

All pavements lead to the

2006 T&DI Airfield and Highway Pavement Specialty Conference

Airfield and Highway Pavements



Meeting Today's Challenges with Emerging Technologies

WESTIN ATLANTA AIRPORT HOTEL

ATLANTA, GEORGIA

APRIL 30 - MAY 3, 2006

2006

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American Society of Civil Engineers

Presented by the Transportation & Development Institute of the American Society of Civil Engineers

For **PLANNERS, DESIGNERS, OWNERS, RESEARCHERS, and CONTRACTORS** on the frontline, constantly challenged to construct and rehabilitate runways and highways that are durable, smooth, quiet, efficient, cost-effective, and capable of supporting projected traffic operations... all the while cognizant of the owner's need to minimize closures during construction and to minimize future rehabilitation work.

Register online at: www.asce.org/conferences/pavements2006

Head to Airfield and Highway Pavements 2006!



We invite you to come to Atlanta for the **2006 T&DI Airfield and Highway Pavement Specialty Conference** to explore "Meeting Today's Challenges with Emerging Technologies."

Keeping up with the challenges of the airfield and highway pavement industries requires insight into emerging technologies and their implementation. This conference is designed to transfer vital knowledge that keeps you current with cutting-edge technological improvements in the field.

Attend seven technical sessions with five specialty tracks featuring some 100 presentations, and three workshops, two of which will be offered twice for your convenience. In day-long sessions, a team of FAA experts will introduce the new "FAA Design Software for Airport Pavement Thickness Workshop," explaining the basics of FAARFIELD and covering changes to LEDFAA1.3. In repeat sessions, you will have the opportunity to attend the "Mechanistic-Empirical Pavement Design Guide (MEPDG) Workshop," which will introduce a new approach to the design of asphalt and concrete pavements and overlay, and the popular "Back-to-Basics Workshop", which will provide both experienced and new pavement engineers with a complete overview of asphalt and concrete materials, design and construction processes.

Earn up to 22 nationally recognized Professional Development Hours.

On behalf of the entire Steering Committee, I invite you to join your colleagues at the 2006 T&DI Airfield and Highway Pavement Specialty Conference for a rewarding professional experience and an opportunity to tour the most important runway project underway in America, the landmark 9,000-foot Fifth Runway at the Hartsfield-Jackson Atlanta international Airport, with its glimpse into the future of airfield pavement design and implementation!

GARY MITCHELL, P.E., CONFERENCE CHAIR

Director of Airports

American Concrete Pavement Association

Southeast Chapter, Charlotte, NC

CONFERENCE STEERING COMMITTEE

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American Concrete Pavement Association,
Southeast Chapter, Charlotte, NC

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Hartsfield-Jackson Atlanta International Airport

Hallil Ceylan, Ph.D.
Assistant Professor,
Iowa State University and Center for
Portland Cement Concrete Pavement
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Chief Engineer,
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Consulting Engineer, Cincinnati, OH

Wayne Seiler, Ph.D., P.E.
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CONFERENCE SPONSORS

PLATINUM LEVEL (\$5,000 - \$9,999)

Roadway Infrastructure Group of the Virginia Tech Transportation Institute (VTTI),
the Virginia Transportation Research Council (VTRC),
and the Virginia Department of Transportation (VDOT)
www.vtti.vt.edu
<http://vtrc.virginia-dot.org/>



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Airport Technology (CEAT)
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BENEFACTOR LEVEL (\$500 - \$999)

American Concrete Pavements Association

Asphalt Pavement Alliance

Delta Airport Consultants, Inc.

PATRON (\$499 and under)

Applied Research Associates, inc.

Sponsorship Opportunities Available!

Put your company out front among pace-setters of the pavements industry by sponsoring conference activities and events, including the Dinner Event and Refreshment Breaks. For information, please contact Marcia Saumweber at 703-295-6347 or msaumweber@asce.org.

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Atlanta Preview

Construction of Runway 10-28, the legendary Fifth Runway at the Hartsfield-Jackson Atlanta International Airport, will be approaching completion at the time of the 2006 T&Dl Airfield and Highway Pavement Conference. It is due to be commissioned in Summer 2006. The new Fifth Runway is one the most complex structures of its kind in the world. It is also the first design/build project of its size and complexity in the State of Georgia, the first tunnel in the State of Georgia as defined by NFPA 502, and the first Runway Bridge of its span length in the world.

The new runway will span across an interstate highway of 18 lanes (12 mainline and 6 collector-distributor roads) on a structure sturdy enough to simultaneously bear a 1.33-million-pound Airbus A380 and 1.04-million-pound Boeing 747.



In addition to getting a glimpse of this unprecedented pavement project, conference attendees will have the opportunity to experience Atlanta's classic Southern hospitality in a modern, big-city setting. While you're in town, plan to visit locations connected to civil rights and the Civil War, take a CNN studio tour, or explore Underground Atlanta's unique shopping and dining spots, local history, and frequent special events. Don't fail to arrange a trip to the new Georgia Aquarium, which opened in November 2005 with more than 5 million gallons of water and more than 55,000 fish!

Interested Engineering Students are highly encouraged to attend the 2006 T&Dl Airfield and Highway Pavement Specialty Conference! Student attendees can expect insightful technical sessions and several prime opportunities to network and gain career tips from seasoned professionals in the field. Full-time students are offered admission at affordable rates.

Airfield and Highway Pavements

2006

*Meeting Today's Challenges with
Emerging Technologies*

Stay with us... at the official Conference hotel!

Westin Atlanta Airport Hotel
4736 Best Road • Atlanta, GA 30337

The Westin Atlanta Airport Hotel is conveniently located next to Hartsfield-Jackson Atlanta International Airport at major interstates I-85 and I-285. Eight miles from downtown Atlanta, this full-service hotel offers spacious guest rooms, a variety of quality dining options, and more than 22,000 square feet of function space. The hotel offers complimentary 24-hour shuttle transportation – both to and from the airport and to the Hartsfield MARTA rail terminal, and BAGS, a unique airport skycap service located in the hotel lobby.



**For hotel reservations, call 888-627-7211 or
404-762-7676.**

For special conference rates, reserve by April 7 and mention that you're attending PAVEMENTS 2006!

Rates:

Single/Double	\$115.
Triple	\$135.
Quad	\$155

(Plus 13% tax.)

Earn up to 22 nationally recognized Professional Development Hours (PDHs)!



Please note that there are differences from state to state in continuing education requirements for professional engineering licensure. Each state registration board has the final authority to approve courses, credits, and professional development hours for courses, and other methods of earning credit in that state. ASCE strongly recommends that individuals regularly check with their state registration boards for specific continuing education requirements in their jurisdictions that affect professional engineering licensure and the ability to renew licensure.

Conference Proceedings will be published and available at the Conference. Full Conference Registrants will receive a copy of the proceedings at the Registration Desk. Additional copies may be ordered in advance on the registration form. Please see page 9.

SPECIAL EVENTS

Workshops

Workshops are free, but registration is required. Please see page 9.

New FAA Design Software for Airport Pavement Thickness Workshop

SUNDAY, APRIL 30 • 9:00 AM - 4:30 PM

In 2006, the FAA will introduce a new software program for airfield pavement design, called FAARFIELD (**FAA** Rigid and **F**lexible **I**nteractive **E**lastic **L**ayered **D**esign). The FAA will conduct this one-day training workshop to help airport pavement engineers as well as airport owners/operators become familiar with this new program and changes to the FAA's LEDFAA 1.3 design program. The workshop will include lectures, discussions, and demonstrations.

INSTRUCTORS:

Satish K. Agrawal, Ph.D., and **David R. Brill, Ph.D., P.E.**,
Airport Technology R&D Branch, Williams H. Hughes Technical Center, FAA
Rodney Joel, P.E., FAA Airport Engineering Branch
Navneet Garg, Ph.D., **Izydor Kawa, Ph.D.**, and **Lia Ricalde**, SRA/Galaxy Inc.

Mechanistic-Empirical Pavement Design Guide (MEPDG) Workshop

SUNDAY, APRIL 30 • 1:00 PM - 5:00 PM AND
TUESDAY, MAY 2 • 1:00 PM - 5:00 PM

The MEPDG is a new design approach that is based on fundamental engineering principles and calibrated with extensive field performance data. This workshop will provide a comprehensive overview and several illustrative examples of the design of asphalt and concrete pavements and overlay. It will offer ample time for discussion and questions. Each participant should bring a laptop to take part in the example design projects.

INSTRUCTORS:

Michael I. Darter, Ph.D., P.E., former Professor of Civil Engineering,
University of Illinois and Principle Engineer, ARA, Inc.
Harold Von Quintus, P.E., Principal Engineer, ARA, Inc.
Halil Ceylan, Ph.D., Assistant Professor, Iowa State University and PCC
Engineer, Center for Portland Cement Concrete Pavement Technology at Center for
Transportation Research and Education, Ames, IA

Dr. Darter and **Mr. Von Quintus** were part of the six-year MEPDG development team and are internationally recognized authorities in pavement design. **Dr. Ceylan** was part of MEPDG's TRB/NCHRP independent evaluation team and Iowa DOT implementation team.

Back-to-Basics Workshop

SUNDAY, APRIL 30 • 1:00 PM - 5:00 PM AND
TUESDAY, MAY 2 • 1:00 PM - 5:00 PM

The "Back-to-Basics" Seminar has been a very popular feature of past Airfield Pavement Specialty Conferences. It provides you, the design professional, with a complete overview of both asphalt and concrete pavement materials, design, and construction. It offers opportunity for young engineers and others new to the airfield industry to get the most up-to-date industry information available, as well as to network and share information with others in attendance. This is a must-attend for engineers looking to build solid careers in the airfield industry!

Back-to-Basics – Asphalt Pavement

The Asphalt Pavement portion of the workshop will address the fundamentals of asphalt technology materials, design, and construction, including the principles of the Superpave system and performance-graded asphalt binders; the basics of production, transportation, placement, and compaction of hot-mix asphalt with an emphasis on QC/QA methodology. It will also provide an overview of state-of-the-practice maintenance and rehabilitation techniques.

INSTRUCTOR:

Mike Huner, P.E., District Engineer, Asphalt Institute, Franklin, TN

Back-to-Basics – Concrete Pavement

The Concrete Pavement portion of the workshop will cover the fundamentals of concrete pavement technology related to materials, design, and best construction practices. Topics will include discussions on material selection for concrete pavement mixtures, pavement jointing details, the effects of base material type selection on pavement design, and the latest research on alkali-silica reaction (ASR) and mitigation.

INSTRUCTORS:

American Concrete Pavement Association Technical Staff



CONFERENCE ESSENTIALS

Car Rental Discounts

Conference attendees may receive car rental discounts by contacting Hertz and providing the appropriate codes:

Hertz: 800-654-2210 / www.Hertz.com

Codes: CDP# 11381 and PC# 979731

Local Weather

Atlanta's April-May weather is mild, with average daily highs in the upper 70s and lows in the upper 50s.

Conference Dress Code

Business casual.

Refreshment Breaks

Complimentary coffee and soft drink service will be available between sessions in the Exhibit Hall.

Speakers' Preparation Room

All presenters and moderators are required to register and pay appropriate fees for the 2006 T&D Airfield and Highway Pavements Specialty Conference. A Speakers' Preparation Room will be available beginning Monday, May 1 at 8:00 AM and run for the duration of the Conference. Some audiovisual equipment will be available for rehearsing; however, no LCD panels will be provided in this room.

Icebreaker Reception

SUNDAY, APRIL 30 • 6:00 PM - 7:30 PM

Say "Hello!" over beverages and a bite to eat, and get yourself rolling into the spirit of this conference! Network and meet industry colleagues from around the world. Introduce yourself to our exhibitors, who are leading vendors and service providers who could become invaluable resources for your upcoming jobs.

Included in Full and Student Registrations.
Additional tickets: \$55.

Sponsored by:

Roadway Infrastructure Group of the
Virginia Tech Transportation Institute (VTTI),
the Virginia Transportation Research Council (VTRC),
and the Virginia Department of Transportation
(VDOT)



Opening Plenary Session

MONDAY, MAY 1 • 8:30 AM - 10:00 AM

Attend the Opening Plenary prior to the Technical Sessions for a brief orientation to help you focus on conference details for the days ahead. Get revved to derive the greatest benefit from your participation in conference events.

Sponsored by:

Center of Excellence for Airport Technology (CEAT)



Lunch in the Exhibit Hall

MONDAY, MAY 1 • 12 NOON - 1:30 PM

Have your lunch and allow time to network with colleagues and stroll among the exhibitors.

Included in Full, Student, and Monday-Daily Registrations. Additional tickets: \$45.

Committee Meetings

If your committee would like to hold a meeting during the conference, please contact **Andrea C. Baker at 703-295-6124 or abaker@asce.org**. Time has been allotted for committee meetings to take place on Monday evening, May 1 from 7:00 PM to 9:00 PM

Lunch in the Exhibit Hall

TUESDAY, MAY 2 • 12 NOON - 1:00 PM

Enjoy a convenient lunch before taking your final lap around the Exhibit Hall.

Included in Full, Student, and Tuesday-Daily Registrations. Additional tickets: \$45.

TOUR: Runway 10-28, Hartsfield-Jackson Atlanta International Airport

TUESDAY, MAY 2 • 1:00 PM - 5:00 PM

Don't miss this up-close technical tour of the 9,000-foot Fifth Runway under construction at the Hartsfield-Jackson Atlanta International Airport. Known as "the most important runway project in America," this \$1.284 billion project, which covers 920 acres of land and includes 18,000 feet of taxiways, will be nearly complete at the time of the Conference. It is expected to save the airline industry an estimated \$260 million yearly by eliminating costly delays at the world's busiest passenger airport.



Designed to span I-285, the runway project required moving more than 18 million cubic yards of earth fill from offsite borrow pits by means of a 5.5-mile long conveyor belt and discharge bin system, and the construction of a full-length parallel taxiway and dual north/south taxiways.

The new taxiway bridge spanning the Interstate is of particular interest. It is the first design/build project of its size (1264 LF) and complexity in the state of Georgia; the first tunnel in the State of Georgia defined by NFPA 502; and the first runway bridge of its length in the world. When opened, I-285's capacity will have grown from 10 lanes to 18.

Tour is free, but registration is required.
Please see page 9.

Dinner Event

TUESDAY, MAY 2 • 6:00 PM - 8:00 PM

Please join us for a congenial dinner event. Following a very busy day, there will be lots to share with colleagues and discussions will be brisk. A noted speaker will round out the agenda.

Included in Full and Student Registrations.
Additional tickets: \$60.

Exhibit Hall

See Exciting Tabletop Exhibits ... Meet Leading Industry Equipment, Service, and Software Suppliers

To help you maintain your competitive edge, improve productivity, and learn of new products and software, we've put together a great exhibits program. You'll find this the perfect way to explore the latest in design and technical innovations that can help you with every phase of your work in the pavements industry. Meet and talk with leading manufacturers and industry service providers. Gather valuable insights and develop your roster of organizations that can assist you with future projects.

EXHIBIT HOURS

SUNDAY, APRIL 30 6:00 PM - 7:30 PM

Icebreaker Reception in the Exhibit Hall:
6:00 PM - 7:30 PM

MONDAY, MAY 1 10:00 AM - 4:00 PM

Coffee Break in the Exhibit Hall:
10:00 AM - 10:30 AM
Lunch in the Exhibit Hall:
12 NOON - 1:30 PM
Refreshment Break in the Exhibit Hall:
3:00 PM - 3:30 PM

TUESDAY, MAY 2 10:00 AM - 1:00 PM

Refreshment Break in the Exhibit Hall:
10:00 AM - 10:30 AM
Lunch in the Exhibit Hall:
12 NOON - 1:00 PM

This schedule is very concentrated to give both exhibitors and attendees the opportunity to take part in all other conference activities.

Interested in Exhibiting?

It's not too late to become an exhibitor at the **2006 T&DI Airfield and Highway Pavement Specialty Conference!** Plan to showcase your products and services! The pavements industry's most qualified pool of buyers and decision makers expect to visit your booth. To request an exhibitor prospectus or to select your space, go online at www.asce.org/conferences/pavements2006 and download an exhibitor space application or contact

Bob Silverstein:

Direct: 703-295-6234

Fax: 703-295-6276

E-Mail: rsilverstein@asce.org

Return the original copy of your completed and signed space application by mail, as directed. (Unsigned or faxed applications will not be accepted.) A deposit of at least 50% of the total space rental must accompany all applications, with the balance due April 1, 2006. Applications received after April 1, 2006 must be accompanied by full payment.

Technical Program



SUNDAY, APRIL 30, 2006

9:00 AM – 4:30 PM
1:00 PM – 5:00 PM
1:00 PM – 5:00 PM
6:00 PM – 7:30 PM

FAA DESIGN SOFTWARE FOR AIRPORT PAVEMENT THICKNESS WORKSHOP
MECHANISTIC-EMPIRICAL PAVEMENT DESIGN GUIDE (MEPDG) WORKSHOP
BACK-TO-BASICS WORKSHOP
ICEBREAKER RECEPTION in the Exhibit Hall

MONDAY, MAY 1, 2006

8:30 AM – 10:00 AM OPENING PLENARY SESSION • 10:00 AM – 10:30 AM Coffee Break

10:30 AM – 12 NOON TECHNICAL SESSIONS I

TRACK 1	TRACK 2	TRACK 3	TRACK 4	TRACK 5
Pavement Roughness I Texas IRI Summary (2000-2005) 14454 A.D.F. Smit, B. Haggerty, J.A. Prozzi, D. Rand, M.Y. Mikhail Airport Pavement Roughness Index Relationships Using the Federal Aviation Administration (FAA) Profiling System 14684 Injun Song, Gordon F. Hayhoe Effects of Design and Site Factors on Roughness of Flexible Pavements in the LTPP SPS-1 Experiment 15043 S.W. Haider, K. Chaffi	Pavement Subgrade Stabilization I Advanced Modern and Innovative Technologies Used at the Houston Airport System (Stabilized Subgrades and Stabilized Bases) 14800 Adil Godiwalla Case Study: In-Situ Ground Improvement Trials Using High Energy Impact Compaction 14634 Fredrick Lekarp, Rune Fredriksson Development of a Damage Model for Stabilized Soil Layers Subjected to Repetitive Aircraft Loadings 14690 E. Heymsfield, R.E. Wahl, W. Hodo	Rigid Pavement Rehabilitation I Rehabilitation of Jointed Concrete in LTPP Southern Region 14314 Corey Zollinger, Mark Gardner, Dan Zollinger Precast Prestressed Concrete Pavement for Rapid Construction and Rehabilitation 14490 David K. Merritt, Samuel S. Tyson Case Study: Runway 12L-30R Keel Section Rehabilitation, Lambert-St. Louis International Airport 14335 Ty C. Sander, Jeffery R. Roesler	Flexible Pavement Rehabilitation Flexible Pavement Rehabilitation: A Case Study of the Badlands Loop Road in Badlands National Park 14651 Michelle Cline, Mark Meng, C.C. Chang Study of Best Practices for Pre-Overlay Repair and Asphalt Overlay 13000 Haifang Wen, Hani Titi, Darrell Berry Field Evaluation of Pavement Rehabilitation Using Full-Depth Reclamation (FDR) 14619 David R. Johnson, N. Mike Jackson, Timothy M. Sauer	Flexible Pavement Analysis I FE Simulation and Experimental Analysis on Bearing Capacity of Runway Strips 15154 M. Coni, S. Portas NLFM for SFRC Pavement Design 15000 A. Meda, G.A. Plizzari, L. Sorelli Flexible Pavement Response to Different Loading Amplitude 14577 Pyeong Jun Yoo, Imad L. Al-Qadi

12 NOON – 1:30 PM Lunch in the Exhibit Hall

1:30 PM – 3:00 PM TECHNICAL SESSIONS II

TRACK 1	TRACK 2	TRACK 3	TRACK 4	TRACK 5
Pavement Roughness II Runway Ride Quality Criteria Put to the Test at Newark Liberty International Airport 14400 Scott D. Murrell, Philip Cremin, Brian Hegarty Ride Quality Performance of Asphalt Concrete Pavements Subjected to Different Rehabilitation Strategies 14484 Rohan W. Perera, Starr D. Kohn Roughness Assessment of Runway 8L-26R at Hartsfield-Jackson Atlanta International Airport 14581 Richard L. Boudreau, Tony Gerardi, Mike Freeman, Viswanath Dokka	Pavement Subgrade Stabilization II PennDOT's Efforts to Improve Pavement Subgrade during Highway Reconstruction 14506 Lawrence W. Cole, Christopher Cepko BCD: A New Tool for Compaction Control 14526 Keunyoung Rhee, Jean-Louis Briaud Mechanical Properties of Roller-Compacted Concrete with Bottom Ash for Sustainable Pavements Applications 14530 G. Triches, R.C.A. Pinto, A.J. Silva, T.T. Machad	Airfield and Highway Rigid Pavement Design Design Comparisons Using the New Mechanistic-Empirical Rigid Pavement Design Guide 14262 David H. Timm Upgrade of an Australian Defence Airfield for the Introduction of Code E Aircraft 14240 G.W. White, P.J. McCullagh Modification of Load-Repetition Factors for Airfield-Pavement Design 14289 M. Livneh, M. Divinsky	Airfield and Highway Flexible Pavement Design Material Equivalence for Flexible Aircraft Pavement Thickness Design 13268 G.W. White Flexible Pavement Design: Sensitivity of the NCHRP 1-37A Pavement Design Guide, A Global Approach 14018 R. Clark Graves, Kamyar C. Mahboub Defining Critical Seasons in Pavement Design 15138 David P. Orr	Flexible Pavement Analysis II Three-Dimensional Finite Element Analyses of Flexible Airport Pavements for the Next Generation of Aircrafts 14547 Michael Willis, Dona Johnson, Beena Sukumaran Calibration of Fatigue Cracking Model of Flexible Pavements Using Mechanistic-Empirical Method Based Probabilistic Method 14715 Zairen Luo, Eddie Chou, Jiangxiang Yu Modeling Initiation and Propagation of Reflective Cracking with and without Steel Reinforcing Interlayer System 14718 Jongun Baek, Imad L. Al-Qadi

3:00 PM – 3:30 PM Refreshment Break

MONDAY, MAY 1, 2006

3:30 PM – 5:00 PM TECHNICAL SESSIONS III

TRACK 1	TRACK 2	TRACK 3	TRACK 4	TRACK 5
Pavement Roughness, Friction, and Taxiing Pattern Smoothness Evaluation at Weigh-In-Motion Scales 14624 Amy L. Simpson Slippery When Dry: Negative-Textured Bituminous Road Surfaces and Low Dry Friction in the United Kingdom 16000 J.C. Bullas Aircraft Taxiing Pattern in Chiang Kai-Shek International Airport 14674 Chia-pei Chou, Hsiang-Jen Cheng	Pavement Subgrade Stabilization and Granular Material III Characterizing Subgrade Soils and Establishing Treatment Needs for a New Runway at Chicago's O'Hare Airport 14568 H.S. Brar, E. Tutumluer, M.R. Thompson, L. Gosain, R. Anderson Intelligent Compaction Control 14643 M. Hossain, J. Mulandi, L. Keach, M. Hunt, S. Romanoschi Geogrid-Reinforced Embankment Constructed over Peat Soils in Clark County, Washington: Design and Field Performance 14621 T.W. Blackwood, C.V. Vulova Rutting Evaluation of Airport Pavement Granular Layers Considering Stress History Effects 14564 In Tai Kim, Erol Tutumluer	Highway and Airfield Concrete Pavement Construction Fast-Track Concrete Pavement Case Studies 14313 Wouter Gulden Engineering and Construction Challenges at Jefferson County Airport's Taxiway: A Relocation 14735 Carla Gamet Sustainability Resolutions to Complex Support Issues: The 5th Runway at Hartsfield-Jackson Atlanta International Airport 14833 Dale Stubbs, Kathy Masters Assessment of Improved Pulverizer Technology 15106 E.M. Velez-Vega, O.J. Vargas-Granell	HMA and Special Mixes Characterization and Performance I A Performance Baseline for Stone-Matrix Asphalt 14259 Kevin K. McGhee, Trenton M. Clark, Robert A. Reid Correlating Loaded Wheel Testing Dynamic Stability with Asphalt Pavement Analyzer Rut Depth 14576 Xingwei Chen, Baoshan Huang, Zhihong Xu Influence of the Compaction Degree of Asphalt on Rutting and Stiffness: Comparison between Conventional and Innovative Asphalts 14601 P. Sivapatham, H.J. Beckedahl Study of Hot-Mix Asphalt Using X-Ray Tomography Imaging Techniques 15012 K. Gopalakrishnan, H. Ceylan, F. Inanc, J. Gray, M. Heitzman	Accelerated Loading Testing and Data Analysis Performance Evaluation of Asphalt Surface Treatment Using MMLS3 15141 Jusang Lee, Y. Richard Kim Calibrating the Aging Difference between In-Service Performance of Flexible Pavements and Accelerated Pavement Testing 14961 Runhua Guo, Jorge A. Prozzi California Efforts Towards Mechanistic-Empirical Pavement Design 14975 E. Kohler, V. Kannekanti, J. Harvey

7:00 PM – 9:00 PM Committee Meetings

TUESDAY, MAY 2, 2006

8:30 AM – 10:00 AM TECHNICAL SESSIONS IV

TRACK 1	TRACK 2	TRACK 3	TRACK 4	TRACK 5
Pavement Management Systems I Implementation and Benefits of Pavement Management at the George Washington Bridge 14566 Kiran Pokkuluri, Katherine Keegan Development and Application of the Maintenance Rating Program of City Roadway Networks in Taiwan 14645 Chia-pei Chou, Ai-Chin Chen, Hung-pin Liang, Chih-Ming Chang Network-Level Airfield Pavement Management Program at ATL: An Historical Perspective 14682 Quintin Watkins, Frank Hayes, Dan Molloy, S.R. Kuchikulla, Richard Boudreau	Pavement Concrete Consolidation and Material Characterization Self-Consolidating Concrete: Case Study of a Mix Design Methodology Based on Raw Materials Properties 15346 Wei-Chou Ping, Raphael Kampmann, W. Virgil Ping Characterizing Early-Age Properties of Lithium-Treated Concrete Mixtures 14329 J.W. Mack, S.M. Stoffels, D.A. Morian, A.M. Ioannides, S.S. Wu Mechanical Properties of Concrete Pavement Mixtures with Larger-Size Coarse Aggregate 14701 Jefferey Roesler, Cristian Gaedicke, David Lange, Salvado Villalobos, Robert Rodden, Zachary Grasley	Rigid Pavement Rehabilitation II Pavement Rehabilitation Using Fractured Concrete Pavement Techniques 14706 D.A. Morian, S. Sadasivam, J.W. Mack, S.M. Stoffels Design and Acceptance Testing during Reconstruction of Terminal Apron Taxi Lanes at Hartsfield-Jackson Atlanta International Airport 15091 Wayne Seiler, Thomas Gambino, Soheil Nazarian, Frank Heyes, Quintin Watkins Innovative Fast-Track Approach to Concrete Pavement Rehabilitation in Urban High Network 15359 Eul-Bum Lee, Kunhee Choi	Characterization of Binders and Polymer Modified Asphalt Performance Evaluation of Jet Fuel Resistant Polymer-Modified Asphalt for Airport Pavements 14358 Ronald C. van Rooijen, Arian H. de Bondt, Ronald L. Corun Evaluation of Polymer Detection Methods for Binder Quality Assurance 14666 Stacey Diefenderfer Acid-Base Characteristics of an Asphalt Binder 14671 Nazimuddin Wasiuddin, Donovan C. Howell, Chris M. Fogle, Musharraf M. Zaman, Edgar A. O'Rear	Pavement Instrumentation I Construction and Instrumentation of Full-Scale Geogrid-Reinforced Flexible Pavement Test Sections 14641 Imad L. Al-Qadi, E. Tutumluer, S. Dessouky Field Instrumentation and Testing Data from Pennsylvania's Superpave In-Situ Stress/Strain Investigation 14697 Shelley M. Stoffels, Mansour Solaimanian, Dennis Morian, Hae Yin Case Study: Accelerated Full-Scale Testing of Coarse Granular Layers Using Heavy Vehicle Simulator 14656 Fredrick Lekarp, Rune Fredriksson

10:00 AM – 10:30 AM Coffee Break

TUESDAY, MAY 2, 2006

10:30 AM – 12 NOON TECHNICAL SESSIONS V

TRACK 1	TRACK 2	TRACK 3	TRACK 4	TRACK 5
Pavement Management Systems II Profile Data Variability in Pavement Management: Findings and Tools from LTPP 14692 Hao Yin, Shelley M. Stoffels, Charles A. Antle Summary and Comparison of Airfield Pavement Inventory, Condition, and Performance Across the United States 14740 A. Muntasir The Challenge of Developing a Single Pavement Condition Index to Represent Many Jurisdictions Using Different Indices 14644 Kim Chan, John Whitman, Amanda Elioff	Concrete Pavement Material Characterization High Volume Fly Ash Concrete for Pavement Applications with Gap Graded Aggregates: Marginal and Fine Sands 15077 Chetan Hazaree, Halil Ceylan Optimizing Mix Proportions for Durable Roller-Compacted Concrete Pavement Applications in Indian Conditions 15076 Chetan Hazaree, Halil Ceylan, Kejin Wang Selection of Design Factors for the Use of Gravel in CRC Paving 14283 Juanyu Liu, Anal K. Mukhopadhyay, Dan G. Zollinger	Rigid Pavement Design, Analysis, and Rehabilitation Comparison Of Pavement Design Using AASHTO 1993 and NCHRP Mechanistic-Empirical Pavement Design Guides 14404 J. Mulandi, T. Khanum, M. Hossain, Greg Schieber Analysis of Airfield Concrete Slabs Connected by Continuous Elastic Joints 14496 C.R. Gonzalez, W.R. Barker Characterization of Rubblized Concrete Pavements with HMA Overlays at The National Airport Pavement Test Facility 14678 Gordon F. Hayhoe, Navneet Garg	HMA and Special Mixes Characterization and Performance II Preparing High Modulus Asphaltic Concrete Mixtures 14655 Lelo Momm Advanced, Modern, and Innovative Technologies Used at the Houston Airport System (Polyethylene Additive) 14802 Adil Godiwalla Digital Simulative Rutting Test for Asphalt Pavement Analyzer 16001 Yongping, Linbing Wang	Pavement Instrumentation II Unbonded Concrete Overlay Research for Airfields at the FAA National Airport Pavement Test Facility 14710 J.W. Mack, S.M. Stoffels, D.A. Morian, A.M. Ioannides, S.S. Wu Instrumentation and Accelerated Testing on Louisiana Flexible Pavements 14720 Zhong Wu, Zhongji Zhang, Bill King, Amar Raghavedra, Mark Martinez Measured and Theoretical Pressures in Base and Subgrade Layers under Dynamic Truck Loading 14561 W. Immanuel, D.H. Timm
12 NOON – 1:00 PM Lunch in the Exhibit Hall • 1:00 PM – 5:00 PM TECHNICAL TOUR 1:00 PM – 5:00 PM MECHANISTIC-EMPIRICAL PAVEMENT DESIGN GUIDE (MEPDG) WORKSHOP 1:00 PM – 5:00 PM BACK-TO-BASICS WORKSHOP • 6:00 PM – 8:00 PM DINNER EVENT				

WEDNESDAY, MAY 3, 2006

8:30 AM – 10:00 AM TECHNICAL SESSIONS VI

TRACK 1	TRACK 2	TRACK 3	TRACK 4
Pavement Nondestructive Evaluation FWD Determination of the In-Situ Subgrade Resilient Modulus and Effective Structure Number of Virginia's Interstate Network 14647 Khaled Galal, Brian Diefenderfer, Javed Alam, Thomas Tate, Michael Wells Demonstration of Seismic and Maturity Testing Technologies at Aurora Municipal Airport 14321 Sohail Nazarian, Deren Yuan, Kurt Smith, Jim Bruinsma Network-Level Pavement Structure Assessment Using Automated Processing of Ground-Penetrating Radar (GPR) Data 14657 Ken Moser, Bruce Vandre	Concrete Pavement Alkali-Silica Reaction Case Study: Using Lithium Nitrate to Arrest Alkali-Silica Reaction in an Existing Concrete Pavement 14246 Michael T. Kelly, Christopher Y. Tuan An Investigation into Alkali-Silica Reaction in Concrete Pavements at Hartsfield-Jackson Atlanta International Airport 14432 P.R. Rangaraju, R. Tadimalla, S. Kuchikulla, Q. Watkins Evaluation of Alkali-Silica Reaction Potential of Aggregate Using Dilatometer Method 14676 Chang-Seon Shon, Anal K. Mukhopadhyay, Dan G. Zollinger	Pavement Tack Coat Evaluation Evaluating Tack Coat Applications and the Bond Strength between Pavement Layers 14360 Randy C. West, Jason R. Moore, Jingha Zhang Development of a Portable Device to Measure Tack Coat Quality in the Field 14730 Vivek Tandon, Issac Puentes	HMA Healing and Moisture Damage Comparison of Moisture Damage in Hot Mix Asphalt Using Ultrasonic Accelerated Moisture Conditioning and Tensile Strength Test Results 14184 Martin McCann, Richard Anderson-Sprecher, Kenneth Thomas, Shin-Che Huang Low-Temperature-Thermal Stress, Triaxial, and Split Tensile Strength Testing to Evaluate Moisture Sensitivity and the Performance of Lime in Hot Mix Asphalt Mixtures 14185 Martin McCann, Peter Sebaaly Characterization of Healing in Sand Asphalt Mixtures Using a Thermomechanical Framework 14057 Venkaiah Chowdary, J. Murali Krishan
10:00 AM – 10:30 AM Coffee Break			

10:30 AM – 12 NOON TECHNICAL SESSIONS VII

TRACK 1	TRACK 2	TRACK 4
Pavement Economics A Cost-Effective Mixture for Concrete Pavements I. Poppianni, E. Anastasiou Estimation of the Effects of Influential Factors on Pavement Service Life with Cox Proportional Hazards Method 14304 Jianxiang Yu, Eddie Y.J. Chou, Jyh-Tyng Yau A Mechanistic Approach to Determine Price Reduction Factors for Density-Deficient Asphalt Pavements 15139 Y. Richard Kim, S. Joon Lee, Omar El-Haggan Development of a Pavement Warranty Contract and Performance Specification for a Hot-Mix Asphalt Resurfacing Project 14696 Brian K. Diefenderfer, James W. Bryant, Jr.	Rigid Pavement Curling and ASR Prediction of Moisture Curling of Concrete Slabs for Airfield Applications 14550 D.A. Lange, C.J. Lee, Y. Liu Curling and Curling Stresses of New Concrete Pavements 14694 Zahidul Siddique, Mostaque Hossain, Dave Meggers A Lab Study on the Potential of Potassium Acetate Deicer to Induce ASR in Concrete, and Its Mitigation 14433 P.R. Rangaraju, K. Sompura, J. Desai, J. Olek	Special HMA, QC, and Recycling Influences of Binder and RAP Temperatures and Foaming Water Content on Cold In-Place Recycling Mix Design Process Using Foamed Asphalt 14738 Hosin Lee, Yongjoo Jim Non-Nuclear Density Gauge Comparative Study for QC/QA in HMA Construction 14608 Y. Liao, S. Sargand, S. Kim Potential Use of Petroleum-Contaminated Soil in Hot Mix Asphalt Concrete 14611 H. Hassan, A. Al-Rowas, A. Al-Futaisi, A. Al-Jamrah, R. Taha, A. Hago

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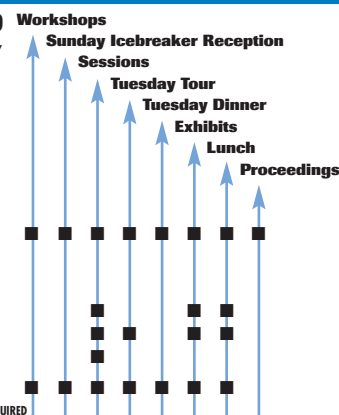
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- Back-to-Basics Workshop

2006

CONFERENCE AT A GLANCE

SUNDAY, APRIL 30, 2006

9:00 AM - 4:30 PM	FAA DESIGN SOFTWARE FOR AIRPORT PAVEMENT THICKNESS WORKSHOP
1:00 PM - 5:00 PM	MECHANISTIC-EMPIRICAL PAVEMENT DESIGN GUIDE (MEPDG) WORKSHOP
1:00 PM - 5:00 PM	BACK-TO-BASICS WORKSHOP
6:00 PM - 7:30 PM	Icebreaker Reception in the Exhibit Hall

MONDAY, MAY 1, 2006

8:30 AM - 10:00 AM	Opening Plenary Session
10:00 AM - 10:30 AM	Coffee Break
10:30 AM - 12 NOON	TECHNICAL SESSIONS I [5 TRACKS]
12 NOON - 1:30 PM	Lunch in the Exhibit Hall
1:30 PM - 3:00 PM	TECHNICAL SESSIONS II [5 TRACKS]
3:00 PM - 3:30 PM	Refreshment Break
3:30 PM - 5:00 PM	TECHNICAL SESSIONS III [5 TRACKS]
7:00 PM - 9:00 PM	Committee Meetings

TUESDAY, MAY 2, 2006

8:30 AM - 10:00 AM	TECHNICAL SESSIONS IV [5 TRACKS]
10:00 AM - 10:30 AM	Coffee Break
10:30 AM - 12 NOON	TECHNICAL SESSIONS V [5 TRACKS]
12 NOON - 1:00 PM	Lunch in the Exhibit Hall
1:00 PM - 5:00 PM	Technical Tour
1:00 PM - 5:00 PM	MECHANISTIC-EMPIRICAL PAVEMENT DESIGN GUIDE (MEPDG) WORKSHOP
1:00 PM - 5:00 PM	BACK-TO-BASICS WORKSHOP
6:00 PM - 8:00 PM	Dinner Event

WEDNESDAY, MAY 3, 2006

8:30 AM - 10:00 AM	TECHNICAL SESSIONS VI [4 TRACKS]
10:00 AM - 10:30 AM	Coffee Break
10:30 AM - 12 NOON	TECHNICAL SESSIONS VII [3 TRACKS]

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