

for Concrete Pavements

SOCIETY FOR SOCIET

IN THIS ISSUE

TITLE PAGE
Industry News 1-2
Industry Publications 2-3
Conference News 3-5

Call for Papers Digest 6
Upcoming Events 6

AMERICAN CONCRETE PAVEMENT ASSOCIATION























62

m

66





npca





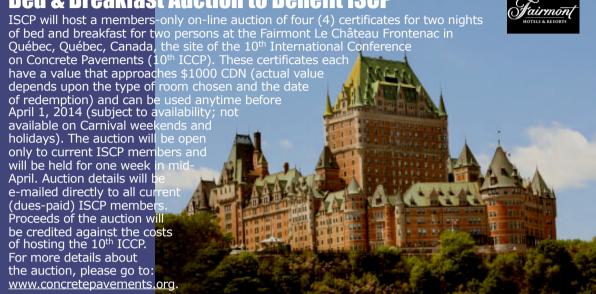
Stantec

Transports
Québec * *



ISCP MEMBER NEWS

Bed & Breakfast Auction to Benefit ISCP



INDUSTRY NEWS

Portland Cement Association Shifts Leadership Focus to Washington, D.C., USA



PCA management changes have been designed to shift leadership to Washington, D.C., in support of a renewed emphasis on national advocacy efforts in our nation's capitol. Greg Scott, PCA's recent Senior Vice-President of Government Affairs, was promoted to PCA's President/CEO on January 1, 2013.

In an announcement of the changes, Aris Papadopoulos, *PCA [Past] Chairman of the Board said,* "Over the past ten (10) years, we have debated the merits of our national association becoming more 'D.C.-centric'. The time has come to adapt to this new reality of the cement industry."

Although PCA's new chief is now based in Washington, D.C., the Skokie, Illinois office will continue to operate as an important resource for North America as well as regional promotion and advocacy efforts. "The past five years have seen unprecedented changes to the cement industry in both economic and regulatory arenas," said Papadopoulos. He added, "We value Brian McCarthy's leadership (previous *PCA President/CEO*) and thank him for his service to the association and to the industry."

After 75 Years, South Africa Cement & Concrete Institute Will Close

After 75 years of serving the construction industry in South Africa, the Cement & Concrete Institute (C&CI) will be closing. This decision was reluctantly taken by the Board following the resignation of the Institute's main funding members. The process began February 27, 2013 and is expected to take two to three months to complete in its entirety. This will be the main focus of management of



months to complete in its entirety. This will be the main focus of management going forward and will severely curtail services normally provided by the Institute.

For seventy five years (75 years) The Cement & Concrete Institute has promoted the interests and general advancement of the portland cement and concrete industries in southern Africa. As a non-profit organization, the Institute has been a:

- Promoter of the use of concrete
- Cement and concrete information provider
- Educator and trainer in concrete technology and practice
- Market development partner with the cement and concrete industries
- Provider of specialist consulting service on cement and concrete related issues

For C&CI publications, please go to: http://www.cnci.org.za/EN/Content/Pages/Publications/Leaflets For more information on C&CI, please visit the C&CI website at: www.cnci.org.za.

IGGA Celebrates 40th Anniversary ... Video Discusses How to Repair America's Infrastructure

John Roberts, Executive Director of the International Grooving and Grinding Association (IGGA), and Terry Kraemer, President of Diamond Surface, Inc. and IGGA Board Member, sat down with *Concrete Contractor Magazine* at The World of Concrete in February to share their viewpoint on how concrete pavement repair (CPR) is uniquely suited to meet America's challenge related





to aging infrastructure and how to repair it. Optimism about the outlook of the pavement industry was the theme throughout the World of Concrete and it is extremely evident in the CPR industry.

Roberts noted that America can't afford to rebuild the entire network of roads, so repairing is going to be critical. "In 1995, our association affiliated with the American Concrete Pavement Association (ACPA), and we developed the Concrete Pavement Preservation Partnership, or CP3. Essentially, our goal is to take care of any kind of pavement repair maintenance that need to be done," said Roberts.

Terry Kraemer states, "It is the advancement in the equipment and the tightening of the specifications that have really driven the industry in the last 15 years or so, and what we are able to put out there is a much better product than what we've been able to in the past. Improvements in the equipment itself, as well as the cutting wheels have both come a long way." To watch the video, please go to: http://www.forconstructionpros.com/video/10875168/

video-iggas-terry-kraemer-john-roberts-live-at-world-of-concrete-2013.

IGGA was formed in 1972 by a small group of contractors who wanted to improve American's highway system. In 2012, they celebrated their 40^{th} Anniversary! IGGA is a non-profit organization dedicated to serving as the leading promotional and technical resource for diamond grinding and grooving as well as pavement preservation and restoration. For the IGGA website, please go to: http://www.igga.net.

INDUSTRY PUBLICATIONS

IGGA Releases Publication on Dowel Bar Retrofit Process

2011, the concrete pavement restoration/preservation industry celebrated the 20th anniversary of the first high-production, large-scale dowel bar retrofit (DBR) project constructed by the Washington, D.C. State Department of Transportation (DDOT), USA. Specially designed machines were utilized that allowed for the placement of hundreds, even thousands of DBR's in a single day making it a cost-effective and viable preservation treatment.

POWER BAR

BY Ward Moostmoon

BY

SUCCESSFUL RETROFITTING Early research in the state of Georgia shows that the DBR process was envisioned and developed in the early 1980s. In 2012, DBR technology reached its 30th anniversary as an essential pavement preservation tool. This method of retrofitting load transfer devices across transverse joints and cracks in concrete pavement has been used successfully on thousands of lane-miles of concrete pavement in the U.S., with more than 6.5 million dowel bars installed during the past 30 years.

The first installation of DBR was completed on I-75 in Georgia as part of a research study to determine how to reestablish load transfer in existing PCC pavements. The Georgia Department of Transportation (GDOT) became interested in improving the load transfer capabilities of existing PCC pavements after observing the refaulting of pavements following diamond grinding and concrete pavement restoration (CPR). It was felt that the effectiveness of CPR could be extended if load transfer could be added at the joints. The goal was to develop construction procedures for adding load transfer to existing pavements and to evaluate the methods' effectiveness.

"We are excited to see that after 30 years, DBR is being used by more municipalities as an environmentally friendly, economic, long-term repair," says John Roberts, *Executive Director of IGGA*. "This technique has spread throughout the U.S. and Canada as a viable means of preserving concrete roadways."

... it was telt that the effectiveness of CPR could be extended if load transfer could be added at the **RESTORATION OF LOAD TRANSFER** DBR is a CPR technique that restores load transfer capability of existing jointed concrete pavement by the placement of dowel bars across joints and cracks that exhibit poor load transfer. The retrofit dowel bars ensure that the traffic load is shared between adjacent panels, preventing differential vertical movement of the slabs at the joints and cracks, thereby eliminating the formation of faults or step-offs. "The evidence of DBR's effectiveness is there, revealed through time and experience," says Roberts. "DBR will continue to grow as municipalities look for more cost-effective solutions to meet their growing need for infrastructure repairs."

To read the entire publication (pdf), please go to: http://moderncontractorsolutions.com/i/pdf/MCS0213_TEC_Dowel.pdf.

For More Information, please visit The International Grooving and Grinding Association (IGGA) website at: www.igga.net.





Schematic Layout of CRCP Transition showing the CRCP demarcation zones

CRCP Used to Solve Saturated Base Conditions in Perth, Australia

Gateway Western Australia (Gateway WA) is the largest infrastructure project ever undertaken by Main Roads Western Australia (MRWA). The project started about five (5) years ago with Gateway Vision, the dream child of MRWA, who realized that it is necessary to design and construct a "Gateway" from the Perth International Airport into the Perth Metropolitan area. The need to upgrade the precinct from the north-western side around to the south-eastern side of the airport was driven by the proposed expansion and consolidation of the Perth International and Domestic airport terminals.

Many constraints have been placed on the designers, but a number of challenges have already been identified and overcome. The airport and surrounding areas are inundated with high seasonal groundwater levels. The residents in the suburban area, south-west of the airport, have been using this to their advantage, as a large number of established boreholes from which water is drawn for general use and irrigation purposes. One of the constraints placed on the designers is that subsoil drains used to reduce the groundwater level are not allowed.

Another challenge designers have to deal with is that no obstruction is allowed in the aircraft glide path. Therefore, instead of designing the freeways and overpasses to cross over existing roads, the crossroads have to be constructed as underpasses, through wet/saturated soil conditions. This required the development of a groundwater model with three defined water surface levels: Low, Medium and High.

A fair amount of research and modeling of the effect of groundwater levels on specific pavement materials resulted in the development of three main pavement structures, namely: full-depth asphalt, rigid pavements and concrete bath structures. Asphalt pavements are not an option along the road sections that will be at risk of flooding, as it is prone to moisture damage - capillary rise and stripping of the as-

phalt. Where hydrophilic aggregates are used, stripping is even more of a peril. Rigid pavements and concrete bath structures were therefore specifically chosen for the areas.

CRCP (Continuously reinforced concrete pavement) was chosen as the rigid pavement type, rather than JCP (jointed concrete pavements) that have regular-spaced transverse joints, increasing the risk of water entering the pavement, which increases the risk of pumping and damage to joint sealants. All the pavement types and bath structure are a function of the finished road surface levels relative to the Medium Maximum water surface, with only the bath structure levels being defined by the Low Maximum water surface. Therefore, CRCP can be sub-divided into two sections, depending on the level of the water surface. To read the entire report, please go: http://www.concrete.pavements.org/Membership/Newsletter/MARCH2013-transition_slabs.pdf. For more information about this project, please contact: Anna-Carin Brink, GHD Services, 67 Delamere Ave., Currambine, Western Australia, 6028 E-mail: annacarinb654@gmail.com.

Full-depth Asphalt CRCP CRCP Bath structure OGA 10 (C320) DGA 14 (A15E) DGA 14 (A15E) Prime and crumb rubber seal Prime and crumb rubber seal

CONFERENCE NEWS

FAA Airport Pavement Working Group to be Held in Atlantic City, New Jersey, USA

The 2013 Federal Aviation Administration Airport Pavement Working Group meeting will be held by the Airport Pavement Research and Development (R&D) Section April 15-17, 2013 at the Sheraton Atlantic City Convention Center Hotel in Atlantic City, New Jersey.

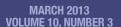
The conference program includes Construction Cycle Plans and Updates, Open Discussion Sessions about Future R&D Work, vast global topics from the USA, China, France, Korea, daily discussions and "question of the day". The draft program includes the following topics:

Boeing Aircraft Overview/R&D Needs
AIRBUS Aircraft Overview/R&D Needs
ICAO - PSG Update
High Tire Pressure & ACN/PCN
French DGAC Research
Korean Airport Corp Research Work
SMA and Heated Pavement in China
FAA Airport Pavement International Research Update
Test Facility Update
NextGen Materials Testing Laboratory
High Temperature Pavement Test Facility Update
Heavy Vehicle Simulator-Airport Model Update
Accelerated Highway pavement Testing
and Pavement Rehabilitation
Asphalt Mix Design for High Tire Pressure
& Gyratory Compactor
Full Scale Reflective Cracking Tests
Post-Traffic Testing of CC5
Research on Flexible Pavements - Update
Update on Al's Environment Cracking Research
PROFFAA/Roughness Update
Comparisons of Pavement Profiles Created by Airport
Pavement Profiler and Highway Profiling System



FAA Airport pavement R&D 10-Year Program
FAA Regional Perspective
A Consultant's Perspective on Airfield Pavement
Testing & PMS Data Collection
Airport Authority Pavement Perspective
Non-Destructive Technology Update
FAA PAVEAIR Update
Instrumentation Projects at Airports
Airport Pavement Surface Characteristics with
1mm 3D Laser Imaging System
Backcalculation of Rubblized PCC Sections
A multi-purpose testing device for airfield
pavements: the Rolling Dynamic Deflectormeter
Modeling of Pavement Behavior under
FWD and Moving Load
South Carolina Pavement Strength Rating Report
ERCD-FAA Interagency Agreement,
Pavement Projects
ERDC - Research Updates
NCHRP 10-84 related to modulus-based
specification of bases and subgrades

To obtain the draft agenda, conference registration and hotel information links, please go to: http://www.airporttech.tc.faa.gov/Conference/.







ICMA to Hold the 35th International Conference on Cement Microscopy in Rosemont. Illinois. USA

International Cement Microscopy Association (ICMA) will hold the 35th International Conference on Cement Microscopy, April 28-May 1, 2013, at The Embassy Suites Hotel-O'Hare, Rosemont, Illinois, Ú.S.A.

Program speakers will present a wide variety of papers that will admix practical applications, new techniques and latest research efforts in the field of microscopic evaluation of portland cement and related materials. This year, there will be an interesting panel discussion entitled "Application of Microscopy in Relation to Energy Consumption in Cement Plants." Cement-plant personnel are strongly encouraged to attend. The full preliminary program will be posted at: http://www.cemmicro.org/icma/conference.html.

Part of the program will include a combined tour to the famous landmarks and architectural buildings of the City of Chicago, such as the John Hancock Tower, Water Tower Place, Willis Tower (formerly Sears Tower), tour to the Portland Cement Association (PCA) and the Construction Technology Laboratories (CTL) Facilities in Skokie, Illinois. This is a lifetime opportunity to see the world famous 'Skyline of Chicago by Lake Michigan.'

Hotel reservations must be made through the Embassy Suites Hotel, prior to April 9, 2013 to guarantee a room at the ICMA conference rate. If contacting the hotel directly by phone/fax/or mail, be sure to state that you are with the "International Cement Microscopy 2013 Annual Meeting" to get the ICMA conference rate. To make a hotel reservation, please call:

Cementpersonnel are strongly

to attend the

conference.

Telephone: 1-847-678-400 Fax: 1-847-928-7659 1

ICMA will be organizing a spouse/guest program for the $35^{\rm th}$ ICMA Conference and details will be posted/shared as registration progresses.

For conference information, registration, hotel registration, exhibit information and preliminary program, please go to:

http://www.cemmicro.org/icma/conference.html.

For all other information, please go to: www.cemmicro.org.

To view the full announcement, please go to:

http://www.cemmicro.org/icma/pdf/f_announce.pdf.



The 14th Euroseminar on Microscopy Applied to Building Materials to be Held in Copenhagen, Denmark

EMABM 2013 Euroseminar on Microscopy Applied to Building Materials



The Danish Technological Institute, in collaboration with The Danish Society of Engineers (IDA), will host the 14th Euroseminar on Microscopy Applied to Building Materials (EMABM 2013), June 10-14, 2013 near Copenhagen, Denmark. Those interested in microscopy of building materials are invited to participate in the bi-annual event.

The seminar covers a wide range of topics related to microscopy in building materials as well as new trends in instrumentation and techniques for analysis and assessment. The seminar is addressed to: students (graduate/postgraduate), teachers, researchers and experts in the industry.

If interested in becoming a sponsor, please contact: Ulla Hjorth Jakobsen, Danish Technological Institute Telephone: +45 7220 2198 E-mail emabm2013@teknologisk.dk. For sponsor information, please go to: http://www.emabm2013.com/32445.

For more information about the EMABM, key deadlines, accommodations and publishing please go to: http://www.emabm2013.com/.





ASCP Announces First Call for Abstracts for the Concrete Pavements Conference 2013 to be Held in Sydney, Australia

The Australian Society for Concrete Pavements (ASCP) announces the Concrete Pavements Conference that will be held August 12, 2013 at the Australian National Maritime Museum at Darling Harbour in Sydney, Australia. This will be a full-day technical event with morning and afternoon tea and lunch, followed by an evening social networking function.

The ASCP also announces a call for abstracts that are due April 26, 2013 and are to be submitted in Word format to the Executive Director, ASCP. Abstracts are to contain the topic title, the authors and their affiliations, and a brief summary of the key matters and conclusions of the intended paper. A single page submission will satisfy this requirement. To submit an abstract by email, please go to: exec@concretepavements.com.au.

For more information on abstracts and papers, please go to: http://www.concretepavements.org/ ASCP%20Conference%20Announcement.pdf.

In 2011, ASCP held its first Concrete Pavements Conference in Sydney. At that time, the International Society for Concrete Pavements (ISCP) was invited to hold the August Board meeting in Sydney, and for ten ISCP

SYDNEY, MONDAY 12 AUGUST 2013 AUSTRALIAN NATIONAL MARITIME MUSEUM 2 MURRAY STREET, DARLING HARBOUR

ASCP 2013: CONCRETE PAVEMENTS CONFERENCE

SPONSORSHIP AND EXHIBIT OPPORTUNITIES

MARCH 2013 VOLUME 10, NUMBER 3



Attendance at this event may be eligible for credit towards Engineers Australia and other organizations' Continuing Professional Development requirements.

KEY DATES April 26: Submission of Abstracts May 3: Authors advised of acceptance or not of their abstracts (or earlier) **June 14:** Final draft papers to be submitted

July 19: Final papers to be submitted

August 2: Final PowerPoint presentations

to be submitted

Directors to present technical papers at the Conference. This Conference was regarded as a great success, and provided Australian practitioners with valuable information from overseas. The ASCP Conference then became a biennial event.

The aim of the 2013 Conference is to provide our industry with current and detailed information about concrete payement design, construction, materials and equipment from within Australia and from overseas. The Conference is a very different format from our various Forums held throughout the year - it provides more in-depth information presented on specific topics, and creates a wonderful opportunity for industry members to discuss such matters with the presenters and their colleagues.

The ASCP Conference provides a wonderful opportunity for organizations to sponsor and promote their products and services to the Australian concrete pavement industry. A separate Sponsorship and Exhibit Opportunities brochure is available on request.

To become a sponsor for the Concrete Pavements Conference, please go to: http://www.concretepavements.org/ASCP%20Conference%20Sponsor%20Brochure.pdf.

For more information on the ASCP, please go to: http://www.concretepavements.com.au.





ICI-IWC 2013

International Conference on

WORLD OF

CONCRETE*

India

India's Innovative World of Concrete: Twin Event Conference and Expo to be Held in Hyderabad, Andhra Pradesh, India

The fifth (5th) Edition Conference of "Innovative World of Concrete ICI-IWC 2013" along with the International Exposition: "World of Concrete India 2013" will be held October 23-26, 2013, at the National Academy of Construction (NAC) and Hyderabad International Trade Exposition (Hitex), Hyderabad, Andhra Pradesh, India. The Indian Concrete Institute (ICI) and World of Concrete (WOC) have partnered to host this three-day (3-day) "twin event". The event will be an outstanding opportunity for networking, education, sharing of ideas and exposure to new technologies from around the world.

. concrete has been recognized as one of the components of intrastructure

The International Exhibition 'World of Concrete India 2013' is expected showcase products and services from around the world. The combined conference and exposition are expected to be one of the best shows on concrete in India, so please mark your calendar and be a part of this must attend to all those who are connected to concrete industry!

Both events aim to address new developments in concrete and construction, especially in the infrastructure sphere, with specific reference to innovative technologies and approaches in concrete needed to overcome the challenges, as well as present the opportunity for key participants to:

• Collaborate with national and international experts

- Attend presentations from Indian and foreign experts highlighting innovative work
- Ensure a future that uses healthier and more efficient methods of design, planning, construction, maintenance, repair and restoration
- Serve the construction community with the latest developments and innovative ideas
- Gather the various organizations to share knowledge and experience
- Promote the use of newest and best practices for the benefit of future construction and growth of concrete construction
- Train personnel for the needs of changing concepts in technology
- Promote growth of concrete construction and its sub-specializations
- Disseminate information & arrange and train personnel for the needs of changing concepts in technology
- Collaborate with national and international agencies to create better understanding of concrete construction technology

Exhibition Centre, Hyderabad

Abstract submissions are due April 15, 2013. Full paper submissions are due July 31, 2013. The theme of the ICI-IWC-2013 is "Innovations in Concrete for Meeting Infrastructure Challenge". Technical papers are invited on a collection sub-themes. To view the list of paper themes (under section titled "Theme of the ICI-IWC-2013"), please go to: http://www.masterbuilder.co.in/data/edata/ICI/IWC/ICI-IWC-2013.pdf. For information about abstract submissions, please e-mail: Er. Ar. S P Anchuri, *Organizing Secretary, ICI-IWC 2013 at:* iciiwc2013@gmail.com.



World of Concrete (WOC) is the world's largest concrete exhibition organizers; "Innovative World of Concrete ICI-IWC 2013" is an ICI flagship conference, supported by WOC, organized by ICI-APHC; and "World of Concrete India 2013" is planned and organized by Hanley Wood, USA and Inter Ads Exhibitions Pvt. Ltd., India and supported by ICI.

For the ICI-IWC 2013 Conference flyer: http://www.masterbuilder.co.in/data/ edata/ICI/IWC/ICI-IWC-2013.pdf.

For conference information, please go to: www.ici-iwc2013.com.

For more details, please contact:

Er. Ar. S P Anchuri, Organizing Secretary, ICI-IWC 2013

Mobile: +91 9246523197 E-mail: iciiwc2013@gmail.com







Call for Papers & Abstracts Digest

April 15, 2013 Due date for abstracts for the India ICI-IWC 2013 - Innovative World of Concrete and International Conference on Innovation in Concrete to be held in Hyderabad, Andhra Pradesh, India, October 23-26, 2013. For abstract submission, please please e-mail: Er. Ar. S P Anchuri, Organizing Secretary, ICI-IWC 2013 at: iciiwc2013@gmail.com. For conference information, please go to: http://www.masterbuilder.co.in/data/edata/ICI/IWC/ICI-IWC-2013.pdf.

April 26, 2013 Due date for abstracts for the Australian Society for Concrete Pavements' (ASCP) Concrete Pavements Conference to be held at the Australian National Maritime Museum at Darling Harbour in Sydney, Australia, August 23, 2013. To submit an abstract by email, please go to: exec@concretepavements.com.au. For more information on abstracts and papers, please go to: http://www.concretepavements.org/ASCP%20Conference%20Announcement.pdf.

May 15, 2013 Due date for papers for the 12th International Symposium on Concrete Roads - "Innovative Solutions - Benefitting Society" to be held in Prague, Czech Republic, September 24-26, 2014. For the Symposium website, please go to: www.concreteroads2014.org.

UPCOMING EVENTS

april

2013 FAA Airport Pavement Working Group Meeting, held by the Airport Pavement Research and Development (R&D) Section

April 15-17, 2013, in Atlantic City, New Jersey, http://www.airporttech.tc.faa.gov/Conference/.

35th International Conference on Cement Microscopy sponsored by International Cement Microscopy Association (ICMA)

April 28-May 1, 2013, at The Embassy Suites Hotel-O'Hare, Rosemont, Illinois http://www.cemmicro.org/icma/conference.html.

Fifth North American Conference on the Design and Use of Self-Consolidating Concrete (SCC 2013)

May 12-15, 2013 in Chicago, Illinois, USA, http://www.intrans.iastate.edu/events/scc2013/.

International Conference on Concrete Sustainability (ICCS13) May 27-29, 2013 in Tokyo, Japan, http://www.jci-iccs13.jp/.

JUNE

International RILEM Conference on Multi-Scale Modeling and Characterization of Infrastructure Materials

June 10-12, 2013 in Stockholm, Sweden, http://www.rilem2013.org.

The 14th Euroseminar on Microscopy Applied to Building Materials (EMABM 2013) June 10-14, 2013 near Copenhagen, Denmark, http://www.emabm2013.com/.

Ninth International Conference on the Bearing Capacity of Roads, Railways

and Airfields (BCRRA 2013) June 25-27, 2013 in Trondheim, Norway, http://www.bcrra.org.

ASCE T&DI 2013 Airfield and Highway Pavements Conference: Sustainable and Efficient Pavements

July 9-12, 2013 in Los Angeles, California, USA, http://content.asce.org/conferences/pavements2013/.

8th International Conference on Road and Airfield Pavement Technology (ICPT 2013) July 14-18, 2013 in Taipei, Taiwan, http://www.icpt2013.org.

SEPTEMBER

7th International Conference on Concrete under Severe Conditions - Environment and Loading (CONSEC'13)

September 23-25, 2013 in Nanjing, China, http://www.consec13.com.

For events taking place in October 2013 and beyond, please go to: http://www.concretepavements.org/calendar.htm.



VOLUME 10, NUMBER

The ISCP Newsletter is produced monthly by:

Editor-in-Chief & Art Director: Amy M. Dean newsletter@concretepavements.org Technical Editors: Robert Rodden, Nancy Whiting, Corey Zollinger and Cristian Gaedick Chief Correspondent: Neeraj Buch, Ph.D secretary@concretepavements.org

ISCP would like to thank Anna-Carin Brink, Pavement Engineer, GHD Services, for contributions to this newsletter. ISCP invites ISCP members and friends to submit articles and calendar items to the Editor-in-Chief for future issues.

> ISCP President: Mark B. Snyder, Ph.D., P.E. president@concretepavements.org Vice-President: José T. Balbo, Ph.D vice-president@concretepavements.org Secretary/Treasurer: Neeraj Buch, Ph.D. secretary-treasurer@concretepavements.org

Please visit the ISCP Website at www.concretepavements.org for more information about ISCP.