



MAY 18-21, 2015

ICMPA9 • Washington D.C.
International Conference on Managing Pavement Assets

9th International Conference on
MANAGING PAVEMENT ASSETS (ICMPA9)

May 18-21, 2015 • Alexandria, Virginia, USA





Monday, May 18, 2015

8:00 – 17:30	Registration	<i>Inventor's Foyer</i>
9:00 – 12:00	Tutorial 1 <i>Edison ABC</i> Introduction to Pavement Management Moderator: Sue McNeil Instructor: David Peshkin & Carlos Chang	Tutorial 2 <i>Edison EFG</i> Public-Private Partnerships Tools for Pavement Management Moderator: Cesar Queiroz Instructors: Cesar Queiroz & Goran Mladenovic
12:00 – 13:00	Lunch (on your own)	
13:00 – 16:00	Tutorial 3 <i>Edison ABC</i> The Role of Pavement Management in the Implementation of MAP-21 and the Development and Adoption of Performance Measures Moderator: Sue McNeil Instructors: Thomas Van, David Janisch, Jonathon Groeger, & Gonzalo Rada	Tutorial 4 <i>Edison EFG</i> Pavement Management in the Context of Developing Countries and Countries in Transitions Moderator: Ian Greenwood Instructors: Ian Greenwood & Ross Waugh
17:00 – 19:00	Welcome Reception (Ice Breaker)	Carlyle Club <i>2054 Ballenger Avenue</i>

Tuesday, May 19, 2015

7:30 – 17:30	Registration	<i>Inventor's Foyer</i>
7:30 – 17:30	Exhibits	<i>Foyer DABC</i>
7:30 – 8:30	Continental Breakfast	<i>Exhibit Area – Foyer DABC</i>
8:30 – 10:00	Plenary Session 1 Moderator: Gerardo Flintsch Welcome, Tanveer Chowdry Executive Panel Discussion Gregory G. Nadeau , <i>Acting Administrator, Federal Highway Administration</i> Oscar de Buen Richkarday , <i>President, World Road Association (PIARC)</i> Jorge Sales Gomes , <i>CEO, Brisa Inovação e Tecnologia</i> Charles Kilpatrick , <i>Commissioner of the Virginia Department of Transportation</i>	<i>Edison Ballroom</i>

Tuesday, May 19, 2015 *continued*

10:00 – 10:30 Coffee Break Exhibit Area – Foyer DABC

10:30 – 12:00 **Plenary Session 2** Edison Ballroom

Moderator: Theuns Henning
 Invited Presentation, Sam Savage
 The Flaw of Average, Why We Underestimate Risks in Face of Uncertainty
 Keynote Speech, Katie Zimmerman
 Preparing for the Next Transformation in Pavement Management

12:00 – 13:30 Lunch* **Lunch Stations:** Foyer DABC
Seating*: Edison ABC, D, and EFG
Additional Seating: Banneker, Wright

*Please make sure to vacate Edison Ballroom between 12pm and 12:30pm. Seating will resume in Edison ABC, D, and EFG at 12:30pm.

Alexandria Conventions and Visitors Bureau Information Desk
 Information and brochures will be provided on the Washington D.C. metropolitan area and optional post-conference city tours.

13:30 – 15:00

<p>1. Innovation <i>Edison ABC</i> Moderator: Omar Smadi</p> <p><i>A Multi-Objective Asset Management Approach to Evaluate Maintenance Strategies for Funding Allocation</i>, Carlos Chang, Marketa Vavrova, Roger Smith & Sui Tan (219)</p> <p><i>Pavement Management's Role in an Asset Management World</i>, Kathryn Zimmerman & Prashant Ram (79)</p> <p><i>Addressing Uncertainties of Performance Modelling with Stochastic Information Packages – Incorporating a Measure of Uncertainty in Performance and Budget Forecasts</i>, Peter Kadar, Tim Martin, Michelle Baran & Ranita Sen (126)</p> <p><i>An Implementable Framework for Standardizing National Crack Measures</i>, Yichang Tsai & Chenglong Jiang (282)</p>	<p>2. PMS & Urban Case Studies <i>Edison D</i> Moderator: Sue McNeil</p> <p><i>30 Years - 21 State DOTs – Trends in Pavement Management observed through real world Implementation at the State DOT Level</i>, Jeffrey Zavitski & Robert Plane (75)</p> <p><i>Quantifying the Benefits of Good Pavement Management</i>, Ronald Hudson & Ralph Haas (156)</p> <p><i>Accelerated Testing and Instrumentation: A Canadian Case Study</i>, Susan Tighe (183)</p> <p><i>Developing Optimized Maintenance Work Programs for an Urban Roadway Network using Pavement Management System</i>, Muhammad Arif Beg & Ambarish Banerjee (168)</p>	<p>3. Policy & Funding <i>Edison EFG</i> Moderator: Magdy Mikhail</p> <p><i>Generating Infrastructure Funds Through Innovative Pavement Management</i>, Javier Ponce, Patrick Overton & Wiley Cunagin (56)</p> <p><i>Economic Evaluation of Pavement Management Decisions</i>, David Luhr & Timothy Rydholm (111)</p> <p><i>A Case for Breaking Down the Capital-Maintenance Barrier</i>, Anna Robak, Shawn Landers, Simon Bush & Ewan Hunter (139)</p> <p><i>Cost-Effective Pavement Performance Management of Indiana's Enhanced National Highway System through Strategic Modification of the Pavement Rehabilitation Treatment Trigger Values</i>, Menna Nouredin, Jon Fricker & Kumares Sinha (271)</p>	<p>Poster Session 1 <i>Foyer EFG</i> Moderator: Edgar de León</p> <p><i>Functional Capacity Asset Class</i>, Stephanie Weigel (38)</p> <p><i>Methodology for Asset Valuation in Chile</i>, David Saldaña, Robinson Lucero, Gerardo Flintsch & Daniel Munoz (106)</p> <p><i>Overcoming IT Issues in Asset Management</i>, Benjamin Ong, Hitesh Shah & DJ Swan (64)</p> <p><i>Sampling versus Whole Network Monitoring in Pavement Management Systems</i>, Nima Kargah-Ostadi, DJ Swan & Jerome Daleiden (150)</p> <p><i>Impacts of Profiler Purchases on Pavement Management</i>, Amy Simpson, Gary Elkins, Rohan Perera & Larry Wiser (201)</p> <p><i>Comparative Analysis of Microsurfacing and Portland Cement Slurry Seal For Rut Filling</i>, Dominique Pittenger, Douglas Gransberg, Caleb Riemer & Musharraf Zaman (20)</p>
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Tuesday, May 19, 2015 *continued*

15:00 – 15:30

Coffee Break

Exhibit Area – Foyer DABC

15:30 – 17:00

<p>4. Airports I <i>Edison ABC</i> Moderator: Jeff Gagnon</p> <p><i>Innovative Approach to Airfield Pavement Inspections and Distress Identification at Oakland International Airport, Katherine Keegan & Kenneth Jung (70)</i></p> <p><i>Use of A Digital Survey Vehicle For Pavement Condition Surveys At Airports, Paul Wilke (98)</i></p> <p><i>Comparison of United States Air Force PCI Standard Deviation Values to Default Values in ASTM D5340, Aaron Pullen & Timothy Parsons (110)</i></p> <p><i>Improving Airport Pavement Management Using an Analytical Hierarchy Process Decision Making Tool, Samantha Pinto & Susan Tighe (181)</i></p>	<p>5. Performance Prediction I <i>Edison D</i> Moderator: Raja Shekharan</p> <p><i>Development of a performance prediction model to manage flushing of sprayed seal pavements, Sachi Kodippily, Jason Ingham & Theuns Henning (83)</i></p> <p><i>Analysis of the evolution of flexible pavement conditions based on LTPP SPS5 sections, Joana Azevedo, Silvino Capitão, Deolinda Rasteiro & Luís Picado-Santos (69)</i></p> <p><i>Pavement Deterioration Prediction Model and Project Selection for Kentucky Highways on Model and Project Selection for Kentucky Highways, Lihui Bai, Zhihui Sun, Guangyang Xu & Tracy Nowaczyk (71)</i></p> <p><i>Long-Term Pavement Performance Automated Faulting Measurement, Mahesh Agurla & Sean Lin (239)</i></p>	<p>6. Sustainability <i>Edison EFG</i> Moderator: Tom Kazmierowski</p> <p><i>A Methodology for Counting Carbon Credits from Using Foam Stabilized Base, Xiaoyu Liu, Qingbin Cui & Chandra Akisetty (25)</i></p> <p><i>Integration of Sustainability Rating Tools in Contemporary Pavement Management Systems, Tom Kazmierowski, Michael Maher & Michael Navarra (54)</i></p> <p><i>Impact of Overweight Traffic on Pavement Life Using Weigh-In-Motion Data and Mechanistic-Empirical Pavement Analysis, Hao Wang, Jingnan Zhao & Zilong Wang (208)</i></p> <p><i>Managing Ethekewini Municipality's Road Network - A South African Perspective, Shaun Moodley (77)</i></p>	<p>Poster Session 1 <i>Foyer EFG</i> Moderator: Edgar de León</p> <p><i>Functional Capacity Asset Class, Stephanie Weigel (38)</i></p> <p><i>Methodology for Asset Valuation in Chile, David Saldaña, Robinson Lucero, Gerardo Flintsch & Daniel Munoz (106)</i></p> <p><i>Overcoming IT Issues in Asset Management, Benjamin Ong, Hitesh Shah & DJ Swan (64)</i></p> <p><i>Sampling versus Whole Network Monitoring in Pavement Management Systems, Nima Kargah-Ostadi, DJ Swan & Jerome Daleiden (150)</i></p> <p><i>Impacts of Profiler Purchases on Pavement Management, Amy Simpson, Gary Elkins, Rohan Perera & Larry Wiser (201)</i></p> <p><i>Comparative Analysis of Microsurfacing and Portland Cement Slurry Seal For Rut Filling, Dominique Pittenger, Douglas Gransberg, Caleb Riemer & Musharraf Zaman (20)</i></p>
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17:30 – 19:00

Young Professionals and Students:
Speed Networking Event

Wright

17:30 – 19:00

IRF Asset Management Committee Meeting

Banneker

17:30 – 20:30

Pooled-Fund 5(268) National Sustainable Pavement Consortium Technical Advisory Committee Meeting

Bell

Wednesday, May 20, 2015

7:00 – 8:00	TRB AFD00 (1) Pavement Management Systems Committee Meeting	<i>Banneker</i>				
7:30 – 12:00	Registration	<i>Inventor's Foyer</i>				
7:30 – 17:00	Exhibits	<i>Foyer DABC</i>				
7:30 – 8:30	Continental Breakfast	<i>Exhibit Area - Foyer DABC</i>				
8:30 – 10:00	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; background-color: #ADD8E6; padding: 5px; vertical-align: top;"> <p>7. Cracking & IRI Measurements <i>Edison ABC</i> Moderator: Andrew Williams</p> <p><i>Junction Detection of Pavement Crack using Correlation Analysis and Tensor Voting</i>, Yuchun Huang (205)</p> <p><i>The Australian 3D roughness experience</i>, Richard Wix & Simon Barlow (244)</p> <p><i>Identifying Waveband Roughness in Highway Pavements using Power Spectral Density Analysis</i>, Robert Evans & Arul Arulrajah (34)</p> <p><i>Framework for Developing Specifications and Acceptance Testing of an Inertial Profiler</i>, Rohan Perera, Gary Elkins, Larry Wisner (122)</p> </td> <td style="width: 25%; background-color: #F08080; padding: 5px; vertical-align: top;"> <p>8. New Systems & Software <i>Edison D</i> Moderator: Tanveer Chowdhury</p> <p><i>StreetSaver™ and Paver™ Budget and Condition Analysis: A Case Study</i>, Nathan Kebede, Linda Pierce & Ryan Miles (116)</p> <p><i>Recent Innovations in the Management of Irish National Roads</i>, Kieran Feighan, Ray McGowan, Tom Casey & Andrew O'Sullivan (200)</p> <p><i>An Innovative Footpath Pavement Management Approach for Auckland Transport</i>, Scott Fraser & Wei Liu (131)</p> <p><i>Advancing Pavement Surface Evaluation to Support Engineering and Investment Decisions</i>, Jerome Daleiden, Thomas Burchett & Andy Mergenmeier (59)</p> </td> <td style="width: 25%; background-color: #FFD700; padding: 5px; vertical-align: top;"> <p>9. Performance Prediction II <i>Edison EFG</i> Moderator: Thomas Van</p> <p><i>Variation in Deterioration Rates of Major Arterials in Rural Victoria/Australia</i>, Bayar Mohammed, Rayya Hassan & Robert Evans (89)</p> <p><i>Piecewise Linear Models for Ordinal Pavement Distress Data</i>, Don Chen, Tara Cavalline & Neil Mastin (167)</p> <p><i>Development of Pavement Performance Models for the NCDOT PMS</i>, Don Chen, Neil Mastin, Thomas Nicholas (169)</p> <p><i>Developing Rubberized Asphalt Concrete Performance Models for MTC PMS</i>, DingXin Cheng, Gary Hicks & Sui Tan (192)</p> </td> <td style="width: 25%; background-color: #80CBC4; padding: 5px; vertical-align: top;"> <p>Poster Session 2 <i>Foyer EFG</i> Moderator: Samer Katicha</p> <p><i>Challenges of Compliance Specifications and the Effective Management of Pavements for Highway Concessions</i>, David Hein (86)</p> <p><i>Next Generation of Forward Works Programme for Pavement and Resurfacing</i>, Simon Hunt & Sean Rainsford (114)</p> <p><i>Pavement Maintenance for Long Term Performance Based Contracts</i>, Zaid Alyami & Susan Tighe (172)</p> <p><i>Ontario Flexible Pavement Local Calibration on AASHTOWARE Pavement ME Using PMS2</i>, Amin Hamdi, Mohab El-Hakim, Susan Tighe & Li Ningyuan (206)</p> <p><i>Dynamic Pavement Maintenance and Rehabilitation Needs Estimation to Meet Changes in Influencing Factors</i>, Raja Shekharan, Tanveer Chowdhury, Matthew Ayotte, Akyiaa Hosten & Eddie Coggins (323)</p> <p><i>3D Pavement Surface Reconstruction using NURBS</i>, Ran Ji, Cheng Chen & Kelvin Wang (288)</p> </td> </tr> </table>		<p>7. 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10:00 – 10:30	Coffee Break	<i>Exhibit Area - Foyer DABC</i>				



Wednesday, May 20, 2015 *continued*

10:30 – 12:00

<p>10. Structural Evaluation <i>Edison ABC</i> Moderator: Peter Kadar</p> <p><i>Optimizing Highway Funds by Integrating RWD Data into Pavement Management Decision Making</i>, Douglas Steele, Curt Beckemeyer & Thomas Van (93)</p> <p><i>Network Level Pavement Structural Evaluation Through The Use Of The Rolling Wheel Deflectometer</i>, Paul Wilke (97)</p> <p><i>The use of Deflection Measurements in Pavement Management of the Primary Road Network of Wallonia, Belgium</i>, Carl Van Geem, Pierre Nigro & Bruno Berlémont (107)</p> <p><i>Use of High-Speed Deflection Devices in Network-Level PMS Applications: Are We Ready?</i>, Gonzalo Rada, Soheil Nazarian, Visintine Beth, Rajaratnam Siddharthan & Nadarajah Sivaneswaran (212)</p>	<p>11. Airports II <i>Edison D</i> Moderator: Susan Tighe</p> <p><i>The Use of GPS-Based Distress Mapping to Improve Pavement Management</i>, Peter-Paul Dzwilewski, Monty Wade & Genevieve Long (198)</p> <p><i>Maintaining Airport Pavement Friction Using Surface Densification: A Sustainable Pavement Asset Preservation Tool</i>, Douglas Gransberg & Dominique Pittenger (204)</p> <p><i>Automated Pavement Condition Assessment Using Laser Crack Measurement System (LCMS) on Airfield Pavements in Ireland</i>, Brian Mulry, Michael Jordan & David O'Brien (246)</p> <p><i>US Army Experience with Precast Panels for Military Airfield Pavement Repairs</i>, Lucy Priddy, Peter Bly & Gerardo Flintsch (250)</p>	<p>12. Decision Making I <i>Edison EFG</i> Moderator: Ross Waugh</p> <p><i>Data Driven Decision Making</i>, Luke Stovall (160)</p> <p><i>Development of a Web Based Pavement Management Reporting System to Enhance the Virginia Department of Transportation Pavement Performance Monitoring Program</i>, Aaron Gerber, Ahmad Kanaan, Eric Perrone, Tanveer Chowdhury & Raja Shekharan (217)</p> <p><i>Ensuring Roadway and Utility Financial Sustainability through Right-of-Way Capital Planning & Optimization</i>, Chris Lombard & Gary Ruck (132)</p> <p><i>A Fair Division Approach in the Context of Performance-Based Cross-Asset Resource Allocation</i>, Juan Diego Porras-Alvarado, Zhe Han & Zhanmin Zhang (154)</p>	<p>Poster Session 2 <i>Foyer EFG</i> Moderator: Samer Katicha</p> <p><i>Challenges of Compliance Specifications and the Effective Management of Pavements for Highway Concessions</i>, David Hein (86)</p> <p><i>Next Generation of Forward Works Programme for Pavement and Resurfacing</i>, Simon Hunt & Sean Rainsford (114)</p> <p><i>Pavement Maintenance for Long Term Performance Based Contracts</i>, Zaid Alyami & Susan Tighe (172)</p> <p><i>Ontario Flexible Pavement Local Calibration on AASHTOWARE Pavement ME Using PMS2</i>, Amin Hamdi, Mohab El-Hakim, Susan Tighe & Li Ningyuan (206)</p> <p><i>Dynamic Pavement Maintenance and Rehabilitation Needs Estimation to Meet Changes in Influencing Factors</i>, Raja Shekharan, Tanveer Chowdhury, Matthew Ayotte, Akyiaa Hosten & Eddie Coggins (323)</p> <p><i>3D Pavement Surface Reconstruction using NURBS</i>, Ran Ji, Cheng Chen & Kelvin Wang (288)</p>
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12:30 – 13:30

Lunch

Lunch Stations: Foyer DABC
Seating: Edison ABC, D, and EFG
Additional Seating: Banneker, Wright

Wednesday, May 20, 2015 *continued*

13:30 – 15:00

<p>13. Skid, Safety & Texture <i>Edison ABC</i> Moderator: Seosamh Costello</p> <p><i>Assessing the Impact of Pavement Surface Condition on the Performance of Signalized Intersections</i>, Nasreen Hussein, Rayya Hassan & Robert Evans (84)</p> <p><i>Skid Resistance Strategy</i>, Simon Hunt (112)</p> <p><i>Integrating Risk into GDOT Pavement Preservation Planning</i>, Yichang (James) Tsai, Yiching Wu, Timothy Brantley, Erany Robinson-Perry, Binh Bui (229)</p> <p><i>Latest Development in the Processing of Pavement Macrotecture Measurements of High Speed Laser Devices</i>, Daniel Mogrovejo Carrasco, Samer Katicha, Gerardo Flintsch & Edgar de León Izeppi (264)</p>	<p>14. Decision Making II Edison D Moderator: Brian Ferne</p> <p><i>Maximize the Level of Service using Cross Asset Portfolio Renewals Management</i>, Micheal Mason, Siri Rangamuwa & Theunis F P Henning (157)</p> <p><i>A Critical Assessment of Jointed Plain Concrete Pavement (JPCP) Using Sensing Technology -- A Case Study on I-285</i>, Yiching Wu, Yichang Tsai & Julius Doan (197)</p> <p><i>Taking the Namibian Road Management System to the Next Level</i>, Sophia Tekie (259)</p> <p><i>Incorporating Traffic Speed Pavement Deflection Data in Pavement Management Decision Making for Flexible Pavements</i>, Senthilmurugan Thyagarajan (81)</p>	<p>15. Data Quality & Accountability <i>Edison EFG</i> Moderator: Linda Pierce</p> <p><i>Improving Data Quality for Pavement Management System</i>, Sui Tan & DingXin Cheng (193)</p> <p><i>A Case Study in Establishing Quality Assurance Limits for Automated Pavement Distress Data in North Carolina</i>, Douglas Frith, Shelley Stoffels, Neil Mastin & Dennis Morian (269)</p> <p><i>Private Sector Business Principles to Embrace - and to Avoid in Planning and Managing our Public Sector Assets</i>, Anna Robak (138)</p> <p><i>Going Beyond MAP 21 Performance Measures of Pavement Condition</i>, Sui Tan (276)</p>	<p>Poster Session 3 <i>Foyer EFG</i> IMCPA9 Challenge</p> <p>Moderators: Shelly Stoffels & Nasir Gharaibeh</p>
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15:00 – 15:30

Coffee Break

Exhibit Area - Foyer DABC



Wednesday, May 20, 2015 *continued*

15:30 – 17:00

<p>16. Data Quality <i>Edison ABC</i> Moderator: Gonzalo Rada</p> <p><i>Quality Management for Pavement Condition Data Collection</i>, Linda Pierce & Katie Zimmerman (49)</p> <p><i>Managing Missing Pavement Performance Data in Pavement Management System</i>, Javed Farhan & Tien Fwa (66)</p> <p><i>Prequalification Criteria for Pavement Inspectors</i>, Dragos Andrei (72)</p> <p><i>Ten-Years of Pavement Distress IV&V in Virginia</i>, Douglas Frith, Raja Shekharan, Dennis Morian & Tanveer Chowdhury (127)</p>	<p>17. Preservation <i>Edison D</i> Moderator: Akyiaa Hosten</p> <p><i>Factors Affecting the Performance of Pavement Preservation Treatments</i>, Beth Visintine, R. Gary Hicks, Dingxin Cheng, Gary Elkins & Jonathan Groeger (121)</p> <p><i>Pavement Preservation Process at the Maryland State Highway Administration</i>, Praveen Desaraju, Geoff Hall & Paulo DeSousa (165)</p> <p><i>A Comprehensive Life Cycle Costs Analysis of In-Place Recycling and Conventional Pavement Construction and Maintenance Practices</i>, João Santos, James Bryce, Gerardo Flintsch & Adelino Ferreira (255)</p> <p><i>Pavement Remaining Service Interval: A Logical Replacement to the Remaining Service Life Concept</i>, Nadarajah Sivaneswaran, Beth Visintine, Gonzalo Rada, Elkins Gary, Senthilmurugan Thyagarajan (179)</p>	<p>18. Performance Monitoring, Reporting & Visualization <i>Edison EFG</i> Moderator: Brian Diefenderfer</p> <p><i>Visualizing Pavement Management Data at the Project Level</i>, Timothy Rydholm & David Luhr (120)</p> <p><i>Long-Term Pavement Performance (LTPP) InfoPave: Extracting Practical Information out of the Data</i>, Riaz Ahmad, Jerome Daleiden & Nima Kargah-Ostadi (257)</p> <p><i>Use of VDOT's Pavement Management System to Proactively Plan and Monitor Pavement Maintenance and Rehabilitation Activities to Meet the Agency's Performance Target</i>, Akyiaa Hosten, Tanveer Chowdhury, Raja Shekharan, Matthew Ayotte & Eddie Coggins (321)</p> <p><i>The Use of Performance Metrics on the Pennsylvania Turnpike</i>, Paul Wilke & Pamela Hatalowich (123)</p>	<p>Poster Session 3 <i>Foyer EFG</i> ICMPA9 Challenge</p> <p>Moderators: Shelly Stoffels & Nasir Gharaibeh</p>
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18:00 – 21:30

Innovation Themed Gala Dinner
Guest speaker: Elisabeth L. Dougherty
Director of Inventor Education, and Recognition

United States Patent and Trademark Office (USPTO)
*Madison Building
Lower Atrium, Inventor's Museum, and Auditorium
600 Dulany Street*

Thursday, May 21, 2015

7:00 – 8:00	TRB AFD00 (1) Sustainable Pavements Subcommittee Meeting	Banneker				
7:30 – 17:00	Exhibits	Foyer DABC				
7:30 – 8:30	Continental Breakfast	Exhibit Area - Foyer DABC				
8:30 – 10:00	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #ADD8E6; vertical-align: top; padding: 5px;"> <p>19. Other Data Collection Issues <i>Edison ABC</i> Moderator: Zhanmin Zhang</p> <p><i>New Jersey Micro-Surface Pavement Noise Evaluation</i>, John Hencken, Michael Tulanowski & Thomas Bennett (263)</p> <p><i>Effect of Traffic and Environmental Factors on Roughness Progression Rate of Sealed Low Volume Arterials</i>, Nahla Alaswadko, Rayya Hassan & Robert Evans (85)</p> <p><i>Measuring Pavement Condition Data for a Long-term Pavement Performance Study on New Zealand Roads</i>, Douglas Brown (65)</p> <p><i>Effective Implementation of GPR Data in PMS for Identification of Homogeneous Sections with Uniform Pavement Thickness & Assessing Thickness Variability: A Multi-Scale Approach</i>, Michael Scott & Dimitrios Goulias (194)</p> </td> <td style="background-color: #FFC0CB; vertical-align: top; padding: 5px;"> <p>20. 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10:00 – 10:30	Coffee Break	Exhibit Area - Foyer DABC				



Thursday, May 21, 2015 *continued*

10:30 – 12:00

<p>22. Performance Based Contracts Edison ABC Moderator: Ian Greenwood</p> <p><i>Performance Measures for Pavement Assets under Performance Based Contracts</i>, Zaid Alyami, Susan Tighe, Douglas Gransberg & Maria Bianchin (173)</p> <p><i>Challenges of a Construction Defect Claim Involving a Highway Concessions Project: A Private Sector Forensic Perspective</i>, Jason Gregorie & Luis Mariaca (202)</p> <p><i>A Financial Model to Estimate Annual Payments Required under Performance Based Contracts</i>, Goran Mladenovic & Cesar Queiroz (240)</p> <p><i>Use of Emerging Technologies in Support of Pavement Preservation Decision Making</i>, Gonzalo Rada, Beth Visintine, H. Gary Hicks, DingXin Cheng & Thomas Van (174)</p>	<p>23. Pavement Maintenance Management & Applied PMS Edison D Moderator: Gonzalo Rada</p> <p><i>From Nothing to Something... Creating a Road Maintenance Culture for Tonga</i>, Megan Schlotjes, Christopher Bennett, Asif Faiz, Alex Visser & Ian Greenwood (14)</p> <p><i>Life Cycle Cost Analysis to Identify the Need for Drainage Renewal in Maintenance of Road Asset: Case Studies from a New Zealand Road Network</i>, Mohammad Mia, Theunis Henning, Seosamh Costello & Campbell Mckegg (128)</p> <p><i>10 Year Plan for Managing Interstate Pavements in North Carolina</i>, Judith Corley-Lay (27)</p> <p><i>Innovative Approach to the Development of a Strategic Plan for the Alaska Highway</i>, Gary Ruck, Gary St. Michel & Alex Taheri (104)</p>	<p>24. Topics in PM Edison EFG Moderator: Cesar Queiroz</p> <p><i>Three-Dimensional Surface Texture of Asphalt Pavements Containing Reclaimed Asphalt Concrete</i>, Qingfan Liu, Saman Esfandiarpour & Ahmed Shalaby (230)</p> <p><i>Impact of Pavement Performance Models on Strategic Funding Analyses in the NCDOT Pavement Management System</i>, Jeffery Mastin & Alan Finger (274)</p> <p><i>The Evolution and Benefits of Web Based Viewers for Pavement Data</i>, DJ Swan & Michael Slack (80)</p> <p><i>Measures of Pavement Performance must Consider the Road User</i>, W. Ronald Hudson, Ralph Hass, Eric Perrone (307)</p>	<p>Poster Session 4 – Foyer EFG Moderator: Freddie Salado</p> <p><i>Case Study: TXDOT experience with upgrading the Pavement Management System</i>, Magdy Mikhail & Ron Hagquist (24)</p> <p><i>Pavement Management Systems for Canadian Low Volume Roads</i>, Donaldson MacLeod, Susan Tighe & Marta Juhasz (40)</p> <p><i>Hardening Airport Pavements: A Sustainable Pavement Preservation Tool</i>, Douglas Gransberg & Dominique Pittenger (21)</p> <p><i>Optimal Budget Allocation System for Airport Pavement Rehabilitation in Japan</i>, Yoshitaka Hachiya & Masahiro Kanno (42)</p> <p><i>Comprehensive Evaluation of Airfield and Highway Pavement Surface Based on 1mm 3D Data</i>, Joshua Li, Kelvin Wang, Guangwei Yang & Wenting Luo (288)</p> <p><i>A Journey Through Nine ICMPA's</i>, Ralph Hass (invited)</p>
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12:00 – 13:30

Lunch*

*Please make sure to vacate Edison ABC, D, and EFG between 12pm and 12:30pm. Seating will resume in Edison Ballroom at 12:30pm.

Lunch Stations: Foyer DABC

Seating*: Edison Ballroom
Additional Seating: Banneker, Wright

Thursday, May 21, 2015 *continued*

13:30 – 15:00	25. Natural Disasters and Resilience Moderator: Judith Corley-Lay <i>Impacts of Energy Development on Texas Road</i> , Zheng Li & Magdy Mikhail (53) <i>Determining Post-Earthquake Pavement Requirements for Christchurch, New Zealand</i> , Sean Rainsford & Andrew Crofts (76) <i>Recovering from the 2010 Nashville Flood: Pavement Management as a Tool in Long Term Disaster Recovery</i> , Donald Reid & Jacob Walter (39)	<i>Edison Ballroom</i>
15:00 – 15:30	Coffee Break	<i>Exhibit Area - Foyer DABC</i>
15:30 – 17:00	Plenary Session 3 Moderator: Judith Corley-Lay Keynote Speech, Andre Molenaar Sustainable and Durable Design and Construction of Pavement Assets Theme Report & Awards Closure	<i>Edison Ballroom</i>
17:30 – 19:30	TRB AFD10(3) Pavement Management Systems International Conferences Subcommittee Meeting *Invitation only*	<i>Banneker</i>

Friday, May 22, 2015

8:00 – 14:00	Transportation Pooled Fund (TPF) 5(282) – Demonstration of Network-Level Structural Evaluation with a Traffic Speed Deflectometer technical Advisory Committee Meeting	<i>Banneker</i>
9:00 – 17:00	11th Annual Inter-University Infrastructure Management Symposium (AISIM)	<i>Wright</i>
08:30-13:00	International Study of Road Asset Management and Models (ISRAMM) Public session to discuss key needs and priorities for the development of the next generation of methodologies and models for road asset management. <i>*Sign-up sheet located at the registration desk. Space is limited and will be given on a first-come, first-serve basis.</i>	World Bank <i>1818 H Street, NW Washington, DC</i>
14:00 – 17:00	ISRAMM Closed Meeting *Invitation Only*	World Bank

MONDAY, MAY 18

7:00 - 7:30
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Registration		
Inventor's Foyer	Tutorial 1 Introduction to Pavement Management Edison ABC	Tutorial 2 Public-Private Partnership Tools Edison EFG
Lunch On your own*		
Tutorial 3 Implementation of MAP-21 Edison ABC		Tutorial 4 Pavement Management in Developing Countries Edison EFG
Welcome Reception (Ice Breaker)		
Carlyle Club 2054 Ballenger Avenue		

Registration	Exhibits	Lunch*
Inventor's Foyer	Foyer DABC	Foyer DABC
		1. Innovation Edison ABC
		4. Airports I Edison ABC
Speed Networking Event Young Professionals and Students Wright		

THURSDAY, MAY 21

7:00 - 7:30
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19:00 - 19:30

				TRB AFD00 (1) Sustainable Pavements Subcommittee Banneker	
	Breakfast Foyer DABC				
	19. Other Data Collection Issues Edison ABC	20. PMS Implementation Edison D	21. Low Volume & Unsealed Roads Edison EFG		
	Break Foyer DABC				Poster Session 4
	22. Performance Based Contracts Edison ABC	23. Pavement Mgmt. Maintenanc & Applied PMS Edison D	24. Topics in PM Edison EFG	Foyer EFG	
Exhibits	Lunch* Foyer DABC				
Foyer DABC	*Please make sure to vacate Edison Ballroom between 12pm and 12:20pm. Seating will resume in Edison ABC, D, and EFG at 12:20pm.				
	25. Natural Disasters and Resilience Edison Ballroom				
	Break Foyer DABC				
	Plenary Session 3 Edison Ballroom				
	TRB AFD10(3) Pavement Management Systems International Conferences Subcommittee Meeting				
	Invitation Only Banneker				

Transportation Pooled Fund (TPF) 5(282) - Demonstration of Network-Level Structural Evaluation with a Traffic Speed Deflectometer Technical Advisory Committee Meeting		
Banneker		

TUESDAY, MAY 19

Continental Breakfast Foyer DABC		TRB AFD10 Pavement Management Systems Committee Meeting Banneker
Plenary Session 1 Edison Ballroom		
Break (Foyer DABC)		
Plenary Session 2 Edison Ballroom		
*Please make sure to vacate Edison Ballroom between 12pm and 12:30pm. Seating will resume in ABC, D, and EFG at 12:30.		Alexandria CVB Information Desk Inventor's Foyer Registration for optional tours available
2. PMS & Urban Case Studies Edison D	3. Policy & Funding Edison EFG	Poster Session I Foyer EFG
Break (Foyer DABC)		
5. Performance Prediction I Edison D	6. Sustainability Edison EFG	

IRF Asset Management Committee Meeting Banneker	Pooled-Fund 5(268) National Sustainable Pavement Consortium Technical Advisory Committee Meeting Bell
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FRIDAY, MAY 22

11th Annual Inter-University Infrastructure Management Symposium (AISIM) Wright	<p>International Study of Road Asset Management and Models (ISRMM)</p> <p><i>World Bank</i> 1818 H Street, NW Washington, DC</p> <p>*Transportation is not provided. Please sign-up at the registration desk.</p>
	<p>ISRMM Closed Meeting <i>*Invitation Only*</i></p> <p><i>World Bank</i> 1818 H Street, NW Washington, DC</p>

WEDNESDAY, MAY 20

Continental Breakfast Foyer DABC			
Registration	7. Cracking & IRI Measurements Edison ABC	8. New Systems & Software Edison D	9. Performance Prediction II Edison EFG
Inventor's Foyer	Break (Foyer DABC)		Poster Session 2 Foyer EFG
	10. Structural Evaluation Edison ABC	11. Airports II Edison D	12. Decision Making I Edison EFG
Exhibits Foyer DABC	Lunch Foyer DABC Seating in Edison Ballroom		
	13. Skid, Safety & Texture Edison ABC	14. Decision Making II Edison D	15. Data Quality & Accountability Edison EFG
	Break (Foyer DABC)		Poster Session 3 IMCPA 9 Challenge Foyer EFG
	16. Data Quality Edison ABC	17. Preservation Edison D	18. Performance Monitoring, Reporting & Visualization Edison EFG

Innovation Themed Gala Dinner

US Patent and Trademark Office (USPTO)
Mason Building, Lower Atrium and Auditorium
600 Dulany Street





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