Welcome to the 13th Arizona Pavements/Materials Conference

Following up with last year’s theme on Progress in Pavement Practices, this year’s theme is focused on “Sustaining Performance”. We will address pavement sustainability and preservation, while reviewing fundamentals of pavement engineering, specifications and best construction practices.

We are also excited to bring back by popular demand, Professor Braden Allenby and Grady Gammage, Jr. of ASU. Come and meet our nationally recognized speakers who will address issues from the perspective of ADOT, FHWA, AZ Counties and Maricopa Association of Governments.

**Location**

This two-day conference sponsored by Arizona State University (ASU), Arizona Department of Transportation (ADOT), Federal Highway Administration (FHWA), Arizona’s industry and local governments will be held at **Arizona State University, Tempe Campus** (1290 S. Normal Ave., Tempe, AZ 85281) on **November 16-17, 2016** in the Memorial Union (MU).

The MU serves as the central meeting and conference center for the ASU community.

Speaker presentations will be in the Ventana and Turquoise Ballrooms with Exhibitors, Luncheons, Refreshment Breaks and Welcome Reception in the Arizona Ballroom.

**Visitor Parking at ASU**

The conference will validate your parking at three parking structures on the ASU Tempe Campus.

1. Fulton Center (Foundation Building) located at University Drive and College Avenue (NE Corner)
2. Rural Road Structure located at Rural Road and Terrace Road (SW corner)
3. Apache Blvd. Structure located at Apache Blvd and Normal Avenue (NW corner)

The Fulton Center and Rural Road Structures have the largest number of visitor spots.

A limited number of reservations have been made at the Apache Blvd. Parking Structure. If the visitor spots in Apache Parking have been used up identify yourself as an attendee of the Pavement Conference to receive one of the reserved spots. If parking is not available in Apache please check the Fulton Center and Rural Road structures as they contain a larger number of visitor spaces.

**Accommodations**

Visit our website [http://pavement.engineering.asu.edu](http://pavement.engineering.asu.edu) for a list of hotels conveniently located within walking distance of the campus. Call the hotel directly to make your reservation. ASU and government rates may be available.
## 2016 Conference Program

### DAY 1 | AGENDA  WEDNESDAY, NOVEMBER 16, 2016

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>8:00-10:00am</td>
<td>REGISTRATION, EXHIBIT VIEWING - Continental Breakfast - Arizona Ballroom 221</td>
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</table>
| 10:00-10:15am | OPENING SESSION: Ventana Ballroom 241  
Moderator: **Tom Buick**, Consultant                  |
| 10:00-10:15am | Welcome from Arizona State University  
G. Edward (Edd) Gibson, Jr, PhD, Director of Sustainable Engineering and the Built Environment, ASU |
| 10:15-10:30am | ADOT Agency Issues Overview  
Floyd Roehrich, Jr, PE, Executive Officer, Arizona Department of Transportation |
| 10:30-11:00am | Achieving Asphalt Pavement Sustainability  
John Bukowski, Materials & Quality Assurance, Team Leader, Federal Highway Administration |
| 11:00-11:30am | Financing Transportation Improvements, including Pavement Preservation, for Economic Expansion and Community Wellbeing  
Chuck Huckelberry, County Administrator, Pima County |
| 11:30-12:00am | MAG Overview  
Dennis Smith, Executive Director, Maricopa Association of Governments (MAG) |
| 12:00-1:30pm | LUNCH: Arizona Ballroom 221 (Community Service Awards Luncheon)  
Moderator: **David Martin**, President, Arizona Chapter Associated General Contractors |
| 1:30-2:00pm | TRACK 1  
**SESSION 1:**  
**PAVEMENT SUSTAINABILITY**  
Ventana Ballroom 241  
Moderator: **Kami Kaloush**, PhD.  
Associate Professor, ASU |
| 1:30-2:00pm | Advancing Sustainability with INVEST: Focus on Pavements  
Connie Hill, PhD, Environmental Protection Specialist, FHWA |
| 2:00-2:30pm | Performance Specifications and Durability  
W. Jason Weiss, PhD, Head of School of Civil and Construction Engineering, Oregon State University |
| 2:30-3:00pm | Advancements in Asphalt Sustainability  
Heather Dylla, PhD, Director of Sustainable Engineering, National Asphalt Pavement Association |
| 3:00-3:30pm | BREAK: Arizona Ballroom 221 |
| 3:30-4:30pm | GENERAL SESSION: Ventana Ballroom 241  
Moderators: **Bob McGennis**, Technical Manager, HollyFrontier Refining & Marketing and  
**Don Cornelison**, Vice President/Division Manager, Speedie & Associates, Inc. |
| 3:30-4:30pm | Hot Mix Asphalt Construction Quality Assurance Specifications - What's Good and What's Bad, Less Good  
John Shi, Maricopa County DOT, Tom Kaczmarowski, City of Glendale, Paul Burch, ADOT,  
Phillip Reid, Vulcan Materials Company |
| 4:30-6:00pm | TRACK 2  
**SESSION 2:**  
**AZ STATE RESEARCH PROGRESS**  
Turquoise Ballroom 220  
Moderator: **Jean Nehme**, PhD, PE  
Director of Performance Management, ADOT |
| 4:30-6:00pm | The Application of GIS and Accelerometers in Pavement Condition Assessment  
Chun-Hsing (Jun) Ho, PhD, PE, Assistant Professor, NAU |
| 4:30-6:00pm | Pavement Research at ASU and its Relevance to Arizona  
B. Shane Underwood, PhD, Assistant Professor, ASU |
| 4:30-6:00pm | Utilization of Wastes in Pavement Construction through Geopolymerization  
Lianyang Zhang, PhD, PE, Associate Professor, UA |
| 4:30-6:00pm | WELCOME RECEPTION - STUDENT POSTER SESSION  
Moderator: **Claudia Zapata**, PhD, Associate Professor, ASU |
| 4:30-6:00pm | Door Prizes, Refreshments, Complimentary Bar  
All Conference attendees are invited to attend. |
# 2016 Conference Program

## DAY 2 | AGENDA  
**THURSDAY, NOVEMBER 17, 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:00-8:00am</td>
<td><strong>REGISTRATION, EXHIBIT VIEWING</strong> Continental Breakfast - Arizona Ballroom 221</td>
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</tbody>
</table>
| 8:00-8:30am| **GENERAL SESSION: PAVEMENT PRESERVATION 1**  
Moderator: **Mo Rahman**, PE, Technical Services Manager, Alon Asphalt Company | Ventana Ballroom 241               |
| 8:30-9:00am| **Lessons Learned in Pavement Preservation: A National Perspective**  
Larry Galehouse, PE, Director, National Center for Pavement Preservation |                                     |
| 9:00-9:30am| **Crumb Rubber in Asphalt Pavements-History, Uses and Benefits**  
Jon Epps, PhD, PE, Executive Associate Director, Texas A&M Transportation Institute |                                     |
| 9:30-10:00am| **Performance Characteristics of HMA/WMA Rubber/Polymer Modified Asphalt Mixtures**  
Peter Sebaaly, PhD, Director of Western Regional Superpave Center, University of Nevada, Reno |                                     |
| 10:00-10:30am| **MnROAD - A National Treasure**  
Ben Worel, MnROAD Operations Engineer, Minnesota Department of Transportation |                                     |
| 10:00-10:30am| **BREAK: Arizona Ballroom 221**                                      |                                     |

### TRACK 1

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| 10:30-11:00am| **SESSION 3: PAVEMENT PRESERVATION 2**  
Moderator: **Bill Hurguy**, ADOT (Retired) | Ventana Ballroom 241               |
| 11:00-11:30am| **ADOT Roadway Friction Studies**  
Kevin Robertson, PE, Pavement Condition & Evaluation Manager, ADOT |                                     |
| 11:30-12:00pm| **Hot in Place Recycling-the First 50 Years**  
John Rathbun, Cutler Repaving, Inc. |                                     |
| 12:00-1:30pm| **LUNCH: Arizona Ballroom 221** (Sponsors/Exhibitors Awards Luncheon)  
Moderator: Steve Trussell, Arizona Rock Products Association  
Speaker: Braden Allenby, PhD, Professor, Arizona State University (Introduced by Edward Kavazanjian, Jr., PhD, ASU) |                                     |
| 1:30-2:00pm| **SESSION 5: GEOTECHNICAL TECHNOLOGY**  
Moderator: **Armando de la Rocha**, PE, Senior Geotechnical Engineer/Principal, Western Technologies | Ventana Ballroom 241               |
| 2:00-2:30pm| **Utilizing Soil Stabilization in your Sustainable Engineered Designs**  
Marco Estrada, Pavement Recycling Systems |                                     |
| 2:30-3:30pm| **Geosynthetic Reinforced Soil Integrated Bridge System-GRS-IBS: An Overview**  
Laura Spencer, PhD, PE, Project Manager, Terracon Consultants, Inc. |                                     |
| 3:00-3:30pm| **The Future of the Suburban City**  
Grady Gammage, Jr, Senior Fellow, ASU’s Morrison Institute |                                     |
| 3:30pm     | **END OF CONFERENCE: Grand Prize Drawing**  
Ventana Ballroom 241 |                                     |

### TRACK 2

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<th>Time</th>
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| 10:30-11:00am| **SESSION 4: PAVEMENT ENGINEERING 101**  
Moderator: **Joe Phillips**, Principal, Terracon | Turquoise Ballroom 220             |
| 11:00-11:30am| **Pavement Triangle: Design/Construction Practice/Preservation**  
Matt Manthey, Pavement Management Supervisor, City of Mesa |                                     |
| 11:30-12:00pm| **Mechanistic-Empirical Pavement Design: History and Future**  
Feng Mu, PhD, CEMEX, Inc. |                                     |
| 12:00-1:30pm| **Implementation Process of Pavement ME Design in Maricopa County DOT**  
Gant Yasanyake, PhD, PE, MCDOT |                                     |
| 1:30-2:00pm| **SESSION 6: BEST CONSTRUCTION PRACTICES**  
Moderator: **Paul Burch**, PE, Manager, Pavement & Structural Materials Testing, ADOT | Turquoise Ballroom 220             |
| 2:00-2:30pm| **Contractor’s Perspective on Achieving Quality and Smoothness in Hotmix Paving**  
Mark Belshe, PE, Executive Director, Rubber Pavements Association |                                     |
| 2:30-3:30pm| **Lessons Learned in Building the Phoenix Freeway System**  
Matt McNeil, Vice President, McNeil Brothers |                                     |
| 3:30pm     | **END OF CONFERENCE: Grand Prize Drawing**  
Ventana Ballroom 241 |                                     |
The 2016 conference has several sponsorship packages available, providing sponsors with a choice of exposure related to financial commitment.

- **Reception Sponsor $4,000** (one available) (FMV = $750.00)
  - Three (3) conference registrations
  - Opportunity to provide your sign displayed at the Reception refreshment station
  - Acknowledgement sign on luncheon tables
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during conference Sponsor luncheon

- **Platinum Level $3,000** (unlimited) (FMV = $500.00)
  - Two (2) conference registrations
  - Acknowledgement sign on luncheon tables
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during conference Sponsor luncheon
  - Opportunity to provide your sign displayed at the refreshment station

- **Gold Level $2,000** (unlimited) (FMV = $250.00)
  - One (1) conference registration
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during the conference Sponsor luncheon

- **Silver Level $1,000** (unlimited)
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during the conference Sponsor luncheon

- **Name Badge Lanyard Sponsor $1,500** (one available)
  - Your name imprinted on lanyards
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference website
  - Acknowledgement during the opening session
  - Award recognition during the conference Sponsor luncheon

- **Bronze Level $500** (unlimited)
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo on the conference website
  - Acknowledgement during the opening session
  - Award recognition during the conference Sponsor luncheon

*If paid before print deadline.

**Why Sponsor...**

- To raise your company profile
- To network
- To reach your target audience
- To demonstrate your company’s commitment to the pavements/materials industry

**Conference Sponsorship Opportunities**

**Sponsorship Agreement**

Level of Sponsorship: ____________________________

Company Name: ____________________________

Contact Person: ____________________________

Address: ____________________________

Email: ____________________________

Phone: ____________________________

Payment Method: □ Check (made payable to ASU Foundation)
  □ Visa □ MasterCard □ American Express

Card #: ____________________________

Expiry Date: ____________________________ CCV code: ____________________________

Name on Card: ____________________________

All funds will be deposited into an account with the ASU Foundation, a separate non-profit organization that exists for the benefit of ASU. Due to the value of benefits received, only payments in excess of fair market value (FMV) may be considered a charitable contribution. Conference sponsorships and proceeds will be used toward facilitating the Arizona Pavements/Materials Conference as well as funding undergraduates and graduate student projects, activities and a scholarship endowment with the ASU Foundation for A New American University.

Attn: Judy Reedy

Pavements/Materials Conference
Arizona State University
PO Box 873005
Tempe, AZ 85287-3005

Fax: (480) 965-0557
Email: judy.reedy@asu.edu

http://Pavement.engineering.asu.edu

The 2016 conference has several sponsorship packages available, providing sponsors with a choice of exposure related to financial commitment.

- **Reception Sponsor $4,000** (one available) (FMV = $750.00)
  - Three (3) conference registrations
  - Opportunity to provide your sign displayed at the Reception refreshment station
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  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during conference Sponsor luncheon

- **Platinum Level $3,000** (unlimited) (FMV = $500.00)
  - Two (2) conference registrations
  - Acknowledgement sign on luncheon tables
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during conference Sponsor luncheon
  - Opportunity to provide your sign displayed at the refreshment station

- **Gold Level $2,000** (unlimited) (FMV = $250.00)
  - One (1) conference registration
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during the conference Sponsor luncheon

- **Silver Level $1,000** (unlimited)
  - Signage at the conference
  - Recognition in the conference program *
  - Your logo and link to your website on the conference Website
  - Acknowledgement during the opening session
  - Award recognition during the conference Sponsor luncheon

*If paid before print deadline.
Participating as an exhibitor at the 2016 Arizona Pavements/Materials Conference will demonstrate your level of support and commitment to the pavements/materials industry.

The undersigned hereby applies for space as an Exhibitor at the Arizona Pavements/Materials Conference. There are a limited number of exhibit spaces available for the conference on a first come/first serve basis.

The exhibitor registration fee of $799 includes one six foot table with two chairs and electricity in the Arizona Ballroom plus registration to the conference for two (2) people.

Register to be an Exhibitor - $799.00

- My check for $799.00 is enclosed payable to Arizona State University.
- I wish to pay with a credit card at the conference website http://pavement.engineering.asu.edu

Company Name: ____________________________

Name of attendees: (1) ____________________________

(2) ____________________________

Address: ____________________________

City/State/Zip: ____________________________

Email: ____________________________

Phone: ____________________________

Table Number (first choice) ____________________________ Table Number (second choice) ____________________________

Please indicate here if you would like a vegetarian lunch. Attendee #1 Attendee #2

Requests will not be taken at the conference.

Exhibit space is limited. All payments for exhibiting are due at the time of registration.

Location: Arizona State University, Memorial Union Building, 2nd Floor Arizona Ballroom, 1290 S. Normal Avenue, Tempe, AZ 85281

Send completed form to:

Attn: Judy Reedy
Pavements/Materials Conference
Arizona State University
PO Box 873005
Tempe, AZ 85287-3005
Fax: (480) 965-0557
Email: judy.reedy@asu.edu
13th Arizona Pavements/Materials Conference • Sustaining Performance
Early registration deadline is October 24, 2016

(Use this form if paying with a check or Purchase Order – Register online if paying with a credit card. http://pavement.engineering.asu.edu

<table>
<thead>
<tr>
<th>Attendee Information</th>
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<tbody>
<tr>
<td>Name: ____________________________</td>
</tr>
<tr>
<td>Company: ____________________________</td>
</tr>
<tr>
<td>Address: ____________________________</td>
</tr>
<tr>
<td>City/State/Zip: ____________________________</td>
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<tr>
<td>Email: ____________________________</td>
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<tr>
<td>Phone: ____________________________ Date: ____________________________</td>
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<thead>
<tr>
<th>Attendee Profile</th>
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</table>
| ❑ Full-Time Student
❑ Contractor
❑ Materials Testing Laboratory
❑ Materials Supplier
❑ State Government
❑ City Government
❑ Consulting Engineer
❑ Equipment Manufacturer
❑ Materials Producer
❑ Federal Government
❑ County Government
❑ Other ____________________________ |

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<tr>
<th>Registration Fee Includes:</th>
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<tbody>
<tr>
<td>Entry to technical sessions, Wednesday and Thursday continental breakfasts, luncheons, refreshment breaks, Welcome Reception Wednesday evening and parking during the conference. Presentations will be posted on the website after the conference. <a href="http://pavement.engineering.asu.edu">http://pavement.engineering.asu.edu</a></td>
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<tr>
<th>Cancellation Policy</th>
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<tbody>
<tr>
<td>Registrants unable to attend are encouraged to send a substitute at no additional charge. No refunds will be made after Oct. 24, 2016.</td>
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<tbody>
<tr>
<td>FULL REGISTRATION (two days)</td>
<td>$250</td>
<td>$300</td>
</tr>
<tr>
<td>FULL-TIME STUDENT (two days)</td>
<td>$25</td>
<td>$25</td>
</tr>
<tr>
<td>Pavement Maintenance Demo Only (Nov.15)</td>
<td>$75</td>
<td>$75</td>
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<tr>
<td>Pavement Maintenance Demo With Conference Registration</td>
<td>$50</td>
<td>$50</td>
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<tr>
<th>Method of Payment</th>
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<tbody>
<tr>
<td>❑ Check Enclosed (made payable to Arizona State University)</td>
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<td>❑ PO # ____________________________</td>
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If paying with a credit card, please register online at http://pavement.engineering.asu.edu

In order to assist with conference planning, please check the conference events you will attend (Open to all attendees):

❑ Day 1 Lunch ❑ I would like a vegetarian meal
❑ Day 1 Welcome Reception
❑ Day 2 Lunch ❑ I would like a vegetarian meal

Please Note: Request for a vegetarian lunch must be made on this registration form. Requests will not be taken at the conference.

Submit this form to:

Attn: Judy Reedy
School of Sustainable Engineering and the Built Environment
Arizona State University
PO Box 873005, Tempe, AZ 85287-3005
Fax: (480) 965-0557
Email: judy.reedy@asu.edu
As part of the Arizona Pavements/Materials Conference, three individuals who have made significant contributions to the advancement of the pavement/materials technology and programs in Arizona will be recognized and honored with a Pavements/Materials Conference Community Service Award to be presented during the luncheon on the first day of the conference, November 16.

One award will recognize a person working in the public sector - federal, state, local government agencies. The second award will recognize a person working in the private sector - contractors, consultants, material supplies, equipment suppliers, etc. and the third award will recognize someone in academia.

The basis for an award should be one or more of the following attributes:

- Exceptional contributions to technology enhancement relating to pavements/materials
- Excellence in implementing advanced technology into practice
- Excellence in bridging the gap between research and practice
- Exceptional contributions to the advancement of paving/materials programs in Arizona

The only restrictions on nominations are (1) recipients of the awards must conduct work in or reside in Arizona, and (2) members of the Award Selection Committee are not eligible.

Please use this form to submit your nomination by October 21, 2016. The Awards Selection Committee needs a concise paragraph outlining the basis for the nomination, emphasizing the notable contributions of the nominee to the pavements/materials program and/or industry in Arizona.

Nominations may be submitted at the conference website under the Service Awards tab or by completing this form and submitting it to:

Attn: Judy Reedy
School of Sustainable Engineering and the Built Environment
Arizona State University
PO Box 873005
Tempe, AZ 85287-3005
Fax: (480) 965-0557
Email: judy.reedy@asu.edu

http://Pavement.engineering.asu.edu

2015 Community Service Award Recipients

Bob Erdman  Shane Underwood  Equbalali Charania