AAPT Annual Meeting Program  
Ft. Worth, TX

SUNDAY MARCH 3, 2019
2:00 – 5:00 PM
AAPT/ISAP Global Forum: Impacts of Climate Change on Asphalt Pavements  
(Kamilla Vasconcelos and Jean-Pascal Planche, presiding)

Boosting Pavement Resilience  
Heather Dylla, FHWA

Planning for Uncertainty in a Changing Climate  
Katharine Hayhoe, Texas Tech University

Resilient Pavements in Australia  
Melissa Lyons, ARRB

Impacts of Climate-Change on Asphalt Pavement Maintenance and Rehabilitation Decisions using Life Cycle Assessment  
Katie Haslett, Eshan V. Dave; University of New Hampshire

Development of an Asphalt Binder LCA for North America  
Ron Corun, Associated Asphalt

5:30 – 7:00 PM  
Icebreaker Reception
MONDAY MARCH 4, 2019

7:00 – 8:00 AM
**Newer Members Breakfast** (Jenna Bowers, presiding)
for AAPT members with less than 5 years of membership

8:00 – 9:30 AM
94th **Annual Business Meeting** (Audrey Copeland, presiding)

9:45-11:45 AM
**Leading Edge Workshop: Automation in the Paving Industry** (Phil Blankenship, presiding)

**3-D Paving: Advances and Limitations**
Laikram Narsingh, Wirtgen America

**Automation in Testing from the Lab to the Field**
Stacey Glidden, Payne and Dolan

11:45 AM – 1:15 PM
**Authors/Presenters Lunch**
for 2019 authors/presenters including Leading Edge Workshop, Symposium, and Global Forum presenters

11:45 AM – 1:15 PM
**No-Host Lunch at Flying Saucer Restaurant** (Courtney Rice, NMC contact)
an opportunity for attendees – particularly newer meeting attendees – to join a group for a meal and fellowship

1:15 – 3:00 PM
**Technical Session 1** (Gaylon Baumgardner, presiding with Thomas Ludlum, moderating)

**Internal Restraint Damage Mechanism for Age-Induced Pavement Surface Distresses: Block Cracking and Raveling**
Michael D. Elwardany\(^a\), Gayle King\(^b\), Jean-Pascal Planche\(^c\), Carolina Rodezno\(^d\), Donald Christensen\(^d\), Ray S. Fertig III\(^e\), Kyle Kuhn\(^e\), and Faisal Bhuiyan\(^e\)

\(^a\) Western Research Institute
\(^b\) GHK, Inc.
\(^c\) National Center for Asphalt Technology
\(^d\) Advanced Asphalt Technologies
\(^e\) University of Wyoming
Analysis of Double Edge Notched Tension Test and Multiple Stress Creep Recovery Test Ability to Predict HMA Fatigue Performance
Mike Aurilio\textsuperscript{a}, Ali Qabur\textsuperscript{b}, Peter Mikhailenko\textsuperscript{b}, and Hassan Baaj\textsuperscript{b}
\textsuperscript{a} Yellowline Asphalt Products Ltd.
\textsuperscript{b} University of Waterloo

Evaluation of Newly Developed Performance Grading Systems for Emulsion Residues
Andrew Hanz\textsuperscript{a}, R. Michael Anderson\textsuperscript{b}, Codrin Daranga\textsuperscript{a}, Brett Lambden\textsuperscript{d}, and Mary Ryan\textsuperscript{a}
\textsuperscript{a} MTE Services Inc.
\textsuperscript{b} Asphalt Institute
\textsuperscript{c} Paragon Technical Services
\textsuperscript{d} Husky Energy

3:00 – 5:00 PM
Student Poster Session (Nima Roohi, presiding)

Poster 1 Regional Calibration of Pavement ME Design for Flexible Pavements in Oklahoma
Mahmood Tabesh, Texas A&M University

Poster 2 Field and Laboratory Investigation of The Constructability of Asphalt Emulsion Cold In-Place Recycling
Sadie (Smith) Casillas, University of Arkansas

Poster 3 Performance Evaluation and Economic Analysis of Asphalt Mixtures with High RAP Contents and Recycling Agents
Fawaz Kaseer, Texas A&M University

Poster 4 Comparison of Laboratory Performance Tests with In-situ Performance Data for Reflective Cracking Evaluation
Katie Haslett, University of New Hampshire

Poster 5 Quantitative Measurement of Tackiness and Development of a Numerical Damage Model for Tackiness of Trackless Tack Coat
Ah Young Seo, Texas A&M University

Poster 6 Development of a Fatigue Failure Criterion for Asphalt Mixtures Using Damage Growth Rate from Simplified-Viscoelastic Continuum Damage Theory
Rasool Nemati, University of New Hampshire

Poster 7 Effect of Preservation Treatments on Pavement Structural Performance
Md Rahman, National Center for Asphalt Technology (NCAT) at Auburn University

Poster 8 Towards Implementation of GPR for Continuous Density Measurement of Hot Mix Asphalt Construction
Bryan T. Wilson, Texas A&M University
Poster 9  Exploring the Compactability and Workability of RAP  
Elizabeth Poblete, University of Arkansas

Poster 10  Evaluation of Semi-Circular Bend [SC(B)] Geometry’s Properties in Asphalt Concrete  
Airam Morales, University of Arkansas

Poster 11  Simulation of the Aging Processes and Investigation on the Aging Property of HCPMA in Porous Pavement  
Peng Lin, Tongji University

Poster 12  Forensic investigation of cold in place recycled pavements using Falling weight deflectometer data  
Irvin Pinto, Iowa State University

Poster 13  Evaluation of Cold Recycled Asphalt Mixture Treated with Portland Cement for Sustainable Transportation Infrastructure  
Masoud Faramarzi, University of Rhode Island

6:00 – 9:00 PM  
Monday Night Social (OPTIONAL)
TUESDAY MARCH 5, 2019
6:00 – 7:00 AM
Pavement Inspection Tour
Outdoor running/walking group excursion

8:00 – 11:45 AM
Technical Session 2 (Phil Blankenship, presiding with Todd Thomas, moderating)

Fifteen Years of Warm-Mix Asphalt in the United States: What are the Overall Implications of Varying Warm-Mix Technologies on High, Intermediate, and Low Temperature Behaviors?
Carl V Pittman\textsuperscript{a}, Rabeea W Bazuhair\textsuperscript{a}, Isaac L Howard\textsuperscript{a}, and James Michael Hemsley, Jr.\textsuperscript{b}
\textsuperscript{a} Mississippi State University
\textsuperscript{b} Paragon Technical Services

Warm Mix Asphalt (WMA) for Airport Pavements – Relating Laboratory Test Results to Performance Under Accelerated Pavement Testing (APT)
Hasan Kazmee\textsuperscript{a}, Navneet Garg\textsuperscript{a}, Christopher Tomlinson\textsuperscript{b} and Lia Ricalde\textsuperscript{c}
\textsuperscript{a} Federal Aviation Administration, William J. Hughes Technical Center,
\textsuperscript{b} Applied Research Associates, Inc.,
\textsuperscript{c} University of Akron

State of Practice on the Use of Tack Coats for Micro-Surfacing Applications: A Survey
Munir Nazzal\textsuperscript{a}, Louay Mohammad\textsuperscript{b}, Ala Abbas\textsuperscript{c}, Sang Soo Kim\textsuperscript{c}, Eric Biehl\textsuperscript{d}, and Perry Riccardi\textsuperscript{d}
\textsuperscript{a} Ohio University
\textsuperscript{b} Louisiana State University/LTRC
\textsuperscript{c} University of Akron
\textsuperscript{d} Ohio DOT

Superpave\textsuperscript{5}: Relationship of In-Place Air Voids and Asphalt Binder Aging
Gerald Huber\textsuperscript{a}, Jason Wielinski\textsuperscript{b}, Christopher Campbell\textsuperscript{a}, Jim Padgett\textsuperscript{b}, Geoffrey Rowe\textsuperscript{c}, Matt Beeson\textsuperscript{d}, and Seong-Hwan Cho\textsuperscript{d}
\textsuperscript{a} Heritage Research Group
\textsuperscript{b} Walsh and Kelly
\textsuperscript{c} Abatech
\textsuperscript{d} Indiana Department of Transportation

Estimating Frictional Properties of Compacted Asphalt Mixtures
Rebecca S. McDaniel\textsuperscript{a}
\textsuperscript{a} Purdue University

Evaluation of Increased Use of RAP with Soft Husky Asphalt Binder
John D’Angelo\textsuperscript{a}, Raj Dongre\textsuperscript{b}, and Brett Lambden\textsuperscript{c}
\textsuperscript{a} D’Angelo Consulting
\textsuperscript{b} Dongré Laboratory Services
\textsuperscript{c} Husky Energy
BY TITLE ONLY
Performance Evaluation for Cold In-Place Recycling with Different Binders, Curing Processes and Compaction Levels
Ahmed Saidi\textsuperscript{a}, Zhaoxing Xie\textsuperscript{a}, Ayman Ali\textsuperscript{a}, and Yusuf Mehta\textsuperscript{a}
\textsuperscript{a} Rowan University

11:45 AM – 1:15 PM
Past Presidents Council (Gaylon Baumgardner)

11:45 AM – 1:15 PM
No-Host Lunch at Little Red Wasp Restaurant (Ben Cox, NMC contact)
an opportunity for attendees – particularly newer meeting attendees – to join a group for a meal and fellowship

1:15 – 1:50 PM
Technical Session 3 (Jo Sias and Dave Timm, presiding with Matthew Corrigan, moderating)

Developing a Performance-Related Specification Program for Asphalt Pavements
Mirkat Oshone\textsuperscript{a}, Jo E. Sias\textsuperscript{a}, Leslie Myers McCarthy\textsuperscript{b}, David J. Mensching\textsuperscript{c}, Eshan V. Dave\textsuperscript{a}
\textsuperscript{a} Department of Civil and Environmental Engineering, University of New Hampshire
\textsuperscript{b} Department of Civil and Environmental Engineering, Villanova University
\textsuperscript{c} Federal Highway Administration, US DOT

2:00 – 5:00 PM
Symposium: Implementation and Use of Mechanistic-Empirical Pavement Design (Jo Sias and Dave Timm, presiding with Kevin Hall, moderating)

Pavement ME update
Harold Von Quintus, Applied Research Associates

CalME
John Harvey, University of California-Davis

Virginia’s Experience with MEPDG Implementation
Harikrishnan Nair\textsuperscript{a}, Affan Habib\textsuperscript{b}, Bryan Smith\textsuperscript{b}, and Girum Merine\textsuperscript{b}
\textsuperscript{a} Virginia Transportation Research Council (VTRC)
\textsuperscript{b} Virginia Department of Transportation

Implementation of Texas Mechanistic-Empirical Flexible Pavement Design System
Sheng Hu\textsuperscript{a}, Asif Rahman\textsuperscript{a}, Jun Zhang\textsuperscript{a}, Fujie Zhou\textsuperscript{a}, Tom Scullion\textsuperscript{a}, and Enad Mahmoud\textsuperscript{b}
\textsuperscript{a} Texas A&M Transportation Institute
\textsuperscript{b} Texas Department of Transportation
Australian Perspective
Eric Denneman, Australian Asphalt Pavement Association

China Perpetual Pavement Approach
Gerry Huber, Heritage Research Group

6:00 – 7:00 PM
Social Hour

7:00 – 9:00 PM
Awards Dinner (Audrey Copeland, presiding)

9:00 – 10:30 PM
After Dinner Social
WEDNESDAY MARCH 6, 2019
8:00 – 11:45 AM
Technical Session 4 (Adam Hand, presiding with Adam Taylor, moderating)

Balanced Mix Design Sensitivity to Production Tolerance Limits and Binder Source
Walaa Mogawera, Alexander Jordan Austerman, Kevin D Stuart, Fujie Zhou, and Pedro Romero

Balanced Design of Asphalt Mixes with Reclaimed Asphalt Pavement and Recycled Asphalt Shingle Using Binder and Mixture Performance Tests
Xuan Chen, Mansour Solaimanian, and Scott Milander

Relationships between Mixture Fatigue Performance and Asphalt Binder Properties
Donald Christensen and Nam Tran

Impact of High Polymer Modification on the Performance Characteristics of Asphalt Mixtures
Jhony Habbouche, Elie Y. Hajj, Murugaiyah Piratheepan, and Peter E. Sebaaly

Impact of Crumb Rubber Modifier Type and Blending Temperature on Asphalt Binder and Mixture Properties
Sreelatha Balamurugan, Louay Mohammad, Moses Akentuna, William Daly, Ioan Negulescu, Samuel Cooper, III, Samuel Cooper, Jr., and Gaylon Baumgardner

Recent Advances in Ground Tire Rubber Recycling in Midwest Pavements
Punyaslok Rath, Hamed Majidifar, Behnam Jahangiri, and William Buttlar

BY TITLE ONLY
Obtaining Asphalt Binders Rheological Properties from BBR Strength Test—The Effect of Loading Rate
Tianhao Yan, Mugurel Turos, and Mihai Marasteanu

11:45 AM – 1:15 PM
No-Host Lunch at Bird Café (Jason Moore, NMC contact)
an opportunity for attendees – particularly newer meeting attendees – to join a group for a meal and fellowship
1:15 – 5:00 PM

**Technical Session 5 (Randy West, presiding with Reyhaneh Rahbar-Rastegar, moderating)**

**Component Materials Selection Guidelines and Evaluation Tools for Binder Blends and Mixtures with High Recycled Materials Content and Recycling Agents**
Amy Epps Martin\(^a\), Fawaz Kaseer\(^b\), Edith Arámbula-Mercado\(^c\), Akash Bajaj\(^d\), Jo Sias Daniel\(^e\), Elie Y Haji\(^d\), Nathan Morian\(^d\), and Chibuike Ogbo\(^e\)

\(^{a,b}\) Texas A&M University
\(^{c}\) University of New Hampshire
\(^{d}\) University of Nevada – Reno
\(^{e}\) Nevada Department of Transportation

**Evaluation and Comparison of Cracking Tests for Top-Down Cracking Resistance of Asphalt Mixtures**
Chen Chen\(^a\), Nathan Moore\(^b\), Randy West\(^a\), Fan Yin\(^b\), and Adam Taylor\(^a\)

\(^a\) NCAT

**A Machine Learning Approach for the Prediction of Fracture Energy in Asphalt Mixtures**
Hamed Majidifard\(^a\), Behnam Jahangiri\(^a\), Amir Alavi\(^a\), and William Buttlar\(^a\)

\(^a\) University of Missouri-Columbia

**Evaluating Aggregate Size Effects on Dynamic Modulus Using Gray Scale Analysis**
Sadie E Smith\(^a\), Airam M Morales\(^a\), and Andrew F Braham\(^a\)

\(^a\) University of Arkansas

**Development and Validation of an Ideal Shear Rutting Test for Asphalt Mix Design and QC/QA**
Fujie Zhou\(^a\), Bill Crockford\(^a\), Jun Zhang\(^a\), Sheng Hu\(^a\), Jon Epps\(^a\), and Lijun Sun\(^b\)

\(^{a,b}\) Texas A&M Transportation Institute
\(^b\) Tongji University

**Separating Load from Moisture Effects in Wet Hamburg Wheel-Track Test**
QuanLv\(^a\) and Hussain U. Bahia\(^b\)

\(^{a,b}\) Tongji University

\(^b\) University of Wisconsin – Madison

**Developing a Robust Modeling Approach for Pavement Performance Prediction and Optimization**
Parnian Ghasemi\(^a\), Mohamad Aslani\(^a\), Ronald Christopher Williams\(^a\), and Derrick Rollins\(^a\)

\(^a\) Iowa State University

**Development of 3-Point Bending Beam Fatigue Test System and Implementation of Viscoelastic Continuum Damage (VECD) Theory**
Aksel Seitali\(^a\) and Muhammed Emin Kutay\(^a\)

\(^a\) Michigan State University