

**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^a, Carolina Rodezno^c, 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^a, Ali Qabur^b, Peter Mikhailenko^b, and Hassan Baaj^b

^a Yellowline Asphalt Products Ltd.

^b University of Waterloo

Evaluation of Newly Developed Performance Grading Systems for Emulsion Residues

Andrew Hanz^a, R. Michael Anderson^b, Codrin Daranga^c, Brett Lambden^d, and Mary Ryan^a

^a MTE Services Inc.

^b Asphalt Institute

^c Paragon Technical Services

^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^a, Rabeea W Bazuhair^a, Isaac L Howard^a, and James Michael Hemsley, Jr.^b

^a Mississippi State University

^b Paragon Technical Services

Warm Mix Asphalt (WMA) for Airport Pavements – Relating Laboratory Test Results to Performance Under Accelerated Pavement Testing (APT)

Hasan Kazmee^b, Navneet Garg^a, Christopher Tomlinson^b and Lia Ricalde^b

^a Federal Aviation Administration, William J. Hughes Technical Center,

^b Applied Research Associates, Inc.,

State of Practice on the Use of Tack Coats for Micro-Surfacing Applications: A Survey

Munir Nazzal^a, Louay Mohammad^b, Ala Abbas^c, Sang Soo Kim^a, Eric Biehl^d, and Perry Riccardi^d

^a Ohio University

^b Louisiana State University/LTRC

^c University of Akron

^d Ohio DOT

Superpave5: Relationship of In-Place Air Voids and Asphalt Binder Aging

Gerald Huber^a, Jason Wielinski^a, Christopher Campbell^a, Jim Padgett^b, Geoffrey Rowe^c, Matt Beeson^d, and Seong-Hwan Cho^d

^a Heritage Research Group

^b Walsh and Kelly

^c Abatech

^d Indiana Department of Transportation

Estimating Frictional Properties of Compacted Asphalt Mixtures

Rebecca S. McDaniel^a

^a Purdue University

Evaluation of Increased Use of RAP with Soft Husky Asphalt Binder

John D'Angelo^a, Raj Dongre^b, and Brett Lambden^c

^a D'Angelo Consulting

^b Dongré Laboratory Services

^c Husky Energy

BY TITLE ONLY

Performance Evaluation for Cold In-Place Recycling with Different Binders, Curing Processes and Compaction Levels

Ahmed Saidi^a, Zhaoxing Xie^a, Ayman Ali^a, and Yusuf Mehta^a

^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^a, Jo E. Sias^a, Leslie Myers McCarthy^b, David J. Mensching^c, Eshan V. Dave^a

^a Department of Civil and Environmental Engineering, University of New Hampshire

^b Department of Civil and Environmental Engineering, Villanova University

^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^a, Affan Habib^b, Bryan Smith^b, and Girum Merine^b

^a Virginia Transportation Research Council (VTRC)

^b Virginia Department of Transportation

Implementation of Texas Mechanistic-Empirical Flexible Pavement Design System

Sheng Hu^a, Asif Rahman^a, Jun Zhang^a, Fujie Zhou^a, Tom Scullion^a, and Enad Mahmoud^b

^a Texas A&M Transportation Institute

^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 Mogawer^a, Alexander Jordan Austerman^a, Kevin D Stuart^b, Fujie Zhou^c, and Pedro Romero^d

^a HSRC/University of Massachusetts

^b Consultant

^c Texas A&M Transportation Institute

^d University of Utah

Balanced Design of Asphalt Mixes with Reclaimed Asphalt Pavement and Recycled Asphalt Shingle Using Binder and Mixture Performance Tests

Xuan Chen^a, Mansour Solaimanian^a, and Scott Milander^a

^a Pennsylvania State University

Relationships between Mixture Fatigue Performance and Asphalt Binder Properties

Donald Christensen^a and Nam Tran^b

^a Advanced Asphalt Technologies, LLC

^b National Center for Asphalt Technology

Impact of High Polymer Modification on the Performance Characteristics of Asphalt Mixtures

Jhony Habbouche^a, Elie Y. Hajj^a, Murugaiyah Piratheepan^a, and Peter E. Sebaaly^a

^a University of Nevada Reno (UNR)

Impact of Crumb Rubber Modifier Type and Blending Temperature on Asphalt Binder and Mixture Properties

Sreelatha Balamurugan^a, Louay Mohammad^a, Moses Akentuna^a, William Daly^a, Ioan Negulescu^a, Samuel Cooper, III^b, Samuel Cooper, Jr.^b, and Gaylon Baumgardner^c

^a Louisiana State University

^b Louisiana Transportation Research Center

^c Paragon Technical Services

Recent Advances in Ground Tire Rubber Recycling in Midwest Pavements

Punyaslok Rath^a, Hamed Majidifard^a, Behnam Jahangiri^a, and William Buttlar^a

^a University of Missouri, Columbia

BY TITLE ONLY

Obtaining Asphalt Binders Rheological Properties from BBR Strength Test—The Effect of Loading Rate

Tianhao Yan^a, Mugurel Turoș^a, and Mihai Marasteanu^a

^a University of Minnesota

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^b, Akash Bajaj^b, Jo Sias Daniel^c, Elie Y Hajj^d, Nathan Morian^e, and Chibuike Ogbo^c

^a Texas A&M University

^b Texas A&M Transportation Institute

^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^a, Randy West^a, Fan Yin^a, 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 Texas A&M Transportation Institute

^b Tongji University

Separating Load from Moisture Effects in Wet Hamburg Wheel-Track Test

Quan Lv^a and Hussain U. Bahia^b

^a Tongji University

^b University of Wisconsin – Madison

BY TITLE ONLY

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

BY TITLE ONLY

Development of 3-Point Bending Beam Fatigue Test System and Implementation of Viscoelastic Continuum Damage (VECD) Theory

Aksel Seitllari^a and Muhammed Emin Kutay^a

^a Michigan State University