TTCC	TAC Tolerances Coord. Comm.	Tue	2:00 pm – 5:00 pm	Gardenia

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
TTTC	TAC Technology Transfer	Tue	8:00 am – 9:30 am	Boardroom 1
117	Tolerances	Tue	8:00 am – 11:00 am	Boardroom 4
118	Computers	Mon	8:30 am – 10:00 am	Flamboyan B
120	History	Tue	1:30 pm – 3:00 pm	Magnolia
121	Quality Assurance	Sun	3:00 pm – 4:45 pm	Salon 1
122	Thermal Properties	Mon	3:30 pm – 5:00 pm	Boardroom 3
123	Research	Sun	3:00 pm – 4:45 pm	Salon 2
124	Aesthetics	Mon	8:30 am – 10:00 am	Palmas B
201	Durability	Tue	8:00 am – 11:00 am	Magnolia
201-A	Durability-Sulfate Attack	Sun	3:30 pm – 4:45 pm	Palmas A
201-C	Durability-Condition Report	Sun	8:00 am – 11:00 am	Las Croabas B
201-D	Durability-Oversight Committee	Mon	11:30 am – 1:00 pm	Las Croabas B
207	Mass Concrete	Mon	10:00 am – 1:00 pm	Las Croabas A
209	Creep & Shrinkage	Tue	2:00 pm – 5:00 pm	Orchidea
211	Proportioning	Wed	8:30 am – 11:30 am	Magnolia
211-A	Proportioning-Editorial	Tue	9:30 am – 11:30 am	Ceiba A
211-D	Proportioning-High Strength	Mon	11:30 am – 1:00 pm	Gardenia
211-E	Proportioning-Evaluation	Tue	11:30 am – 1:00 pm	Orchidea
212	Chemical Admixtures	Mon	2:00 pm – 6:30 pm	Culebra A
213	Lightweight	Tue	1:30 pm – 3:00 pm	Poinsettia C
214	Strength Tests	Mon	3:30 pm – 5:00 pm	Flamboyan B
215	Fatigue	Mon	8:30 am – 10:00 am	Ceiba A
216	Fire Resistance	Mon	10:00 am – 1:00 pm	Boardroom 4
221	Aggregates	Sun	11:00 am – 12:30 pm	Flamboyan B
222	Corrosion	Tue	1:30 pm – 5:00 pm	Flamboyan A
223	Shrinkage Compensating	Tue	2:00 pm – 5:00 pm	Flamboyan B
223-D	Shr Compensating-Non Reinforced Concrete or Mortar	Tue	11:00 am – 12:30 pm	Flamboyan B
224	Cracking	Sun	3:00 pm – 4:45 pm	Boardroom 4
225	Hydraulic Cements	Tue	8:00 am – 9:30 am	Poinsettia C
228	Nondestructive Testing	Sun	9:30 am – 12:30 pm	Vieques A
229	Controlled Low Strength	Tue	1:30 pm – 5:00 pm	Boardroom 1
230	Soil Cement	Tue	8:00 am – 10:00 am	Ceiba B

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
231	Early Age	Mon	2:00 pm – 3:30 pm	Flamboyan B
232	Fly Ash & Natural Pozzolans	Mon	2:00 pm – 5:00 pm	Magnolia
232-A	Fly Ash-Use of Nat Pozzolans	Mon	10:00 am – 1:00 pm	Ceiba A
233	Ground Slag	Tue	1:30 pm – 6:00 pm	Salon 1
234	Silica Fume	Tue	1:30 pm – 3:00 pm	Boardroom 4
235	Electronic Data Exchange	Tue	1:30 pm – 5:00 pm	Culebra B
236	Material Science	Mon	5:00 pm – 6:30 pm	Magnolia
236-B	Material Science-Permeation Methods	Sun	2:00 pm – 3:30 pm	Palmas A
236-D	Material Science–Nanotechnology of Concrete	Tue	9:00 am – 11:00 am	Icaco B
237	Self-Consolidating Concrete	Mon	8:30 am – 11:30 pm	Palominito A
238	Workability of Fresh Concrete	Tue	8:00 am – 10:00 am	Vieques B
301	Specifications M1	Sat	1:00 pm – 6:00 pm	Salon 5
301	Specifications M2	Sun	8:00 am – 9:30 am	Casa Blanca
301	Specifications M3	Mon	2:00 pm – 6:30 pm	Pablo Casals
301-A	Spec-Gen Req., Definitions, & Tolerances	Sun	12:30 pm – 4:45 pm	Siete Mares B
301-B	Spec-Formwork & Reinforcement	Mon	8:30 am – 1:00 pm	Siete Mares B
301-C	Spec-Placing Consolidating & Curing	Sun	12:30 pm – 4:45 pm	Siete Mares A
301-D	Spec-Lightweight & Massive Concrete	Sun	12:30 pm – 4:45 pm	Ceiba B
301-E	Spec-Prestressed Concrete	Sun	12:30 pm – 4:45 pm	Ceiba A
301-F	Spec-Precast Concrete Panels	Mon	8:30 am – 1:00 pm	Siete Mares A
301-G	Spec-Shrink Comp Conc & Ind Floor Slabs	Sun	12:30 pm – 4:45 pm	Las Croabas B
301-H	Spec-Tilt-Up Constr & Arch Conc	Sun	12:30 pm – 4:45 pm	Las Croabas A
301-SC	Spec-Steering Committee	Sun	6:00 am – 7:30 am	Poinsettia A
302	Floor Construction	Mon	8:30 am – 1:00 pm	Pablo Casals
303	Architectural CIP	Wed	8:30 am – 11:30 am	Palmas A

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
304	Measuring/Mix/Trans/ Placing	Mon	11:30 am – 1:00 pm	Poinsettia A
305	Hot Weather	Sun	1:00 pm – 4:45 pm	Icaco B
306	Cold Weather	Tue	8:00 am – 11:00 am	Culebra A
308	Curing	Wed	2:00 pm – 5:00 pm	Magnolia
308-A	Curing-Guide	Wed	11:00 am – 1:00 pm	Palmas B
308-B	Curing-Specifications	Wed	8:30 am – 11:00 am	Palmas B
309	Consolidation	Sun	3:30 pm – 4:45 pm	Icaco A
310	Decorative Concrete	Tue	1:30 pm – 5:00 pm	Ceiba A
311	Inspection	Mon	8:30 am – 11:30 am	Culebra A
314	Simplified Design Buildings	Mon	2:00 pm – 3:30 pm	Casa Blanca
315	Detailing	Sun	1:30 pm – 4:45 pm	Poinsettia C
315-B	Detailing-Constructibility	Sun	8:00 am – 11:00 am	Palominito B
318	Building Code M1	Wed	8:30 am – 1:00 pm	Atlantic Salon 3
318	Building Code M2	Wed	2:00 pm – 6:30 pm	Atlantic Salon 3
318-A	General Concrete Constr	Tue	1:30 pm – 6:00 pm	Palmas A
318-B	Reinforcement & Development	Tue	8:00 am – 12:30 pm	Palmas A
318-C	Serviceability/Safety	Tue	8:00 am – 12:30 pm	Palmas B
318-D	Flexure & Axial Loads	Tue	8:00 am – 12:30 pm	Las Croabas A
318-E	Shear & Torsion	Tue	1:30 pm – 6:00 pm	Palmas B
318-F	New Mat. Products & Ideas	Tue	1:30 pm – 6:00 pm	Las Croabas A
318-G	Prestressed Precast	Tue	8:00 am – 12:30 pm	Las Croabas B
318-H	Seismic Provisions	Tue	1:30 pm – 6:30 pm	Palominito B
318-L	International Liaison	Mon	5:00 pm – 6:30 pm	Palmas A
318-TG2	Notation & Editorial TG	Sun	9:30 am – 11:00 am	Siete Mares A
318-TG6	Piles TG	Mon	10:00 am – 1:00 pm	Palmas B
325	Pavements	Mon	3:30 pm – 6:30 pm	Salon 3
325-A	Pavements-Design	Mon	8:30 am – 10:00 am	Violeta
325-C	Pavements– Prestressed and Precast	Mon	10:00 am – 11:30 am	Violeta
325-D	Proportioning for Pavements	Mon	2:00 pm – 3:30 pm	Violeta
327	RCC Pavements	Mon	2:00 pm – 5:00 pm	Siete Mares B

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
330	Parking Lots & Site Paving	Wed	1:00 pm – 4:00 pm	Pablo Casals
330-TG	Parking Lots & Site Paving TG	Wed	8:30 am – 11:30 am	Pablo Casals
332	Residential Concrete	Tue	2:00 pm – 5:00 pm	Casa Blanca
332-B	Residential Concrete-Materials & Conc Requirements	Tue	9:30 am – 11:00 am	Siete Mares A
332-C	Residential Concrete-Production & Placement	Tue	11:00 am – 12:30 pm	Siete Mares A
332-D	Residential Concrete-Footings & Foundation Walls	Tue	9:30 am – 11:00 am	Siete Mares B
332-E	Residential Concrete-Above Grade Walls	Tue	8:00 am – 9:30 am	Siete Mares A
332-F	Residential Concrete-Slabs	Tue	11:00 am – 12:30 pm	Siete Mares B
334	Shells	Mon	5:00 pm – 6:30 pm	Boardroom 1
335	Composite Hybrid	Sun	11:30 am – 1:00 pm	Boardroom 4
336	Footings	Sun	1:30 pm – 4:45 pm	Palominito B
341	Earthquake-Resistant Bridges	Sun	3:00 pm – 4:45 pm	Salon 3
341-A	Equake Res Brdgs-Columns	Sun	9:30 am – 11:00 am	Icaco B
341-B	Equake Res Brdgs-Pier Walls	Sun	11:00 am – 12:30 pm	Icaco B
341-C	Equake Res Brdgs-Retrofit	Sun	1:30 pm – 3:00 pm	Boardroom 4
341-D	Equake Res Brdgs-Perf Based Seismic Design	Sun	8:00 am – 9:30 am	Icaco B
342	Bridge Evaluation	Sun	8:00 am – 9:30 am	Vieques A
343	Bridge Design	Mon	10:00 am – 1:00 pm	Flamboyan A
345	Bridge Construction	Sun	1:30 pm – 3:00 pm	Salon 3
346	CIP Pipe	Mon	11:30 am – 1:00 pm	Boardroom 1
347	Formwork	Sun	8:00 am – 12:30 pm	Las Croabas A
347-A	Formwork-Specification	Sat	7:30 pm – 10:00 pm	Boardroom 1
348	Safety	Tue	11:00 am – 12:30 pm	Poinsettia B
349	Nuclear Structures	Tue	1:30 pm – 5:00 pm	Salon 2
349-A&B	Nuclear Str-Design & Materials	Tue	8:00 am – 1:00 pm	Palominito B
349-C	Nuclear Str-Anchorage	Mon	2:00 pm – 5:00 pm	Los Croabas A

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
350	Environmental Structures	Wed	8:30 am – 6:30 pm	Atlantic Salon 1
350-A	Env Str-General & Concrete	Tue	11:30 am – 3:30 pm	Vieques A
350-B	Env Str-Durability	Mon	8:30 am – 1:00 pm	Culebra B
350-C	Env Str-Reinf & Devel	Sun	8:00 am – 11:00 am	Ceiba A
350-D	Env Str-Structural	Mon	8:30 am – 6:30 pm	Ceiba B
350-E	Env Str-Precast/ Prestressed	Mon	1:00 pm – 6:30 pm	Ceiba A
350-F	Env Str-Seismic	Tue	8:00 am – 5:00 pm	Palominito A
350-G&K	Env Str-Tightness Testing/Haz Mat	Mon	8:30 am – 11:30 am	Orchidea
350-H	Env Str-Editorial	Tue	9:30 am – 11:00 am	Violeta
350-J	Env Str-Education	Mon	3:30 pm – 6:30 pm	Orchidea
350-L	Env Str-Specification	Tue	3:00 pm – 6:00 pm	Ceiba B
350-SC	Env Str-Steering Comm	Sun	11:00 am – 12:30 pm	Boardroom 1
351	Equip Foundations	Mon	2:00 pm – 5:00 pm	Vieques B
351-A	Equip Fdns-Static Fdns	Mon	8:30 am – 11:30 am	Vieques B
352	Joints	Sun	1:30 pm – 4:45 pm	Palominito A
355	Anchorage	Sun	8:00 am – 4:45 pm	Poinsettia B
355-TG	Anchorage TG	Mon	8:30 am – 11:30 am	Vieques A
357	Offshore & Marine	Tue	8:00 am – 11:00 am	Culebra B
359	Nuclear Reactors	Wed	8:30 am – 4:30 pm	Boardroom 1
360	Slabs on Ground	Mon	2:00 pm – 6:30 pm	Salon 2
362	Parking Structures	Mon	2:00 pm – 5:00 pm	Icaco B
362-A	Parking Str-Standard	Mon	10:00 am – 1:00 pm	Icaco B
363	High-Strength	Wed	8:30 am – 11:30 am	Poinsettia A
363-A	High Strength State-of-the-Art Report	Tue	3:00 pm – 5:00 pm	Boardroom 4
364	Rehabilitation	Mon	2:00 pm – 5:00 pm	Palominito A
364-A	Rehabilitation-Evaluation	Mon	11:30 am – 2:00 pm	Violeta
365	Service Life	Mon	9:00 am – 1:00 pm	Magnolia
365-A	Service Life-Std Model Development	Mon	2:00 pm – 5:00 pm	Siete Mares A
369	Seismic Rehab	Mon	2:00 pm – 5:00 pm	Poinsettia A
370	Dynamic & Vibratory Effects	Sun	1:30 pm – 3:00 pm	Vieques A
371	Elevated Tanks with Concrete Pedestals	Tue	9:30 am – 12:30 pm	Boardroom 3

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
372	Prestressed/Wire Wrapped	Tue	1:30 pm – 3:30 pm	Icaco A
373	Prestressed/Tendons	Sun	8:00 am – 9:30 am	Siete Mares A
374	Seismic Design	Mon	8:30 am – 12:30 pm	Salon 1
375	Design for Wind Loads	Mon	3:00 pm – 6:00 pm	Boardroom 4
376	RLG Containment Structures M1 – Main Meeting	Sun	8:00 am – 3:00 pm	Salon 1
376	RLG Containment Structures M2 – Main Meeting	Mon	2:00 pm – 5:00 pm	Vieques A
376	RLG Containment Structures M3	Tues	8:00 am – 12:30 pm	Salon 1
376	RLG Containment Structures M4	Wed	8:30 am – 5:00 pm	Vieques B
408	Bond & Development	Sun	8:00 am – 11:00 am	Salon 2
421	Reinf Slabs	Sun	10:00 am – 1:00 pm	Palmas B
423	Prestressed	Sun	11:00 am – 3:00 pm	Salon 2
423-445	Adhoc Grp on Shear in Prestress Conc	Sun	3:00 pm – 4:45 pm	Vieques A
435	Deflection	Mon	5:00 pm – 6:30 pm	Palominito A
437	Strength Evaluation	Mon	8:30 am – 11:30 am	Salon 3
439	Steel Reinforcement	Mon	10:00 am – 12:00 pm	Icaco A
439-A	Steel Reinf-Wire	Sun	1:30 pm – 3:00 pm	Icaco A
439-C	Steel Reinf-Mech Bar Develop	Sun	11:00 am – 12:30 pm	Palominito B
440	Fiber Reinforced Polymer	Tue	1:00 pm – 4:00 pm	Pablo Casals
440-D	Research Development and Applications	Mon	11:00 am – 12:30 pm	Salon 2
440-E	FRP-Prof Education	Tue	10:00 am – 12:00 pm	Ceiba B
440-F	FRP-Repair Stregthening	Mon	3:30 pm – 6:30 pm	Casa Blanca
440-H	FRP-Reinforced Concrete	Sun	8:30 am – 9:45 am	Salon 3
440-K	FRP-Material Characteristics	Mon	8:15 am – 9:30 am	Gardenia
440-L	FRP-Durability	Tue	8:00 am – 10:00 am	Salon 2
440-M	FRP-Repair of Masonry Str	Sun	1:00 pm – 5:00 pm	Casa Blanca
440-TG	FRP-Specifications-TG	Mon	1:30 pm – 3:00 pm	Icaco A
441	Columns	Mon	11:30 am – 2:00 pm	Palominito A
444	Experimental Analysis	Mon	12:00 pm – 2:00 pm	Poinsettia C
445	Shear & Torsion	Mon	2:00 pm – 6:00 pm	Poinsettia C

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
445-A	Shear & Torsn-Strut & Tie	Sun	10:30 am – 1:30 pm	Palominito A
445-B	Shear & Torsn-Seismic Shear	Sun	8:00 am – 11:00 am	Ceiba B
445-C	Shear & Torsn-Punching Shear	Sun	1:00 pm – 3:00 pm	Palmas B
445-E	Shear & Torsn-SOA Torsion	Sun	3:00 pm – 4:45 pm	Palmas B
446	Fracture Mechanics	Mon	3:30 pm – 5:30 pm	Salon 1
447	Finite Element Analysis	Mon	11:30 am – 2:00 pm	Palominito B
503	Adhesives	Tue	10:00 am – 11:30 am	Vieques A
506	Shotcreting	Tue	8:00 am – 11:00 am	Casa Blanca
506-A	Shotcreting-Evaluation	Sun	9:30 am – 11:00 am	Vieques B
506-B	Shotcreting-Fiber Reinforced	Sun	1:30 pm – 3:00 pm	Vieques B
506-C	Shotcreting-Guide	Mon	8:30 am – 10:00 am	Boardroom 3
506-E	Shotcreting-Specifications	Mon	10:00 am – 12:30 pm	Boardroom 3
506-F	Shotcreting-Underground	Mon	2:30 pm – 5:00 pm	Las Croabas B
506-G	Shotcreting-Qualification of Nozzlemen	Sun	11:00 am – 12:30 pm	Vieques B
515	Protective Systems	Tue	11:00 am – 1:30 pm	Poinsettia C
522	Pervious Concrete	Mon	8:30 am – 11:30 am	Palominito B
523	Cellular Concrete	Mon	10:00 am – 1:00 pm	Flamboyan B
523-A	Cellular-Autoclaved Aerated	Mon	8:30 am – 10:00 am	Las Croabas A
524	Plastering	Mon	8:30 am – 10:00 am	Icaco B
533	Precast Panels	Sun	8:00 am – 11:00 am	Palmas A
544	Fiber Reinforced Concrete	Tue	3:30 pm – 6:00 pm	Magnolia
544-A	FRC-Production & Applications	Mon	11:30 am – 1:00 pm	Culebra A
544-B	FRC-Education	Mon	8:30 am – 10:00 am	Icaco A
544-C	FRC-Testing	Tue	1:30 pm – 3:00 pm	Vieques B
544-D	FRC-Structural Uses	Mon	3:30 pm – 6:30 pm	Icaco A
544-E	FRC-Mechanical Properties	Mon	10:00 am – 11:30 am	Boardroom 1
544-F	FRC-Durability	Tue	10:30 am – 12:00 pm	Vieques B
546	Repair	Mon	8:30 am – 11:30 am	Casa Blanca
546-A	Repair-Underwater	Sun	8:00 am – 9:00 am	Siete Mares B

Numerical Committee Meeting Listing

Code	Committee	Day	Time	Room Name
546-B	Repair-Material Selection Guide	Sun	9:00 am – 10:00 am	Siete Mares B
546-C	Repair-Guide	Sun	10:00 am – 11:00 am	Siete Mares B
548	Polymers	Tue	8:00 am – 9:30 am	Ceiba A
548-A	Polymers-Overlays	Mon	8:30 am – 11:30 am	Las Croabas B
548-B	Polymers-Sulfur Concrete	Mon	1:00 pm – 2:30 pm	Las Croabas B
548-C	Polymers-Str Design & Analysis	Mon	11:30 am – 1:00 pm	Palmas A
548-TG	Polymers-TG	Sun	11:00 am – 12:30 pm	Siete Mares A
549	Thin Reinforced	Sun	9:30 am – 12:30 pm	Casa Blanca
549-A	Thin Reinforced-Premix GFRC	Sun	8:00 am – 9:30 am	Poinsettia A
550	Precast Structures	Tue	11:00 am – 1:30 pm	Culebra B
551	Tilt-Up	Sun	8:00 am – 10:30 am	Icaco A
552	Cementitious Grouting	Mon	11:30 am – 2:00 pm	Orchidea
555	Recycled	Mon	5:00 pm – 6:30 pm	Poinsettia A
560	Design & Constr ICFs	Wed	8:30 am – 11:30 am	Flamboyan B
562	Eval, Repair & Rehab	Sun	11:30 am – 4:45 pm	Poinsettia A
562-A	Eval, Repair & Rehab-Life Safety	Sun	1:30 pm – 4:45 pm	Gardenia
562-B	Eval, Repair & Rehab-Loads	Sun	1:30 pm – 4:45 pm	Violeta
562-C	Eval, Repair & Rehab-Structural Analysis	Sun	1:30 pm – 4:45 pm	Orchidea
562-D	Eval, Repair & Rehab-Structural Repair Design	Sun	1:30 pm – 4:45 pm	Boardroom 3
562-E	Eval, Repair & Rehab-Durability Quality Assur	Sun	1:30 pm – 4:45 pm	Boardroom 1
563	Specs Repair of Struct Conc in Buildings	Tue	1:30 pm – 5:00 pm	Icaco B

Sunday, October 14, 2007
7:00 am – 8:00 am

First-time Convention Attendee Breakfast **Flamboyan A**

Sponsored by the ACI Convention Committee

Session Moderator: Debrethann R. Orsak
Principal
Cagley & Associates, Inc.,
Rockville, MD

First-time convention attendees are invited to join Debby Orsak, ACI Convention Committee member, for a continental breakfast and a brief session to orient you to the week ahead. Attendees will have an opportunity to meet other convention attendees and learn all that an ACI convention has to offer.

Sunday, October 14, 2007
12:30 pm – 4:30 pm

Student Concrete Cube Competition **Pablo Casals**
in honor of Raymundo Rivera-Villarreal

Sponsored by Committee E801, Student Activities, and the ACI Puerto Rico Chapter

Session Moderator: John J. Myers
Assistant Professor
University of Missouri-Rolla
Rolla, MO

The objective is to produce a concrete cube that achieves, as closely as possible, target design strength and a target mass as specified in the rules. Don't miss this exciting competition! Stop by and cheer on your favorite team!

Student Concrete Projects Competition Winners
1st Place
Designing and Analyzing a New Shrinking Reducing Admixture for Concrete
Michael J. Loy, Oregon Episcopal High School, Portland, OR;
Faculty Advisor: **Rosa Hemphill**

2nd Place
Rapid Setting Composite Concrete for Blast Protection
Cadets Dan Long, **Chip Heidt**, and **Mark Hogan**, United States Military Academy, West Point, NY;
Faculty Advisor: **Lieutenant Colonel Karl F. Meyer**

Sunday, October 14, 2007
1:30 pm – 4:30 pm

***The Art of Bridges** **Salon 7**

Sponsored by Committee 124, Concrete Aesthetics

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

Brian D. Miller
Director of Engineering and Technology
Precast/Prestressed Concrete Institute
Chicago, IL

The Art of Bridges explores the aesthetics of one of civilization's most significant structures—bridges. Concrete is synonymous with bridge construction. This session highlights projects that combine the strength, durability, and utility of concrete with aesthetic features that make them works of art. By spotlighting best practices and presenting concrete solutions to structural challenges that are beautiful and functional, this session will emphasize the natural beauty of concrete. Art bridges the divide between form and function. The Art of Bridges brings together concrete professionals from the Americas and the world to share ideas and celebrate triumphs in aesthetics and utility.

Aesthetic Versatility of Precast Concrete Bridges **1:30 pm**
Dean Frank, Director of Quality Programs, Precast/Prestressed Concrete Institute, Chicago, IL

Aesthetic Survey of Bridges in Film **2:00 pm**
Kimberly Kramer, Director of Graduate Studies, Kansas State University, Manhattan, KS

Creating Bridges as Art—Capturing the Community's Vision **2:30 pm**
Claudia Pulido-Collantes, Bridge Engineer, FIGG Engineer Group, Dallas, TX

Concrete Bridges as Works of Art **3:00 pm**
Ronald J. Watson, President, R J Watson Inc., Amherst, NY

* = theme session

Sunday, October 14, 2007
1:30 pm – 4:30 pm—cont.

Origins of Inspiration: Approach to Modern Highway Structures Architecture and Aesthetics **3:30 pm**
H. Javier Chavez, Chief Architect, Bridge Architecture and Aesthetics, State of California Department of Transportation, Sacramento, CA

The Aesthetics of Precast Bridges **4:00 pm**
Lynne Vaia, Director of Research and Development, CON/SPAN Bridge Systems, Dayton, OH

Sunday, October 14, 2007
1:30 pm – 4:30 pm

Deflection and Stiffness Issues in FRC and Thin Structural Elements—Part 1 **Atlantic Salon 3**

Sponsored by Committees 435, Deflection of Concrete Building Structures, and 544, Fiber Reinforced Concrete

Session Co-Moderators:

Faris Malhas
Civil and Environmental Engineering Department
University of Dayton
Dayton, OH

Barzin Mobasher
Professor
Department of Civil and Environmental Engineering
Arizona State University
Tempe, AZ

Presentation topics are related to the benefits of using fibers in concrete to enhance stiffness and reduce deflection of fiber-einforced concrete (FRC) members both with and without reinforcement. Used in combination with conventional reinforcement, FRC can increase stiffness and reduce deflection of cracked members as well as decrease the stress in the reinforcement. This is particularly important in thin sections and cement-based products where the geometry and profile play an important role in controlling deflection.

Introduction **1:30 pm**
Faris Malhas, Civil and Environmental Engineering Department, University of Dayton, Dayton, OH; and **Barzin Mobasher**, Arizona State University

Current and Future Activities of Committee 544 on Fiber Reinforced Concrete **1:35 pm**
Nemkumar Banthia, Professor, University of British Columbia, Vancouver, BC, Canada

Design Considerations for Steel Fiber-Reinforced Concrete (ACI 544-D) **1:50 pm**
Bruno Massicotte, Professor, Ecole Polytechnique Montreal, Montreal, QC, Canada

Sunday, October 14, 2007
1:30 pm – 4:30 pm—cont.

Numerical Simulation of Thin Steel Fiber Self-Compacting Concrete Structures **2:15 pm**
Joaquim Barros, Professor, University of Minho, Guimaraes, Portugal; **Eduardo Pereira**, **Ventura Gouveia**, and **Álvar Azevedo**, University of Minho

Deflection Calculation Using an Effective Moment of Inertia for Fiber-Reinforced Concrete **2:40 pm**
Peter H. Bischoff, Professor, University of New Brunswick, Fredericton, NB, Canada

Considerations for Computing the Flexural Response of SFRC Members **3:05 pm**
Bruno Massicotte, Professor, Ecole Polytechnique Montreal, Montreal, QC, Canada; **S. Braike**, CIMA+; **Renaud de Montaignac** and **Jean-Philippe Charron**, Ecole Polytechnique Montreal; and **Ali Nour**, Hydro Quebec

Effect of Long Carbon Fibers on Deflection of One-Way Members Under Immediate and Sustained Loads **3:30 pm**
Andrew Scanlon, Professor of Civil Engineering, Pennsylvania State University, Bellefonte, PA; and **Eric Musselman**, **Je Il Lee**, and **Andrea J. Schokker**, Pennsylvania State University

Modeling Aspects of Flexural Load-Deflection Response from Parametric Material Models of Cement Composites **3:55 pm**
Barzin Mobasher, Professor, Department of Civil and Environmental Engineering, Arizona State University, Tempe, AZ; and **Chote Soranakom**, Arizona State University

Sunday, October 14, 2007
1:30 pm – 4:30 pm

Design and Applications of Textile Reinforced Concrete **Salon 5**

Sponsored by Committee 549, Thin Reinforced Cementitious Products and Ferrocement

Session Moderator: Corina Maria Aldea
Senior Materials Engineer
AMEC
Hamilton, ON
Canada

Textile reinforced concrete (TRC) has emerged as a novel composite with various potential applications in nonstructural and, more recently, structural building materials including thin and slender elements, repair, and strengthening of existing structural members. This technical session will be focusing on design, load-carrying characteristics, and possible applications of TRC.

Introduction **1:30 pm**
Corina Maria Aldea, Senior Materials Engineer, AMEC, Hamilton, ON, Canada

Improvement of Serviceability and Strength of Textile Reinforced Concrete Elements with Short Fiber Mixtures **1:35 pm**
Wolfgang Brameshuber, Professor and Chair of Building and Construction Materials, Institut für Bauforschung, Aachen, Germany; and **Marcus Hinzen**, Institut für Bauforschung

Textile Reinforced Concrete for Flexural Strengthening of RC Structures—Part 1: Structural Behavior and Design Model **2:00 pm**
Silvio Weiland, Research Associate, Technische Universitat Dresden, Dresden, Germany; and **Anna Bösche**, **Manfred Curbach**, **Frank Jesse**, and **Regine Ortlepp**, Technische Universitat Dresden

Textile Reinforced Concrete for Flexural Strengthening of RC Structures—Part 2: Application on a Hypar Concrete Shell **2:25 pm**
Silvio Weiland, Research Associate, Technische Universitat Dresden, Dresden, Germany; and **Manfred Curbach**, **Christoph Hankers**, **Barbara Hauptenbuchner**, and **Regine Ortlepp**, Technische Universitat Dresden

Sunday, October 14, 2007
1:30 pm – 4:30 pm—cont.

Subsequent Applied Waterproof Basements Made of Textile Reinforced Concrete Using the Spraying Method **2:50 pm**
Rebecca Mott, Research Assistant, Institut für Bauforschung, Aachen, Germany; and **Wolfgang Brameshuber**, Institut für Bauforschung

Textile Reinforced Concrete (TRC) for Lightweight Structures **3:15 pm**
Alexander Scholzen, Research Assistant, RWTH Aachen University, Aachen, Germany; and **Josef Hegger** and **Stefan Voss**, RWTH Aachen University

Investigation on the Damage Accumulation of AR-Glass Filaments Under Cyclic Loading **3:40 pm**
Wolfgang Brameshuber, Professor and Chair of Building and Construction Materials, Institut für Bauforschung, Aachen, Germany; and **Bong-Gu Kang**, Institut für Bauforschung

Sandwich Panels with Thin-Walled Textile Reinforced Concrete (TRC) Facings **4:05 pm**
Alexander Scholzen, Research Assistant, RWTH Aachen University, Aachen, Germany; **Josef Hegger**, Aachen University; and **Michael Horstmann**, Lehrstuhl und Institut fur Massivbau

Sunday, October 14, 2007
1:30 pm – 4:30 pm

Durability of Marine Environments **Salon 4**

Sponsored by Committee 201, Durability of Concrete

Session Co-Moderators:

Ramón L. Carrasquillo
President
Carrasquillo Associates LTD
Austin, TX

Paul J. Tikalsky
Chair and Professor of Civil and Environmental Engineering
University of Utah
Salt Lake City, UT

The challenge of designing and building concrete structures in marine environments requires innovative thinking, advanced knowledge of materials, and a keen understanding of the local conditions. Speakers will address the deterioration and best practices of concrete in marine environments.

Design and Durability Considerations of Tourism Pier 4, Old San Juan **1:30 pm**
José M. Izquierdo-Encarnación, Principal, PORTICUS, San Juan, PR

Durability in Marine Construction **2:00 pm**
Emilio Colon, Retired Engineer, San Juan, PR

Using Blended and Ternany Cements to Resist Marine Exposures **2:30 pm**
Paul J. Tikalsky, Chair and Professor of Civil and Environmental Engineering, University of Utah, Salt Lake City, UT

Case Studies of Marine Distress **3:00 pm**
Ramon L. Carrasquillo, President, Carrasquillo Associates LTD, Austin, TX

Concrete Applications in Latin American Maritime Terminals—Rehabilitation of Katrina Damage **3:30 pm**
Carlos Ospina, Design Engineer, Berger/ABAM Engineers Inc., Federal Way, WA

Achieving Durability in Post-Tensioned Structures in Coastal Environments **4:00 pm**
Andrea J. Schokker, Henderson Professor/Civil Engineering, Pennsylvania State University, University Park, PA

Sunday, October 14, 2007
1:30 pm – 4:30 pm

Emerging Technologies in Civil Infrastructure Applications **Salon 6**

Sponsored by the TAC Technology Transfer Committee Task Group

Session Co-Moderators: Peter Emmons
President
Structural Group Inc.
Hanover, MD

Joseph Sanders
Vice President
Charles Pankow Builders Ltd.
Pasadena, CA

Collaborating to solve industry technology problems and advancing the adoption of industry-critical technologies is the goal of ACI's Strategic Development Council (SDC). The mission of the TAC Technology Transfer Committee (TTTC) is to provide a vehicle to move innovation and technology into practice as rapidly as possible. This session highlights the status of some of the SDC's industry-critical technologies and the role played by the TTTC in its industry adoption process.

Introduction **1:30 pm**
Joseph Sanders, Vice President, Charles Pankow Builders Ltd., Pasadena, CA

Strategic Development Council Overview **1:35 pm**
Claude Bedard, Vice President and General Manager, The Euclid Chemical Co., St Hubert, QC, Canada

The State of Repair Technologies **2:05 pm**
Kelly M. Page, Executive/Technical Director, International Concrete Repair Institute, Des Plaines, IL

Tolerances and Incompatibility **2:35 pm**
Eldon G. Tipping, President, Structural Services Inc., Richardson, TX

Concrete and Sustainability **3:05 pm**
Terence C. Holland, Consulting Engineer, Auburn Township, OH

Sunday, October 14, 2007
1:30 pm – 4:30 pm

Recent Advances in Form Pressure Exerted by Self-Consolidating Concrete (SCC) **3:35 pm**
Kamal H. Khayat, Professor, University of Sherbrooke, Sherbrooke, QC, Canada

ITG-6: High-Strength Rebar **4:05 pm**
Paul Zia, Distinguished University Professor, North Carolina State University, Raleigh, NC

Sunday, October 14, 2007
5:00 pm – 6:00 pm

Opening Session and Hardy Cross Lecture Series **Atlantic Salons 1 & 2**

The convention officially kicks off at the Opening Session where Mete Sozen will deliver the Hardy Cross Lecture Series. Hardy Cross wished that the analysis of a structure for continuity would be less complicated than the determination of anchorage and stirrup spacing. In our time, we find that his wish has been achieved by turning it on its head. The determination of bar anchorage and stirrup spacing have become more complicated than Cross's approach to analysis. It has been said that it took an age to understand Aristotle and another age to forget him. Hardy Cross may have been forgotten even before he was understood. In this talk, we remember him with the hope that remembrance will encourage understanding of what he meant by "All analyses are based on some assumptions which are not quite in accordance with the facts. From this, however, it does not follow that the conclusions of the analysis are not very close to the facts." We ponder what he meant by "very close" and what he meant by "facts."

Sunday, October 14, 2007
6:00 pm – 9:00 pm

Opening Reception—Welcome to Puerto Rico!

Main Pool & Trellises—weather permitting
Grand Caribbean Foyer & Terrace—inclement weather

Sponsored by the ACI Puerto Rico Chapter and RUMS of Puerto Rico

Following the Opening Session, meet your colleagues, friends, and exhibitors for beverages and a hearty taste of Puerto Rico.

Please use the drink tickets found in your registration packet for this event. Beverages are courtesy of RUMS of Puerto Rico.

RUMS of PUERTO RICO
THE RUM CAPITAL OF THE WORLD

Monday, October 15, 2007
6:30 am – 8:15 am

Workshop for Technical Committee Chairs **Atlantic Salon 1**

Sponsored by the Technical Activities Committee

Session Moderator: Kenneth B. Bondy
Consulting Structural Engineer
West Hills, CA

ACI Technical Committee Chairs are encouraged to attend this breakfast workshop for an opportunity to meet with fellow Chairs, TAC members, and ACI staff. There will be table discussions and short presentations on recent developments of interest to ACI technical committee chairs.

Monday, October 15, 2007
7:00 am – 8:30 am

Speaker Skills Training Breakfast **Magnolia**

Sponsored by Committee E802, Teaching Methods and Educational Materials

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

This session explores the objectives of a presentation at an ACI convention session or committee meeting. From these objectives comes a discussion of how to plan an effective presentation. A continental breakfast will be served.

Why Am I Doing This?
James Hanson, Assistant Professor, Rose-Hulman Institute of Technology, Terre Haute, IN

Monday, October 15, 2007
9:00 am – 12:00 pm

Deflection and Stiffness Issues in FRC and Thin Structural Elements—Part 2 **Atlantic Salon 3**

Sponsored by Committees 435, Deflection of Concrete Building Structures, and 544, Fiber Reinforced Concrete

Session Co-Moderators: Peter H. Bischoff
Professor
University of New Brunswick
Fredericton, NB
Canada

Hani Nassif
Professor
Rutgers University
Piscataway, NJ

Presentation topics are related to the benefits of using fibers in concrete to enhance stiffness and reduce deflection of fiber-reinforced concrete (FRC) members both with and without reinforcement. Used in combination with conventional reinforcement, FRC can increase stiffness and reduce deflection of cracked members as well as decrease the stress in the reinforcement. This is particularly important in thin sections and cement-based products where the geometry and profile play an important role in controlling deflection.

Introduction **9:00 am**
Peter H. Bischoff, Professor, University of New Brunswick, Fredericton, NB, Canada

Mechanical Properties for Structural Design (544-E) **9:05 am**
Neven Krstulovic-Opara, Senior Structural Engineer, ExxonMobil Development Company, Houston, TX

Numerical Simulation of FRC Round Panel Tests and Full-Scale Elevated Slabs **9:30 am**
Barzin Mobasher, Professor, Department of Civil and Environmental Engineering, Univiersity of Arizona, Tempe, AZ; **Chote Soranakom**, Arizona State University; and **Xavier Destree**, ARCELORMittal

Monday, October 15, 2007
9:00 am – 12:00 pm

Effect of Synthetic Macro-Fibers on Shear Behavior of Reinforced Concrete Beams **9:55 am**
Salah Altoubat, Assistant Professor of Civil Engineering, University of Sharjah, Sharjah, UAE; **Klaus-Alexander Rieder**, W R Grace; and **Ardavan Yazdanbakhsh**, University of Sharjah

Deflection-Softening and Deflection-Hardening FRC Composites: Characterization and Modeling **10:20 am**
Antoine Naaman, Professor, University of Michigan, Ann Arbor, MI

Effect of Open-Loop or Closed-Loop Deflection Control on Measured Toughness of FRC **10:45 am**
Nemkumar Banthia, Professor, Department of Civil Engineering, University of British Columbia, Vancouver, BC, Canada; and **Rishi Gupta**, British Columbia Institute of Technology

The Role of Fiber Dispersion on Toughness and Deflection Stiffness Properties of SFRCs **11:10 am**
Liberato Ferrara, Assistant Professor, Politecnico di Milano, Milano, Italy; and **Surendra P. Shah** and **Yon-Dong Park**, Northwestern University

Monday, October 15, 2007
9:00 am – 12:00 pm

Fabrication Technologies for Thin Cementitious Products—Part 1 — **Salon 4**

Sponsored by Committee 549, Thin Reinforced Cementitious Products and Ferrocement

Session Co-Moderators:

Yixin Shao
Associate Professor
McGill University
Montreal, QC
Canada

Ashish Dubey
Research Associate
USG Corporation
Libertyville, IL

State-of-the-art fabrication technologies for thin cementitious composite products and their physical and mechanical properties will be presented. The technologies include pultrusion, spray-up, continuous mixing, Hatschek, pressure molding, injection modeling, spun casting, as well as fast carbonation curing.

Importance of Processing in Advanced Cement-Based Composites — **9:00 am**
Surendra P. Shah, Professor and Director, Center for ACBM, Northwestern University, Evanston, IL

Development of Thermal Insulation and Storage Materials Using Extrusion Techniques — **9:30 am**
Zongjin Li, Professor, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong, China; and **Xiangyu Li**, The Hong Kong University of Science and Technology

Extruded HPFRCC for Use in Residential Building Application — **10:00 am**
Katherine G. Kuder, Assistant Professor, Seattle University, Seattle, WA; and **Surendra P. Shah**, Northwestern University

The Use of a Continuous Mixer and a Fast Setting GFRC Material to Produce Architectural Product — **10:30 am**
Hiram Ball, President, Ball Consulting Ltd, Ambridge, PA

Monday, October 15, 2007
9:00 am – 12:00 pm

Recent Development of GRC Production **11:00 am**
John Jones, Technical Sales Manager, Nippon Electric Glass America Inc., Grand Prairie, TX

Pultrusion versus Casting Processes for the Production of Fabric-Cement Composites **11:30 am**
Barzin Mobasher, Professor, Department of Civil and Environmental Engineering, Arizona State University, Tempe, AZ; and **Alva Peled**, Ben-Gurion University

Monday, October 15, 2007
9:00 am – 12:00 pm

Internal Curing of High-Performance Concretes: Laboratory and Field Experiences—Part 1 **Salons 6 & 7**

Sponsored by Committee 236, Material Science of Concrete

Session Co-Moderators: Dale Bentz
Chemical Engineer
National Institute of Standards and Technology
Gaithersburg, MD

Benjamin Mohr
Assistant Professor
Tennessee Technological University
Cookeville, TN

Internal curing is accomplished by the incorporation of water-absorptive materials in low-permeability (that is, high-performance) concretes, where external curing may not be sufficient to completely maintain saturation of the concrete member. In the absence of adequate curing, early-age shrinkage can be problematic. Experimental research and practical field applications of internal curing will be presented.

On the Influence of Internal Curing on Basic Creep **9:00 am**
Mauricio Lopez, Assistant Professor, Pontificia Universidad Catolica de Chile, Santiago, Chile; and **Lawrence Kahn** and **Kimberly Kurtis**, Georgia Institute of Technology

Assessment of Saturated Lightweight Aggregate Effectiveness for Internal Curing of High-Performance Concrete **9:30 am**
Daniel Cusson, Research Officer, National Research Council Canada, Ottawa, ON, Canada

Autogenous Elimination of Autogenous Shrinkage **10:00 am**
Alejandro Duran-Herrera, Civil Engineer, University Autonoma De Nuevo León, Escobedo, NL, Mexico; and **Olivier Bonneau**, **Pierre-Claude Aïtcin**, **Nikola Petrov**, and **Kamal H. Khayat**, University of Sherbrooke

Monday, October 15, 2007
9:00 am – 12:00 pm

Influence of Internal Curing on the Microstructure of High-Performance Blended Cement Mortars **10:30 am**
Dale Bentz, Chemical Engineer, National Institute of Standards and Technology, Gaithersburg, MD; and **Paul Stutzman**, National Institute of Standards Technology

Internal Curing Water Movement in High-Performance Cement-Based Materials **11:00 am**
Kristen Batey, Graduate Student, Tennessee Technological University, Cookeville, TN; and **Benjamin Mohr**, Tennessee Technological University

Activities of RILEM Technical Committee: Internal Curing of Concrete and Anticipated Research Trends (2007-2002) ICC-196 **11:30 am**
Kosta Kovler, Technion, Israel Institute of Technology, Israel; and **Ole M. Jensen**, Technical University of Denmark

Monday, October 15, 2007
9:00 am – 12:00 pm

Research in Progress **Salon 5**

Sponsored by Committee 123, Research and Current Developments

Session Co-Moderators:
Matthew D'Ambrosia
Materials Consulting
CTLGroup
Skokie, IL

Farshad Rajabipour
Assistant Professor
Purdue University
West Lafayette, IN

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

Introduction **9:00 am**
Matthew D'Ambrosia, Materials Consulting, CTLGroup, Skokie, IL

Sulfate Resistance of High-Calcium Fly Ash Concrete **9:01 am**
Rajaram Dhole, Graduate Student, University of New Brunswick, Fredericton, NB, Canada; and **Thano Drimalas**, University of Texas at Austin

A Synergistic Method for Identification and Quantification of Crystalline and Amorphous Mineral Phases in a Class F Fly Ash **9:15 am**
Ryan Chancey, Graduate Student, University of Texas at Austin, Austin, TX; **Maria Juenger**, **Kevin Folliard**, and **David Fowler**, University of Texas at Austin; and **Paul Stutzman**, National Institute of Standards Technology

Flocculation Mechanisms of SCC Cement Pastes **9:30 am**
Raissa P. Ferron, PhD Candidate, Northwestern University, Chicago, IL; and **Surendra P. Shah**, Northwestern University

Use of Expandable Polystyrene as Lightweight Aggregates in Concrete **9:45 am**
Tricia Guevara, Development Leader, NOVA Chemicals Inc, Monaca, PA

Monday, October 15, 2007
9:00 am – 12:00 pm

Bauxsol™: Is It a Potential Sand Replacement Material in Concrete? **10:00 am**
Salim Barbhuiya, Graduate Student, Queen's University Belfast, Belfast, Northern Ireland; **P.A.M. Basheer**, **Daniel McPolin**, **G.I.B. Rankin**, and **B. Sen Gupta**, Queen's University of Belfast; and **M.W. Clark**, Southern Cross University

Nonlinear Analysis of Reinforced Concrete Frames Under Push-Over and Cyclic Loads **10:15 am**
Serhan Guner, PhD Candidate, University of Toronto, Toronto, ON, Canada; and **Frank J. Vecchio**, University of Toronto

Reinforced Concrete Tension Stiffening Behavior for Nonlinear Model Updating **10:30 am**
Migeum So, Research Assistant, Department of Civil Engineering, Washington University of St. Louis; and **Tom Harmon**, **Gun Jin Yun**, and **Shirley Dyke**, Washington University of St. Louis

D-Region Strength and Serviceability Design **10:45 am**
Robin Tuchscherer, PhD Candidate, University of Texas at Austin, Austin, TX; and **Oguzhan Bayrak** and **David Birrcher**, University of Texas

Shear Behavior of Steel Fiber-Reinforced Concrete Beams **11:00 am**
Hai Dinh, PhD Candidate, University of Michigan, Ann Arbor, MI

Experimental Study of Concrete Tank Walls Subjected to Hydrostatic Loading **11:15 am**
M. Reza Kianoush, Professor/PhD, Ryerson University, Toronto, ON, Canada; and **Armin Zyarishalamni**, Ryerson University

FRP Encasement of Concrete to Improve Seismic Performance of Bridge Piers **11:30 am**
Yilei Shi, PhD Student, Florida International University, Miami, FL; and **Amir Mirmiran** and **Bin Li**, Florida International University

Anchorage of Carbon Fiber-Reinforced Polymers to Reinforced Concrete in Shear Applications **11:45 am**
Carl Niemitz, Graduate Student, Northampton, MA; and **Sergio Brena**, University of Massachusetts

Monday, October 15, 2007
9:00 am – 12:00 pm

Structural Implications of Concrete Shrinkage and Creep of Concrete—Part 1 **Atlantic Salon 2**

Sponsored by Committee 209, Creep and Shrinkage in Concrete

Session Co-Moderators: N. J. Gardner
Ottawa, ON
Canada

Mario Alberto Chiorino
Professor
Politecnico di Torino
Torino, Italy

All concrete structures, to some extent, are susceptible to the effects of the shrinkage and creep of concrete. Deflections increase, moments are redistributed, and shrinkage and creep contribute to loss of precompression in prestressed concrete elements. Increasing use of higher-strength concretes and reinforcing steels and more effective design procedures lead to shallower section members with attendant reductions in stiffness and, hence, larger deflections. These changes, together with more adventurous concepts by architects and engineers, suggest a review of current experiences would be appropriate and useful. ACI Committee 209 has proposed new provisions for shrinkage and creep that will increase calculated responses and is currently discussing guidelines for the evaluation of time-dependent effects in concrete structures.

Stress Distribution of Prestressed Concrete Structures as Influenced by Time and Temperature **9:00 am**
Neil C. M. Tsang, Lecturer, Imperial College, London, UK; and **George England**, Imperial College

Numerical Approach to Viscoelastic Analysis of Concrete Structures in the Frame of Equilibrium Method **9:25 am**
Mario Sassone, Assistant Professor, Politecnico di Torino, Torino, Italy; and **Davide Bigaran** and **Carlo Casalegno**, Politecnico di Torino

Removal of Temporary Supports Under Creep Effects in the Sequential Construction of Bridges **9:50 am**
Marcello Arici, Professor, Università di Palermo, Italy

Monday, October 15, 2007
9:00 am – 12:00 pm

Creep and Shrinkage of a Self-Compacting VHPC in Prebended Composite Beams for Innovative Railway Bridges in France — **10:15 am**
Stéphanie Staquet, PhD Student, Université Libre de Bruxelles, Brussels, Belgium

Shrinkage Effect on Shear Strength of Reinforced High-Strength Concrete Beams — **10:40 am**
Ryoichi Sato, Associate Professor, Hiroshima University, Higashi-Hiroshima; and **Ippei Maruyama**, Nagoya University

Investigation Upon Cracking of Concrete Induced By Restrained Contraction — **11:05 am**
Călin Mircea, Professor and Director, National Building Research Institute Cluj-Napoca Branch, Romania; **Mihai Filip**, National Building Research Institute Cluj-Napoca Branch; and **Adrian Ioani**, Technical University of Cluj-Napoca Branch

Comparison of Prediction Models and Design Approaches for Creep and Shrinkage of Concrete — **11:30 am**
Zdenek P. Bažant, Walter P. Murphy Professor, Northwestern University, Evanston, IL

Monday, October 15, 2007
12:00 pm – 2:00 pm

✓**Student Lunch** **Atlantic Salon 1**
$40 U.S. per person

Sponsored by Committee E801, Student Activities, and the ACI Puerto Rico Chapter

Session Moderator: John J. Myers
Assistant Professor
University of Missouri-Rolla
Rolla, MO

Speaker: Ramón L. Carrasquillo
President
Carrasquillo Associates LTD
Austin, TX

Topic: Are You an Engineer?

This presentation explores the way of life of an engineer as viewed from a student's perspective which is mostly troubled by unanswered questions, confusion, and short-term battles lost as the student maneuvers through school. The speaker will address questions and topics such as "Do students learn at school?" "What makes an engineer?" and "Things you are not taught at engineering school but you need to know to be an engineer." This presentation will compare the black and white world of an engineering student with the gray world of a practicing engineer. In this presentation, Dr. Carrasquillo will describe the difference between an engineering way of life and an engineering job. How you find satisfaction in life by practicing your own engineering is the question to be answered by each of us.

Following lunch, awards will be presented to the winners of the Student Concrete Cube Competition. The Student Lunch is FREE to students who preregister. **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, October 15, 2007
2:00 pm – 3:00 pm

Convention Moderator Question and Answer **Palominito B**

Sponsored by the ACI Convention Committee

The hottest ticket in town! Forget Wicked and kiss Mama Mia goodbye... more fun than Spamalot, more exciting than Les Miserables...

ACI Presents...
Convention Moderator Question and Answer Session In Puerto Rico.

Find out who that person behind the curtain really is as you take one wild trip down the rabbit hole to the world of ACI Convention Sessions.

All future convention session moderators are encouraged to attend this informative session. Also, you will have an opportunity to have questions answered specific to your future session.

Monday, October 15, 2007
2:00 pm – 5:00 pm

***Towards Better Bridge Design and Analysis: Lessons Learned From Recent Strong Earthquakes** **Atlantic Salon 3**

Sponsored by Committee 341, Earthquake-Resistant Bridges

Session Co-Moderators: Pedro Silva
Assistant Professor
The George Washington University
Washington, DC

Ayman Salama
Senior Structural Engineer
CH2M Hill
Santa Ana, CA

Attendees will hear presentations on state-of-the-art practices on bridge design and analysis that are based on lessons learned from recent earthquakes.

Fragilities of Typical California Bridges: Combining Computer Models and Sensor Data **2:00 pm**
John-Michael Wong, Graduate Student, University of California-Berkeley, Berkeley, CA; and **Bozidar Stojadinovic**, University of California-Berkeley

Seismic Retrofit of the Rafael Mendoza Aviles Multi-Span Concrete Bridge Spanning the Daule and Babahoyo Rivers, Guayaquil, Ecuador **2:25 pm**
Roupen Donikian, Senior Associate, TY Lin International, San Francisco, CA

A Shake Table Study of Near-Fault Earthquake Effects on RC Bridge Columns **2:50 pm**
M. Saiid Saiidi, Professor of Civil and Environmental Engineering, University of Nevada-Reno, Reno, NV; and **Hoon Choi**, University of Nevada-Reno

* = theme session

Monday, October 15, 2007
2:00 pm – 5:00 pm

Statistical Significance of Model Parameters of Bridge Systems Identified From Strong Motion Data **3:15 pm**
Khalid M. Mosalam, Associate Professor, University of California-Berkeley, Berkeley, CA; and **Yalin Arici**, University of California-Berkeley

Push-Over Analysis of Bridge Pier with Coupled Disconnected Spread Footing Foundation **3:40 pm**
Hisham Nofal, Senior Geotechnical Engineer, CH2M Hill, Santa Ana, CA

Monday, October 15, 2007
2:00 pm – 5:00 pm

Developing Innovative Solutions Through Research for Design of Precast/Prestressed Concrete Structures **Salon 5**

Sponsored by Committee 550, Precast Concrete Structures

Session Co-Moderators: Thomas J. D'Arcy
Founding President/Principal
The Consulting Engineers Group
San Antonio, TX

L. S. Paul Johal
Director, Research and Development
Precast/Prestressed Concrete Institute
Chicago, IL

The session includes presentations on several precast/prestressed concrete research and design projects, including standardized testing for self-consolidating concrete, determination of strength reduction due to fire damage, accelerated bridge construction in seismic zones, precast concrete walls subjected to blast effects, design of prestressed concrete piles in high seismic regions, and design methodology for precast diaphragms in low and high seismic regions.

Standardized Physical Property Testing for Self-Consolidating Concrete **2:00 pm**
David Mukai, Associate Professor, University of Wyoming, Laramie, WY

Fire-Flexural Strength Relationship Research: Preliminary Data and a Simplified Construction Strength Model **2:25 pm**
Scott Schiff, Professor, Clemson University, Clemson, SC; and **Kacie Caple**, Clemson University

Accelerated Bridge Construction in Seismic Zones: Precast Concrete Bentcap Systems **2:50 pm**
Jose I. Restrepo, Associate Professor, University of California-San Diego, La Jolla, CA

Analysis of Precast Concrete Wall Panels Subjected to Blast Effects **3:15 pm**
James S. Davidson, Associate Professor, University of Alabama, Birmingham, AL; and **Robert S. Browning**, University of Alabama

Monday, October 15, 2007
2:00 pm – 5:00 pm

Design of Spiral Reinforcement for Prestressed Concrete Piles in High Seismic Regions **3:40 pm**
Sri Sritharan, Associate Professor, Iowa State University, Ames, IA; and **Ann-Marie Fanous**, Iowa State University

Development of Design Methodology for Precast Concrete Diaphragms for Seismic Resistance **4:05 pm**
Robert B. Fleischman, Associate Professor of Civil Engineering, University of Arizona, Tucson, AZ

Monday, October 15, 2007
2:00 pm – 5:00 pm

Fabrication Technologies for Thin Cementitious Products—Part 2 **Salon 4**

Sponsored by Committee 549, Thin Reinforced Cementitious Products and Ferrocement

Session Co-Moderators:
Yixin Shao
Associate Professor
McGill University
Montreal, QC
Canada

Ashish Dubey
Research Associate
USG Corporation
Libertyville, IL

Presentations on state-of-the-art fabrication technologies for thin cementitious composite products and their physical and mechanical properties will be presented. The technologies include pultrusion, spray-up, continuous mixing, Hatschek, pressure molding, injection modeling, spun casting, as well as fast carbonation curing.

Bamboo Composite Panel with Extruded FRC Thin Sheet **2:00 pm**
Zongjin Li, Professor, Department of Civil Engineering, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong, China

Thin Shell Structural Concrete Insulated Panel Systems—Fabrication Methods with Low-Velocity Concrete **2:30 pm**
Mark D. Heath, Chief Technology Officer, Green Sandwich Technologies, Newhall, CA; **Fouad Fouad**, University of Alabama at Birmingham; and **Jim Farrell**, Blastcrete Equipment Co.

Thin Walled Concrete Tubular Members Spun-Cast into Fiber-Reinforced Polymer Tubes **3:00 pm**
Amir Fam, Associate Professor and Canada Research Chair, Queen's University, Kingston, ON, Canada

Thin Cement-Based Elements with Nonwoven Fabrics **3:30 pm**
Alva Peled, Structural Engineering Department, Ben-Gurion University, Beer Sheva, Israel

Monday, October 15, 2007
2:00 pm – 5:00 pm

Comparison of Compression and Injection Molding on the Mechnical Properties of Cement-Based Fiber Composites **4:00 pm**

Barzin Mobasher, Professor, Department of Civil and Environmental Engineering, Arizona State University, Tempe, AZ

Carbonation Curing of Cement Fiberboard Made by Slurry-Dewatering Process **4:30 pm**

Yixin Shao, Associate Professor, Department of Civil Engineering, McGill University, Montreal, QC, Canada; and **Sam Wang**, McGill University

Monday, October 15, 2007
2:00 pm – 5:00 pm

Internal Curing of High-Performance Concretes: Laboratory and Field Experiences—Part 2 **Salons 6 & 7**

Sponsored by Committee 236, Material Science of Concrete

Session Co-Moderators:
Dale Bentz
Chemical Engineer
National Institute of Standards and Technology
Gaithersburg, MD

Benjamin Mohr
Assistant Professor
Tennessee Technological University
Cookeville, TN

Internal curing is accomplished by the incorporation of water-absorptive materials in low-permeability (that is, high-performance) concretes, where external curing may not be sufficient to completely maintain saturation of the concrete member. In the absence of adequate curing, early-age shrinkage can be problematic. Experimental research and practical field applications of internal curing will be presented.

Evaluation of High Absorptive Materials to Improve Internal Curing of Low-Permeability Concrete **2:00 pm**
Norbert Delatte, Assistant Professor, Cleveland State University, Broadview Heights, OH

Internal Curing for Improved Performance of Concrete in Pavement and Bridge-Deck Applications **2:30 pm**
Will Hansen, Professor of Civil Engineering, University of Michigan, Ann Arbor, MI; and **Ya Wei**, University of Michigan

Using Intermediate Gradations of Rotary Kiln Lightweight Aggregate to Enhance Cement Hydration in Mainline Paving Mixtures **3:00 pm**
Tracey Friggle, Director of Construction, Dallas Area, Texas Department of Transportation, Dallas, TX; and **Don Reeves**, Texas Industries Inc.

Monday, October 15, 2007
2:00 pm – 5:00 pm

Internal Hydration—Real World Ready Mix Production and Applications **3:30 pm**
Victor H. Villarreal, Sales Representative, TXI Industries LP, Dallas, TX

Internal Curing Study with Intermediate Lightweight Aggregate **4:00 pm**
Michael A. Caldarone, Principal Engineer, CTLGroup, Skokie, IL; **Don Reeves**, Texas Industries Inc.; and **Wioleta A. Pyc** and **Don Broton**, CTLGroup

Monday, October 15, 2007
2:00 pm – 5:00 pm

Structural Implications of Concrete Shrinkage and Creep of Concrete—Part 2 **Atlantic Salon 2**

Sponsored by Committee 209, Creep and Shrinkage in Concrete

Session Co-Moderators: Mario Chiorino
Professor/Dr Ing
Politecnico di Torino
Torino, Italy

David McDonald
Senior Research Associate
USG Corp
Libertyville, IL

All concrete structures, to some extent, are susceptible to the effects of the shrinkage and creep of concrete. Deflections increase, moments are redistributed, and shrinkage and creep contribute to loss of precompression in prestressed concrete elements. Increasing use of higher-strength concretes and reinforcing steels, and more effective design procedures, lead to shallower section members with attendant reductions in stiffness and, hence, larger deflections. These changes, together with more adventurous concepts by architects and engineers, suggest a review of current experiences would be appropriate and useful. ACI Committee 209 has proposed new provisions for shrinkage and creep that will increase calculated responses and is currently discussing guidelines for the evaluation of time-dependent effects in concrete structures.

Designing for Effects of Creep and Shrinkage in High-Rise Buildings **2:00 pm**
Domingo J. Carreira, Professor, Illinois Institute of Technology, Chicago, IL

Creep and Shrinkage and the Design of Supertall Buildings—A Case Study: The Burj Dubai Tower **2:20 pm**
Lawrence Novak, Associate Partner, Skidmore Owings & Merrill LLP, Chicago, IL; and **William Baker**, **Bradley Young**, and **D. Korista**, Skidmore Owings & Merrill LLP

Monday, October 15, 2007
2:00 pm – 5:00 pm

Comparison of Different Creep and Shrinkage Models on Two Concrete High-Rise Buildings **2:40 pm**
Ahmet K. Sanli, Associate, Uzun and Case Engineers LLC, Atlanta, GA

Cracking Induced by Drying Shrinkage on Slabs of Composite Steel-Concrete Floors of a 37-Story Building in Mexico **3:00 pm**
Mario E. Rodriguez, Research Professor, National University of Mexico, Mexico City, DF, Mexico

Effect of Shrinkage on Short-Term Deflection of Reinforced Concrete Beams **3:20 pm**
Peter H. Bischoff, Professor, University of New Brunswick, Fredericton, NB, Canada

Modeling and Calculation of Shrinkage and Creep in Hardened Concrete (ACI 209.YR-XX) **3:40 pm**
Carlos Videla, Professor of Civil Engineering, Pontificia Univ. Catolica de Chile, Santiago, Chile

A Proposal of Simple Design Equations for Evaluating Flexural Serviceability Performance of Reinforced High- and Low-Shrinkage HSC Beams **4:00 pm**
Makoto Tanimura, Research Scientist, Taiheiyo Cement Corporation, Chiba Prefecture; and **Ryoichi Sato**, Hiroshima University

Effect of Early Age Loading on Time-Dependent Deflection and Shrinkage Restraint Cracking of Slabs with Low Reinforcement Ratios **4:20 pm**
Andrew Scanlon, Professor/Head CEE Engineering, Pennsylvania State University, University Park, PA

Monday, October 15, 2007
5:00 pm – 6:00 pm

Women in ACI Reception **Mirador Terrace – weather permitting**
Magnolia Foyer – inclement weather

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 through networking and socializing. A hosted bar and light hors d'oeuvres will be served.

Monday, October 15, 2007
7:30 pm – 10:00 pm

123 Forum: Do We Know What the Chloride Threshold is for Reinforcing Steel Corrosion? **Salon 4**

Sponsored by Committee 123, Research and Current Developments

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

Following its long tradition, ACI Committee 123 brings industry experts together in Puerto Rico to debate on another subject and to share their views with ACI convention attendees. The debate this time is whether we know the chloride threshold for reinforcing steel corrosion. Currently, ACI itself does not have consistent chloride threshold in its various documents. This leads to some basic questions:

- Do we have a good understanding of what a chloride threshold is?
- What factors within the concrete and outside the concrete define a chloride threshold?
- Should there be a common chloride threshold for different concrete mixture proportions and concrete constituent types or different chloride thresholds for different variations present in concrete, at least the major ones?
- What role does alkalinity (or pH) of concrete play in establishing a chloride threshold for reinforced concrete?
- Does the chloride threshold change or remain constant during the service life of concrete structures?
- Is there a need to develop a rapid test procedure for determining the chloride threshold of reinforced concrete?

Our panelists will address these and many other questions you might have.

Presentation on following page

Monday, October 15, 2007
7:30 pm – 10:00 pm—cont.

Introduction **7:30 pm**
Mohammad S. Khan, Senior Vice President, Professional Service Industries, Inc., Herndon, VA

ACI 318 Perspective on Chloride Threshold **7:35 pm**
Kenneth C. Hover, Professor, Department of Civil & Environmental Engineering, Ithaca, NY

A Consultant's Perspective on Chloride Threshold **7:45 pm**
Randall W. Poston, Principal, WDP & Associates Inc., Austin, TX

Chloride Threshold – A Good Understanding is the Key! **7:55 pm**
Richard E. Weyers, Professor, Civil Engineering Department, Virginia Polytechnic Institute, Blacksburg, VA

Importance of Chloride Threshold in Post-Tensioned Structures **8:05 pm**
Ted Neff, Executive Director, Post-Tensioning Institute, Phoenix, AZ

Practical Experiences Related to Chloride Threshold **8:15 pm**
David Whitmore, President, Vector Corrosion Technologies, Winnipeg, MB, Canada

Questions, Answers, and Discussion **8:25 pm**

Monday, October 15, 2007
5:30 pm – 12:00 am

Dine Arounds **Departs Main Entrance El Conquistador**

On Monday, October 15, 2007, ACI attendees will have an opportunity to visit Old San Juan. ACI has reserved seats at the following restaurants in Old San Juan at 7:00 pm and 8:00 pm.

Restaurant	Cuisine
311 Troi Cent Onze	French
Baru	Spanish tapas
El Patio de Sam	International
Fratelli	Italian
Il Perugino	Italian
La Mallorquina	Spanish and international
Marmalade	French
Old Harbor Brewery Steak and Lobster House	Steakhouse
Tamarind Steakhouse	Steakhouse
Tantra	Indian

If you have requested a reservation in advance, please see the Dine Around Information Table to obtain your confirmation.

To make a reservation, go to the Dine Around Information Table located in the Atrium Lobby to select an available restaurant during the following times:

Saturday	2:00 pm – 6:00 pm
Sunday	7:30 am – 5:00 pm
Monday	8:00 am – 3:00 pm

Complimentary shuttles will depart from the El Conquistador main entrance. Return shuttles will stop at the Fajardo Inn, Wyndham Rio Mar, and El Conquistador. ACI will be running shuttles to/from Old San Juan at the following times:

To Old San Juan	To Hotels
5:30 pm	9:00 pm
6:00 pm	10:00 pm
6:30 pm	11:00 pm
7:00 pm	12:00 am
7:30 pm	
8:00 pm	

Please note: Old San Juan is approximately 60 minutes one-way from the hotels. Be sure to refer to the map of Old San Juan between pages 24 and 25 for restaurant locations and the drop-off/pick-up point.

Tuesday, October 16, 2007
9:00 am – 12:00 pm

***Improving the Durability of Concrete Bridges—Part 1 Atlantic Salon 3**

Sponsored by Committee 343, Concrete Bridge Design

Session Co-Moderators: Shrinivas Bhide
Bridge Program Manager
Portland Cement Association
Skokie, IL

Bruce Kates
Structural Section Manager
Jacobs Civil Inc.
St. Louis, MO

Improving the durability of concrete bridges has been the subject of intense interest for the past quarter century. There is much to share regarding research on non-corroding reinforcement, the implementation of high-performance concrete (HPC) technology, guide specifications to produce HPC, performance specifications for HPC, and valuable lessons learned through the incorporation of HPC on bridge projects. Learn from the experience of these respected industry leaders by attending this session.

Implementation of High-Performance Concrete Bridge 9:00 am
Louis Triandafilou, High-Performance Structural Materials Specialist, FHWA Resource Center, Baltimore, MD

Guide Specification for HPC Bridges 9:30 am
Peter Taylor, Associate Director, National Concrete Pavement Technology Center, Ames, IA; and **Shrinivas Bhide**, Portland Cement Association

High-Performance Concrete for Bridges in Virginia 10:00 am
H. Celik Ozyildirim, Principal Research Scientist, Virginia Transportation Research Council, Charlottesville, VA

Bridge Concrete—The Port Authority of NY and NJ Experience 10:30 am
Casimir Bognacki, General Manager of Material Engineering Division, Port Authority of New York and New Jersey, Jersey City, NJ

Use of High-Performance Steel Reinforcing Bars for Concrete 11:00 am
Sami H. Rizkalla, Distinguished Professor, North Carolina State University, Raleigh, NC

* = theme session

Tuesday, October 16, 2007
9:00 am – 12:00 pm

***Hot Topic Session: Concrete Finishes: Meeting Architects Expectations at Reasonable Costs** **Salon 5**

Sponsored by the Hot Topic Committee and ACI Puerto Rico Chapter

Session Moderator: Ward R. Malisch
Senior Managing Director
American Concrete Institute
Farmington Hills, MI

Whether the subject is floor flatness or the required finish for exposed walls, architects and engineers need to discuss with contractors the expectations for floor and wall finishes. You'll hear from all three members of the construction team in this session as they discuss F-numbers, the meaning of a smooth-form finish, and what degree of uniformity can reasonably be expected from various off-the-form finishes.

Meeting the Concrete Challenge: Modern Art Museum of Fort Worth **9:00 am**
Ramon L. Carrasquillo, President, Carrasquillo Associates LTD, Austin, TX

Concrete Finishes Through the Eye of an Architect **10:00 am**
Thomas S. Marvel, The Office of Marvel & Marchand Architects LLP, Santurce, PR

A Contractor's View of Architectural Requirements for Concrete Surfaces **11:00 am**
Bruce A. Suprenant, Senior Construction Engineer, Concrete Engineering Specialists, Boulder, CO

* = theme session

Tuesday, October 16, 2007
9:00 am – 12:00 pm

Residential Concrete—A to Z Guidelines **Salon 4**

Sponsored by the ACI Puerto Rico Chapter and
Committee 332, Residential Concrete Work

Session Moderator: Angel Herrera
Consulting Engineer
San Juan, PR

The use of reinforced concrete in residential construction has been a unique experience in Puerto Rico. From foundations to roofs, from columns and walls, to beams and partitions, reinforced concrete is the preferred material in residential construction. Puerto Rico is in the unique environment of being subject to hurricanes and seismic events.

Why We Design Buildings with Concrete **9:00 am**
Segundo Cardona, Partner, SCF Architects, Guaynabo, PR

Structural Design of High-Rise Residential Structures **9:30 am**
José A. Espinal, Vice President, José Espinal Vazquez & Assoc., San Juan, PR

How to Build Low-Rise Residential Buildings **10:00 am**
José R. Vizcarrondo, President, Desarrollos Metropolitanos, LLC, San Juan, PR

Methods Used in High-Rise Residential Construction **10:30 am**
Miguel Sabater, President, Bird Construction Co. Inc., San Juan, PR

ACI 332.1R-06, Guide to Residential Concrete **11:00 am**
James R. Baty, Technical Director, Tilt-Up Concrete Association, Mount Vernon, IA

Effects on Single-Family Reinforced Concrete **11:30 am**
Residences Due to Blasting-Induced Vibrations
Emiliano H. Ruiz, Consulting Engineer, San Juan, PR

Tuesday, October 16, 2007
9:00 am – 12:00 pm

Self-Consolidating Concrete for Precast Prestressed Applications—Part 1 **Salons 6 & 7**

Sponsored by Committee 237, Self-Consolidating Concrete

Session Co-Moderators:
Robert W. Barnes
Associate Professor
Auburn University
Auburn, AL

Anton Schindler
Associate Professor
Auburn University
Auburn, AL

Presentations will focus on the hardened properties and performance of SCC developed for use in precast prestressed applications. The sessions will also cover SCC volume changes, deformations, performance, and other parameters that influence the design of precast prestressed elements.

Development of Self-Consolidating Concrete for Prestressed Bridge Beams **9:00 am**
Eric P. Koehler, Graduate Research Assistant, University of Texas at Austin, Austin, TX; and **David W. Fowler**, University of Texas at Austin

Applicability of Standard Equations for Predicting the Mechanical Properties of SCC **9:30 am**
David Trejo, Associate Professor, Texas A&M University, College Station, TX; **Mary Beth D. Hueste**, Texas A&M University; and **Hakan N. Atahan,** Istanbul Technical University

Effect of Admixture Combination on Top-Bar Effect in Highly Flowable and Self-Consolidating Concrete **10:00 am**
Kamal H. Khayat, Professor, University of Sherbrooke, Sherbrooke, QC, Canada; and **Emmanuel K. Attiogbe** and **Heather T. See**, BASF Admixtures Inc.

Improving Precast Operations in Sweden through the Application of Self-Compacting Concrete **10:30 am**
Robert C. Lewis, Technical Marketing Manager, Elkem Materials, Reading Berkshire; and **Jarl Larsson**, Elkem Nordic

Tuesday, October 16, 2007
9:00 am – 12:00 pm—cont.

Shear Characteristics of Self-Consolidating Concrete for Precast Prestressed Concrete Members **11:00 am**
Young Kim, Graduate Research Assistant, Texas A&M University, College Station, TX; and **Mary Beth D. Hueste** and **David Trejo**, Texas A&M University

Structural Behavior and Field-Monitoring of SCC Prestressed Box Beams for Demonstration Bridge **11:30 am**
Rigoberto Burgueño, Associate Professor, Michigan State University, East Lansing, MI; and **David A. Bendert**, Michigan State University

Tuesday, October 16, 2007
9:00 am – 12:00 pm

Structural Implications of Concrete Shrinkage and Creep of Concrete—Part 3 **Atlantic Salon 2**

Sponsored by Committee 209, Creep and Shrinkage in Concrete

Session Co-Moderators:
N. J. Gardner
Ottawa, ON
Canada

Akthem Al-Manaseer
Professor/Chair
San Jose State University
San Jose, CA

All concrete structures, to some extent, are susceptible to the effects of the shrinkage and creep of concrete. Deflections increase, moments are redistributed, and shrinkage and creep contribute to loss of precompression in prestressed concrete elements. Increasing use of higher-strength concretes and reinforcing steels, and more effective design procedures, lead to shallower section members with attendant reductions in stiffness and, hence, larger deflections. These changes, together with more adventurous concepts by architects and engineers, suggest a review of current experiences would be appropriate and useful. ACI Committee 209 has proposed new provisions for shrinkage and creep that will increase calculated responses and is currently discussing guidelines for the evaluation of time-dependent effects in concrete structures.

Numerical Analysis of Shrinkage on Flexural Deformation and Crack Width of Structure Concrete Members **9:00 am**
Isao Ujike, Professor of Engineering for Production and Environment, Ehime University, Matsuyama; **Ryoichi Sato**, Hiroshima University; **Makoto Tanimura**, Taiheiyo Cement Corporation; **Masahiro Suzuki**, PS Mitsubishi Construction Co Ltd.; and **Ippei Maruyama**, Nagoya University

Design Optimization of a Continuous Railway Bridge with Prebended and Prestressed Composite Decks **9:20 am**
Stéphanie Staquet, PhD Student, Université Libre de Bruxelles, Brussels, Belgium; and **Bernard Espion**, Universite Libre de Bruxelles

Tuesday, October 16, 2007
9:00 am – 12:00 pm—cont.

Influence of Passive Reinforcement on Creep and Shrinkage of Concrete: Long-Term Observations **9:40 am**
Luc Taerwe, Professor and Director of the Magnel Lab for Concrete Research, Ghent University, Ghent, Netherlands; and **Katrien Audenaert**, Ghent University

Effects of Construction and Loading Steps on the Stress Redistribution in Railway Prestressed Decks **10:00 am**
Mario Sassone, Assistant Professor, Politecnico di Torino, Torino, Italy

Preliminary Results for Determining the Effects of Shrinkage in Cracked Reinforced Concrete Beams **10:20 am**
Richard H. Scott, Reader in Engineering, University of Durham, Durham, UK; and **Andrew Beeby**, University of Leeds

The Importance of Time in Understanding Concrete Behavior **10:40 am**
Stuart J. Alexander, Group Tech Coordinator, WSP Group, London, UK

Does Bernoulli's Hypothesis Apply to Differential Shrinkage Problems? **11:00 am**
Johan Silfwerbrand, Professor, Swedish Cement and Concrete Research Institute, Stockholm, Sweden

Drying Shrinkage Updated Model for Hardened Chilean Concretes **11:20 am**
Carlos Videla, Professor of Civil Engineering, Pontificia Univ. Catolica de Chile, Santiago, Chile

Tuesday, October 16, 2007
12:00 pm – 2:00 pm

✓Contractors' Day Lunch **Atlantic Salon 1**
$45 U.S. per person

Hosted by the Construction Liaison Committee,
ACI Puerto Rico Chapter, and AGC of Puerto Rico

Speaker: Carlos González-Miranda
Secretary
Department of Transportation and Public Works
San Juan, PR

Topic: Concrete and Transportation: Infrastructure Development in Puerto Rico

Puerto Rico's modern infrastructure development is based on the use of concrete. Short- and long-range strategic development projects throughout the island are presented.

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

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

***Improving the Durability of Concrete Bridges—Part 2** **Atlantic Salon 3**

Sponsored by Committee 343, Concrete Bridge Design

Session Co-Moderators: Shrinivas Bhide
Bridge Program Manager
Portland Cement Association
Skokie, IL

Bruce Kates
Structural Section Manager
Jacobs Civil Inc.
St Louis, MO

Improving the durability of concrete bridges has been the subject of intense interest for the past quarter century. There is much to share regarding research on non-corroding reinforcement, the implementation of high-performance concrete (HPC) technology, guide specifications to produce HPC, performance specifications for HPC, and valuable lessons learned through the incorporation of HPC on bridge projects. Gain from the experience of these respected industry leaders.

Engineer/Specifier Perspectives in Implementation of HPC **2:00 pm**
Tarif M. Jaber, President/Principal, Jaber Engineering Consulting Inc., Scottsdale, AZ

Development of Performance Specifications for HPC Bridges in New Jersey **2:30 pm**
Hani Nassif, Associate Professor, Rutgers University, Piscataway, NJ

The First Ultra-High-Performance Concrete Highway Bridge in the United States **3:00 pm**
Vic Perry, Vice President and General Manager—Ductal, Lafarge North America, Calgary, AB, Canada

Fiber-Reinforced Polymers in Concrete Transportation Infrastructure **3:30 pm**
Rudolf Seracino, Associate Professor, North Carolina State University, Raleigh, NC

Durability Assessment of High-Performance Concrete Bridges in Ontario **4:00 pm**
R. Doug Hooton, Professor, University of Toronto, Toronto, ON, Canada

* = theme session

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

Formwork: Challenges and Opportunities for the Contractor **Atlantic Salon 2**

Sponsored by the Construction Liaison Committee

Session Moderator: Rex C. Donahey
Editor-in-Chief of *Concrete International*
American Concrete Institute
Farmington Hills, MI

Three industry leaders will discuss and answer questions regarding concrete form systems, including case histories, failures, and troubleshooting.

Session Overview **2:00 pm**
Rex C. Donahey, Editor-in-Chief of *Concrete International*, American Concrete Institute, Farmington Hills, MI

Bespoke and Beyond **2:05 pm**
Kimberly Kramer, Director of Graduate Studies, Kansas State University, Manhattan, KS

Forming for the Finish **3:00 pm**
Kim Basham, Senior Structural Engineer, KB Engineering LLC, Cheyenne, WY

Unusual as Usual **3:55 pm**
Bruce A. Suprenant, Senior Construction Engineer, Concrete Engineering Specialists, Boulder, CO

Questions and Answers – Wrap Up **4:45 pm**
Rex C. Donahey, Editor-in-Chief of *Concrete International*, American Concrete Institute, Farmington Hills, MI

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

Open Paper Session **Salon 3**

Sponsored by Committee 123, Research and Current Developments

Session Co-Moderators: Narayanan Neithalath
Assistant Professor
Clarkson University
Potsdam, NY

Prasad Rangaraju
Assistant Professor
Clemson University
Clemson, SC

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

Introduction **2:00 pm**
Narayanan Neithalath, Assistant Professor, Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY

Early-Age Properties of Cement-Based Materials: Influence of Cement Fineness **2:04 pm**
Dale Bentz, Chemical Engineer, National Institute of Standards and Technology, Gaithersburg, MD and **Gaurav Sant** and **Jason Weiss**, Purdue University

Study of the Effect of Plasma Source Ion Nitriding on ASTM A 615 Steel Reinforcing Bars **2:26 pm**
Omar R. Rodriguez, Civil Engineering Department, Polytechnic University of Puerto Rico, San Juan, PR; and **Alberto Guzmán de La Cruz** and **Angel Gonzalez**, Polytechnic University of Puerto Rico

Strut and Tie Models of Deep Beams with Openings: Importance of Detailing and Spreading Reinforcement **2:48 pm**
David B. Birrcher, Graduate Research Assistant, University of Texas at Austin, Austin, TX; and **InSung Kim** and **John E. Breen**, University of Texas at Austin

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

Evolution of Crack Width in Structural Concrete Beams Under Fatigue Efforts **3:10 pm**
Dorys C. González, Lecturer, School of Civil Engineering, University of Burgos, Burgos, Spain; and **Miguel A. Vicente** and **Jose A. Martinez**, University of Burgos

Calcium Aluminate Cement Concrete: The Basics and Early Age Volume Change **3:32 pm**
Jason Ideker, PhD Candidate, Concrete Durability Center–The University of Texas at Austin, Austin, TX

Revised Design Equation for Checking Cover Splitting Failure of FRP Mounted RC Structures **3:54 pm**
Migeum So, PhD Student, Department of Civil Engineering, Washington University of St. Louis, St. Louis, MO; and **Tom Harmon**, Washington University of St. Louis

Examining Moisture Ingress in Hydrating Cementitious Systems Using X-Ray Absorption **4:16 pm**
Gaurav Sant, PhD Student, School of Civil Engineering, Purdue University, West Lafayette, IN, and **Jason Weiss**, Purdue University

Estimating Crack Depth in Concrete Using Surface Wave Spectral Energy Transmission Method **4:38 pm**
Jinying Zhu, Assistant Professor, Department of Civil, Architectural and Environmental Engineering, The University of Texas at Austin, Austin, TX; **Sung Woo Shin** and **Jiyoung Min**, Korea Advanced Institute of Science and Technology; and **John S. Popovics**, The University of Illinois at Urbana-Champaign

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

Self-Consolidating Concrete for Precast Prestressed Applications—Part 2 **Salons 6 & 7**

Sponsored by Committee 237, Self-Consolidating Concrete

Session Co-Moderators:

Robert W. Barnes
Associate Professor
Auburn University
Auburn, AL

David Trejo
Associate Professor
Texas A&M University
College Station, TX

This session will discuss recent developments on the effects of SCC on the hardened properties and behavior of precast prestressed concrete. Concerns about the effects of SCC proportions on hardened properties have limited the wide-spread use of SCC in precast prestressed applications. This session will specifically focus on the properties of SCC that may affect volume changes, deformations, and performance of precast prestressed elements.

Experimental Study of Prestress Loss and Camber in High-Strength SCC Beams **2:00 pm**
Shawn P. Gross, Associate Professor, Villanova University, Villanova, PA; **Joseph R. Yost**, Villanova University; and **Elizabeth Gaynor**, O'Donnell and Naccarato, Inc.

Prestress Losses in Beams Cast with Self-Consolidating Concrete **2:30 pm**
W. Micah Hale, Associate Professor, University of Arkansas, Fayetteville, AR; **Blake W. Staton**, Lockwood, Andres & Newman, Inc.; **Nam H. Do**, Fluor Corporation; and **Edmundo D. Ruiz**, Universidad de Oriente

Effect of SCC Mixture Proportioning on Transfer and Development Length of Prestressing Strand **3:00 pm**
Rigoberto Burgueño, Associate Professor, Michigan State University, East Lansing, MI; and **Mahmoodul Haq**, Michigan State University

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

Evaluation of Bond Properties in Self-Consolidating Concrete Prestressed Beams **3:30 pm**
Andrea J. Schokker, Henderson Professor/Civil Engineering, Pennsylvania State University, University Park, PA; and **Edwin S. Rueda**, Pennsylvania State University

Bond Strength and Shear Capacity of Prestressed Beams Made of SCC **4:00 pm**
Sebastian Bülte, Research Engineer, RWTH Aachen Institute of Structural Concrete, Aachen, Germany; and **Josef Hegger** and **Norbert Will**, RWTH Aachen University

Time-Dependent Behavior of Full-Scale Self-Consolidating Concrete Precast Prestressed Girders **4:30 pm**
Catherine E. French, Professor, University of Minnesota, Minneapolis, MN; and **Bulent Erkmen** and **Carol K. Shield**, University of Minnesota

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

State-of-the-Art Cement and Concrete Applications **Salon 4**

Sponsored by the ACI Puerto Rico Chapter

Session Moderator: José M. Izquierdo-Encarnación
Principal
PORTICUS
San Juan, PR

High-Ductility Concrete **2:00 pm**
Victor Li, Professor, University of Michigan, Ann Arbor, MI

Performance-Based Seismic Designs of High-Rise Concrete Buildings **2:30 pm**
Jack P. Moehle, Director, University of California-Berkeley, Berkeley, CA

Photocatalytic Cement Technology **3:00 pm**
Dan Schaffer, Territory Manager, Essroc Cement Corp, Nazareth, PA

The Benefits of Slag Cement **3:30 pm**
Jan Prusinski, Executive Director, Slag Cement Association, Sugar Land, TX

High-Performance Highways **4:00 pm**
Jon I. Mullarky, Senior Project Engineer, Global Consulting Inc., Chester, MD

Ready Slump **4:30 pm**
Edwin Dunstan, Director of Technical Services, CEMEX – U.S. Operations, Houston, TX

Tuesday, October 16, 2007
2:00 pm – 5:00 pm

State-of-the-Art Concrete Repair Techniques **Salon 5**

Sponsored by the International Concrete Repair Institute (ICRI) and the ACI Puerto Rico Chapter

Session Co-Moderators: Kelly M. Page
Executive/Technical Director
ICRI
Des Plaines, IL

Eric L. Edelson
Vice President
Tadjer-Cohen-Edelson Associates Inc.
Silver Spring, MD

State of the Concrete Repair Industry and Vision 2020 **2:00 pm**
Kelly M. Page, Executive/Technical Director, ICRI, Des Plaines, IL

Your Concrete is Cracked, Now What? **2:20 pm**
Eric L. Edelson, Vice President, Tadjer-Cohen-Edelson Associates Inc., Silver Spring, MD

CSI-Concrete Repair **2:55 pm**
Dennis J. Pinelle, Senior Staff Engineer – Materials, Simpson Gumpertz & Heger Inc., Waltham, MA

Cementitious Repair Material Characterization with the ICRI Data Sheet Protocol **3:30 pm**
Fred R. Goodwin, Senior Development Scientist, BASF Construction Chemicals Inc., Beachwood, OH

San Juan Combined Cycle Plant Repair Project **4:05 pm**
Monica M. Rourke, President, Dry Works, Inc., Bristol, CT

Structural Analysis and Repair of Structural Parking Slab – San Juan **4:35 pm**
Héctor Juncos Gautier, Engineering Consultant, Technical Services Group, Guaynabo, PR; and **Jose Gaya**, JR Technical and Development

Tuesday, October 16, 2007
5:00 pm – 6:00 pm

Faculty Network Reception **El Faro Terrace – weather permitting**
Las Brisas Restaurant – inclement weather

Faculty members and students are invited to attend this informal reception where you will have a chance to exchange ideas and network. Light hors d'oeuvres and beverages will be available.

Tuesday, October 16, 2007
6:00 pm – 10:00 pm

Concrete Mixer—A Puerto Rican Carnival **Main Entrance & Porte Couchere**

Sponsored by the ACI Puerto Rico Chapter and RUMS of Puerto Rico

Every year, each town celebrates patron saint festivals (fiestas patronales) in honor of the town's patron saint. The festivities include religious processions because they were originated as a Spanish Catholic tradition. However, they have adopted from the Taino Indians and other elements of African origin. **This is the Concrete Mixer you don't want to miss!** Enjoy a feast in a recreated town square, complete with colorful displays of pride and joy, games, regional food, and live entertainment.

PLEASE USE THE DRINK TICKETS FOUND IN YOUR REGISTRATION PACKET FOR BEVERAGES THIS EVENING. Beverages are courtesy of RUMS of Puerto Rico.

RUMS of PUERTO RICO
THE RUM CAPITAL OF THE WORLD

Wednesday, October 17, 2007
9:00 am – 12:00 pm

***International Session: Structural Concrete in the Americas** **Salons 6 & 7**

Sponsored by the International Committee

Session Co-Moderators:

Mario E. Rodriguez
Research Professor
National University of Mexico
Mexico City, DF
Mexico

H.S. Lew
Senior Structural Research Engineer
National Institute of Standards and Technology
Gaithersburg, MD

The fourth international workshop "Structural Concrete in the Americas" took place on April 20-21, 2007, in Atlanta, GA, in conjunction with the ACI Spring 2007 Convention. From this workshop, six presentations were selected for the International Session at the ACI Fall 2007 Convention in Puerto Rico.

Introduction **9:00 am**
Mario E. Rodriguez, Research Professor, National University of Mexico, Mexico City, DF, Mexico

Innovations in the Design of Concrete Cable Stayed Bridges **9:05 am**
Claudia Pulido-Collantes, Bridge Engineer, FIGG Engineering Group, Dallas, TX

Puerto Rico: An Island Where Everything is Concrete, but What About Quality? **9:35 am**
Fernando Buxo, President, TechnoEngineering, Rio Piedras, PR

Does Construction Cost Affect the Code? The Colombian Experience **10:00 am**
Luis E. García, President, Proyectos y Diseños Ltda., Consulting Engineers, Bogotá, Colombia

* = theme session

Wednesday, October 17, 2007
9:00 am – 12:00 pm

Reinforced Concrete Structures Cost in Mexico **10:25 am**
Roberto Stark, Consultant, Stark Consulting Engineers, Mexico City, DF, Mexico

Materials and Costs of High-Rise RC Buildings in Republic de Panama **10:50 am**
Oscar Ramirez, President, O.M. Ramirez and Associates, Universidad Tecnologica de Panama, Panama

Survey on Concrete Structures Systems, Materials Usage, and Structural Engineering Scope of Work in the Americas **11:15 am**
Luis E. García, President, Proyectos y Diseños Ltda., Consulting Engineers, Bogotá, Colombia; and **James Cagley**, Cagley & Associates, Inc.

Wednesday, October 17, 2007
9:00 am – 12:00 pm

25th Anniversary Session for 228 NDT of Concrete— Building on the Past for the Future of NDT of Concrete—Part 1 **Salon 4**

Sponsored by Committee 228, Nondestructive Testing of Concrete

Session Co-Moderators: Michael Forde
Carillion Professor of Civil Engineering
University of Edinburgh
Edinburgh, England

Bernard Hertlein
Associate
STS Consultants Ltd
Vernon Hills, IL

This session will review developments in nondestructive testing techniques.

Filling the Void: The First 25 Years of ACI 228 **9:00 am**
Nicholas Carino, Concrete Materials Consultant (Retired), Gaithersburg, MD

Vision 2032: Overview of NDT of Concrete— 25 Years into the Future **9:20 am**
Michael Forde, Carillion Professor of Civil Engineering, University of Edinburgh, Edinburgh, Scotland

Stress Wave Testing of Concrete: A 25-Year Review and a Peek into the Future **9:40 am**
Bernard Hertlein, Associate, STS Consultants Ltd, Vernon Hills, IL

Nondestructive Testing Techniques: The Past and the Future **10:00 am**
Claus Petersen, Director, Germann Instruments A/S, Copenhagen; and **Aldo Delahaza**, Wiss Janney Elstner Associates, Inc.

Role of Near-Surface Methods for Measuring Permeation Properties in Assessing the Durability of Concrete Structures **10:20 am**
Muhammed Basheer, Professor of Structural Materials, Queen's University Belfast, Belfast; and **Lulu Basheer**.

Wednesday, October 17, 2007
9:00 am – 12:00 pm

Data Fusion and Imaging of NDT Data **10:40 am**
Herbert Wiggenhauser, Director and Professor, BAM—Federal Institute for Materials and Research and Testing, Berlin, Germany

Concrete Imaging for Structural Condition Assessment with Ultrasonic Tomography and Impact Echo Scanning **11:00 am**
Larry Olson, Principal Engineer, Olson Engineering Inc., Golden, CO

Application of Ground-Penetrating Radar to Concrete Evaluation—Review of Developments over the Past 25 Years **11:20 am**
Kenneth Maser, President, Infrasense Inc., Arlington, MA

✓ Separate fee required

Wednesday, October 17, 2007
9:00 am – 12:00 pm

New Developments in Understanding Steel Reinforcement Corrosion Thresholds in Concrete **Salon 5**

Sponsored by Committee 222, Corrosion of Metals in Concrete

Session Co-Moderators:
Paul Tourney
Vice President
Tourney Consulting Group LLC
Kalamazoo, MI

Mohammad S. Khan
Senior Vice President
PSI
Herndon, VA

Corrosion of steel reinforcement is a major deterioration mechanism in the global infrastructure industry. There are several groups that have determined when the process starts (corrosion threshold), but there is little consensus on this threshold value, how it is determined, or how it changes with concrete mixture variations or exposure conditions. This session will provide new developments in understanding corrosion thresholds of steel in concrete.

Measure Techniques for Corrosion of Steel in Concrete—Potential Pitfalls **9:00 am**
Carolyn Hanson, Professor, University of Waterloo, Waterloo, ON, Canada; and **A. Poursaee**, University of Waterloo

Modeling Corrosion Initiation **9:25 am**
Eric Samson, Material Service Life, LLC, Monroeville, PA

Concrete Mixture Variation Influencing Changes in Corrosion Threshold **9:50 am**
Paul Tourney, Vice President, Tourney Consulting Group LLC, Kalamazoo, MI

Chloride Threshold Values for Steel in Concrete **10:15 am**
Neal Berke, Principal Scientist, W.R. Grace & Co., Cambridge, MA

Wednesday, October 17, 2007
9:00 am – 12:00 pm

Critical Chloride Thresholds Values: An Update **10:40 am**
David Trejo, Associate Professor, Texas A&M University, College Station, TX; and **Ceki Halmen**, Texas A&M University

A Perspective on Assessing Corrosion Thresholds for Epoxy-Coated Steel Reinforcing Bars **11:05 am**
Scott R. Humphreys, Manager of Corrosion Protection, Concrete Reinforcing Steel Institute, Schaumburg, IL

Increasing the Corrosion Initiation Threshold by Electrochemical Means **11:35 am**
David Whitmore, Vice President, Vector Corrosion Technologies, Winnipeg, MB, Canada

Wednesday, October 17, 2007
12:00 pm – 2:00 pm

✓International Lunch **Atlantic Salon 2**
$49 U.S. per person

Hosted by the International Committee

Speaker: Alberto Aleman Zubieta
Administrator
Panama Canal Authority
Miami, FL

Topic: The Expansion of the Panama Canal

In 1998, after serving as PCC administrator for two years, Aleman was appointed administrator of the Panama Canal Authority (ACP), the new Panamanian entity that would assume complete responsibility for the waterway following the Canal transfer on December 31, 1999. For the next two years, Aleman served as both Panama Canal Commission and Panama Canal Authority Administrator, thus ensuring that decisions made under the Commission would be honored by the ACP.

As head of the Canal organization, Mr. Aleman is responsible for maximizing efficiency in the management, operation, and maintenance of the Panama Canal. He is committed to transforming the Canal organization into a world leader in maritime industry services, the cornerstone of the global transportation system, and a model of excellence, integrity, and transparency in conduct.

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

Wednesday, October 17, 2007
2:00 pm – 5:00 pm

25th Anniversary Session for 228 NDT of Concrete—Building on the Past for the Future of NDT of Concrete—Part 2 **Salon 4**

Sponsored by Committee 228, Nondestructive Testing of Concrete

Session Co-Moderators: Michael Forde
Carillion Professor of Civil Engineering
University of Edinburgh
Edinburgh, Scotland

Bernard Hertlein
Associate
STS Consultants Ltd
Vernon Hills, IL

Assessment of Damaged and Deteriorated Structures **2:00 pm**
Keith Kesner, Project Director, WDP & Associates Inc., South Norwalk, CT; and **Randall W. Poston**, WDP & Associates Inc.

In-Situ Testing of Bridge Piers Subject to Impact-Related Damage **2:20 pm**
Christopher C. Ferraro, Research Engineer/PhD Student, University of Florida, Gainesville, FL; and **Andrew Boyd**, McGill University

Comparing Different NDT Methods Out in the Field **2:40 pm**
Malcolm K. Lim, Principal, UCT, Highland Park, IL; and **Honggang Cao,** CTLGroup

In-Situ Nondestructive Testing of Concrete Structures—Case Studies; Lesson Learned **3:00 pm**
Benjamin Lavon, President, Feld Kaminetzky & Cohen PC, Jericho, NY; and **Pericles C. Stivaros**, Feld Kaminetzky & Cohen PC

Load Testing and GPR Assessment for Concrete Bridges on Military Installations **3:20 pm**
Wilmel Varela-Ortiz, Structural Engineer, U.S. Army Corps of Engineers, Vicksburg, MS; and **Carmen Y. Lugo Cintrón**, **Gerardo I. Velázquez**, and **Terry R. Stanton**, U.S. Army Corps of Engineers

Wednesday, October 17, 2007
2:00 pm – 5:00 pm—cont.

Nondestructive Testing of Concrete During Construction of Airfield Pavements **3:40 pm**
Adam Tennant, Project Engineer, Civil & Materials Engineering, University of Illinois at Chicago, Chicago, IL; and **Farhad Ansari**, University of Illinois at Chicago

Elevation Profiling of a Subsurface Drainage Layer Combining a Differential Elevation Survey with Ground-Penetrating Radar Test **4:00 pm**
Ethan C. Dodge, Senior Engineer, CTLGroup, Portsmouth, NH

Design of Quantitative Infrared Thermography Testing Procedures for Externally Bonded FRP Composites Using Single Pixel Analysis **4:20 pm**
Jeff R. Brown, Assistant Professor, Hope College, Holland, MI; and **H. R. Trey Hamilton**, University of Florida

Wednesday, October 17, 2007
2:00 pm – 5:00 pm

ICFs—Hazard-Resistant Structures **Salon 5**

Sponsored by Committee 560, Design and Construction with ICFs

Session Moderator: Carla Yland
President
Yland Research & Consulting LLC
Irvine, CA

This session will provide insight into using ICFs to provide safe, hazard-resistant, easy-to-build, quiet, healthy structures. Topics include: wind design, efficient construction, foundations and termite control, interior air quality, and acoustical benefits of ICFs.

Wind Design for ICFs **2:00 pm**
Robert C. Rogers, Team Leader, Steven Schaefer Associates Inc., Cincinnati, OH

Speed of Construction with ICFs **2:30 pm**
Juan Rodriguez, Contractor, R & F Consulting Group, San Juan, PR

ICF Foundations and Termite Control **3:00 pm**
Vera Novak, Technical Services Manager, Insulating Concrete Forms Association, Glenview, IL

Waterproofing ICFs with Cementitious Coatings **3:30 pm**
Stan Pace, Director of Research and Development, FossilCrete, Inc., Phoenix, AZ

Indoor Air Quality and ICFs **4:00 pm**
Thomas L. Klemens, Senior Editor/Engineer, Hanley Wood LLC, Chicago, IL

Acoustical Benefits of ICFs **4:30 pm**
Donn C. Thompson, Manager Residential Technology, Portland Cement Association, Skokie, IL

Wednesday, October 17, 2007
2:00 pm – 5:00 pm

Proportioning: New Technologies **Salons 6 & 7**

Sponsored by Committee 211, Proportioning Concrete Mixtures

Session Co-Moderators: Gary Knight
Technical Service Engineer
Heidelberg Technology Center
Atlanta, GA

Allyn Luke
Concrete Lab Director
New Jersey Institute of Technology
Newark, NJ

These presentations describe how mixture designs are being tailored to their applications. Specialized applications have required the development of specialized concretes. Challenging conditions, like those found in Puerto Rico, often need specialty mixtures to produce concrete with the required characteristics.

Challenges of Producing 6,000,000 yd³ of Concrete Annually on a 3500 mi² Island **2:00 pm**
Fernando Buxó, President, TechnoEngineering, Rio Piedras, PR

Production of Specialty Concretes in Puerto Rico **2:20 pm**
Alberto Casiano, Empresas Master Corp, Vega Baja, PR; and **Terry Harris,** Eastern Division, W.R. Grace & Co.

A Practical Methodology for Developing Self-Consolidating Concrete Mixture Designs **2:40 pm**
Gary Knight, Technical Service Engineer, Heidelberg Technology Center, Atlanta, GA

Development of Locally Compatible Specifications for the Luis Munoz Marin International Airport Runway Retrofit **3:00 pm**
Carlos Arboleda, Program Manager, PBS&J Caribe Engineering, Caguas, PR; and **James M. Shilstone, Jr.**, Shilstone Companies Inc.

Materials Selection and Proportioning for Producing High-Performance Concrete for PR-10 Highway Bridge in Puerto Rico **3:20 pm**
Ricardo Valentin, Admixture and Construction Products Engineer, BASF Construction Chemicals, Caguas, PR

Guide for Selecting Proportions for High-Strength Concrete **3:40 pm**
Tarif M. Jaber, President/Principal, Jaber Engineering Consulting Inc., Scottsdale, AZ

PDH Form for Sessions at the ACI Fall 2007 Convention

Professional Development Hours (PDH)—A nationally recognized unit of record in noncredit professional development programs—can be earned for participation in activities at this conference. If you registered for the convention and attended sessions, you have earned Professional Development Hours. For your records, use the convenient form found between pages 148 and 149 to keep track of which activities you completed and the amount of credit earned.

Instructions: Check off each session you attended and write in the number of PDH credits you earned for each day.
Remember that 1 PDH is equal to a contact hour (nominal) of instruction or presentation, rounded down to the nearest half-hour.

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