ISCP News

ISCP Officer Election Re-boot Scheduled for December 1 – 10, 2013

The election of officers that was initiated in early November had to be invalidated and canceled before all votes were cast, due to a problem with the electronic balloting system, which was failing to record votes for one of the presidential candidates.

The problem has now been corrected and a new ballot has been developed and tested to ensure that votes for all candidates will be properly counted. This new ballot will be distributed by e-mail by December 1, 2013. If you are an ISCP member in good standing and do not receive an e-mail link to your ballot by December 1, please contact the Secretary’s office to confirm your eligibility to vote and obtain a ballot. E-mail: secretary@concretepavements.org. (Please check your spam filters before contacting the Secretary; the e-mailed link will appear to come from Jake Hiller.)

The election will be closed at 23h59 GMT (11:59pm) on December 10 and results will be announced in the December ISCP newsletter.

ISCP Annual Membership Meeting Set for January 11, 2014

ISCP members and guests are invited to attend the ISCP Annual Membership Business Meeting, which will be held on Saturday, January 11, 2014 at 17h30 (5:30pm) Eastern Standard Time (EST) in the Coolidge Room of the Marriott Wardman Park Hotel in Washington, D.C., USA. Agenda items are expected to include:

• Update on planning for the 11th International Conference on Concrete Pavements in San Antonio, Texas, USA in 2016
• Discussion of plans to hire an Executive Director
• Presentation and discussion of the 2014 ISCP budget
• Induction of honorary members
• Installation of new officers.

Members with additional agenda suggestions should submit them to: president@concretepavements.org.

A complete agenda will be posted on the ISCP website one week prior to the meeting. No arrangements have been made this year for a post-meeting dinner for the general membership. However, refreshments will be available in the meeting room.

ISCP Board Changes Officer Election Cycle, Initiates Exec Director Search

When ISCP was formed in 1999, the sole purpose of the Society was to ensure the continuation of the International Conferences on Concrete Pavements that had been organized by Purdue University since the 1970s. At the time, it was suitable that the officer and director positions were closely linked to the 4-year cycle of the International Conferences. Since that time however, ISCP’s activities have become more continuous and less centered on the quadrennial conference, and the organization and management of the International Conference is now handled by a Committee within ISCP.

Therefore, it was deemed appropriate to de-couple officer terms from the Conference schedule and provide a more dynamic organizational structure to ISCP. At its November meeting, the ISCP Board of Directors voted to reduce the service terms for officers from 4 years to 2 years, effective with the officers that will be elected in late 2013. Board director terms remain at 4 years, with half of the director positions being open for election every other year in even-numbered years.

The net result of this change is that ISCP will now hold elections every year, with officers being elected in the fall of odd-numbered years and directors being elected in even-numbered years.

It has also become apparent that ISCP cannot continue to grow and successfully serve the needs of its members purely through the voluntary efforts of its members. With this in mind, the Board voted to initiate the planning required to hire a part-time paid Executive Director who will handle the day-to-day operations of the Society and free officers, directors and members to devote their volunteer time to ISCP mission activities.

Current ISCP officers are working on developing a position description, and strategies for funding the position are being developed in consultation with the Membership Committee. It is hoped that a successful search will be mounted in early 2014.
Greer & Larson Elected to ISCP Honorary Membership

The ISCP Board of Directors recently elected W. Charles (Charlie) Greer, Jr. and Roger M. Larson to Honorary Membership in ISCP. They will be inducted at the Annual Membership Meeting in Washington, DC on January 11, 2014. Honorary membership is the highest honor bestowed by ISCP upon individuals that have provided exemplary service to the Society and/or to the improvement of concrete pavement technology throughout their careers.

Charlie Greer is Senior Vice-President at AMEC E&I, Inc. (formerly MACTEC Engineering and Consulting) where he has served the engineering profession for nearly 40 years. He has made particularly important contributions to the improvement of quality control during the construction of airfield concrete pavements. He has also been a leader in the development and implementation of pavement management systems for highways and airports.

Roger Larson is nationally and internationally recognized in pavement circles for his background in concrete pavement design, performance, construction, and rehabilitation. Throughout his 41-year career with the Federal Highway Administration (FHWA), Mr. Larson was actively involved in projects involving highway research, planning, design, and construction and maintenance activities, and served in progressively responsible positions. During his last 18 years with the organization, he managed the research, development, and implementation of improved pavement design, construction, maintenance, and performance evaluation procedures.

More complete professional biographies of these gentlemen will be featured in future ISCP newsletters.

Only 19 people have previously been elected to Honorary Membership since 1999; a list of this distinguished group can be found at: http://www.concretepavements.org/Membership/memberlist.htm. ISCP is pleased and honored to welcome Charlie Greer and Roger Larson to this elite group!

ISCP Brazilian Member Awarded Prestigious "Engo. Ary Frederico Torres" Award

On October 29, 2013, ISCP Brazilian Member, Professor Tatiana Cervo, Federal University of Santa Maria (UFSM), Brazil, was awarded with the most important Brazilian Concrete Institute (IBRACON) award “Eng. Ary Frederico Torres” for her contributions and achievements to the advancement of concrete technology in Brazil.

ISCP Vice-President, José Balbo, IBRACON Executive Secretary, presented the award to Tatiana during the opening ceremony of the 55th Brazilian Concrete Conference, held in Gramado, Brazil. Professor Cervo developed her PhD program at the University of São Paulo on the subject of fatigue behavior of high strength concretes for paving. Currently, she is the leader of the Pavement and Road Safety Research Team of the UFSM, with 30 engaged undergraduate and graduate students. ISCP takes this opportunity to congratulate and commend Professor Cervo’s works in favor of innovation and diffusion of concrete pavement technology.

INDUSTRY RESOURCES & PUBLICATIONS

TRB’s “SHRP 2 Tuesdays” Webinar to be Held December 3: SHRP 2 Composite Pavement Systems (R21)

As part of the SHRP2 Tuesdays Webinar Series, The Transportation Research Board (TRB) will conduct a webinar on December 3, 2013 that explores the project called “Composite Pavement Systems”.

DATE: December 3, 2013
TIME: 2:00 p.m. - 3:30 p.m. ET

There is no fee to attend this webinar, however, participants must register in advance. The first 60 minutes of the webinar is for presentations and the final 30 minutes is reserved for audience questions.

This webinar will explore the SHRP 2 Composite Pavement Systems research project, which provides guidelines and validated models, techniques, and specifications for using two composite pavement systems:

- A relatively thin, high-quality, hot-mix asphalt layer over a Portland cement concrete (PCC) structural layer
- A relatively thin PCC surface on top of a second, less-expensive, recycled PCC layer

Composite pavements have been demonstrated to increase pavement service life while providing favorable surface characteristics and structural capacity. However, objective studies of their use and installation have been inadequate to support widespread adoption. This project included the development of validation procedures and produced documentation to assist transportation agencies with installation and maintenance of composite pavement systems that are long-lasting and have predictably low life-cycle costs.

Webinar Presenters:
Stephen J. Cooper, FHWA
Greta Smith, American Association of State Highway and Transportation Officials (AASHTO)

Webinar Moderator: James Bryant, Transportation Research Board (TRB)

Webinar Outline:
- Part 1: Brief overview of SHRP 2 mission, objectives of the Renewal focus area and related SHRP 2 research.
- Part 2: SHRP 2 researchers introduce the results, concepts, and products and experience gained from

A certificate for 1.5 Professional Development Hours (PDH) will be provided to attendees who register & attend the webinar as an individual.
Testing Accelerated Determination of ASR Susceptibility During Concrete Prism Damage Assessment

To download the entire publication in PDF form, please go to:

Effects of high-strength concrete on pavement fatigue life: In some areas of the country, airports are able to achieve high-strength concrete, for example: pavements with 800 to 1,000 psi flexural strength with minimum cement requirements. The FAA Test Center is evaluating the effects on fatigue life of high-strength concrete. Conventional thinking is that thinner, brittle pavements produced from high-strength concrete are compromised by the reduction of fatigue life. The project aim is to determine if thinner pavement sections can be constructed with high-strength concrete without compromising pavement performance. This research is particularly important as it relates to the proposed 40-year pavement design life. ISCP thanks “ACPA On the Grade” for this article. “ACPA On the Grade” is produced and distributed at no cost to members and affiliates by the American Concrete Pavement Association.

Accelerated Determination of ASR Susceptibility During Concrete Prism Testing Through Nonlinear Resonance Acoustic Spectroscopy

The U.S. Federal Highway Administration (FHWA) has released a report that uses standard expansion tests and nonlinearity measurements to evaluate 10 concrete mix designs with varying alkali-silica reaction (ASR) reactivity.

Accuracy, reliable, and timely laboratory assessment of concrete mixtures — aggregates combined with cementitious materials — is a critical component in ensuring the durability of concrete infrastructure from the adverse effects of the ASR. Currently, the “Concrete Prism Test” (ASTM C1293) is the most reliable standard test method for assessing the suitability of materials and material combinations for resistance to damage by ASR. However, the main drawback of this method is the 1- to 2-year duration required for the test. This research study evaluates a new nonlinear acoustic technique for characterization of ASR damage in standard concrete prism specimens. Nonlinear impact resonance acoustic spectroscopy offers a fast and reusable measurement of the material nonlinearity. Microstructural changes that occur as a result of ASR cause an increase in the measured nonlinearity, which can be used as a measure of the amount of ASR-induced damage. This study evaluates ten (10) concrete mix designs with varying ASR reactivity. Both standard expansion tests and nonlinearity measurements are performed on the specimens. Results of these tests are presented to illustrate the utility of the new method as a complementary technique for damage assessment of laboratory concrete prisms specimens.

To download the entire publication in PDF form, please go to:
Dowel Bar Retrofit Provides Safe, Smooth Ride & Saves Money in Utah, USA

Dowel bar retrofit (DBR) can restore concrete roadways to structurally sound, smooth conditions, when used in conjunction with other concrete pavement repair techniques. For example, the Utah Department of Transportation (UDOT) began concrete rehabilitation on a 15-mile stretch of freeway, both northbound and southbound lanes, from S.R. 30 in Box Elder County to the Idaho state line. Even after decades of use, the pavement was in adequately good condition to save, so UDOT elected to perform concrete pavement preservation (CPP) - a favored method of road repair in the state.

DBR was included in the rehabilitation because the aggregate interlock, that had originally provided load transfer capability between slabs, was worn away and dowel bars were needed to re-establish load transfer at the joints. It is the largest DBR project ever conducted in the state. According to Mitzi McIntyre, P.E., Executive Director, Utah Chapter, American Concrete Pavement Association, (ACPA), it represents the final phase in the state’s long history of implementing DBR in its CPP.

According to John Roberts, Executive Director, IGGA, UDOT realized the benefits of CPP with DBR early, providing benefit to the driving public and taxpayers alike. "Looking outside the box allowed UDOT to provide a safe, smooth ride while saving considerable sums of money that could be used to improve their transportation infrastructure elsewhere in the state."

To read the full case study from the IGGA, please go to: http://origin.library.constantcontact.com/download/get/file/1105372907373-134/0913IGGA_Ogden.pdf

Pervious Concrete Research Compilation: Past, Present & Future

Dr. Heather J. Brown, the Ready Mixed Concrete (RMC) Research and Education Foundation, and the Concrete Construction Management Program, Middle Tennessee University, has updated the Pervious Concrete Research Compilation. The Research Categories in this compilation are:

- Applications and Case Studies
- Construction Techniques
- Durability and Maintenance
- Hydrological and Environmental Design
- Mix Design
- Specifications and Test Methods
- Structural Design and Properties
- Additional Resources

Each category contains the links to each research paper.

To read the entire update in PDF form, please go to: http://www.rmc-foundation.org/images/PCRC%208-29-13.pdf

Evaluation of Internally Cured Concrete for Paving Applications

Internally Cured Concrete (ICC) is a concrete mixture in which a portion of the coarse, intermediate, and/or fine aggregates (for example, 30% of sand) is replaced with similar sized prewetted lightweight aggregate (LWA). Internal curing (IC) is a means to provide hydrating concrete adequate moisture from within the mixture to replace water lost due to chemical shrinkage. IC may also restore, at least partially, the moisture that escapes through evaporation. IC, which naturally takes place in LWA concrete, has been designed into the mixture to replace water lost due to chemical shrinkage. IC shows reduction in early age shrinkage and associated plastic shrinkage cracking. Reduction in permeability and improved interfacial transition zone between aggregate and cement paste may also control joint transfer at the joints. It is the largest DBR project ever conducted in the state.

ICC has been used on bridge decks in recent years in several U.S. states with good success, significantly reducing the amount of plastic shrinkage cracking and other random cracking. ICC has been used only on a few concrete pavement projects in the United States to date and these projects have also shown good results. ICC demonstrated good constructibility and has shown excellent performance. The objective of this report is to evaluate the use of ICC in routine concrete pavement design and construction.

Life cycle cost analyses for these projects showed generally lower costs in ICC as compared to conventional concrete

The two key benefits determined for ICC in concrete pavement are structural longevity and durability. Structural longevity is improved with ICC due to its small reduction in unit weight, elastic modulus and coefficient of expansion and a small increase in strength. These small effects, when combined, amount to a significant positive impact on slab fatigue damage and associated slab cracking in jointed concrete pavements analyzed. Likewise, ICC leads to tighter crack openings and reduced punchout failures in continuously reinforced concrete pavements (CRCP). Several case studies were analyzed using the AASHTOWare ME Design procedure - the results indicate improved performance and longer lives of ICC projects. LCCA for these projects showed generally lower costs in ICC as compared to conventional concrete.

Durability benefits are provided through moisture loss control and improved hydration, including that of SCMs from extended moisture supply. ICC shows reduction in early age shrinkage and associated plastic shrinkage cracking. Reduction in permeability and improved interfacial transition zone between aggregate and cement paste may also control joint disintegration in pavements that are subjected to freeze-thaw cycles under saturated conditions.

A long term implementation plan titled “Road Map for Internally Cured Concrete Pavements” was developed, which aims to give industry and government recommendations on how to proceed to achieve the goal of wider use of ICC in concrete pavement design and construction. To download a PDF of the entire publication, please go to: http://www.escsi.org/uploadedFiles/Technical_Docs/Internal_Curing/Eval%20of%20Paving%20Apps%20Report.pdf.
6th Annual Concrete Airport Pavement Workshop “Right Choice, Right Now”

ISCP Member, Greg Dean, Executive Director, Carolinas Concrete Paving Association (CCPA), moderated and hosted along with ACPA-SE, the 6th Annual Concrete Airport Pavement Workshop “Right Choice, Right Now”. The two-day Workshop was held October 29-30, 2013 at the Hilton Atlanta Hartsfield Airport in Atlanta, Georgia, USA. According to Dean, approximately 90 delegates registered this year, once again making it one of the largest concrete pavement training forums in the southeast.

Speakers represented many facets of the airport planning, design and construction community, including personnel from the Southern Region, Federal Aviation Administration (FAA), as well as engineering consultants and industry representatives from across the United States. Presentations included topics relating to best practice as well as innovative materials (or methods) used in airfield pavement construction. ISCP Member, Gary Mitchell, National Airports Director, ACPA who presented again this year added the following perspective “What makes this workshop so unique is the excellent interaction between agencies, airports, consultants and the contracting industry”. Although there were a lot of first-timers in attendance, there was (as always) a good number of repeat attendees too. The presentations illustrated how unique challenges in design and construction were accomplished and the teamwork involved that enabled demanding schedules to be met.

Presentations Included:
- How to Submit a Modification of Standards on FAA Projects?
- ACPA Priorities
- Improving the Durability and Sustainability of Concrete Paving Using Internal Curing
- Contractors’ Forum - Ask the Contractor
- Keys to Successful Project Development
- Design, Construction & Maintenance of Concrete Pavements at HJAIA
- Using a Modified Concrete Spec at Laurens County
- Verifying Pavement Smoothness/Using the Latest Technologies
- Crack Sealing, Joint Sealing & Pavement Repair Materials
- Roller-Compacted Concrete - What’s the Future for Airports
- Full-Depth Reclamation for Local Airports

Mr. Dean concludes, “Pavement durability does not need to be sacrificed in order to meet demanding schedules . . . concrete is the right choice for nearly all airfield pavement applications.” Portland Cement Concrete is the only pavement that can withstand both load and environmental conditions beyond the FAA recommended 20-year design life.

All 2013 presentations will soon be uploaded on the ACPA website: www.pavement.com.

CALL FOR PAPERS & ABSTRACTS

Reminder: Call for Abstracts Due February 1, 2014 for TU Delft 8th International Workshop

Abstracts are due February 1, 2014 for the 8th International Delft University of Technology (DUT) - Workshop on Research and Innovations for Design of Sustainable and Durable Concrete Pavements to be held September 20–21, 2014 scenic Prague, Czech Republic. This series of prestigious Workshops began in 1986 and is organized by Delft University of Technology (DUT) in cooperation with FEBELCEM, European Concrete Paving Association (EUPAVE) and ISCP. This Workshop is complementary to, and will precede, the 12th International Symposium on Concrete Roads, September 23–26, 2014 in Prague.

The Workshop is of special interest to experts and researchers in the field of design and performance of sustainable and durable concrete pavements for roads, bridges, airports, industrial yards and railways. In order to ensure a maximum amount of time for discussion, the number of participants will be limited to 40. Please submit a short abstract (maximum 200 words) pertaining to one of the themes of the Workshop.
Include the title and the affiliation of the author(s). Deadline for submission of the abstract is February 1, 2014. Authors whose abstracts are chosen will be invited to write and present a concise presentation of their paper. The program of the Workshop consists of four main themes, each dealing with several topics. For a list of topics, please go to the article in the April 2013 ISCP Newsletter on page 5: http://www.concretepavements.org/Membership/Newsletter/ISCPAPRIL13Newsletter.pdf

Copies of the selected papers will be made available to the participants prior to the Workshop. All papers (together with the statements, discussions, conclusions and recommendations) will be published on CD-ROM after the Workshop. A summary of the Workshop will be presented at the 12th International Symposium on Concrete Roads to be held September 23-26, 2014 in Prague.

To submit an abstract by February 1, 2014, please send abstract to: Lambert Houben, Chairman, Delft University of Technology (The Netherlands) E-mail: l.j.m.houben@tudelft.nl.

For more information, please contact:
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For Delft University Website, please go to: http://www.tudelft.nl/en/.

Call for Papers & Abstracts Digest

January, 2014 Due date for final papers for 12th International International Symposium on Concrete Roads to be held September 23-26, 2014 in Prague, Czech Republic. To submit final approved papers, please e-mail: info@eupave.eu. For the website, please go to: http://www.concreteroads2014.org.

February 1, 2014 Due date for abstracts for the 8th International DUT-Workshop on Research and Innovations for Design of Sustainable and Durable Concrete Pavements to be held September 20–21, 2014 in Prague, Czech Republic. To submit an abstract by February 1, 2014, please contact: Lambert Houben, Chairman, Delft University of Technology (The Netherlands), E-mail: l.j.m.houben@tudelft.nl.

UPCOMING EVENTS

ACPA’s 50th Annual Meeting
December 2-6, 2013 in Rio Grande, Puerto Rico
To register: http://events.acpa.org/register/. For additional information, call 847.966.2272

International Journal of Pavements Conference

Annual ISCP Board and Open Membership Meeting
January 11, 2014 from 5:30 - 8:30pm EST
Coolidge Room of Marriott Wardman Park Hotel, Washington, DC, USA
http://www.concretepavements.org/Meetings/agenda.htm

93rd Annual Meeting of Transportation Research Board (TRB)
January 12-16, 2014, Marriott Wardman Park Hotel, Washington, D.C., USA
http://www.trb.org/AnnualMeeting/AnnualMeeting.aspx

World of Concrete
Jan. 20-24, 2014. Seminars will be held January 20-24; the exhibit floor will be open January 21-24.
Las Vegas Convention Center, Las Vegas, N.V.
http://www.worldofconcrete.com

14th International Winter Road Congress

Concrete Sustainability Conference, Latin America 2014
February 6-7, 2014 in Medellin, Colombia, http://www.sustainabilityconf.org/

International Conference on Transportation Infrastructure
April 22-25, 2014 in Las Vegas Convention Center, Las Vegas, N.V.
http://www.concreteroads2014.org

For events taking place in 2014 and beyond, please go to: http://www.concretepavements.org/calendar.htm

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ISCP invites ISCP members and friends to submit articles and calendar items to the Editor-in-Chief and to submit abstracts with calendar items to the Editor-in-Chief for future issues.

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