



International Society for Concrete Pavements

ISCP e-Newsletter
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What's New at ISCP

ASCP and ISCP Sign a Memorandum of Understanding

The [Australian Society for Concrete Pavements Inc. \(ASCP\)](#) and ISCP met on August 17, 2009 in Sydney, NSW Australia to sign a Memorandum of Understanding (MoU) during the ASCP Forum.



The MoU document was signed by Mark Hoskins, President of ASCP and Jim Grove, Member of ISCP Board of Directors

About 45 people attended the function. The purpose of the MoU is for the two societies to strengthen their relationship and provide mutual support in their missions related to facilitating the advancement of knowledge and technology related to concrete pavements through education, technology transfer and research. The MoU will encourage collaboration and cooperation between the two societies and avoid technical duplication whenever possible. The members of ASCP will work on the features of the MoU in the next year.

The memorandum is available to view on the ISCP website at:

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

ISCP Board and Officer Elections Nominations Online

Terms will expire in January 2010 for all ISCP Officers (President, Vice-President and Secretary-Treasurer) as well as half of the Board of Directors. Elections will follow the November Board Meeting (when the Nominating Committee's slate of candidates will be finalized and approved) and newly elected officers and directors will serve 4-year terms beginning January 31, 2010.

Board of Directors members with terms that expire in January 2010 are:

- José Balbo, University of São Paulo (BRAZIL)
- Anna-Carin Brink, UWP Consulting (SOUTH AFRICA)
- Jean-Pierre Christory, LROP (FRANCE)
- Juan Pablo Covarrubias, Litoral Ingeniería Ltda. (CHILE)
- Michael I. Darter, Applied Research Associates, Inc. (USA)
- James Grove, Federal Highway Administration (USA)
- André Jasienski, FEBELCEM (BELGIUM)

New criteria and procedures for the nomination and election of officer and director candidates were established at the August 2008 Board meeting. These can be found on the ISCP website at:

<http://www.concretepavements.org/Meetings/8-16-08%20Draft%20Bd%20Meeting%20Minutes.pdf>

Standard nomination forms and nomination instructions are available on the ISCP website:



[http://www.concretepavements.org/Officer-Director Nomination Form - 2009_distributed.pdf](http://www.concretepavements.org/Officer-Director%20Nomination%20Form%20-%202009_distributed.pdf)

or

http://www.concretepavements.org/Officer-Director%20Nomination%20Form%20-%202009_distributed.doc

Members are strongly encouraged to identify and nominate qualified, worthy candidates for all open positions no later than September 30, 2009. Check the [ISCP website](#) and upcoming newsletters for additional information on the call for nominees and election details.

Conference News

ACPA Annual Meeting Update

The American Concrete Pavement Association (ACPA) is urging members, affiliates, and others in the transportation-construction community to attend the Association's 46th Annual Meeting, scheduled for November 30 through December 4, 2009. The formal ACPA program begins on the morning of December 2.

The event will be held at the Hyatt Regency Grand Cypress, One Grand Cypress Blvd., Orlando, Florida, USA 32836. Phone: 407.239.1234. Additional details will be announced and posted soon to the ACPA website (<http://www.acpa.org>).

As an integral part of ACPA's 46th annual meeting in Orlando, Fla., the association is presenting "Concrete Pavement University," a new approach to the very popular "Tech Day" of meetings past.

"In response to the strong demand for technology transfer, technical updates, and information about research initiatives, we are presenting the most comprehensive education & training program of its type in the association's 46 year history," says Gerald F. Voigt, P.E., ACPA President & CEO.

He explains the format is patterned after basic, intermediate- and advanced level courses, typically assigned 100, 200, and 300 levels found in universities. Voigt adds that although ACPA takes a serious approach to presenting technical topics, there will be a few fun surprises in store for attendees and CPU instructors alike.

The 1-1/2 day event features eight educational tracks, which will begin at with two concurrent tracks (1 and 2), presented from 1:30 to 3:00 on Thursday, December 3, followed by tracks 3 and 4 at 3:30 p.m. The program resumes with tracks 5 and 6 on Friday at 9 a.m., track 6 at 11 a.m., and tracks 7 and 8 at 2 p.m.

Here's the line-up of general topics, as well as the course levels.

- CPU Track 1: Airfield Technology Project Applications 101
- CPU Track 2: Practical Resources for Pavement Design and Construction 101
- CPU Track 3: Concrete Mixtures for Paving 201
- CPU Track 4: Curing Concrete Pavements 201
- CPU Track 5: Paving Best Practices 201
- CPU Track 6: Concrete Overlay Project Applications 201
- CPU Track 7: Design and Construction Innovations 301
- CPU Track 8: Practical Sustainability Applications in Concrete Pavements 301

Additional information will be posted to the ACPA website at <http://www.acpa.org>. If you would like to receive a copy of the electronic flyer for the 46th annual meeting flyer, please contact Bill Davenport at 847.972.9810 or <mailto:mbdavenport@acpa.org>.

National Concrete Consortium Meeting Will be Held in October

The Fall meeting of the National Concrete Consortium (NCC), organized by the Concrete

Pavement Tech Center, will be held October 6-8, 2009 in St. Louis, Missouri, USA. This semi-annual meeting of concrete engineers from state transportation agencies, academia and other interested parties from across the USA will include updates on research of the performance of ternary mixes, joint deterioration, and permeability, as well as presentations and discussions on sustainable concrete paving and cement standards.

Details and agenda are available at:

http://www.cptechcenter.org/t2/ttcc_ncc_meeting.cfm

International Concrete Pavement Symposium Will be Held in November in Chile

ISCP is co-sponsoring the International Concrete Pavement Symposium in Santiago, Chile at the Intecontinental Hotel from November 17 to 19th, 2009. The symposium will be held at the [Pontificia Universidad Católica de Chile](#). Other sponsors are the [Ministerio de Obras Públicas \(MOP\)](#), the [Instituto del Cemento y del Hormigón de Chile \(ICH\)](#), and the [Laboratorio Nacional de Vialidad](#).

This symposium is aimed at discussing the progressive growth of road infrastructure in Chile in terms of engineering, design, construction and management of road challenges. Several ISCP officers and Directors are featured speakers at the event. The ISCP Board Meeting will be held in conjunction before the symposium on November 16th.

For more information about the symposium, please visit the website:

<http://www.dictuc.cl/ciiv/>

Call for Papers for Liverpool John Moores University's 2010 Annual International Conference

The School of the Built Environment at Liverpool John Moores University (UK) in association with Tarmac Ltd. and RSTA is hosting the 9th Annual International Conference addressing research and practical applications using sustainable construction materials and technology in pavement engineering and highway maintenance. The conference will be held from February 17-18, 2010 in Liverpool, UK.

It is aimed at stakeholders with specific interest in the development and management of sustainable infrastructure, environmental protection, energy reduction, developments in road foundations, concrete and asphalt pavements technology, recycled aggregates in construction and highways maintenance.

The organizers are seeking position papers from all areas of the Sustainable Aggregates, Pavement Engineering and Asphalt Technology: Design, Management, Performance and Rehabilitations. Papers describing work in progress should discuss the short and long-term practical implications of the research being undertaken. Contributions are especially welcome from consultants, local authorities, materials suppliers, contractors, research and educational organizations/institutions.

The deadline for submission of abstracts is October 1st, 2009. Instructions for authors on preparing full manuscripts can be obtained from the conference website. All the papers will be reviewed by the Conference Scientific & Technical Board and published in the Conference Proceeding. High quality papers will be selected for publication as refereed papers in the International Journal of Pavement Engineering and Asphalt Technology.

<http://www.ljmu.ac.uk/BLT/100174.htm>

Call for Papers for the 32nd International Conference on Cement Microscopy

A Call for Papers has been issued for the 32nd International Conference on Cement Microscopy to be held in New Orleans, Louisiana, USA on March 28 - April 1, 2010. Potential topics include:

- Application of microscopy for the quality control of concrete
- Effect of additives and admixtures on the microstructure of concrete
- Relationships between the microstructure and concrete performance
- Microstructure of portland cement, clinker, hydration products, light and heavyweight aggregates, concrete, slag, fly ash, etc.

Abstracts are due no later than December 15, 2009. Complete details can be found by following the links for the Annual conference on the ICMA website:

<http://www.cemmicro.org/>

Industry News

New Publications on Tie Bars and Concrete Pavement Recycling Available from ACPA

The American Concrete Pavement Association (ACPA) has recently released two publications contributing to the state of the art in concrete technology. "Recycling Concrete Pavements" is a comprehensive guide that describes concrete pavement recycling as a proven technology offering an alternative aggregate resource that is both economical and sustainable. The publication includes chapters covering production, properties and characteristics, and uses of recycled concrete aggregate (RCA). Included in the appendices are guidelines for removing and crushing existing concrete, using RCA in granular subbases, and using RCA in concrete pavement mixtures. The publication is available in electronic format through ACPA's bookstore at the following address:

https://www.netforumondemand.com/eWeb/Shopping/Shopping.aspx?Cart=0&Site=ACPA_ORG

ACPA has also recently published a research report "A Mechanistic-Empirical Tie Bar Design Approach for Concrete Pavements" conducted by Applied Research Associates, Inc. The major objective of the study was to develop a new methodology for the design of longitudinal joints in concrete pavements placed on different types of bases. This report can be downloaded for free along with other available research reports and papers from ACPA at:

http://www.pavement.com/Concrete_Pavement/Technical/Downloads/Papers_and_Reports.asp

National Concrete Pavement Tech Center Posts Recent Publications

The National Concrete Pavement (CP) Tech Center's (USA) has updated their research project booklet, which summarizes the needs, benefits and progress or findings of both completed and on-going research. This booklet is now available at:

http://www.cptechcenter.org/publications/cp_tech_project_booklet2009.pdf

Thesis Abstract

FRACTURE-BASED METHOD TO DETERMINE THE FLEXURAL LOAD CAPACITY OF CONCRETE SLABS

by

Mario Cristian Gaedicke Hornung

Ph.D. Dissertation

Advisor: Dr. Jeffery R. Roesler

University Of Illinois At Urbana-Champaign, 2009

The increasing service demands and limited availability of raw materials for rigid pavements pose a unique challenge in terms of the initial pavement design, concrete material selection, and the slab's cracking performance throughout its service life. New pavement

fundamental hardened properties of new concrete materials, the pavement layers, and slab geometry to the slab's cracking performance. This research aims to contribute to filling this gap by proposing a new method to discretely account for crack initiation, crack growth, and the flexural load capacity of concrete slabs using mechanical and fracture properties extracted from small-scale concrete specimens. The method predicts the flexural capacity and crack growth of large-scale concrete slabs with different geometries and materials by inserting cohesive surface elements on the expected crack path in the 3-D finite element model that represents the slab. The cohesive elements were defined by the total fracture energy (G_F), initial fracture energy (G_f) measured from notched, three point bending beams, and tensile strength (f'_t) measured from split tensile cylinders. The soil underneath the slab was characterized as a linear elastic spring elements with their stiffness obtained from a beam on soil test. The simulations from the 3-D slab models reasonably matched experimental tests of notched concrete slabs confirming the feasibility of the proposed method. The softening curve type (i.e. bilinear, linear or exponential) embedded into the cohesive elements and the variation in soil stiffness had a similar effect on the flexural capacity of the 150 mm concrete slabs. In contrast, the soil stiffness was a more significant factor affecting the flexural capacity of the 63 mm slabs relative to the softening model. Although the bilinear softening model more readily represented the fracture behavior of concrete beams, the linear softening model applied to slabs was able to reasonably predict the flexural load capacity of the experimental slabs while significantly reducing the computation time. Alternative concrete materials were simulated with the fracture-based methodology. Relative to normal concrete, higher crack resistance and flexural load capacity were attained for concrete containing structural fibers while lower load capacity and more rapid crack propagation occurred in concrete slabs with recycled concrete aggregates. This fracture based methodology constitutes an important step toward a more fully mechanistic pavement design approach that would integrate the specific concrete material fracture parameters, slab geometric properties, and support conditions into the prediction of the rigid pavement cracking performance.

Upcoming Events

13th REAAA (Road Engineering Association of Asia and Australasia) Conference

September 23-26, 2009 in Incheon City, Korea

<http://www.reaaakorea2009.com>

21st Belgian Road Congress

September 22-25, 2009 in Gent, Belgium

<http://www.wegencongres.be>

51st Brazilian Concrete Congress

October 6-10, 2009 in Curitiba, Brazil

<http://www.ibracon.org.br/eventos/51cbc/ingles/informacoes.asp>

Ninth International Conference on Superplasticizers and Other Chemical Admixtures in Concrete

October 12-15, 2009 in Seville, Spain

<http://www.intconference.org/Seville.htm>

Tenth International Conference on Recent Advances in Concrete Technology and Sustainability Issues

October 14-16, 2009 in Seville, Spain

<http://www.intconference.org/Seville1.htm>

9th International Conference on Concrete Block Paving

October 18-21, 2009 in Buenos Aires, Argentina

<http://www.iccbp2009.com.ar>

Ninth International Symposium on Brittle Matrix Composites (BMC9)

October 25-28, 2009 in Warsaw, Poland

<http://bmc.ippt.gov.pl/>

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>



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.acpa.org>



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>

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
Tentatively planned for a location in Canada in 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: Cristian Gaedicke, Corey Zollinger, and Nancy Whiting. Suggestions for future newsletters are welcomed at newsletter@concretepavements.org.

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