The following ISCP members have been nominated to serve as Officers and Directors of ISCP:

Mark B. Snyder, American Concrete Pavement Association-Pennsylvania Chapter, USA

Jamshid Armaghani, Florida Concrete and Products Association, USA



International Society for Concrete Pavements

What's New at ISCP

ISCP Board and Officer Nominees Announced

Neeraj Buch, Michigan State University, USA

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José Balbo, University of São Paolo, BRAZIL

- Board of Directors:
 - Anna-Carin Brink, UWP Consulting, SOUTH AFRICA
 - Juan Pablo Covarrubias, TCPavements, CHILE
 - Jim Grove, Federal Highway Administration, USA
 - Lev Khazanovich, University of Minnesota, USA
 - Erwin Kohler, Dynatest Consulting, Inc., CHILE
 - Luc Rens, FEBELCEM, BELGIUM
 - Jeff Roesler, University of Illinois, USA
 - Peter Taylor, National Center for Concrete Pavement Technology, USA

ISCP's Annual Board and Membership Meeting Planned for TRB

- Bo Tian, Research Institute of Highway, CHINA
- Leif Wathne, American Concrete Pavement Association, USA

















The ISCP Annual Board and Open Membership Meeting is tentatively scheduled for Saturday, January 9, 2010 at 5:30pm in Washington, D.C., USA. The specific location will be determined at a later date as the Transportation Research Board allocates meeting space for external groups. Minutes from previous meetings are available for review on the ISCP website and a draft meeting agenda will be posted shortly. As always, this meeting is open to all ISCP members and guests.

Industry News

Election ballots will be mailed to all current ISCP members shortly after the November Board Meeting (when the Nominating Committee's slate of candidates will be finalized and approved). Information about each nominee (including a brief nominee's statement) will be posted on the ISCP website prior to the mailing of

ballots. The newly elected officers and directors will serve 4-year terms beginning January 31, 2010.

EUPAVE's 1st Publication "Concrete Roads" Available

EUPAVE recently released its first publication, "Concrete Roads: a Smart and Sustainable Choice". This brochure draws on international experience to illustrate that the modern concrete road can be a sustainable solution and that it satisfies the criteria for sustainable construction with respect to the environment, economy and society.





It is widely known that concrete structures and pavements are highly reliable and durable and they require minimal maintenance during their useful life. In addition to these features, sustainability has increased in relevance in recent years, especially for new infrastructure. Sustainability can generally be defined as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs."

Source: Norwegian Prime Minister Gro Harlem Bruntland – 1987 UN World Commission on Environment and Development]

Concrete pavements have proven to be highly sustainable options for use in the public infrastructure. In terms of their raw materials, they can contain by-products, such as fly ash and/or slag cement. At the end of their service life, concrete pavements can be crushed and reused as recycled aggregate in subbases, new concrete mixtures, or other applications. In addition, newer concrete materials, such as pervious concrete, can be used in pavements to allow direct permeation of water to the ground without runoff effects, avoiding

environmental impacts such as water collection and erosion.

A paper copy of this publication can be obtained by simple request: send an email to info@eupave.eu, stating clearly your name, company, address and country.

ACPA Announces Complete Concrete Pavement University (CPU) Details

The American Concrete Pavement Association (ACPA) has announced the complete details of its inaugural Concrete Pavement University (CPU) program. With over 20 presentations scheduled in 8 different tracks, participants are eligible to receive up to 7.5 Professional Development Hour (PDH) credits for their attendance at the 1-1/2-day educational event. Complete program details are available at:

http://www.pavement.com/Events_and_Programs/Events/46thAnnualMtg/Agenda_CPU.html

As previously reported, the CPU is an integral part of the ACPA's upcoming 46th Annual Meeting "Creating Success Together", an event that will also include ACPA Committee and Task Force meetings, a Board of Directors/Membership meeting, optional activities such as golfing and fishing, and the Annual Excellence in Concrete Pavements Awards ceremony/banquet. The meetings are scheduled from November 30th through December 4th, 2009 at the Hyatt Regency Grand Cypress in Orlando, Florida, USA.

If you would like to receive a copy of the electronic flyer for the ACPA's 46th Annual Meeting, please contact Bill Davenport at bdavenport@pavement.com.

MEPDG Version 1.1 is Now Available

Version 1.1 of the Mechanistic-Empirical Pavement Design Guide (ME-PDG) software is now available online for evaluation through the following link:

http://onlinepubs.trb.org/onlinepubs/archive/mepdg/home.htm

Some US State Departments of Transportation have already begun using the previous version of this software as their primary pavement design/analysis tool. Pavement designers are encouraged to use this new version of the software to thoroughly evaluate its applicability and provide feedback to the developers. The current software version was released in September 2009 and includes significant changes and improvements since its last release in April 2007. Some of the improvements related to concrete pavement analysis include more accurate modeling of:

- bonded concrete overlays, on existing asphalt or concrete pavements, with minimum thickness as low as 38 mm (1.5 inches)
- bonded jointed plain concrete pavements (JPCP) over an existing JPCP
- joint spalling
- sealant type

Several bugs were fixed, including those associated with fatigue damage accumulation for JPCP with widened lanes and software interface problems. Visit the website above for more detailed information and download instructions for the new version of the guide and software.

Conference Updates

Concrete Pavement Workshops and Sessions at TRB Annual Meeting

Scheduled

It's not too early to start planning for the 89th Annual Transportation Research Board (TRB) Meeting, which will be held in Washington DC, USA from January 10th through 14th, 2010. Hotel reservations at the conference hotels must be done through registration and the rooms fill up quickly. To register and reserve a hotel room, please go to the TRB Annual Meeting website.

http://www.trb.org/AnnualMeeting2010/Public/AnnualMeeting2010.aspx

ISCP will hold its annual membership meeting in Washington DC, USA on Saturday, January 9th prior to the TRB Annual Meeting. The ISCP meeting is open for all members to attend. Also, the newly elected officers and board of directors will be announced during the ISCP meeting, along with the induction of new honorary members and the introduction of new individual and corporate members.

Various concrete related workshops are offered on Sunday, January 10th as part of the TRB Meeting on the following topics:

- Performance-Based Specifications in Current Concrete Practice
- Research and Emerging Technology in Portland Cement Concrete Pavement Construction
- Ultrasonic Imaging of Concrete

A brief summary of the TRB sessions being held related to concrete or concrete pavements includes the following:

- Advances in Concrete Property Characterization
- Emerging Technologies Related to Concrete
- Portland Cement Concrete Pavement Construction: New Developments
- Properties of Concrete: Advances in Test Methods and Procedures
- Recent Developments in Concrete Durability
- Pervious Concrete in Transportation Applications
- Science of Cracking and Crack-Free Concrete
- Improving Sustainability in Concrete Construction
- Effects of Incorporating Supplementary Cementitious Materials (SCM) in Concrete Mix Design

An interactive program providing details on all the sessions and workshops will be available shortly on the TRB website. Please visit the following links for the Annual Meeting Program.

http://trb.org/AnnualMeeting2010/AM2010Program.aspx

Research Notes

IJPE Accepted for Inclusion in the Science Citation Index

The International Journal of Pavement Engineering (IJPE) was recently accepted for inclusion in the Science Citation Index Expanded[™]. This index covers 6,650 of the world's leading journals of science and technology. The database allows researchers to identify articles most frequently cited or articles by a particular author.

The IJPE is published bimonthly by the Taylor and Francis Group (UK) and is dedicated to the publication of cutting edge research and development in pavement-related structures and facilities, including advanced analytical and computational techniques, pavement mechanics, laboratory techniques, non-destructive testing, innovative design approaches and their implementation, construction, performance, maintenance and rehabilitation techniques. All published research articles undergo rigorous peer review, based on initial editor screening and anonymous refereeing by independent expert referees.

ISCP has designated the International Journal of Pavement Engineering as the journal of the ISCP. Members are strongly encouraged to submit their technical manuscripts to IJPE for peer review and possible publication.

For more information about the journal or to submit papers online to the journal please see the following website.

http://www.tandf.co.uk/journals/titles/10298436.asp



OPTIMIZATION OF MIXTURE PROPORTIONS FOR CONCRETE PAVEMENTS - INFLUENCE OF SUPPLEMENTARY CEMENTITIOUS MATERIALS, PASTE CONTENT AND AGGREGATE GRADATION

By: Adam Rudy, Ph.D

Advisor: Professor Jan Olek, Ph.D., P.E., Professor Purdue University, West Lafayette, IN

The main purpose of this research was to evaluate the influence of the type and the amount of supplementary cementitious materials, paste content and aggregate gradation on the results of statistical optimization of mixture proportions for concrete pavements. The research program was divided into three main PHASES.

In PHASE I, the influence of the amount and type of supplementary cementitious materials (as well as the paste content) on selection of optimum proportions for concrete pavement mixtures was studied. The Response Surface Methodology (RSM) was utilized to design test matrices of concrete mixtures consisting of three binder systems: the fly ash system, the GGBFS system and the fly ash plus GGBFS system. For each binder system, the paste content varied from 21 to 25% by mixture volume. The optimum composition of concrete mixtures was found to be 29% of fly ash and 22% of paste for the fly ash system, 37% of GGBFS and 23% of paste for the GGBFS system, and 15% of fly ash, 27% of GGBFS and 22% of paste for the ternary system.

In PHASE II, three concrete mixtures (each representing near optimum composition of variables studied in PHASE I) were selected and produced with six different aggregate gradations. These aggregate gradations varied with respect to coarseness (CF) and workability (WF) factors (as defined by Shilstone's chart), packing density and maximum aggregate size. The results revealed that the best performance was obtained for mixtures with CF of about 67 and WF of about 40. In addition, the paste-aggregate void saturation ratio (k"), which relates paste content to aggregate packing density, was found to be important in controlling scaling and drying shrinkage of concrete mixtures produced in PHASE II.

The focus of PHASE III of the study was on numerical modeling to determine the optimum combination of (k") and aggregate packing density (Φ) with respect to concrete performance. The results revealed that the most desirable concrete mixtures were produced with a (k") value ranging from 0.925 to 1.000 and with packing density in the range from 0.755 to 0.786.

Finally, selected concrete mixtures produced in Phase III were evaluated with respect to their cracking potential. The mixtures selected for the cracking potential study were those which showed elevated level of drying shrinkage and were characterized by relatively high k" values and poor aggregate packing density. The cracking potential of these mixtures was evaluated using the modified AASHTO ring test procedure, which involved demolding of specimens immediately after the concrete reached the final setting time. The final setting time was determined using the Time Domain Reflectometry (TDR) method.

Upcoming Events

TREMTI 3: 3rd International Symposium on Stabilization and Recycling November 12-14, 2009 in Antigua, Guatemala http://www.eupave.eu/documents/events/tremti-2009.xml



ISCP "Mid-Year" Board Meeting November 16, 2009 in Santiago, Chile http://www.concretepavements.org

ISCP

International Concrete Pavement Symposium November 17-19, 2009 in Santiago, Chile http://www.dictuc.cl/ciiv/

ACPA's 46th Annual Meeting

November 30-December 4, 2009 in Orlando, Florida, USA http://www.pavement.com/Events_and_Programs/Events/46thAnnualMtg/index.html



International Conference on Concrete Pavements – China December 2-4, 2009 in Haikou, Hainan, China http://www.concretepavements.org

International Rilem Conference on Progress of Recycling in the Built Environment December 2-4, 2009 in São Paulo, Brazil http://www.recycle2009.org/index.html



ISCP Annual Membership Meeting January 9, 2010 in Washington, D.C. http://www.concretepavements.org

89th Transportation Research Board Annual Meeting January 10-14, 2010 in Washington DC, USA http://www.trb.org

13th International Winter Road Congress

February 8-11, 2010 in Quebec City, Canada http://www.aipcrquebec2010.org

9th Annual International Conference Addressing: Sustainable Construction Materials and Technology in Asphalt, Pavement Engineering and Highways Maintenance

February 17-18, 2010 in Liverpool, UK http://www.ljmu.ac.uk/BLT/100174.htm

11th Heavy Vehicle Transport Technology Symposia (HVTT11) March 15-17, 2010 in Melbourne, Australia

http://www.hvttconference.com/

Thirty-Second International Conference on Cement Microscopy

March 28 – April 1, 2010 in New Orleans, Louisiana, USA http://www.cemmicro.org/icma/conference.html

1st International Conference on Pavement Preservation

April 12-16, 2010 in Newport Beach, California, USA http://www.pavementpreservation.org/icpp/

2010 FAA Worldwide Airport Technology Transfer Conference

April 20-22, 2010, in Atlantic City, New Jersey, USA http://www.airtech.tc.faa.gov/att2010/



First International Conference on Nanotechnology in Cement and Concrete

May 5-7, 2010, in Irvine, California, USA http://www.trb.org/Conferences/2010/Nanotech

7th International Symposium on Cement & Concrete

May 9-12, 2010 in Jinan, China http://www.iscc2010.org/

7th International Conference on Fracture Mechanics of Concrete and Concrete Structures

May 23-28, 2010 on Jeju Island, South Korea http://www.framcos7.org/

GeoShanghai 2010

June 3-5, 2010 in Shanghai, China http://www.geoshanghai2010.org/index.asp

Sustainable Construction Materials & Technologies

June 28-30, 2010 in Ancona, Italy http://www.uwm.edu/Dept/CBU//ancona.html



International Conference on Sustainable Concrete Pavements: Practices, Challenges, and Directions

September 15–17, 2010 in Sacramento, California, USA http://www.fhwa.dot.gov/pavement/concrete/2010acptpconf.cfm

Maintenance Superintendants Associations (MSA) Conference 2010

October 3-9, 2010 in Temecula, California, USA http://www.gomsa.net/



7th International DUT Workshop on the Design and Performance of Sustainable and Durable Concrete Pavements

October 10-11, 2010 near Seville, Spain http://www.citg.tudelft.nl/live/pagina.jsp?id=46c8bc2d-df2b-44c7-8cda-fc456c6c9648&lang=en



11th International Symposium on Concrete Roads

Organized by EUPAVE October 13-15, 2010 in Seville, Spain http://www.2010concreteroads.org/

10th International Conference on Low-Volume Roads July 24-27, 2011 in Lake Buena Vista, Florida, USA

http://www.trb.org/conferences/2011/10LVR

24th World Road Congress

September 25-30, 2011 in Mexico City, Mexico http://www.piarc.org/en/congresses-seminars/road-congresses.htm

International Conference on Concrete Pavement Design, Construction, and Rehabilitation Tentatively planned for 2011

Chang'an University, Xi'an, Shaanxi Province, P.R. China http://www.concretepavements.org/



10th International Conference on Concrete Pavements Organized by ISCP Quebec City, Canada, August 2012 http://www.concretepavements.org/

If you wish to submit an announcement and/or link for an upcoming conference, meeting, or call for papers for the next ISCP e-newsletter, please contact us at newsletter@concretepavements.org.

The ISCP E-Newsletter is produced by Editor-in-Chief, Amanda Bordelon, Associate Editor, Dr. Jake Hiller, and Assistant Editors: Dr. Cristian Gaedicke, Corey Zollinger, and Nancy Whiting. Suggestions for future newsletters are welcomed at <u>newsletter@concretepavements.org</u>.

ISCP President:

Dan G. Zollinger, Ph.D, P.E. Texas A&M University CE/TTI Building, Rm 503e College Station, Texas, USA 77843 Phone: 979-845-9918 Fax: 979-845-0278 Email: dzollinger@concretepavements.org ISCP Vice President: Kathleen T. Hall, Ph.D, P.E. 1271 Huntington Drive South Mundelein, Illinois, USA 60060 Phone: 847-549-8568 Fax: 847-589-4284

ISCP Secretary and Treasurer: Mark B. Snyder, Ph.D., P.E.

7085 Highland Creek Dr. Bridgeville, Pennsylvania, USA 15017 Phone: 412-221-8450 Fax: 412-221-0409 Email: mbsnyder@concretepavements.org (Contact for membership inquiries)