Welcome to the 13th

ARIZONA PAVEMENTS/ MATERIALS CONFERENCE

2016 Sustaining Performance

Tempe, Arizona
November 16-17, 2016

IRA A. FULTON SCHOOLS OF engineering
ARIZONA STATE UNIVERSITY

U.S. Department of Transportation
Federal Highway Administration

Every Day Counts
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ADOT

pavement.engineering.asu.edu

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.

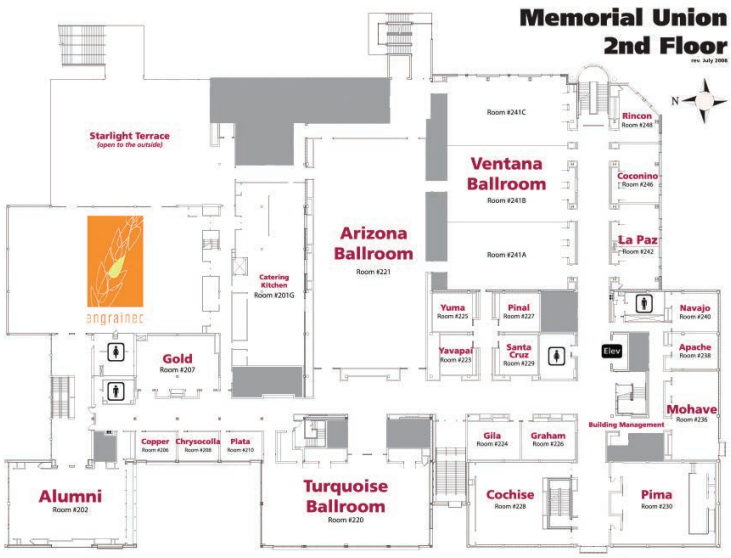
1. Fulton Center (Foundation Building) located at University Drive and College Avenue (NE Corner)
2. Rural Road Structure located at Rural Road and Terrace Road (SW corner)
3. Apache Blvd. Structure located at Apache Blvd and Normal Avenue (NW corner)

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.

Accomodations

Visit our website **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.



Conference Sponsors

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VJS INTERNATIONAL

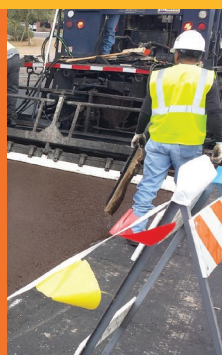
Western Emulsions

Western Refining

AGC/ASU Materials Conference Pavement Preservation Demonstrations

Tuesday, Nov. 15, 2016

Visit website for details and registration.



DAY 1 | AGENDA WEDNESDAY, NOVEMBER 16, 2016

8:00-10:00am

REGISTRATION, EXHIBIT VIEWING - Continental Breakfast - Arizona Ballroom 221

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, School 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

	TRACK 1	TRACK 2
	SESSION 1: **PAVEMENT SUSTAINABILITY** Ventana Ballroom 241 Moderator: **Kami Kaloush,** PhD. Associate Professor, ASU	**SESSION 2:** **AZ STATE RESEARCH PROGRESS** Turquoise Ballroom 220 Moderator: **Jean Nehme,** PhD, PE Director of Performance Management, ADOT
1:30-2:00pm	**Advancing Sustainability with INVEST: Focus on Pavements** - Connie Hill, PhD, Environmental Protection Specialist, FHWA	**The Application of GIS and Accelerometers in Pavement Condition Assessment** Chun-Hsing (Jun) Ho, PhD, PE, Assistant Professor, NAU
2:00-2:30pm	**Performance Specifications and Durability** W. Jason Weiss, PhD, Head of School of Civil and Construction Engineering, Oregon State University	**Pavement Research at ASU and its Relevance to Arizona** B. Shane Underwood, PhD, Assistant Professor, ASU
2:30-3:00pm	**Advancements in Asphalt Sustainability** Heather Dylla, PhD, Director of Sustainable Engineering, National Asphalt Pavement Association	**Utilization of Wastes in Pavement Construction through Geopolymerization** Lianyang Zhang, PhD, PE, Associate Professor, UA

3:00-3:30pm

BREAK: Arizona Ballroom 221

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

WELCOME RECEPTION - STUDENT POSTER SESSION Arizona Ballroom 221
Moderator: **Claudia Zapata,** PhD., Associate Professor, ASU
Door Prizes, Refreshments, Complimentary Bar
All Conference attendees are invited to attend.

DAY 2 | AGENDA THURSDAY, NOVEMBER 17, 2016

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

	TRACK 1	TRACK 2
	SESSION 3: **PAVEMENT PRESERVATION 2** Ventana Ballroom 241 Moderator: **Bill Hurguy,** ADOT (Retired)	**SESSION 4:** **PAVEMENT ENGINEERING 101** Turquoise Ballroom 220 Moderator: **Joe Phillips,** Principal, Terracon
10:30-11:00am	**Cold Asphalt Recycling for a Sustainable Future** Chuck Valentine, Pavement Recycling Systems	**Pavement Triangle: Design/Construction Practice/Preservation** Matt Manthey, Pavement Management Supervisor, City of Mesa
11:00-11:30am	**ADOT Roadway Friction Studies** Kevin Robertson, PE, Pavement Condition & Evaluation Manager, ADOT	**Mechanistic-Empirical Pavement Design: History and Future** Feng Mu, PhD, CEMEX, Inc.
11:30-12:00pm	**Hot in Place Recycling-the First 50 Years** John Rathbun, Cutler Repaving, Inc.	**Implementation Process of Pavement ME Design in Maricopa County DOT** Gant Yasanayake, PhD, PE, MCDOT
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)	
	SESSION 5: **GEOTECHNICAL TECHNOLOGY** Ventana Ballroom 241 Moderator: **Armando de la Rocha,** P.E., Senior Geotechnical Engineer/Principal, Western Technologies	**SESSION 6:** **BEST CONSTRUCTION PRACTICES** Turquoise Ballroom 220 Moderator: **Paul Burch,** P.E., Manager, Pavement & Structural Materials Testing , ADOT
1:30-2:00pm	**Utilizing Soil Stabilization in your Sustainable Engineered Designs** Marco Estrada, Pavement Recycling Systems	**Contractor's Perspective on Achieving Quality and Smoothness in Hotmix Paving** Mark Belshe, PE, Executive Director, Rubber Pavements Association
2:00-2:30pm	**Geosynthetic Reinforced Soil Integrated Bridge System-GRS-IBS: An Overview** Laura Spencer, PhD, PE, Project Manager, Terracon Consultants, Inc.	**Lessons Learned in Building the Phoenix Freeway System** Matt McNeil, Vice President, McNeil Brothers
	GENERAL SESSION: Ventana Ballroom 241 Moderator: **Kamil Kaloush,** PhD, Associate Professor, Arizona State University	
2:30-3:30pm	**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	

Conference Sponsorship Opportunities

ARIZONA PAVEMENTS/MATERIALS CONFERENCE

Sustaining Performance November 16-17, 2016

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

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

*If paid before print deadline.

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 undergraduate and graduate student projects, activities and a scholarship endowment with the ASU Foundation for A New American University. 30001468

(no longer available)

~~❑ 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

Send completed sponsorship forms 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

http://Pavement.engineering.asu.edu

Exhibitor Space Registration

ARIZONA PAVEMENTS/MATERIALS CONFERENCE

Sustaining Performance November 16-17, 2016

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) _____

Addres: _____

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

Conference Attendee Registration

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**

Attendee Information

Name: _____

Company: _____

Addres: _____

_____

City/State/Zip: _____

Email: _____

Phone: _____ Date: _____

Attendee Profile

- ❑ Full-Time Student
- ❑ Contractor
- ❑ Materials Testing Laboratory
- ❑ Materials Supplier
- ❑ State Government
- ❑ City Government
- ❑ Consulting Engineer
- ❑ Equipment Manufacturer
- ❑ Materials Producer
- ❑ Federal Government
- ❑ County Government
- ❑ Other _____

Registration Fee Includes:

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. **http://pavement.engineering.asu.edu**

Cancellation Policy

Registrants unable to attend are encouraged to send a substitute at no additional charge. No refunds will be made after Oct. 24, 2016.

Registration Fees

	Before Oct. 24, 2016	After Oct. 24, 2016
❑ FULL REGISTRATION (two days)	$250	$300
❑ FULL-TIME STUDENT (two days)	$25	$25
❑ Pavement Maintenance Demo Only (Nov.15)	$75	$75
❑ Pavement Maintenance Demo With Conference Registration	$50	$50

Method of Payment

(Please check one)

❑ Check Enclosed (made payable to Arizona State University)

❑ PO # _____

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

Community Service Award Nomination Form

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 by 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

2016 Community Service Award Nomination Form

Nomination deadline **October 21, 2016**

(Only award winners will be notified of their nomination.)

Nominee (Full Name): _____

_____

Organization/Agency/Firm: _____

_____

Position/Title: _____

_____

Contact Information:

Email: _____

Phone: _____

Award Category: (Please indicate category for nominee)

❑ Government/Public ❑ Industry/Private ❑ Academia

Award Basis:
(Please provide a concise paragraph describing the basis for your nomination. Attach additional paper if necessary.)

_____

_____

_____

_____

_____

_____

_____

Submitted by:

Name: _____

Organization: _____

Phone: _____

Email: _____

Date: _____

2015 Community Service Award Recipients

Bob Erdman

Shane Underwood

Equbalali Charania