



International Society for Concrete Pavements

What's New at ISCP

Greetings From the President



Thank you very much to all who attended the 8th International Conference on Concrete Pavements, held during mid-August in Colorado Springs, Colorado. The conference was successful on all fronts. The technical program and the workshops were well received by the attendees, as was the social program. And the conference was a success financially. Colorado Springs did not disappoint us either. Overall, the weather cooperated except for disrupting the outdoor instrumentation demonstration program.

The conference would not have been a success without the excellent contributions by the authors and paper reviewers, the session moderators, the workshop organizers, and the hard work of the Conference Steering Committee led by Dan Zollinger. Also, Purdue University's Conference Division, led by Nona Schaler, continued to excel in supporting the planning function for the conference.

The conference activities were attended by almost 500. The conference activities included a theoretical workshop on fracture mechanics, the main conference and the workshops, and a specialty workshop on airport pavement related alkali-silica reactivity issues. The conference statistics and other details, including award winners, are provided elsewhere in the newsletter. The ISCP Board also conferred Honorary Membership to Gordon Ray and Michael (Mike) Darter.

The next conference is targeted for August 2008. We expect to build upon the 8th Conference's successes and plan for an even more comprehensive and exciting 9th conference. The venue is yet to be selected.

Finally, the balloting for the officers and the Board is in progress. A slate, developed by the Nominating Committee, was recommended. The new officers and the Board will take office February 1, 2006.

The Society, by means of the international conferences and other activities, is actively engaged in promoting technology and technical competence to improve concrete pavement performance and durability in a cost-effective manner. More work is still needed to continue to optimize the practices for concrete pavements. The future of concrete pavement technology is bright. Concrete Pavements, with an excellent service record in both highway and airport applications, will continue to be an important pavement alternative internationally. Thank you all for your support of the Society's activities.

Shiraz Tayabji, President, ISCP
stayabji@concretepavements.org

Quarterly E-Newsletter
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MENU

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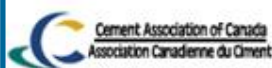
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CORPORATE MEMBERS



ISCP Election Results

The results of the recent election (polls closed on November 1) of ISCP officers and directors are presented below. Sixty-nine ballots were returned.

President:

✓ Dan Zollinger (USA): 67
(no write-in votes)

Vice-President:

✓ Kathleen Hall (CHILE): 65
Mark Snyder (write-in): 1

Secretary-Treasurer:

✓ Mark Snyder (USA): 66
Gordon Smith (write-in): 1

Past-President:

✓ Shiraz D. Tayabji (USA): 64
Ernest J. Barenberg (write-in): 1

Directors:

✓ Michael Darter (USA): 67
✓ Jose Balbo (BRAZIL): 61
✓ Andre Jasienski (BELGIUM): 61
✓ James Grove (USA): 61
✓ Anna-Carin Brink (S.AFRICA): 60
✓ Jean-Pierre Christory (FRANCE): 59
✓ Juan-Pablo Covarrubias (CHILE): 58
✓ Leif Wathne (USA): 58
✓ Jamshid Armaghani (USA): 57
✓ Neeraj Buch (USA): 57
✓ George Vorobieff (AUSTRALIA): 56
✓ Tatsuo Nishizawa (JAPAN): 55
✓ Gerry Krozel (USA): 54
✓ Fred Hejl (USA): 53
Lev Khazanovich (write-in): 11
James Mack (write-in): 11
David Pittman (write-in): 9
Jeffery Roesler (write-in): 9
Gordon Smith (write-in): 7
Adrian Van Leest (write-in): 7
Will Hanson (write-in): 6
Carlos Jofre (write-in): 5
Ernest Barenberg (write-in): 4
Andre Molenaar (write-in): 3
Bryan Perrie (write-in): 1
Erwin Kohler (write-in): 1
Robert Risser (write-in): 1

All officers and directors will be installed at the January 2006 Board and Membership meeting and will take office effective February 1, 2006. All officers will serve 4-year terms. The first seven directors listed will serve 4-year terms and the second seven will serve 2-year terms, in accordance with the board action taken at the August 14 meeting.

Congratulations to all of the winners and ISCP thanks everyone who ran and/or voted for their continued support of and interest in the Society!

Membership Ratifies By-laws

The new by-laws that were approved by the Board of Directors at the August 14, 2005 meeting were unanimously approved by members of the Society that returned ballots, 47-0. The new By-Laws have been posted on the ISCP website at:

<http://www.concretepavements.org/structure.htm>

January Meeting

Please mark your calendars for the next ISCP Board and Membership meeting, which will be held on **Sunday, January 22, 2005 at 5:00pm** in conjunction with the 85th Annual Meeting of the Transportation Research Board in Washington, DC. It is expected that the Society meeting will be concluded by 6:30p.m.

International Journal of Concrete Pavements is Coming Soon!!!

In an effort to disseminate new information and provide on-going benefits to ISCP members in good standing, the Society is launching a new publication. The *International Journal of Concrete Pavements*, the new peer-reviewed electronic journal of the International Society for Concrete Pavements, will be soon available at

www.concretepavements.org/ijournal.htm

For manuscript guidelines and editorial policies, please go to

www.concretepavements.org/Membership/ejournalCFP.htm

Specific questions on the Journal can be directed to Norb Delatte at n.delatte@csuohio.edu.

ISCP Needs Your Help!

The growth and success of ISCP depends upon its ability to provide its members with valuable services. To that end, the officers and board members are soliciting YOUR input to assist in identifying and prioritizing member needs and useful products and services.

Please take a few minutes to think about how ISCP can better serve the profession in general and the membership in particular! Then go to the ISCP website (www.concretepavements.org) and click on the "Forum" tab. Then click on the first discussion item ("Member Input to Improve Society Value"), read the original message, click "reply", and leave your message!

(NOTE: if you haven't yet registered, you will need to do so before you can participate in the Forum! See the article below in this newsletter for further instructions.)

All entries in the forum are summarized and presented at the board and membership meetings for further discussion.

Register NOW to use the ISCP online electronic forum!

The ISCP electronic forum provides members with an opportunity to share information, obtain up-to-date information on Society activities, to discuss technical issues and Society matters, and to vote on various issues. If you're not a registered user, you're missing out on one of the benefits of Society membership!

To register, do the following:

1. Go to the ISCP webpage at www.concretepavements.org and click on the "Forum" tab on the left side of the homepage.
2. Click on the "Register" link and follow the instructions for either a Global (access to any EZBoard message board) or Local (ISCP message board only) registration (either will work). Remember your selected login name and password – you'll need it for all future visits to the forum.

3. After you complete the registration form, an e-mail will be sent to the address you provided. Click on the link within the e-mail to validate your registration.
4. That's all – you're ready to use the forum!

If you have any questions regarding the registration or use of the forum, please contact Mark Snyder at msnyder@concretepavements.org or by phone at 412-221-8450.

Colorado Recap



The International Society for Concrete Pavements was pleased to have held the 8th International Conference on Concrete Pavements from August 14-18, 2005. Over 400 participants from all over the world converged on Colorado Springs, Colorado, USA for the event. Noted experts in the field of concrete pavements gave over 75 technical presentations. These formal presentations were also supplemented by hands-on technical demonstrations on the topics of the following:

1. Mechanistic-empirical pavement design
2. PCC mixtures and materials
3. Noise issues related to PCC pavements
4. Construction process control
5. PCC pavement construction field demonstration
6. Precast paving forum

In addition to the technical presentations and workshops, separate workshops on the application of fracture mechanics in concrete pavements (during the prior week in Copper Mountain, Colorado) and alkali-silica reaction (on Wednesday and Thursday of the conference week) were also well attended.

1. Mechanistic-empirical



Another unique feature of this conference program was the addition of a student poster presentation area. A dozen students from seven universities in the United States participated in this program by developing a poster on their current research. Posters were left up for conference attendees to review and presenters were available for questioning by attendees and judges alike during two coffee break sessions.

ISCP would like to thank the volunteers, conference co-sponsors, authors, reviewers, session moderators, and exhibitors for making this conference successful. More information on the 8th International Conference on Concrete Pavements, news on the 9th International Conference in 2008, and proceedings ordering information from this and previous conferences can be found at the Post-conference website at:

http://www.concretepavements.org/8th_Int_conf/default.htm



Thank You 8th Conference Exhibitors

ISCP thanks all the organizers who exhibited at the 8th Conference. Additional information on their products and services may be obtained by contacting these organizations (listed below) directly.



Mark Bury
Degussa Admixtures, Inc.
23700 Chargin Blvd
Beachwood, OH 44122 USA
mark.bury@degussa.com
(216)839-7266

William Francis
Construction Materials, Inc.
6725 Oxford St.
Minneapolis, MN 55426 USA
CMI@McLeodUSA.net
(800)486-8456

Jon Klatt
Ames Engineering
P.O. Box 310
Ames, IA 50010 USA
jon@AmesEngineering.com
(515)292-8194

Geoffrey Kurgan
FHWA
HIPT-20 Rm 3118
Washington, DC 20590 USA
gkurgan@fhwa.dot.gov
(202)366-1335

David Luhr
Portland Cement Assn.
P.O. Box 5895
Cary, NC 27511 USA
dluhr@cement.org
(919)462-0840

Jagannath Mallela
Applied Research Associates Inc.
505 W University Ave
Champaign, IL 61820 USA
jmallela@ara.com
(217)356-4500
Wes Miller

Jarden Zinc Products
P.O. Box 1890
Greeneville, TN 37744-1890 USA
cdewitt@jandenzinc.com
(423)639-8111

Chris Ounaway
SMI - Texas
370 Pinehurst Dr
Des Plaines, IL 60016 USA

Rick Percival
GCC of America
4253 Montgomery NE, Suite 210
Albuquerque, NM 87109 USA
rpercival@gcc.com

David Rettner
American Engineering Testing, Inc.
550 Cleveland Avenue North
St. Paul, MN 55114 USA
drettner@amengtest.com
(651)755-5795

Dennis Scott
Surface Systems
501 Park Way
Mill Valley, CA 94941 USA
dscott@smoothroad.com
(415)358-4340

George Shields
Soff-Cut International, Inc.
1112 Olympic
Corona, CA 92881 USA
info@soffcut.com
(951)272-2330

Don Simmons
CeraTech Inc
ATTN: TERRY HAAS
1500 N Beauregard St

Alexandria, VA 22311 USA
Don.Simmons@CeraTechinc.com
(703)894-1130

Peter Smith
The Fort Miller Co. Inc.
157 Parkhurst Rd.
Gansevoort, NY 12831 USA
psmith2@nycap.rr.com
(518)584-8758

Cathy Szilagyi
Olson Engineering, Inc
12401 W 49th Ave
Wheat Ridge, CO 80033-1927 USA
CathyS@olsoneengineering.com
(303)423-1212

Andrea Talley
Concrete Reinforcing Steel Institute
933 N. Plum Grove Rd.
Schaumburg, IL 60173 USA
atalley@crsi.org
(847)517-1200

Peter Taylor
CTL Group
Attn: Ken Hooker
5400 Old Orchard Rd.
Skokie, IL 60077 USA
khooker@CTLGroup.com
(847)972-3098

Jose Ramón Vázquez
FAROBEL, S.L.
Padua 29, entl
Barcelona 08021 Spain
jvazquez@farobel.com
(93)414-6158

New Honorary Members

During the awards luncheon at the 8th Conference, ISCP conferred the status of honorary member to two individuals (as decided by July 2005 vote of the board of directors):



Gordon Ray



Michael I. Darter

ISCP would like to congratulate both Gordon Ray and Mike Darter on their lifetime contributions to the concrete pavement field.

8th International Conference Awards

Also at the awards luncheon, several conference papers were noted for their impact and were conferred the following awards.

Eldon J. Yoder Award for Best Paper

Improved Techniques for Assessing Ride Quality on Concrete Pavements

Hans Prem, Director and Senior Consultant, Mechanical System Dynamics Pty Ltd, Australia

Geoff Ayton, Manager, Rigid Pavements, Roads & Traffic Authority of NSW, Australia

Bengt F. Friberg Award for Best paper by a Young Author (2 awards)

Large-Scale Airfield Concrete Slab Fatigue Tests

Jeffery R. Roesler, Assistant Professor, Dept. of Civil & Environmental Engineering, University of Illinois at Urbana-Champaign, USA

Jacob E. Hiller, Graduate Research Assistant, Dept. of Civil & Environmental Engineering, University of Illinois at Urbana-Champaign, USA

Paul C. Littleton, Project Engineer, Applied Research Associates, Inc., USA

Tire-Pavement Interaction Noise: Recent Research on Concrete Pavement Surface Type and Texture

Narayanan Neithalath, Assistant Professor, Concrete Industry Management Program, Middle Tennessee State University, USA

Rolando Garcia, Project Manager, Drash Consulting Engineers, Inc., Construction Materials Engineering Division, USA

Jason Weiss, Associate Professor, School of Civil Engineering, Purdue University, USA

Jan Olek, Professor, School of Civil Engineering, Purdue University, USA

Robert G. Packard Award for Outstanding Paper on Concrete Pavement Design

Design and Construction of Seamless on Westlink M7 Sydney, Australia

Steve Griffiths, Design Manager, Maunsell-SMEC Joint Venture, Australia

Geoff Bowmaker, Bridges Manager, Maunsell-SMEC Joint Venture, Australia

Chris Bryce, Construction Manager, Concrete Paving, Abigroup Leighton Joint Venture, Australia

Russell Bridge, Emeritus Professor, Construction Technology and Research, University of Western Sydney, Australia

B. Frank McCullough Award for Best Poster Presentation

Development of Innovative Mechanistic-Empirical Fatigue Analysis for Jointed Plain Concrete Pavements

Jacob E. Hiller, Graduate Research Assistant, Dept. of Civil & Environmental Engineering, University of Illinois at Urbana-Champaign, USA

Industry Notes

ACPA Newsletters

On The Grade

The last issue of the American Concrete Pavement Association (ACPA) "On The Grade" includes an invitation to the 2005 Convention in California, directs to a publication on Alkali-Silica Reaction on the latest issue of the "R&T Update", and a short article "*Are Surface Treatments Needed to Prevent Scaling?*". Read these and more articles at <http://www.pavement.com/OntheGrade/2005/OTG10-21-05p.htm>

Concrete Pavement Progress

The latest issues of the Concrete Pavement Association covered the following topics: August "Sound at the Tire/Pavement Interface", September "Pavement Preservation", and October "Highways". To access the very well reported articles on this newsletter – and to subscribe- please visit <http://www.pavement.com/CPA/main.html>

NCHRP Recent Publications

The following publications, relevant to the concrete pavement industry, became available this quarter from the TRB's National Cooperative Highway Research Program (free downloads).

NCHRP Report 540: Guidelines for Early-Opening-to-Traffic Portland Cement Concrete for Pavement Rehabilitation examines the proportioning, testing, construction, and other aspects of early-opening-to-traffic (EOT) concrete.
http://trb.org/news/blurb_detail.asp?id=5471

(NCHRP) Report 537: Recommended Guidelines for Curb and Curb–Barrier Installations presents the findings of a research project to develop guidelines for the use of curbs and curb–guardrail combinations on high-speed roadways.
http://trb.org/news/blurb_detail.asp?id=5276

Research News

Workshop on Fracture Mechanics for Concrete Pavements: Theory to Practice

The final proceedings of the "Workshop on Fracture Mechanics for Concrete Pavements: Theory to Practice" are now available on the ISCP website. The objective of this workshop, held in Colorado last August, was to bring together leading scholars in concrete pavement research and fracture mechanics. The proceedings contain the 17 papers presented.

To download a pdf version, please visit the "Recent Updates" section on the ISCP webpage at <http://www.concretepavements.org/>



a success.

The first European Airport Pavement Workshop took place in May at Schiphol-Oost, Amsterdam. Over one hundred participants from all around the world gathered to discuss airport pavements. 31 papers were presented in two days, divided roughly in two subjects: design & construction and measurements & maintenance.

According to the organizers, the international character of the workshop and the presentations from different countries were highly appreciated by participants. Each country has its own problems and solutions. And exactly this diversity and the possibility to share experiences made the workshop

Read more at http://www.crow.nl/engels/_t0_p0_m7_i3148.htm

Source: <http://www.crow.nl/engels/>

Featured Thesis Abstract

Every issue, the ISCP Quarterly E-Newsletter features a recent thesis or dissertation relating to concrete pavements and materials from around the world. Interested individuals should submit their abstract, former university affiliation/advisor, and current position information to newsletter@concretepavements.org. This quarter, we have a featured abstract from Dr. Shreenath Rao.

CHARACTERIZING EFFECTIVE BUILT-IN CURLING AND ITS EFFECT ON CONCRETE PAVEMENT CRACKING

Dr. Shreenath Rao

Currently working as a Senior Engineer
Applied Research Associates, Inc.
Champaign, Illinois, USA

Ph.D. in Civil Engineering at University of Illinois at Urbana-Champaign (2005)

Thesis Advisors: Professor Jeffery R. Roesler

Differential expansion and contraction between the top and bottom of a concrete slab results in curling. Curling affects stresses and deflections and is an important component of any mechanistic-empirical design procedure. A significant portion of the curling can be attributed to the combined effects of nonlinear "built-in" temperature gradients, irreversible shrinkage, moisture gradients, and creep, which can be represented by an effective built-in temperature difference (EBITD).

Several instrumented test sections with various design features were constructed and evaluated using the Heavy Vehicle Simulator (HVS) in Palmdale, California. These instrumented slabs were loaded with a half-axle edge load without wander, to study the effects of curling and to fail the slab sections under accelerated pavement testing. A procedure for estimating EBITD using loaded slab deflections was developed using the HVS results. The advantages are that they can be used for measuring EBITD of slabs with high negative built-in curl and can also be adapted for a Falling Weight Deflectometer, making it an efficient and cost-effective procedure to backcalculate EBITD of in-service pavements. Differences in restraints and variability in concrete material properties resulted in EBITDs ranging from -5 °C to greater than -30 °C.

The HVS field tests were also used to examine Miner's hypothesis along with various fatigue damage models. Results indicate test slabs cracked at cumulative damage levels significantly different from unity. New models that incorporate both stress range and peak stresses were developed to account for transverse cracking, longitudinal cracking, and corner breaks. For slabs susceptible to high shrinkage gradients, microcracking resulting from early-age restraint stresses that can vary considerably from one slab to another is proposed as a factor that significantly affected the nominal strength of individual slabs, resulting in variability in cracking performance. A procedure to model slab strength reduction and slab size was developed using nonlinear fracture mechanics principles. A parameter called "effective initial crack depth" was introduced to characterize the early-age surface microcracking.

Upcoming Events

ACI Fall Convention

November 6-10, 2005 in Kansas City,
Missouri, USA
<http://www.aci-int.org/Convention/Fall-Convention/Front.asp>

International Conference on Concrete Repair, Rehabilitation, and Retrofitting

November 21-23, 2005 in Cape Town,
South Africa
<http://www.civil.uct.ac.za/icrrr/>

42nd Annual ACPA Convention

November 30 - December 2, 2005 in Indian
Wells, California, USA
<http://www.pavement.com/activities/convention/main.html>

World of Concrete 2006

January 16-20, 2006 in Las Vegas, Nevada,
USA
<http://www.worldofconcrete.com/WOC2006/public/enter.aspx>

Transportation Research Board 85th Annual Meeting

January 22-26, 2006 in Washington, DC,
USA
<http://www.trb.org/meeting/>

2006 T&DI Airfield and Highway Pavement Specialty Conference: Meeting Today's Challenges with Emerging Technologies

April 30-May 2, 2006, in Atlanta, Georgia,
USA
<http://www.asce.org/conferences/pavements2006>

ECF 16 - 16th European Conference of Fracture

July 3-7, 2006 in Alexandroupolis, Greece
<http://ecf16.civil.duth.gr>

10th International Symposium on Concrete Roads

September 18-22, 2006 in Brussels,
Belgium
<http://www.concreteroads2006.org/>

8th International Concrete Conference and Exhibition "Concrete in Hot and Aggressive Environments"

November 27-29, 2006 in Manama,
Kingdom of Bahrain
<http://www.engineer-bh.com/icce/>

Transportation Research Board 86th Annual Meeting

January 21-25, 2007 in Washington, DC,
USA
<http://www.trb.org/meeting/>

Advanced Characterisation of Pavement and Soil Engineering Materials

June 20-22, 2007 in Athens, Greece
<http://www.3dfem.org>

XXIIIrd World Road Congress

September 17-21, 2007 in Paris, France
<http://www.paris2007.route.equipement.gov.fr/index.en.html>

9th International Conference on Concrete Pavements

Organized by ISCP
August 2008 at Location to be determined

If you wish to submit an upcoming conference, meeting, or call for papers for the next ISCP quarterly newsletter (December 2005), please contact us at newsletter@concretepavements.org.

The ISCP Quarterly Newsletter is edited and maintained by Jake Hiller and Erwin Kohler. Any suggestions or additions to future newsletters are welcomed at newsletter@concretepavements.org.

<p>ISCP President: Shiraz D. Tayabji, Ph.D., P.E. CTLGroup 5565 Sterrett Place, Suite 312 Columbia, Maryland, USA 21044 Phone: 410-997-0400 Fax: 410-997-8480 Email: stayabji@concretepavements.org</p>	<p>ISCP Vice 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</p>	<p>ISCP Secretary and Treasurer: Mark B. Snyder, Ph.D., P.E. 6305 Oyster Bay Court Bridgeville, Pennsylvania, USA 15017 Phone: 412-221-8450 Fax: 412-221-8450 Email: msnyder@concretepavements.org (Contact for membership inquiries)</p>
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