21st Annual
CONFERENCE & WORKSHOP

MODIFIERS
BRING ASPHALT TO Life!

February 10 – 13, 2020
Rancho Mirage, California
Conference Sponsors

Our thanks to the following companies who have provided sponsorship funding for the conference:

And many thanks to the AMAP support team for making this Conference possible:

John Casola, AMAP Conference Program Chairman  
Cindy Prewett and ECF, Inc., Accounting & Finance  
Hugon Art & Design, Program Graphics & Design  
Katrina Tohle and Pegasus Planning, Event Planning & Organization  
Brian Hirt, Maina Tran and CTC & Associates, Communications & Promotion
AMAP will promote the use of modifiers and technologies that advance the highest standards of quality and performance in engineered asphalt products used in pavements, roofing and other industrial applications.

AMAP will inform and educate owners, contractors and specifiers about the improved performance and economic benefits of modified asphalt materials and technologies.

**AS AN ASSOCIATION WE SHALL:**

Be a consolidated voice on issues pertaining to modified asphalt that will educate and advance the industry.

Encourage the use of high-performance modified asphalt systems.

Evaluate and communicate advancements in modified asphalt technologies.

Promote standardization of asphalt materials specifications and test methods.
Welcome to the new decade. Is it possible the coming years will be a 5G version of the roaring twenties of a century ago? In that distant decade, America saw the introduction and boom of talking pictures to entertain rapidly growing urban populations, mass production of automobiles and other durable goods to support the consumerism of a growing middle class, speak-easies to thwart the decade-long booze ban, penicillin and other antibiotics to support already positive trends in life expectancy, and many other changes to our economic, social, and technological landscape. Today, a hundred years on, the USA is enjoying the longest bull market in the history of the US economy. The rate of social and cultural change appears to be accelerating as new generations enter the US workforce and baby boomers retire. Streaming video, pilotless vehicles, the development of gene editing technologies to cure humanities’ most dreaded diseases by altering a cell’s very genomes, and sustainable breakthroughs in every other industrial sector from energy generation to pollution abatement are a few of the changes that make these Twenties seem so promising.

Our asphalt paving industry isn’t a passive bystander to the sea changes of the 21st century. Our industry continues to explore the use of new materials to improve asphalt quality and performance. We are now engaged nationwide in the introduction and refinement of new mixture design protocols to ensure our pavements achieve maximum durability and service life. With each passing day, we see electronics technology and wireless communication tools being used to dramatically improve our construction practices and quality control protocols. And many parties in all sectors of the asphalt paving supply chain are working tirelessly to correct one of the century-old challenges to the sustainable construction of perpetual pavements, such as adversarial delivery systems like low-bid.

At our AMAP conference this year, you will hear some of our nation’s leading technologists discuss their work to bring us new materials to improve asphalt durability, new construction methods and QC protocols for extended pavement life, better recycling technologies for enhanced sustainability, and different angles on how we fund, maintain, preserve, and expand the capacity of the highway infrastructure so crucial to our country’s economic prosperity.

Thank you for coming and supporting the mission of AMAP.

Sincerely,

Dr. Everett Crews
2020 AMAP President
Welcome to California and the 21st Annual AMAP Conference & Workshop. It is only fitting that California is the site of this event as California has 394,383 miles of highway, second only to Texas. And, on those highways, nearly 15 million registered vehicles travel each day – more than double the number of vehicles found in any other state. While most drivers may not realize it, high performance modified asphalt products play an essential role in life here in California and elsewhere.

Thanks to modification, asphalt quietly does its job. Be it in highways, runways, walkways, roofing materials or the products that maintain them, modifiers make asphalt quieter, safer, longer lasting and more cost effective. Each year, AMAP convenes this Conference as a catalyst that brings forth innovations in materials, technologies and best practices that are needed to meet the ever changing and more stringent demands of our customers.

As our Keynote Speakers will emphasize, change is a given today and is occurring more rapidly than ever before. Success weighs heavily on our ability to recognize and manage change. By the end of this conference, I expect you will be better prepared to meet the challenges of change with practical information and ideas.

Thank you for coming and I look forward to meeting you all.

Jim Sattler, Executive Director
Association of Modified Asphalt Producers

Join me in welcoming our Newest Members

PRODUCER MEMBERS

Imperial Oil
S & Y Terminals LLC
United Asphalt
MGQ

SUPPLIER MEMBERS

Sinopec
Stepan
Mitsubishi
Tech X

ASSOCIATE MEMBERS

Dalworth
NETZSCHE
Livent

ASSOCIATION & ACADEMIC AFFILIATES

Texas A&M University
University of Tennessee
South Dakota State University
UMass Dartmouth
Battelle
ASFALGUA
UNO

Executive Director of Association of Modified Asphalt Producers
A Brief History of Association of Modified Asphalt Producers

In 1997 there were only a handful of modified asphalt producers in the United States. Most were small entrepreneurial companies seeking to insert themselves into what they saw as the future asphalt binder market.

Beyond some academics, DOT officials, and other SHRP researchers, little was known about the superior performance of Superpave using modified asphalt binders. The Strategic Highway Research Program was still in its infancy, and many states and agencies were just beginning to accept the new rheology testing and Superpave program.

Bob Berkley knew a few of the existing producers, and thinking that in order for this new industry to grow, it would take a combined effort from all the producers to educate consumers, transportation departments, and other agencies about the dramatic improvements derived from following the Superpave system and utilizing modified binders in their paving programs.

The subject was broached one winter’s night in Washington, DC at the Transportation Research Board meeting, as snow accumulated to 24 inches outside the hotel. It was decided in a cozy bar that someone should follow up on that idea.

In the Summer of 1998, Berkley called a group of producers he knew and suggested they all join together to form an industry association dedicated to growing the modified binder industry.

On December 1, 1998, a group came together in a hotel in St. Louis and over a two-day period formed AMAP, the Association of Modified Asphalt Producers.

Berkley was elected president, a role he filled for two years. The AMAP office was temporarily housed in the Polymer Asphalt Products office in St. Louis, with a member of the company’s staff working part time as bookkeeper and secretary.

The first annual meeting was held at the Hyatt Union Station with John Casola heading the agenda committee, a position he has held admirably every year since. Bob McGennis was elected president for 2001.

Those attending the first meeting were:
- Bob Berkley, Polymer Asphalt Products
- Chris Blake, Idaho Asphalt
- John Baumgartner, Bit Mat
- Don Buford, Blacklidge Emulsions
- John Casola, Bohlin Instruments
- Dan England, EniChem
- Bob McGennis, Navaho Western Asphalt
- Bobbi Means, Shell Oil
- Alden Bailey, Jebro, Inc.
- John Chippy, Jr., Texas Fuel and Refining
- Henry Romagosa, TexPar Energy
- Jim Sattler, Momentum Technologies
- Bob Rivers, Huntway Petroleum
AMAP periodically honors a Member who has contributed outstanding work on behalf of the Association. By tradition, this person is selected by the Executive Director. This award is presented at the annual Conference. Recipients of this award have included:

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<thead>
<tr>
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<td>Bob Berkley</td>
<td>Polymer Asphalt Products</td>
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Person of the Year Award

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<td>John Casola</td>
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<td>Darryl Young</td>
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<td>2015</td>
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<tr>
<td>2017</td>
<td>Delmar Salomon</td>
<td>PMA Technology</td>
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<tr>
<td>2019</td>
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Past AMAP Presidents

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<td>2009–2010</td>
<td>Gaylon Baumgardner</td>
<td>Paragon Technical Services</td>
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<tr>
<td>2011–2012</td>
<td>Ron Corun</td>
<td>NuStar Energy Refining</td>
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<td>2013–2014</td>
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Association of Modified Asphalt Producers

Modified Asphalt Hall of Fame Lifetime Achievement Award

The asphalt paving industry can be proud of the advances it has made in providing economical, long-life highway infrastructure. Each year, AMAP selects an individual it believes had contributed a significant body of work to the betterment of the asphalt industry. AMAP honors this individual with induction into the AMAP Asphalt Hall of Fame and is presented with its Lifetime Achievement Award. The Honor Roll of recipients includes:

<table>
<thead>
<tr>
<th>Year</th>
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<tbody>
<tr>
<td>2008</td>
<td>Thomas Kennedy, PhD.</td>
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<td>2009</td>
<td>David Jones, IV, PhD.</td>
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<td>2010</td>
<td>Byron Ruth, PhD.</td>
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<td>2011</td>
<td>Jean-Pascal Plancher, PhD.</td>
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Executive Committee

President – Everett Crews, Ingevity
Vice President – John Murphy, Ultrapave
Secretary – Ranjini Murthy, Stepan Chemical
Treasurer – Al Meitl, ECF Incorporated
AMAP Executive Director – Jim Sattler

Board Members

PRODUCER MEMBERS
- Jonathan Davis 2022 Owens Corning
- Bob Forfylow 2021 LaFarge Asphalt Technologies
- Ben Scarcella 2022 The Gorman Group
- Kevin Hardin 2022 Vecenergy
- Sam Huddleston 2021 Marathon Petroleum
- Kevin McGlumphy 2022 Associated Asphalt

SUPPLIER MEMBERS
- Everett Crews 2021 Ingevity
- Jesse Davidson 2022 Innophos
- Dan England 2022 LCY Elastomers
- Terry Hegner 2022 Cook Chemical
- Philip Kayal 2020 Rogitex Inc.
- John Murphy 2020 Ultrapave Corporation
- Ranjini Murthy 2020 Stepan Chemical

ASSOCIATE MEMBERS
- John Casola 2022 Malvern Panalytical
- Ken Grzybowski 2021 PRI Asphalt Technologies
- Delmar Salomon 2020 Pavement Preservation Systems LLC

AMAP Board of Directors

2020 AMAP Board of Directors

Modifiers Bring Asphalt to Life! | www.ModifiedAsphalt.org
Keynote Address: Creating Champions of Change & Culture of Civility Through Courage, Commitment, Character, Compassion and Conversation

The pace of change is doubling every year. So adapting to change is no longer an option, it is a necessity. Unfortunately, it’s what few leaders know how to do… until now. Our Leadership America program is focused on instilling civility back into our society while creating an agile mindset for those in a position of influence. A powerful message is delivered through storytelling and sharing success secrets of sports legends and today’s most prominent leaders who demonstrate courage, commitment, character, and compassion through positive and productive conversation. It is an entertaining and insightful introduction to contemporary leadership principles while creating awareness that is crucial in today’s rapidly changing world. The message inspires a call for more agility, respect, and responsibility so that we may collectively create a more civil culture within our workplace, our communities, and in life. You won’t hear this powerful message anywhere else. Scott and Angel highlight the insights and advice from some of the world’s most influential leaders, as also shared on their weekly radio/podcast program, “Leading the Way Today.”

MANAGING CHANGE SEMINAR

Tuesday, February 11, 2020  9:00 am – 2:30 pm, Desert Suite 2
Open to all Conference attendees.
Don’t miss this professional development seminar lead by our keynote speakers.
SESSION 1
Modified Asphalt: Paving the Way to the Future

- **What’s Happening From the Contractor’s Perspective**
  - Amy Miller
    - *Director, Asphalt Paving Alliance*
  - Change is occurring in the asphalt industry workforce, with women playing an ever increasing role. Ms. Miller will discuss the dynamics of this change and APA’s creation of the Women of Asphalt organization. This group plays an important role in filling workforce needs and addresses worker retention in the asphalt industry.

- **Asphalt: The Next 100 Years**
  - Mike Anderson
    - *Technical Director, Asphalt Institute*
  - The Asphalt Institute celebrated its 100th anniversary in 2019, prompting a look back at the changes in the asphalt industry from 1919 through today. We’ve moved into the next 100 years with a look at what the current issues are for asphalt binders and what we foresee as future challenges and opportunities.

- **Looking Into the Future – 2020 Surface Transportation Reauthorization Activities and Their Impact on Pavement Preservation**
  - Jim Moulthrop
    - *Foundation for Pavement Preservation (FP2)*
  - The five-year highway reauthorization bill which funds surface infrastructure expires September 30, 2020. Congress has begun the long process of reauthorization for this bill. Hear what is being proposed, Congress’ current priorities, how the bill will be funded, and some of the cutting-edge concepts that are being considered for the next transportation legislation that will set policy for the next several years.

- **Living Life Riverside - A Humorous Account of a Midlife Course Change**
  - Richard Paradise
    - *Asphalt Executive, Hotelier, and Author*
  - After many years in the asphalt industry, Richard decided to make a career change. In a luncheon talk, Richard will present a humorous discussion of the ups and downs of being a hotel owner in the middle of the Rockies.

SESSION 2
How the Market Views the Future

- **Building Roads in the Wild West**
  - Brandon Milar
    - *Technical Director, California Asphalt Paving Association*
  - Mr. Milar will provide insight into the challenges and opportunities facing the asphalt pavement industry in California during the new decade. He will share CalAPA’s strategy to continue the success of asphalt pavements in a dynamic environment.

- **Refinery Strategies to Produce Asphalt & Future Trends**
  - Dr. Pavel Kriz
    - *Americas Asphalt Technical Leader, ExxonMobil/Imperial Oil*
  - The refining industry has experienced significant changes in recent years. Carbon neutrality, electric cars, and ever decreasing sulfur content limits for liquid fuels are some of the factors changing the landscape for refiners. As asphalt is an important quality product refineries manufacture, it is important to understand what choices refiners are and will be making in this environment to ensure high quality asphalt supply going forward.

- **Are Recycled Plastics in the Future of Asphalt Pavements?**
  - Dr. Buzz Powell
    - *NCAT Assistant Director, Auburn University*
  - As part of a worldwide effort to address the global challenge of waste plastics accumulation, NCAT researchers have been working on studies involving chemical characterization and performance testing of asphalt binders and mixtures modified with recycled polyethene (rPE) materials. Dr. Powell will discuss the focus and key results of NCAT’s experiments to date as well as their future research efforts devoted to demonstrating that adding recycled plastics has no negative impact on the long-term performance, life-cycle costs, environmental impact, and recyclability of asphalt pavements or any unintended consequences on the health and safety of plant operators and construction crews.
**Taking Polymer Modification to the Next Level**

Dr. Peter E. Sebaaly, P.E.
University of Nevada, Reno

In a research study sponsored by the Florida Department of Transportation and conducted by the Pavement Engineering and Science Program at the University of Nevada, Reno, researchers evaluated the engineering properties and performance characteristics (i.e., resistance to rutting, fatigue cracking, top-down cracking, and reflective cracking) of eight conventional polymer modified (PMA) and eight high-polymer (HP) modified asphalt mixtures. Dr. Sebaaly presents the highlights and findings of this study.

**Update on UCPRC Research on Recycled Tire Rubber in Asphalt Pavement**

Dr. John Harvey
Professor, University of California Davis

The University of California Pavement Research Center (UCPRC) has several studies underway or recently completed regarding use of recycled tire rubber in asphalt pavements. These include progress on developing tests for use in performance related specifications for asphalt rubber binders, investigation of the rutting performance of thicker gap-graded rubberized asphalt hot mix (RHMA-G) surfaces, rutting resistance of RHMA-G with different maximum aggregate sizes, use of 5 to 10 percent rubber in dense graded mixes, performance of reclaimed rubberized hot mix in new HMA, and performance of conventional RAP in RHMA-G. The results of completed studies will be presented, and the questions being investigated in the studies that are underway and why they are important will be presented. An overview of the CalME asphalt surfaced pavement software that considers rubberized and polymer-modified mixes in structural design will also be presented.

**CTC & Associates to Present Results of AMAP Asphalt Market Survey**

Brian Hirt
Managing Director, CTC & Associates

This is the second year AMAP has commissioned CTC & Associates to conduct a market survey of modified asphalt producers and transportation agencies. Over 150 companies and all state DOTs were invited to participate. Brian Hirt will present the results on producers’ input on their modified asphalt use in 2019 and 2020 as well as their thoughts on the future of the industry. Did states specify more modified projects? Don’t miss this session at Rancho Mirage to hear the results.

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**SESSION 3**

Additive Innovations

**Graphene Modification of Asphalt Binders**

Dr. Everett Crews
Director R&D Pavement Technologies, Ingevity

Graphene is a unique, single-atom-thick layer of carbon atoms arranged in a two-dimensional aromatic sheet. The transistor properties of graphene sheets earned two scientists the 2010 Nobel prize in physics. More recently, researchers have also discovered that graphene sheets can be readily dispersed in bitumen and impart beneficial properties to asphalt mixtures. This presentation provides a summary of some of the salient results of recent studies of graphene-doped asphalt in the laboratory and field.

**Binder Structure and Cracking Resistance – Findings from NCRHP Report 9-60**

Dr. Jean-Pascal Planche
Vice President – Asphalt & Petroleum Technologies, Western Research Institute

Dr. Planche will cover the highlights of this NCHRP study addressing impacts of changes in asphalt binder formulation and manufacture on pavement performance through changes in asphalt binder testing and specifications.

**Asphalt Modifiers and Rejuvenators from Coal Derived Chemicals**

Dr. Jeramie J. Adams
Program Manager for Hydrocarbons Asphalt and Petroleum Technology

As thermal coal continues to decrease as a source of electrical power, novel ways to utilize this resource are becoming a reality. The state of Wyoming, through the University of Wyoming and the School of Energy Resources, are investing in developing new materials based on Wyoming coal. While working with WRI new ways to extract coal liquids have been developed that produce very low levels of polycyclic aromatic hydrocarbon (PAHs) and these coal liquids have been chemically modified to produce asphalt additives that can enhance unaged and aged asphalt properties.
Conference Session 4

Owner/Agencies Experiences

Agency/Contractor Collaboration: Better Together

Skip Paul and Sam Cooper
Chair, AMAP DOT Advisory Board (Skip)
and Louisiana DOT (Sam)

Highlights of how Louisiana DOT has worked with the contractors and suppliers in the state to generate the current specifications.

Using the MSCR Test to Better Characterize High Polymer Asphalts

Karl Zipf
Chief Chemist, Delaware Department of Transportation

The MSCR test created an elastomeric curve (AASHTO R92) which helped characterize polymer modified asphalts. For specialty asphalts with high polymer loadings, R92 is inadequate in specifying. However, within standard MSCR test data one can better define these high polymer asphalts without redoing R92 and M332.

Modified Experience at the County Level

Van Truong
Engineer, Los Angeles County Public Work

Los Angeles County Public Works embraces a pavement preservation approach to preserve and extend the life of their road network. By using sustainable treatment approaches rather than conventional treatment methods, the county was able to significantly reduce energy consumption, greenhouse gas emissions, landfill deposition, and costs.

Evaluation of Modified Binders in Alaskan Pavements

Heidi Schaefer
Northern Region Materials Lab (NRML) Supervisor, Alaska Department of Transportation

Ms. Schaefer from Alaska DOT will present the laboratory and field evaluations of modified asphalt binders that must meet the challenges of the Alaskan climate.
The American Society of Civil Engineers reported that 5% to 25% improvement in pavement performance has the potential to yield an annual savings $1.75 to $8.75 billion. These savings can be realized and reinvested into the highway through the design and construction of durable pavements. There have been significant advancements in technology and techniques for pavement design and construction. These advancements have the potential to improve durability and performance and be cost effective. Dr. Mohammad will present tack coat best practices and its influence on pavement performance from field sites throughout the country.

Field Sections in Minnesota with Asphalt Mix Rejuvenators and Cold Recycling
Dr. Michael Vrtis
Research Project Engineer
Minnesota Department of Transportation
In this presentation, Vrtis will discuss the experimental design, construction, and preliminary results for field sections that were constructed under partnerships led by the Minnesota Department of Transportation (MnDOT). The National Road Research Alliance (NRRA) has built ten field sections in northern Minnesota using a higher than allowable RAP content with seven different rejuvenator products. In a separate partnership between MnDOT and NCAT, field sections were constructed with numerous cold recycling techniques including cold-in-place recycling, stabilized full-depth reclamation, and cold central-plant recycling.

Relation Between Flexible Pavement Layers Bonding and Durability
Dr. Louay Mohammad
Louisiana State University /LTRC
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Want to see a presentation again?
Because you have attended the AMAP Conference or Workshop you will have online video access to all of our speakers’ presentations.

Watch for an email from us with instructions on how to access them. Presentations will be available online by March 1.
Over his 50-year career, Dr. Jon A. Epps has been a tirelessly innovative researcher, authoring or co-authoring over 500 publications in fields including soils stabilization, recycling, flexible pavements design, polymer modification, warm mix asphalt, sustainable pavements, structural testing, and many others. As a distinguished professor at both Texas A&M and the University of Nevada Reno, Dr. Epps has inspired new generations of engineers and asphalt technologists to share his life-long passion for developing the practical tools and expanding the fundamental knowledge our industry needs to build longer-lasting, sustainable asphalt pavements. Just as the far-reaching results of his seminal research have directly influenced the technological course of our industry for the past five decades, his unwavering vision of constantly-improving asphalt technology provides us today with an exciting trajectory towards a transformative future.

When one considers the numerous highlights and outstanding achievements of Dr. Epps’ professional career, one is struck by the permanence of mission, steadfastness of conviction, and strength of dedication that have underpinned all his many, diverse accomplishments. Contributions on the scale of those of Dr. Epps are unique and deserving of all the accolades a thankful industry can bestow on him.

To celebrate the enduring legacy of his ongoing work, come join us please for the induction of our 2020 honoree, Dr. Jon A. Epps, during the AMAP Annual Conference and Workshop, February 11-13, 2020.
Monday, February 10, 2020

8:30 - 11:00 Board of Directors Meeting, Desert Suite 2
  Committee Meetings
12:00 - 5:00 AMAP Golf Event, Rancho Las Palmas Resort Golf Course
2:00 - 5:00 Registration open, Fiesta Foyer
6:00 - 7:30 Early Arrival Mixer, Yard House, 71800 Hwy 111

Tuesday, February 11, 2020

7:00 Registration Open, Fiesta Foyer
8:00 - 4:15 Modified Asphalt Workshop
  Track 1: Paving, Fiesta 5
  Track 2: Roofing & Advanced, Fiesta 6
  Track 3: Applications, Las Palmas F
9:00 - 2:30 Managing Change Seminar - Scott Murray and Angel Carlton, Desert Suite 2
12:00 - 1:00 Workshop Lunch, Sunrise Terrace
4:15 - 5:15 Hall of Fame Lecture - Jon Epps, Fiesta 5
5:30 - 7:00 Welcome Reception & Exhibits, Fiesta 3

Wednesday, February 12, 2020

7:00 - 8:00 Registration Open, Fiesta Foyer
  Continental Breakfast, Fiesta 3
  Exhibit Area Open, Fiesta 3
  Speakers Breakfast, Fiesta Patio

Opening Session, Fiesta Ballroom 5
8:00 – 8:15 Welcome
  Jim Sattler, AMAP Executive Director
8:15 – 8:30 President’s Opening Remarks
  Everett Crews, Ingevity
9:00 – 9:30 Keynote Address: Creating Champions of Change
  Scott Murray and Angel Carlton

Session 1 – Modified Asphalt: Paving the Way to the Future
  Moderator: Dr. Everett Crews, Ingevity
9:30 – 10:15 What Happening From the Contractor’s Perspective
  Amy Miller, Director, Asphalt Paving Alliance
10:15 – 10:30 BREAK
10:30 – 11:15 Asphalt: The Next 100 Years
  Mike Anderson, Director of Research and Laboratory Services, Asphalt Institute
11:15 – 12:00 Looking into the Future – 2020 Surface Transportation Reauthorization Activities and Their Impact on Pavement Preservation
  Jim Moulthrop, Executive Director, Foundation for Pavement Preservation (FP2)
12:00 - 1:00 LUNCHEON WITH SPEAKER, Sunrise Terrace
12:30 - 1:00 Living Life Riverside: A Humorous Account of a Mid-Life Course Change
  Richard Paradise - Asphalt Executive, Hotelier, and Author

Session 2: How The Market Views the Future
  Moderator: TBD
1:30 - 2:15 Building Roads in the Wild West
  Brandon Milar, Technical Director, California Asphalt Paving Association
2:15 - 3:00  Future Refinery Strategy and the Impact on Asphalt Supply  
Pavel Kriz, Ph.D., P.Eng. Americas Asphalt Technical Leader, ExxonMobil/Imperial Oil

3:00 - 3:15  BREAK

3:15 - 4:00  Are Recycled Plastics in the Future of Asphalt Pavements?  
Dr. Buzz Powell, NCAT Assistant Director, Auburn University

4:00 - 4:45  Taking Polymer Modification to the Next Level  
Dr. Peter E. Sebaaly, PE, University of Nevada, Reno

4:45 - 5:30  Update on UCPRC Research on Recycled Tire Rubber in Asphalt Pavement  
Dr. John Harvey, Professor, University of California Davis

6:00 - 7:30  Reception Honoring Jon Epps - Hall of Fame Inductee & Lifetime Achievement Award Recipient, Starlight Terrace

Thursday, February 13, 2020

7:00 - 8:00  Continental Breakfast, Fiesta 3

General Session, Fiesta Ballroom 5

8:00 – 8:30  What Modified Asphalt Producers & DOTs Are Thinking Now  
Brian Hirt, Managing Director, CTC & Associates

8:30 - 9:00  Graphene Modification of Asphalt Binders  
Dr. Everett Crews, Director R&D, Pavement Technologies, Ingevity

9:00 - 9:30  Binder Structure and Cracking Resistance – Findings from NCHRP 9-60  
Dr. Jean-Pascal Planche, Senior VP Asphalt & Petroleum Technologies, Western Research Institute

9:30 – 10:00  Asphalt Modifiers and Rejuvenators from Coal Derived Chemicals  
Dr. Jeramie Adams, Program Manager for Hydrocarbons Asphalt and Petroleum Technology

10:00 - 10:15  BREAK

10:15 – 10:45  Plastics! Recycled Plastic Modified Asphalt Binder  
C.J. DuBois, DOW Chemical

10:45 - 11:15  Effects of Isocyanate-Based Chemistry Modification on Asphalt Binder  
Brian Orr, Sr. Asphalt Technologist, BASF

Session 4: Owner/Agencies Experiences  
Moderator: Dave Johnson, Asphalt Institute

11:15 – 11:45  Louisiana  
Sam Cooper, P.E. Louisiana DOTD & Skip Paul, P.E., Chair AMAP DOT Advisory Board

11:45 - 1:00  LUNCH, Sunrise Terrace

1:00 – 1:45  Using the MSCR Test to Better Characterize High Polymer Asphalts  
Karl Zipf, Chief Chemist Delaware DOT

1:45 – 2:30  Modified Experience at the County Level  
Van Truong, Civil Engineer, Los Angeles County Public Works

2:30 – 2:45  BREAK

2:45 – 3:30  Evaluation of Modified Binders in Alaskan Pavements  
Heidi Schaefer, Northern Region Materials Lab (NRML) Supervisor, Alaska DOT

3:30 – 4:15  Field Sections in Minnesota with Asphalt Mix Rejuvenators and Cold Recycling  
Dr. Michael Vrtis, Research Project Engineer, Minnesota DOT

4:15 – 5:00  Relation Between Flexible Pavement Layers Bonding and Durability  
Dr. Louay Mohammad, Professor, Louisiana State University / LTRC

Session 3: Innovations In Asphalt Modification  
Moderator: Bob McGennis

8:30 - 9:00  Graphene Modification of Asphalt Binders  
Dr. Everett Crews, Director R&D, Pavement Technologies, Ingevity

9:00 - 9:30  Binder Structure and Cracking Resistance – Findings from NCHRP 9-60  
Dr. Jean-Pascal Planche, Senior VP Asphalt & Petroleum Technologies, Western Research Institute
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<thead>
<tr>
<th>ROOM</th>
<th>Introduction &amp; Paving</th>
<th>Advanced Technical &amp; Roofing</th>
<th>Applications</th>
<th>Professional Development</th>
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<td>Fiesta 5</td>
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<tr>
<th>TIME</th>
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<th>SPEAKER(S)</th>
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<tr>
<td>8:00-8:45</td>
<td>Introduction to Modified Asphalt Binders</td>
<td>Everett Crews, Ingevity</td>
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<td>Introduction to Modified Roofing Products</td>
<td>Bob Kluttz, Kraton Polymers</td>
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<td>Recycled Plastic Modification</td>
<td>C. J. DuBois, Dow</td>
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<td>8:45-9:30</td>
<td>Chemistry Basics and Polymers 101</td>
<td>Bob Kluttz, Kraton Polymers</td>
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<td>Modified Shingles in Roofing</td>
<td>Eileen Dutton, Malarkey Roofing</td>
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<td>Modified Emulsions Application</td>
<td>Dennis Muncy, Ingevity</td>
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<td>Managing Change</td>
<td>Scott Murray and Angel Carlton</td>
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<td>9:30-10:15</td>
<td>Common Modifiers 101</td>
<td>Ken Graybowski, PRI Asphalt Technologies</td>
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<td>Self-Adhered Underlayments</td>
<td>Jonathan Davis, Owens Corning</td>
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<td>Considerations for Performance Grading Implementation</td>
<td>Bob Kluttz, Kraton Polymers</td>
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<td>Open to all Workshop &amp; Conference Attendees</td>
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<td>10:15-10:30</td>
<td>Break</td>
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<td>10:30-11:15</td>
<td>Binder Testing 101</td>
<td>John Casola, Malvern Panalytical</td>
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<td>Roofing Binders</td>
<td>Laurand Lewandowski, Owens Corning</td>
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<td>Warm Mix Applications</td>
<td>Jennifer Bowers, Ingevity</td>
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<td>Managing Change</td>
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<td>11:15-12:00</td>
<td>Basics of Emulsions 101</td>
<td>Chris Lubbers, Kraton Polymers</td>
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<td>Additives 201</td>
<td>Codrin Daranga, Paragon Technical Services</td>
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<td>Common Misconceptions &amp; Mistakes in Asphalt Binder Testing</td>
<td>Mike Anderson, Asphalt Institute</td>
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<td>Managing Change</td>
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<td>12:00-1:00</td>
<td>Lunch</td>
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<td>1:00-1:45</td>
<td>Handling/Laydown 101</td>
<td>Tanya Nash, Asphalt Testing Solutions &amp; Engineering</td>
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<td>Polymers 201</td>
<td>C. J. DuBois, Dow</td>
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<td>Managing Change</td>
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<td>1:45-2:30</td>
<td>Field Performance 101</td>
<td>John Casola, Malvern Panalytical</td>
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<td>Paving Mix Design</td>
<td>Mike Anderson, Asphalt Institute</td>
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<td>Changes Due To IMO2020</td>
<td>Geoff Rowe, Abetech</td>
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<td>2:30-2:45</td>
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<td>2:45-3:30</td>
<td>Life Cycle Cost Analysis</td>
<td>Dave Johnson, Asphalt Institute</td>
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<td>Balanced Mix Design</td>
<td>Tanya Nash, Asphalt Testing Solutions &amp; Engineering</td>
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<td>Managing Change</td>
<td>Buzz Powell, National Center for Asphalt Technology</td>
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<td>3:30-4:15</td>
<td>Pavement Preservation</td>
<td>Delmar Salomon, Pavement Preservation Solutions</td>
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<td>Advanced Analysis 201</td>
<td>Jeff Rowe, Abatech</td>
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<td>Changes Leading to IMO 2020</td>
<td>Osvaldo Speranza, Argus Media</td>
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<td>4:15-5:15</td>
<td>Plenary Hall of Fame Inductee Lecture</td>
<td>Dr. Jon Epps, Texas A&amp;M</td>
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## Exhibitors

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<th>American Heating Company</th>
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<td>Blankenship Asphalt Tech &amp; Training</td>
<td>BERGKAMP BITUMINOUS SOLUTIONS</td>
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<td>Butaphalt®</td>
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<td>Georgia-Pacific Chemicals</td>
<td>HEATEC®</td>
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<td>THERMOPLASTIC RUBBER</td>
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<td>Zydex®</td>
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21st Annual Conference and Workshop
Scholarship Program

AMAP established the David R. Jones IV Scholarship Fund in 2010. The Fund honors our friend, colleague, Asphalt Hall of Fame recipient and a true legend of our industry, the late Dave Jones. We know that Dave, as a true academic, would be pleased we are helping students interested in pursuing careers in the asphalt industry in his memory. Our program initially started with one $1,000 scholarship per year. The fund has now grown to a point where in 2018 we are awarding four $2,000 scholarships.

This year we have 41 applicants from Colleges and Universities across North America. We continue to be impressed with the quality of students applying. With so many highly qualified applicants, the selection process was difficult as usual. AMAP’s Dr. David R. Jones IV scholarship continues to align well with our internship program, as many of these students come pre-loaded with laboratory and engineering skills and can fill meaningful roles in industry while gaining valuable real world experience.

Find Interns and New Hires with AMAP's Internship Program

The next generation of modified asphalt professionals is out there. Let AMAP help you find them!

AMAP relaunched our internship program for 2019 to connect AMAP member companies and public agencies with students interested in internships while in school or work after graduation. Several students have entered their qualifications, employment goals, fields of interest, and availability (summer/fall, part-time/full-time, geographic location) into our database, with more adding themselves regularly.

AMAP members and public agencies received a link and password in December to access these entries, and we will send the link again right after this conference. If you need the link and don’t receive it, please let AMAP know.

And one last note: If you know students looking for an internship or entering the workforce soon, please point them to modifiedasphalt.org/internship to fill complete the application form.

Our thanks to the Scholarship Committee

Delmar Salomon, Chairman - Pavement Preservation Solutions

Kevin Hardin - Vecenergy

Sue Ann Jones

Sam Jones
See you in
2021 Conference & Workshop
January 12-14, 2021
Hyatt Regency Houston
1200 Louisiana St.
Houston, TX 77002
For Reservations: 713-654-1234
(ask for AMAP 2021 Conference)