



INTERNATIONAL SOCIETY FOR CONCRETE PAVEMENTS

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PRESIDENT'S MESSAGE:



There has been a lot of ISCP activity in recent months, including extensive work in preparation for the upcoming 10th ICCP and 3rd Advanced Workshop on Concrete Pavements, reorganization of the newsletter staff, movement on the tech transfer database, and the presence of ISCP Directors and Members at recent international conferences in Xi'an, China and Sydney, Australia. I would like to express my deep gratitude to everyone who has committed their time and talents to work on these activities (and others). I would especially like to recognize those who have represented ISCP at the conferences in China and Australia, which required large blocks of time (often without pay or using vacation time) and are usually done at some personal financial expense. ISCP also appreciates the contributions of the employers who provide members the time and resources to participate in ISCP activities.

The Board of Directors held its annual full-day meeting in early August and was able to develop and refine specific tasks that will enable the Society to continue moving forward. Specifics are available in the meeting minutes, which will soon be posted on the ISCP website. One highlight of the meeting was a 2-hour joint meeting with the Directors of the Australian Society for Concrete Pavements (ASCP), with whom we have a Memorandum of Understanding (MOU) that allows and encourages interactions and sharing of resources to the benefit of both groups. A number of concepts for future collaboration were discussed and will be developed in coming months. We look forward to continuing to work with ASCP and EUPAVE (with whom we also have an MOU) to achieve our mutual goals.

All that ISCP is able to accomplish depends upon the participation of our members. I encourage everyone to visit the committee homepages on our website (www.concretepavements.org) and contact the chair of any committee that you want to join or "friend". You can also join our Linked-in group and participate in the discussions that have been going on there – the resources of our group become readily apparent when you follow the discussions that take place! And, if you really want to play a major role, consider running for a position as a Director. Elections will be held this fall for 7 Director positions. Anyone interested in serving on the Board should contact Dan Zollinger (d-zollinger@tamu.edu), who is the chair of the Nominating Committee. Finally, please tell your concrete paving friends about ISCP and encourage them to join and be active as well. Membership applications can be completed quickly online from the membership section of the ISCP website.

There was extensive discussion at the end of the August Board meeting concerning specific activities that the Society should be performing (and on the priority ranking of those activities). This is a discussion will continue in our monthly Board conference calls. In addition to organizing the ICCP every 4 years and developing a resource database, suggestions have included the publication of technical bulletins, development of webinars, publication of a textbook, provision of scholarships, and other services. If you have an idea or opinion, please share it with me at president@concretepavements.org and I will present it to the Board at the next meeting.

Thank you again to everyone who supports ISCP through their membership and their contributions of time and talent!

~ Best regards, Mark B. Snyder, President

INDUSTRY RESOURCES

EUPAVE Announces A New Technical Manager



Özlem Aslan began working at EUPAVE as Technical Manager on July 1, 2011. Ms. Aslan obtained a civil engineering degree as well as her MBA from The Middle East Technical University-Ankara. For the last 5.5 years, she worked as Head of The Concrete Laboratory at the Turkish Cement Manufacturers' Association. From now on, she will be at your service at EUPAVE!

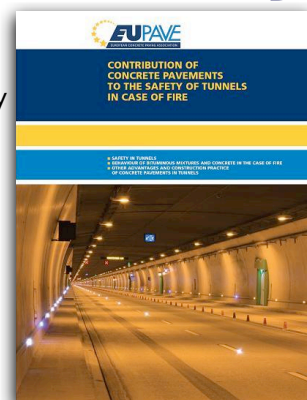
For the EUPAVE website, for updated information and the EUPAVE Newsletter, please go to www.eupave.eu/documents/newsletter-archive.xml?lang=en.

EUPAVE Tunnel Brochure Highlights Concrete Use For Safety

CONTRIBUTION OF CONCRETE PAVEMENTS TO THE SAFETY OF TUNNELS IN CASE OF FIRE

The EUPAVE brochure highlights the importance of choosing the appropriate material for tunnel construction to ensure high safety and reliable availability to traffic. The brochure touts the contribution of concrete to the safety of tunnels, in case of fire, in comparison with other paving materials. The publication of the IECA (Spanish Institute for Cement and its Applications) is translated into English by EUPAVE. To view and download a pdf of the brochure, please go to: <http://www.eupave.eu/documents/technical-information/inventory-of-documents/pictures/safety-of-tunnels-final.pdf>

To request a hardcopy of the brochure, please send an email to: info@eupave.eu. The brochure will have a price for hardcopies of €25 (\$36 USA) plus shipping. It is free for members.



ORGANIZATIONAL MEMBERS: & MAJOR EVENT SPONSORS:



National Concrete Pavement Technology Center



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Designers Stress Use of Concrete in the Construction of Roundabouts

abouts, which allow safer and smoother traffic flow. The intense heavy traffic at these roundabouts induces extreme stresses in the pavement, both as a result of centrifugal forces as well as the overload exerted by the offside wheels of tilting vehicles. The effects of such stresses include rut formation, the sideways displacement of the wearing course, the loss of surface aggregate, and cracking as a result of insufficient bearing capacity in the road structure beneath the offside wheels. These findings encouraged designers to think of ways of using concrete for the construction of roundabouts.

When designing a concrete slab pavement for a roundabout, special attention must be given to the positioning of the contraction and construction joints. Indeed if the slabs are too large or are sharply angled the finished pavement may quickly develop unpredictable and undesirable cracks. The project designer must therefore carefully define the location of all the joints during the project design phase. When it is expected that the roundabout will have to bear higher volumes of traffic, the joints will of course be doweled. Here too, the satisfactory positioning of the dowels during the construction work is vital if the joints are not to become locked up.

A EUPAVE Concrete Roundabouts brochure will be available late 2011.

To view technical information on ROUNDABOUTS, please go to: www.eupave.eu/documents/activity-areas/roundabouts.xml?lang=en

To download 3 documents on roundabouts, please go to: <http://www.eupave.eu/documents/technical-information/inventory-of-documents/inventory-roundabouts.xml?lang=en>.

CONFERENCE NEWS & UPDATES

Sustainable Concrete Pavements Conference to be hosted by TTCC & NCC in September



The Technology Transfer Concrete Consortium (TTCC) and the National Concrete Consortium (NCC) invite you to the Sustainable Concrete Pavements Conference to be held September 13-15, 2011 at the Ramkota Hotel in Rapid City, South Dakota. For those who arrive early, please join us for a casual dinner (on your own) on Monday, September 12 at 6:30 pm. We will meet in the hotel lobby.

Presentation and technical session topics will include sustainable pavements, concrete pavement foundations, joint deterioration, surface-vehicle interaction, partial depth repairs and more. A large part of the conference includes a Field Trip/Concrete Technical Tour and GPR Demo on Wednesday, September 14. Participants will take the 1880 Train from Keystone to Hill City and enjoy a group dinner at Mt. Rushmore. Also, enjoy one of the Black Hills' largest hotel indoor waterparks, FREE for hotel guests.

For the conference agenda, please go to: http://www.cptechcenter.org/t2/ttcc_ncc_meeting.cfm

For reservations, please go to: [Ramkota Hotel-Best Western](http://www.ramkota.com). You may also call the hotel at: (605) 343-8550. The Ramkota offers a free shuttle to/from Rapid City Airport.



Dutch Concrete Roads Day will be October 11, 2011 in 's-Hertogenbosch, The Netherlands

After almost 15 years, the Dutch Concrete Roads Day is organized again!

In the last decades of the 20th century, such an event was organized every 3 to 4 years. The Dutch EUPAVE member, Cement & Beton Centrum takes up this tradition with new energy on October 11, 2011 in 's-Hertogenbosch, North Brabant, The Netherlands. The main topic is sustainability of concrete pavements. As the exposition has booked 21 companies/organizations, there is great opportunity for participants to renew and update their knowledge on concrete pavements. The program shows plenary sessions with trends and visions, as well as parallel sessions with practical subjects as special applications, material development, roundabouts and bicycle lanes. From several points of view, sustainability of concrete will be presented: from opportunities to sustainable purchasing and tools for calculating the sustainable aspects of road constructions. Presentations will be held in Dutch. For more information, please go to: www.betonwegendag.nl.



Cement&BetonCentrum **beton WEGENDAG**

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Participants will take the 1880 Train from Keystone to Hill City & enjoy a group dinner at Mt. Rushmore



www1.american.edu/ted/ice/dutch-sea.htm



ISCP Co-Sponsored Successful Concrete Road Pavement Conference in Sydney, Australia



A Concrete Pavement Conference was held in Sydney, Australia on August 2, 2011. This event, organized by the Australian Society of Concrete Pavements (ASCP) in collaboration with ISCP, was held at the Ryde-Eastwood Leagues Club in Sydney. As ASCP's first Concrete Pavements Conference, the focus was on Concrete **Road** Pavements and topics were: Design, Materials, Sustainability and Performance. The conference was well-attended by 100 pavement professionals, contractors and material suppliers and was a unique opportunity for Australian practitioners to obtain up-to-date information about concrete road pavements from overseas. It was also a great opportunity for organizations to promote their products and services to the industry.

ISCP directors, officers and members figured prominently in writing and delivering papers for the event. Technical presentations were made by ISCP President Mark Snyder, Secretary/Treasurer Neeraj Buch, Directors Jamshid Armaghani, Jacob Hiller, Erwin Kohler, Bryan Perrie, Luc Rens, Leif Wathne, past ISCP President Dan Zollinger and Member Julie Vandenbossche. ASCP President, Mark Hoskins and ASCP Members, John Hodgkinson and Chris Harrison also delivered technical presentations as part of the technical program. The presentations addressed issues of pavement materials, sustainability and performance.

For more information, please visit the ASCP website at: www.concretepavements.com.au.

Pictured:
1. Dan Zollinger
Luc Rens,
Neeraj Buch
Jake Hiller
Jamshid Armaghani
Bryan Perrie
John Hodgkinson
2. Leif Wathne
Mark Snyder
Luc Rens
Jake Hiller
3. Erwin Kohler
Julie Vandenbossche



Ongoing Rehabilitation Project Is Recognized As One of the Largest Concrete Projects in Belgium

A jobsite visit to the "**RECONSTRUCTION OF THE MOTORWAY E17 IN CRCP**" was held on July 6, 2011, with the co-organization of the Belgian Road Association, the Belgian Cement Association FEBELCEM and EUPAVE.

More than 35 participants gathered in Maaltebrugge Castle near Gent. Luc Rens, Managing Director of EUPAVE, opened the seminar and gave the floor to Mr. Peter De Backer, Head of the Roads and Traffic Division East-Flanders. De Backer, who is in charge of the province of East-Flanders, gave an overview of the infrastructure. He mentioned a series of large motorway rehabilitation projects that are planned in the coming years which mainly deal with concrete pavements. The aim, as expressed by the Flemish Minister of Public Works, Mrs. Hilde Crevits, is to make up arrears by 2015 with regard to the quality of the Flemish motorway network. The ongoing project on the E17 is part of a rehabilitation program and it is presently one of the largest projects in Belgium.

For a short overview, please go to:
<http://www.eupave.eu/documents/technical-information/conferences-seminars-visits.xml?lang=en>.



CALL FOR PAPERS

Call for Abstracts & Papers DEADLINES Digest:

SEPTEMBER 30, 2011: EXTENDED PAPER SUBMITTALS DEADLINE for the 10th ICCP Québec Conference, to be held in Québec, Canada July 8-12, 2012

OCTOBER 11, 2011: ABSTRACTS DUE for the International Conference on Long-Life Concrete Pavements, to be held in Seattle, Washington, USA, September 19-21, 2012.

NOVEMBER 30, 2011: CALL FOR PAPERS for the 7th Symposium on Pavement Surface Characteristics, SURF 2012, to be held September 19-22, 2012 in Norfolk, Virginia, USA.

Currently through MARCH 9, 2012: CALL FOR PAPERS for the MAIREPAV 7 Conference (the Maintenance and Rehabilitation of Pavements and Technological Control), to be held in Auckland, New Zealand, August 28-30, 2012.

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First Announcement & Call for Papers: International Conference on Long-Life Concrete Pavements, 2012 in Seattle, Washington, USA

ACPT ADVANCED CONCRETE
PAVEMENT TECHNOLOGY

FHWA's Advanced Concrete Pavement Technology (ACPT) Program and the National Concrete Pavement Technology Center (NCPTC) at Iowa State University are pleased to announce the First Call for Papers for The International Conference on Long-Life Concrete Pavements to be held in Seattle, Washington, USA, Wednesday to Friday, September 19-21, 2012. Abstracts are due October 1, 2011.

October 1, 2011:
Abstracts due
(one page)

December 1, 2011
Authors notified
of abstract
acceptance

January 5, 2012
Accepted authors
confirm

March 1, 2012
Completed papers
due for review
(MS WORD or PDF)

May 1, 2012
Reviews completed,
authors notified of
final disposition of
their papers

July 1, 2012
Electronic versions
of final papers due
(MS WORD)

September 1, 2012
Electronic version of
presentations due
(MS POWERPOINT)

The 2012 Seattle Conference is a follow-up to the very successful and well-attended 2006 Chicago, Illinois, USA Conference and the 2010 Sacramento, California, USA Conference. The 2½-day Seattle Conference is targeted at pavement, materials, and geotechnical engineering professionals who are involved in various aspects of concrete pavement design, construction, testing and evaluation, and rehabilitation. As with the Chicago and the Sacramento conferences, the Seattle Conference will provide an international forum to address various aspects of concrete pavement design, construction, and materials technologies that result in long life and sustainability for concrete pavements. In addition, a mini-symposium focusing on paving concrete durability will be held on the last day of the conference. This is in recognition of the fact that concrete durability under site-specific exposure conditions is a primary requirement for achieving long-life concrete pavements.

Papers and conference presentations are solicited both nationally and internationally on a wide range of topics dealing with technologies that result in long-life concrete pavements:

- pavement analysis, design and construction
- concrete materials
- pavement performance
- pavement repair and rehabilitation
- user expectations
- life cycle cost analysis
- sustainability considerations

Papers on US State highway agencies and international best practices and future directions are especially welcomed.



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ORGANIZED BY:
Federal Highway
Administration

**National Concrete
Pavement
Technology Center**

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Transportation
Officials

**International
Society for Concrete
Pavements**

**American Concrete
Pavement
Association**

**Portland Cement
Association**

**Concrete
Reinforcing Steel
Institute**

**Transportation
Research Board**

**Washington State
Department of
Transportation**

**University of
Washington**

To submit papers, to see the Conference Brochure and for all Conference details, please go to:
<http://www.fhwa.dot.gov/pavement/concrete/2012conf.cfm>
For questions related to the Conference, please contact Shiraz Tayabji at: stayabji@aol.com or Sam Tyson (FHWA) at: Sam.Tyson@dot.gov.

Deadline for 10th ICCP Papers Extended to September 30

The Editorial Committee will still consider submitted papers for the 10th International Québec Conference, to be held July 8-12, 2012. The PAPER deadline is September 30, 2011. For submission of papers please go to: <https://www.softconf.com/c/10thiccp/>. For more information on the 10th ICCP Québec Conference, please go to: <http://www.concretepavements.org/10thiccp/>.

Call for Papers for MAIREPAV 7 through March 9, 2012

The University of Auckland and the Organizing Committee, in conjunction with iSMARTi continue the Call for Papers for the MAIREPAV 7 Conference (the Maintenance and Rehabilitation of Pavements and Technological Control), through March 9, 2011. Hosted by the Dept of Civil and Environmental Engineering, the conference will be held at The University of Auckland's Business School in Auckland, New Zealand, August 28-30, 2012. To submit your papers, please go to: http://www.mairepav7.co.nz/?page_id=5.



To register for the conference and for information, please go to: <http://www.mairepav7.co.nz/>. For questions and more information, please contact: Petteena McOnie
Conference Coordinator
Conference Management Center for Continuing Education
The University of Auckland
E-mail: mairepav@auckland.ac.nz
Phone: +64 9 923 9695



THE UNIVERSITY
OF AUCKLAND
NEW ZEALAND
Te Whare Wānanga o Tāmaki Makaurau



ROADING
NEW ZEALAND



CALL FOR PAPERS:
Currently, through
March 9, 2012

REGISTRATION OPENS:
March 9, 2012

CONFERENCE:
August 28-30, 2012

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THESIS ABSTRACTS

Establishing Permanent Curl/Warp Effective Temperature Gradient in Jointed Plain Concrete Pavements

By Somayeh Nassiri, PhD, University of Pittsburgh, 2011

Advisor, Dr. Julie Vandenbossche

The concrete slab in a pavement structure curls due to a temperature gradient and warps in the presence of a drying shrinkage gradient. The curling is upward (downward) when the slab is cooler (warmer) at the top than the bottom. Warping is consistently upward because the slab is more susceptible to drying at the top. Since the slab is not free to curl, tensile stresses form in the slab. These stresses when combined with traffic loadings can result in cracking of the slab. Slabs do not remain flat in the absence of daily gradients. This is because of the temperature/moisture gradient that exists in the slab at the zero-stress time. Zero-stress time occurs after the placement of the slab, during curing and following final set time. The gradients at the zero-stress time, known as built-in or permanent temperature gradients, lock into the slab and either decrease or increase the curling due to the transient gradients.

One more factor that influences the future shape of the slab is the permanent warp gradient. A portion of the drying shrinkage in drier seasons can reverse in wet seasons, known as reversible drying shrinkage. Permanent warp is due to the irreversible portion of the drying shrinkage, which progressively increases as the concrete ages and eventually reaches a plateau. This study puts forward a procedure, including three tasks, to establish realistic values for permanent curl/warp in the slab. Task 1 includes identifying the zero-stress time in the slab. This is performed by using the data from four different instrumented pavement structures in Western Pennsylvania. Task 2 focuses on establishing the built-in temperature gradient based on the measured temperature. As part of this task, a computer temperature model is developed to predict the temperature within the pavement based on the ambient conditions and the heat of hydration. Task 3 focuses on estimating the permanent warp in the slab. This is achieved by using long-term strain measurements in an instrumented pavement section in Pennsylvania, as well as instrumented pavements sections in Minnesota. The drying shrinkage development is also predicted by using a relative humidity model. The difference between the predicted and measured drying shrinkage is attributed to the effects of creep and base restraints.

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UPCOMING EVENTS CALENDAR

SEPTEMBER
2011

BRIDGES, TUNNELS

September 21-23, 2011, Mikhailovskiy Manege, St. Petersburg, Russia
<http://www.restec.ru/transport>

24th World Road Congress

September 26-30, 2011 in Mexico City, Mexico
<http://www.aipcrmexico2011.org>

OCTOBER
2011

MnROAD Research Conference

October 4, 2011 in Minneapolis, Minnesota, USA
http://www.terraroalliance.org/events/innovation_series/2011/index.html

Dutch Concrete Roads Day

October 11, 2011 in 's-Hertogenbosch, The Netherlands
For details, go to: [DutchConcreteRoadsDay](http://www.betonwegendag.nl/Betonwegendag/Home.html).
<http://www.betonwegendag.nl/Betonwegendag/Home.html>

Fehrl Road Research Meeting, Brussels

October 18-19, 2011 in Brussels, Belgium
<http://www.fehrl.org/index.php?m=306>

German Concrete Roads Days

October 20-21, 2011, Cologne (Köln), Germany
<http://www.fgsv.de>

NOVEMBER
2011



2nd International Conference on Best Practices for Concrete Pavements

November 2-4, 2011 in Florianopolis, Santa Catarina State, Brazil
http://www.ibracon.org.br/eventos/2nd_pavement/informacoes.asp

The Use of Industrial Byproducts in Highway and Road Construction

November 1-2, 2011 in Austin, Texas, USA
http://rma.org/scrap_tires/conferences_and_events/industrial_byproducts_conference/

8th International Conference on Managing Pavement Assets

November 15-19, 2011 in Santiago, Chile, <http://www.icmpa2011.cl/>

ACPA's 48th Annual Meeting

November 29 - December 2, 2011 in Indian Wells, California, USA
<http://www.pavement.com>

2nd International Conference Future Concrete

December 12-14, 2011 in Dubai, UAE
<http://www.futureconcrete.com/>

DECEMBER
2011



ISCP Annual Membership Meeting

January 21, 2012 in Washington, DC, USA

91st Annual Meeting of the Transportation Research Board

January 22-26, 2012 in Washington, DC, USA

JANUARY
2012



10th International Conference on Concrete Pavements

Organized by ISCP, July 8-12, 2012 in Quebec City, Canada
<http://www.concretepavements.org/10thiccp>

JULY
2012



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for contributions to this issue.
ISCP invites ISCP members
and friends to submit articles
and calendar items to the
Editor-in-Chief for future issues.

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www.concretepavements.org
for more information about ISCP.

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AB Stockholm. Sources for additional
maps are noted on perspective pages.