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President's Message:



As we start the new year, it is traditional to take stock of our positions (in both personal and professional matters), to identify areas for potential improvement, and to resolve to make changes for the better.

ISCP's officers, directors and committee members have, in recent months, been working hard to better define ISCP's position and role in the international concrete paving community. We have re-energized our committee structures and redefined their specific roles, goals and tasks in support of the overall Society mission and goals (see specific committee webpages at

<http://www.concretepavements.org/committees/index.htm>). The Board is also currently implementing a series of initiatives to increase the value of ISCP membership, both to individual members and organizational supporters (as described in the November 2010 newsletter). Some of these initiatives aim to make better use of ISCP's greatest resource - its members - by using social networking platforms, online searchable membership databases and blog pages to help members identify resources (including other members) that can provide technical assistance, support and/or partnerships. Some of these initiatives will be accomplished fairly quickly and with relative ease. Other initiatives (such as the long-awaited technical document database) require much higher levels of effort and longer times to accomplish.

The successful completion of the activities and initiatives that are now underway will be of great potential value to both ISCP members and the larger concrete pavement engineering community. However, since ISCP is primarily a volunteer-based nonprofit organization, its ability to accomplish these initiatives and achieve its goals depends on [in no small part] the active involvement of its members. Our goals cannot be accomplished solely through the efforts of our Board members.

**As we
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As we enter 2011, I encourage each ISCP member to do two things:

- 1) Consider becoming more actively involved in ISCP through one or more of the committees (again, check out the committee web pages to find activities in which you may have a special talent and would find interest in contributing)
- 2) Encourage your colleagues to join ISCP and become active members as well.

Best wishes to everyone for a happy and prosperous new year!

Sincerely,
Mark B. Snyder
ISCP President

ORGANIZATIONAL MEMBERS:



WHAT'S NEW AT ISCP:

ISCP Annual Meeting & Social Dinner are this January

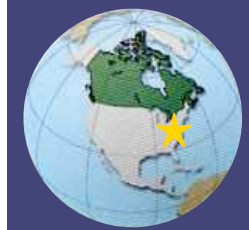
ISCP's annual membership business meeting will be held on Saturday, January 22, 2011 at 17:45 Eastern Standard Time (EST) in the Congressional Room of the Omni Shoreham Hotel in Washington, D.C., USA. All members of ISCP are welcome to join.



Highlighted agenda items include:

- Presentation and discussion of the 2011 budget (approved at the October 12 Board meeting),
- Update on plans for the 10th International Conference on Concrete Pavements and the accompanying 3rd Workshop on Advanced Characterization, Modeling and Design of Concrete Pavements,
- Reports on activities of each standing committee
- Discussion of initiatives to increase ISCP membership value.

A complete agenda will be posted on the ISCP website one week prior to the meeting. All ISCP members and friends are encouraged to attend and contribute to this meeting.



Omni Shoreham Hotel
Washington, D.C., USA



The meeting will be followed by an informal social dinner at the Lebanese Taverna Restaurant (located at 2641 Connecticut Avenue NW) at 20:00 EST. Cost of the dinner, dessert and soft drinks/water will be \$40 per person (including all taxes and service charges). ISCP will partially sponsor the cost of the meal for current student members of ISCP at a rate of \$20 per person (not to include the cost of any alcoholic drinks).

All members (regular and students) who plan to attend are asked to RSVP to secretary@concretepavements.org by January 18 to guarantee a place at the dinner table!

ISCP Members Invited to the ACPA Hospitality Suite



The American Concrete Pavement Association (ACPA) will host its 15th Annual Transportation Research Board's (TRB) Hospitality Reception at the TRB's 90th Annual Meeting. The reception is scheduled for Monday, January 24, from 17:15 to 18:45 p.m. at the Willard InterContinental, 1401 Pennsylvania Avenue NW, Washington, D.C., USA.

The reception helps increase awareness about ACPA research and technology transfer initiatives. The event also is an ideal forum for ACPA to thank researchers and other officials for their efforts in transportation research. It also allows representatives of industry, the public sector, and academia to build on positive relationships and share ideas and concerns.

This year, ACPA is also planning to present the distinguished "Marlin J. Knutson Award for Technical Achievement" at the event.

There is still time to join the growing list of event sponsors. Sponsors enjoy the benefit of formal recognition during this popular event, which builds goodwill and strengthens relationships with customers in research and technology circles. Persons interested in attending or sponsoring the hospitality reception are encouraged to contact ACPA's Debbie Becker at 847.972.9802 or dbecker@acpa.org.

Last, but not least, attendees are reminded that limited ground transportation will be available. Two buses will depart from the 24th Street entrance of the Marriott Hotel to go to the reception at the Willard Hotel at approximately 17:15 p.m.; the buses will return at approximately 18:30 p.m.

Bill Davenport
Vice President-
Communications,
American
Concrete
Pavement
Association

TECHNOLOGY DEVELOPMENTS

THESIS ABSTRACT: Analytical Solutions For Temperature Profile Prediction In Multi-Layered Pavement Systems

Dr. Dong Wang, Ph.D.

Department of Civil and Environmental Engineering, University of Illinois Urbana-Champaign

Advisor: Dr. Jeffery R. Roesler

Accurate prediction of pavement temperature profile is essential to better characterize the mechanistic properties of paving materials and predict pavement responses under traffic and environmental loadings. In practice, characterizing the field temperature profiles are desired in order to calculate the moduli of various pavement layers, analyze Falling Weight Deflectometer (FWD) testing data, as well as assess the load transfer efficiency across joints in concrete pavements.

To facilitate estimation of pavement temperature profiles, one-dimensional (1-D) analytical solutions for temperature profiles in multi-layered pavements have been derived using the method of separa-



tion of variables and the Laplace transforms. The derived theoretical solutions consider the pavement geometries, material thermal properties, solar radiation, and air temperature. Field validation justified that these analytical solutions generate reasonable temperature profiles in the concrete slab of a four-layered continuously reinforced concrete pavement (CRCP) test section. The main advantages of these solutions are that they can rapidly predict the pavement temperature profile for short time durations, e.g., a few days, with limited input data. Under the assumption of axisymmetric thermal conditions, analytical solution for two-dimensional (2-D) temperature profiles in a multi-layered pavement system has been derived using the Hankel transforms and the method of separation of variables, and validated for predicting the temperature profile in the concrete slab of a four-layered CRCP test section.

Finally, rapidly varying temperature profiles in pavement systems due to transient thermal loadings generated by vertical take-off aircraft engines are systematically studied. 1-D analytical solutions for temperature fields in a two-layered pavement system using Laplace transforms are proposed for two different surface boundary conditions, i.e., specified transient surface temperature and mixed boundary condition involving heat flux emanating from the aircraft engine. Furthermore, 2-D axisymmetric temperature field in a homogeneous half-space subjected to transient thermal loading was solved under the specified surface temperature condition. Two solution methods, one based on the Hankel transforms and the method of separation of variables while another based on the Hankel and Laplace transforms, were introduced. Numerical experiments suggest that the combined results based on those two methods give reasonable approximation to the rapidly varying temperature profile.

CONFERENCE NEWS & UPDATES:

India Concrete Exposition to be held January 10-12



The 2nd Concrete Panorama & Deminar will be held from January 10-12, 2011 at the Palace Grounds, Bangalore, India. This will be a 3-Day International Exhibition on Concrete Products, Machinery and Technology for the construction industries which will include a 2-day "Deminar" (demonstration-orientated expositions). Organized by the Indian Concrete Institute, Karnataka, this exposition will showcase the latest equipment, products, services and technologies of the concrete industry.

The 3-day event features over 80 exhibitors from India and a 2-day "Deminar"

The event will feature over 80 exhibitors from India. Sessions provide an opportunity to listen and interact with international speakers, as well as witness live demonstrations of emerging technologies and innovations in the world of concrete. The program will be one of the best training and professional development opportunities, where national & international experts from the country and across the globe will share innovative topics and live demonstrations with attendees. The event is designed to serve the needs and interests of all manufacturers, producers, suppliers, designers, architects, specifiers, students, builders, contractors, end users and others involved in the concrete industry.



For more information and to register, please visit the exhibition website: <http://www.concretepanorama.com/index.html>

Organized by:

Sponsored by:



CALL FOR PAPERS DUE:

If you, as an ISCP member, would like to BE A REVIEWER (for abstracts and papers for various conferences; and for technical publications), please contact Bryan Perrie at: bryan@cnci.org.za or fill out the review panel form online:

<https://spreadsheets.google.com/viewform?formkey=dFQ0am55MGVIYmstRklkV0k0b2o4ZGc6MQ>

Any questions can be directed to editorial@concretepavements.org

Call for Papers DEADLINES:

JANUARY 14, 2011: SUBMIT PAPERS for the 8th International Conference on Managing Pavement Assets, Santiago, Chile, November 15-19, 2011. Please refer to the specifications in the article on page 5 of this newsletter. Submit through <http://www.icmpa2011.cl/abstract.html>

JANUARY 31, 2011: CALL FOR ABSTRACTS for the International Concrete Sustainability Conference, Boston, Mass., August 9-11, 2011.

MARCH, 2011: ABSTRACT SUBMISSIONS for the 7th RILEM Conference on Cracking in Pavements, in Delft, the Netherlands, June 20-22, 2012.

APRIL 30, 2011: CALL FOR ABSTRACTS for the 10th International Conference on Concrete Pavements, Quebec, Canada, July 8-12, 2012.



Google:
Bangalore.com

UPCOMING EVENTS CALENDAR

**JANUARY
2011**

India Concrete Panorama and Deminar 2011

January 10-12, 2011 in Bangalore, India <http://www.concretepanorama.com/index.html>



ISCP Board and Membership Meeting

January 22, 2011 in Washington, DC, USA
<http://concretepavements.org>

90th Transportation Research Board Annual Meeting

January 23-27, 2011 in Washington DC, USA <http://www.trb.org>

**FEBRUARY
2011**

International Symposium on Testing and Specification of Recycled Materials for Sustainable Geotechnical Construction

February 2-4, 2011 in Baltimore, Maryland, USA
<http://www.astm.org/d18symp0211.htm>

**MARCH
2011**

1st ASCE T&DI Congress: Integrated Transportation & Development for a Better Tomorrow

March 13-16, 2011 in Chicago, Illinois
www.tdi-congress.org

**APRIL
2011**



International Conference on Concrete Pavement Design, Construction and Rehabilitation

April 18-20, 2011 in Xi'an, Shaanxi Province, P.R. China
http://www.concretepavements.org/China_2011_cfp.pdf
<http://pavement.chd.edu.cn/iccpdcr>

**JULY
2011**

10th International Conference on Low-Volume Roads

July 24-27, 2011 in Lake Buena Vista, Florida, USA
<http://www.trb.org/conferences/2011/10LVR>

**AUGUST
2011**

2011 International Concrete Sustainability Conference

August 9-11, 2011, in Boston, Massachusetts, USA.
Co-hosted by the Massachusetts Institute of Technology.
<http://www.sustainabilityconf.org/> or contact Lionel Lemay, Lemay@nrmca.org, 847-918-7101.

**SEPTEMBER
2011**

24th World Road Congress

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

**NOVEMBER
2011**



2nd Conference on Best Practices for Concrete Pavements

November 2-4, 2011 in Florianopolis, Santa Catarina State, Brazil
<http://www.concretepavements.org>

8th International Conference on Managing Pavement Assets

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

**JULY
2012**



10th International Conference on Concrete Pavements

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

**SEPTEMBER
2012**

4th International Conference on Accelerated Pavement Testing (APT 2012)

September 2012 in Davis, California, USA
<http://ucprc.ucdavis.edu/APT2012>

**OCTOBER
2012**

10th International Conference on Superplasticizers & Other Chemical Admixtures in Concrete

October 2012 in Prague, Czech Republic
<http://www.intconference.org/>

12th International Conference on Recent Advances in Concrete Technology and Sustainability Issues

October 2012 in Prague, Czech Republic
<http://www.intconference.org/>

Please visit the ISCP calendar at: <http://www.concretepavements.org/calendar.htm>



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ISCP thanks

Bill Davenport, **Robert Rodden** and **Dr. Dong Wang, Ph.D**

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

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Secretary/Treasurer **Neeraj Buch, Ph.D.** secretary-treasurer@concretepavements.org

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

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