2019

June 18-19 | GCC Daniel Technology Center

VIRGINIA PAVEMENT RESEARCH & INNOVATION SYMPOSIUM

VTRC
Virginia Transportation Research Council

GERMANNA COMMUNITY COLLEGE
www.germanna.edu

Virginia Asphalt Association

VIRGINIA PAVEMENT RESEARCH

What is the next big innovation to hit the asphalt industry? What is the research that will lead to or validate these innovations? Over the last decade, asphalt industry innovations have become common place. While the most notable has been warm mix asphalt technologies, it is not the only one. Consider innovations using highly polymer modified binders, intelligent compaction and thermal scanning just to name a few. The overarching goal is to make asphalt even better, last longer, and be more economical.

The **Virginia Pavement Research and Innovation Symposium** features research in Virginia and innovations from around the world. **Join us at VPRIS 2019.**

WHO SHOULD ATTEND

This symposium was designed to link the innovators and researchers with customers and decision-makers. Attendees should include VDOT resident engineers, district materials and maintenance engineers, central office materials and maintenance program managers, researchers from VTRC, city and county department of public works managers, and contractor and consultant senior management.

WHAT TO EXPECT

VPRIS will be a fast paced event with a mix of research presentations and innovation pitches. Each pitch will be 20 minutes long and be tied to projects that support the science behind the product. To keep the symposium moving, no questions will be answered during the presentations. Each presenter will have a booth to allow interested attendees to ask more in-depth questions.

WHERE TO GO

Germanna Community College
Daniel Technology Center
18121 Technology Drive
Culpeper, VA 22701

EXHIBITORS

There will be an exhibit booth representing each VAA member presentation given over the two day symposium. This will give attendees a chance to speak with presenters and ask in depth question about each topic.

& INNOVATION SYMPOSIUM 2019

AGENDA AT A GLANCE

DAY 1

11:30 am **Registration and Exhibits Open**

1:00 pm **Welcome & Purpose of Symposium**
Jean Wesley Ph.D., Germanna Community College

1:20 pm **Alkali & Acid Resistance Glass Fibers For Micro Surfacing**
Mike Jenkins, FORTA Corporation

1:40 pm **JBand**
Dave Henderson, Associated Asphalt, Inc.

2:00 pm **Aquaphalt 4.0**
Michael Wertheim, Aquaphalt

2:20 pm **Balanced Mix Design & Pavement Design with VDOT PG 76E-28**
Bob Kluttz, Kraton Polymers, LLC

2:40 pm **Break**

3:00 pm **Design & Instrumentation of the I-64 Pavement Recycling Project (Segment II)**
Brian Diefenderfer, Ph.D., P.E., VTRC

3:30 pm **Production Reporting for Tracking Paver Performance in Real Time**
Kyle Neisen, Roadtec, Inc.

3:50 pm **eConstruction: Digital Field Data Collection**
Dakota Clifford, VDOT-Central Office

4:10 pm **Moisture Measurement System**
Michael Dixon, Troxler Electronic Laboratories

4:30 pm **Nesilex Silica Dust Suppressant**
David Elam, Chemtek/Carter Machiney, Inc

4:50 pm **Closing Comments on Day 1**
Michael Dudley, Virginia Asphalt Association

5:00 pm **Reception**

DAY 2

7:00 am **Registration & Symposium Breakfast**

8:00 am **Welcome to Day 2**
Mike Fitch, Ph.D., VTRC

8:10 am **Technology Upgrades for Aging Asphalt Lab Equipment**
Brian O'Toole, InstroTek, Inc.

8:30 am **Hot Applied Non-Tracking Tack**
Eugene Cifers, Asphalt Emulsion Industries, LLC

8:50 am **Evotherm with Rubberized Asphalt and Ingevity's Evoflex RMA**
Trey Wurst, Ingevity

9:10 am **Overview of VDOT Reflective Cracking Mitigation Research**
Hari Nair, Ph.D., P.E., VTRC

9:40 am **Break**

10:10 am **Chemically Engineered Crumb Rubber**
Redmond Clark, Ph.D., Asphalt Plus

10:30 am **Asphalt Rejuvenators Used for High RAP Mixes**
Jeff Weitzel, Road Science

10:50 am **Advances in Bio-Based Technology in Pavement Preservation**
Hassan A. Tabatabaee, Ph. D., Cargill

11:10 am ***ReGen*-erating Aged Binder**
Grover Allen, Ph.D., P.E., Blacklidge Emulsions, Inc.

11:30 am **Variability Analysis of the IDEAL CT Test**
Ilker Boz, Ph.D., VTRC

12:00 pm **Closing Symposium Comments**
David Lee, P.E., Virginia Asphalt Association

DAY 1 PROGRAM

TIME	TOPIC
11:30 am	**Registration and Exhibits Open (Lunch on Own)**
1:00 pm	**Welcome to Day 1** *Jean Wesley, Ph.D., Vice President of Academic Affairs & Workforce Development, Germanna Community College*
1:20 pm	**Alkali and Acid Resistance Glass Fibers for Micro Surfacing** *Michael Jenkins, SE Regional Sales Manager, FORTA Corporation* Micro Surfacing / Slurry Seal w/ Fibers – Value Engineering, a cost effective way to renew the road surface using Alkali & Acid Resistance Glass Fibers to enhance and extend pavement preservation life. Helping with pavement flexibility and mitigating cracking.
1:40 pm	**JBand** *Dave Henderson Marketing Manager, Asphalt Materials, Inc./Associated Asphalt, Inc.* How do you create a longer lasting longitudinal joint? You use J-Band Void Reducing Asphalt Membrane (VRAM). A highly polymer modified asphalt material designed to fill the air voids in an asphalt pavement at the longitudinal joint, thereby substantially increasing the life of the pavement.
2:00 pm	**Aquaphalt 4.0** *Michael Wertheim, National Director of Sales, Aquaphalt* Aquaphalt 4.0 fine mix used for asphalt repairs less than 1”.
2:20 pm	**Balanced Mix Design and Pavement Design with VDOT PG 76E-28** *Bob Kluttz, Senior Staff Research Scientist, Kraton Polymers, LLC* Balanced Mix Design (BMD) is a hot topic, Find out how Pavement ME/tm/ and FlexPave/tm/ models can be used with PG 76E-28 mixes to predict performance and thus facilitate novel pavement designs.

TIME	TOPIC
2:40 pm	**Break**
3:00 pm	**Design & Instrumentation of the I-64 Pavement Recycling Project (Segment II)** *Brian Diefenderfer, Ph.D., P.E., Associate Principal Scientist, VTRC* In 2015, VDOT awarded the largest recycling project in the US to rebuild and widen a portion of I-64 near Williamsburg. To quantify the performance of the recycling design, VTRC installed sensors during construction to monitor the temperature, strain, and pressure within the pavement section. This presentation will discuss the project background, initial results, and compare the response with other instrumented recycled sections.
3:30 pm	**Production Reporting for Tracking Paver Performance in Real Time** *Kyle Neisen, Product Manager - Pavers and MTV's, Roadtec, Inc.* With Paver Production Reporting, managers are now able to track exactly how much material is being used throughout the day. Whether the crew is able to move faster than originally thought or constantly waiting on trucks, the company will have the information to take corrective action and maximize efficiency immediately instead of needing to wait for the next day.
3:50 pm	**eConstruction: Digital Field Data Collection** *Dakota Clifford, Construction Engineer, VDOT* Tablet based inspection offers construction programs the opportunity to realize substantial gains in efficiency and workforce utilization through the deployment of mobile devices and software. VDOT's eConstruction team is working to test and identify several solutions, including PlanGrid and Headlight, that will help in making pro grams more efficient and effective.
4:10 pm	**Moisture Measurement System** *Michael Dixon, Marketing Specialist, Troxler Electronic Laboratories* Troxler Laboratories' Moisture Measurement System (MMS) is the next great innovation to help asphalt plants increase efficiency and consistency by continuously measuring moisture in the virgin aggregate. By continuously monitoring moisture, asphalt plants can be sure that they are producing asphalt that most closely resembles the job mix formula without excess waste in the production process.
4:30 pm	**NeSilex Silica Dust Suppressant** *David Elam, NeSilex Product Manager, Chemtek/Carter Machinery* This presentation will discuss how the construction industry can meet the new OSHA Silica Rule in construction operations.
4:50 pm	**Closing Comments Day 1** *Michael Dudley, Director of Technical Services, Virginia Asphalt Association*
5:00 pm	**Reception**

DAY 2 PROGRAM

TIME	TOPIC
7:00 am	**Registration and Symposium Breakfast**
8:00 am	**Welcome to Day 2** *Mike Fitch, Ph.D., Deputy Director of Research, VTRC*
8:10 am	**Technology Upgrades for Aging Asphalt Lab Equipment – Balanced Mix Design-IDEAL-CT & Hamburg** *Brain O'Toole, Domestic Sales Manager, InstroTek, Inc.* Showcasing technology advancements InstroTek continues to introduce making lab testing easier, specifically in the area of Balanced Mix Design (BMD). InstroTek's latest product, the Smart-Jig and IDEAL-CT upgrade for existing load frames like the Pine Test Press does just that. The complimentary equipment in the BMD is the Hamburg Wheel Tracker (HWT). The InstroTek SmarTracker takes an existing piece of equipment and adds safety and technology upgrades and gives the industry a one-stop shop for all BMD needs.
8:30 am	**Hot Applied Non-Tracking Tack** *Eugene Cifers, Sales Manager, Asphalt Emulsion Industries, LLC* Our newest non-tracking product, Unlike our emulsified non-tracking tack, it is a modified binder. This presentation will cover the advantages and disadvantages of both products including when and where it would be best to use them.
8:50 am	**Evotherm with Rubberized Asphalt and Ingevity's Evoflex RMA** *Trey Wurst, Product Development Engineer, Ingevity* Showcasing the use of Evotherm with rubberized asphalt as well as highlighting our newest rubber product, Evoflex RMA. Evoflex RMA is a GTR/SBS hybrid product that utilizes Ingevity chemistry to dramatically improve rubber modification of liquid asphalt.
9:10 am	**Overview of VDOT Reflective Cracking Mitigation Research** *Hari Nair, Ph.D., P.E. Senior Research Scientist, VTRC* VDOT is applying various treatment methods available to delay or to prevent reflection cracking in rehabilitated pavements. Techniques that are used to reduce or prevent reflective cracking include modified binders, mix additives, interlayers, recycling technics and rubblization. This presentation will give an overview of VDOT reflective cracking mitigation research.
9:40 am	**Break**
10:10 am	**Chemically Engineered Crumb Rubber** *Redmond Clark, Ph.D., President, Asphalt Plus* This presentation will not be a commercial for a specific product, rather it will focus on what we see as a breakthrough in mix designs/operations where balanced mix design and dry process rubber are permitting some significant changes in how mixes are designed and produced. As an example, we are currently placing SMA mix designs on multiple interstate highways that include the use of >50% ABR with excellent field results.
10:30 am	**Asphalt Rejuvenators Used for High RAP Mixes** *Jeff Weitzel, Field Engineering Manager, Road Science* This presentation will focus on using asphalt rejuvenators for overall mix performance in a balanced responsible manner through binder rheology and mix performance testing. Utilizing lab and field data from

TIME	TOPIC

10:50 am **Advances in Bio-Based Technology in Pavement Preservation**

Hassan A. Tabatabaee, Ph.D., Global Technical Manager-Asphalt Solutions, Cargill

An applied global perspective of the current state of practice for engineered bio-based technology in Asphalt emulsions and pavement preservation. Starting with a practical explanation of nature of "bio-based" chemicals and products, and continuing with the coverage of a diverse range of applications. The presentation will conclude with a snap-shot of current research efforts on the topic and a vision of the future.

11:10 am ***ReGen*-erating Aged Binder**

Grover Allen, Ph.D., P.E., Technical Director, Blacklidge Emulsions, Inc.

This presentation will demonstrate how **Blacklidge's ReGen®** product is capable of regenerating the characteristically defective asphalt binder typically found in reclaimed materials to a highly durable and ***age-resistant*** condition. It not only provides near-term mixture improvements but also enhances long-term mixture performance. As a result, ReGen® delivers an easy-to-produce and construct, more cost-effective and more durable mixture while maximizing RAP usage potential.

11:30 am **Variability Analysis of the IDEAL CT Test**

Ilker Boz, Ph.D., Research Scientist, VTRC

VDOT is currently moving towards a balanced mix design concept. As part of this effort, the IDEAL CT test is being considered for evaluating the cracking potential of asphalt mixtures. This presentation will provide insight on the variability of the test method and a preliminary variability threshold value based on testing over a dozen asphalt mixtures placed in Virginia past two years.

12:00 am **Closing Comments**

David Lee, P.E., Vice President, Virginia Asphalt Association

CONFERENCE REGISTRATION

Attendee Registration $100

- ⇒ Deadline for registration June 10, 2019.
- ⇒ Payment can be made online by credit card or by check through the mail.
- ⇒ Online registration can be found at https://www.vaasphalt.org/newsevents/vaa-events/
- ⇒ For attendee refund, cancellation must be received 7 business days prior to conference.
- ⇒ For 50% Exhibitor refund, cancellation must be received by May 15, 2018.
- ⇒ Return registration to VAA, 6900 Patterson Avenue, Richmond, VA 23226.

Questions? Contact cfahed@vaasphalt.com. Emailed and faxed forms are accepted (Fax: 804-288-4551).

HOTEL RESERVATIONS

CULPEPER, VA AREA - LOCAL HOTELS (NO Room Blocks Available)
Hampton Inn & Suites, Culpeper • 540.829.9000 • 18411 Gate Road, Culpeper, VA 22701
Holiday Inn Express • 540-825-7444 • 787 Madison Road, Culpeper, VA 22701
Quality Inn • 540-825-4900 • 890 Willis Road, Culpeper, VA 22701
Best Western • 540-825-1253 • 791 Madison Road, Culpeper, VA 22701

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