September 17-20, 2019
The Hotel Roanoke & Conference Center
Roanoke, Virginia

www.cpe.vt.edu/pavementevaluation/
### Monday, September 16, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>15:00-17:00</td>
<td>Pooled Fund 4 TPF-5 (245) Friction Business Meeting</td>
<td>Buck Mountain</td>
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### Tuesday, September 17, 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00-12:00</td>
<td>Pooled Fund 1 TPF-5 (299) – Rut, Crack &amp; Fault Business Meeting</td>
<td>Crystal AC</td>
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<td>Crystal AC Pooled Fund 2 TPF-5 (385) – TSDD Business Meeting</td>
<td>Crystal DE</td>
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<td>13:00-17:00</td>
<td>Pooled Fund 3 TPF-5 (354) – Profilers Business Meeting</td>
<td>Crystal AC</td>
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<td></td>
<td>Smart Road Tour (Reservation Required)</td>
<td>VTTI</td>
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<tr>
<td>18:00-20:00</td>
<td>Ice Breaker Reception (Exhibit Area)</td>
<td>Roanoke CH</td>
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### Wednesday, September 18, 2019

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>8:00-10:00</td>
<td>Plenary Open Session</td>
<td>Washington</td>
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<td></td>
<td>Moderator: Edgar de Leon</td>
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<td></td>
<td>• Inauguration, Ken King</td>
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<td>• Current status of European standardization in the road surface characteristic area,</td>
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<td></td>
<td>Leif Sjögren</td>
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<td>• Integrating Safety into the Transportation Decision Making Process,</td>
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<td>Priscilla Tobias</td>
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<td>Vendor Presentations</td>
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<tr>
<td>10:00-10:30</td>
<td>Coffee Break (Exhibit Area)</td>
<td>Roanoke CH</td>
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<td>10:30-12:00</td>
<td>Functional Session 1-1</td>
<td>Washington</td>
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<td>Moderator: Thomas Van</td>
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<tr>
<td></td>
<td>• Lessons learned from Florida’s profiler certification track,</td>
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<td></td>
<td>James Greene</td>
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<td></td>
<td>• Why profiler certification sites are necessary for quality data,</td>
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<td></td>
<td>Danielle Suess</td>
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<td>• Application of Pavement Smoothness Benefit in Pavement Determination,</td>
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<td>Max Grogg</td>
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<td>• Short-term changes, long-term changes, and repeatability of localized roughness in</td>
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<td>jointed PCC pavement,</td>
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<td></td>
<td>Steve Karamihas</td>
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<td>12:00-13:30</td>
<td>Lunch (Exhibit Area)</td>
<td>Roanoke CH</td>
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### Wednesday, September 18, 2019 – continued

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
<th>Topics</th>
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| 13:30-15:00 | Pooled Fund | Washington 3 (354) – Profilers Technical Session 1 | Moderator: David Huft  
- Sensitivity of inertial profilers to operational conditions on urban and low-speed roadways, Steve Karamihas  
- Characterization of roughness on urban and low-speed roadways, Steve Karamihas |
| 15:00-15:30 | Coffee Break | Exhibit Area | |
| 15:30-17:00 | Pooled Fund | Washington 3 (354) – Profilers Technical Session 2 | Moderator: David Huft  
- Using localized pseudo damage as a characterization tool for longitudinal profiles, Craig Altman  
- Investigation of profile-based curl and warp analysis using LTPP profile data, Steve Karamihas  
Discussion |
| 18:00-21:00 | Dinner | Outside venue | |
| 15:30-17:00 | Structural | Crystal DE Theme 2-2 | Moderator: Senthil Thyagarajan  
- Assessment of jointed concrete pavements using continuous deflection data, Jerry Daleiden  
- Using Traffic Speed Deflectometer measurements to estimate the pavement strains under a moving load, Christoffer P. Nielsen  
- Compaction quality assurance of geomaterials using the Light Weight Deflectometer, Sadaf Khosravifar  
- Joint pursuit: detecting weak joints using TSD measurements by Basis Pursuit, Samer Katicha |
| 15:30-17:00 | Other | Crystal AC Session 3-2 | Moderator: Affan Habib  
- Assessing the impact of data quality on pavement management systems, Ahmad Alhasan  
- The use of pavement management systems to manage and process the “big data” sets generated from continuous measurement road condition surveys to develop practical maintenance plans and budgets, Graeme Paterson  
- Implementation of quality management plan for the collection of interstate pavement condition data, Jonathan Groeger  
- Rutting and faulting data for the interstate highway system: equipment validation, Amy Simpson |
| 15:30-17:00 | Structural | Crystal DE Theme 2-3 | Moderator: Ross McCarthy  
- A comparison study of Traffic Speed Deflectometer and Falling Weight Deflectometer on Texas roads, Feng Hong & John Bilyeu  
- Effect of pavement structural condition on the rate of pavement deterioration, Shivesh Shrestha  
- Field testing of TSD in New Jersey: deflection analysis and backcalculated moduli, Hao Wang |
| 15:30-17:00 | Other | Crystal AC Session 3-3 | Moderator: Bouzid Choubane  
- Forensic evaluation of pavement failure Using GPR and UAV technology, Yahid Ganji  
- Changes in interstate highway system pavement conditions between 2015 and 2018, Sareh Kouchaki  
- Application of 3D radar for pavement evaluation, Kenneth Maser |

Transportation Museum
Thursday, September 19, 2019

8:30- 10:00 DaRTS11 Meeting Part 1: Business Meetings and Updates

8:30- 10:00 Functional Washington
Moderator: Robert Orthmeyer
- Connected vehicle roughness data collection is real and could change our industry, William R. Vavrik
- Five years report for functional and structural deterioration of local road pavements in TRUE Project, Kazuya Tomiyama
- Striving for smoothness: a case study in ride quality measurement and performance specifications, Alex Bernier
- Experiences in the first use of Automatic 3-D Distress Evaluation System for pavement monitoring in Argentina, Gustavo Mezzelani

8:30- 10:00 Other Crystal DE
Session 3-4
Moderator: Raja Shekharan
- Comparable pavement cracking definitions, Kelvin Wang
- The preliminary study on evaluation of Taiwan Freeway No.1 using maintenance condition index, Shih-Huang Cheng
- Costa Rica experience in the application of the IRI parameter as criteria for the acceptance of road maintenance and rehabilitation projects, Luis Diego Herra Gómez
- Pavement evaluation & maintenance prioritization, Dominic Passanita

10:00- 10:30 Coffee Break (Exhibit Area)

10:30- 12:00 Functional Washington
Session 1-3
Moderator: Rohan Perera
- 3-D sidewalk inspection, John Laurent
- Quality assurance process for NCDOT automated data collection, Ryan Finley
- Historical advancements in high speed distress data collection, Doug Frith
- Road surface measurement spacing based on delaunay triangulation, Craig Altmann

10:30- 12:00 Pooled Fund Crystal DE
TPF-5 (385) – TSDD Technical Session 1
Moderator: Gerardo Flintsch
DaRTS11 Meeting Part 2: Technical Presentations (including remote presentation)

10:30- 12:00 Pooled Fund Crystal AC
3 (299) - Rut, Crack, Fault Technical Session 1
Moderator: Andy Mergenmeier
- Proposed standard data format and compression algorithms for 2D/3D pavement surface image, James Tsai
- Jointed concrete pavement faulting collection and analysis standards, TBD
- Discussion/Feedback/Input

12:00- 13:30 Lunch (Exhibit Area)
Thursday, September 19, 2019 – continued

13:30- 15:00  Functional Washington  
Session 1-4  
Moderator: John Senger  
• Introduction to continuous friction measurements, Ryland Potter & Graeme Paterson  
• Implementation of a PFMP for Virginia DOT – preliminary results, Ross McCarthy  
• Eliminate the deduct staircase: towards continuous distress severity measurement, Michael Nieminen  

Pooled Fund 3 Crystal DE  
Technical Session 2  
Moderator: Samer Katicha  
• Use of traffic speed deflection data in Australia, Richard Wix  
• Implementation of TSD for network level pavement management, Kenneth Maser  
• Kansas Traffic Speed Deflectometer (and more) experimental findings, Rick Miller  
• Economic impact of including pavement structural condition into pavement management decisions, Shivesh Shrestha  

Other Crystal AC  
Session 3-4  
Moderator: Thomas Van  
• Pavement distress detection using advanced machine learning methods with intensity and depth data, Matthew Connelly-Taylor  
• Development of a machine learning-based quality control approach for automated pavement condition data, Amir Arshadi & Abbas Kachwalla  
• Pavement surface evaluation beyond cracking with deep learning, Kelvin Wang  

15:00- 15:30  Coffee Break (Exhibit Area)  

15:30- 17:00  Plenary Closing Session  
Moderator, Kevin McGhee  
• Enabling continuous road monitoring applications using connected vehicle data, Donald Grimm  
• RPUG Business Meeting, Kevin McGhee & Scott Mathison  
• Final Remarks, Gerardo Flintsch  

Friday, September 20, 2019

8:00 – 12:00  ProVal Workshop Part 1  
Crystal DE  
Smart Road Tour (Reservation Required)  
VTTI

13:00 – 17:00  ProVal Workshop Part 2  
Crystal DE
Organizing Committee

Conference Chairs:
Gerardo Flintsch,
VTTI
Edgar de Leon Izeppi,
VTTI
Kevin McGhee,
VTRC

Organizing Committee Members

Brian Diefenderfer,
VTRC
Brian Ferne,
TRL, UK
Brian Shleppi,
Ohio DOT
David Huft,
South Dakota DOT
Glenn Hennin,
LMI Technologies
Gonzalo Rada, Chair,
TRB AFD80 Committee
Jerry Daleiden,
ARRB
Jonathan Groeger, Chair,
TRB AFD20 Committee
Ken Maser,
Infrasense
Larry Scofield,
International Grooving and Grinding Association

Leif Sjögren,
VTTI / ERPUG
Magdy MiKhail,
Chair, TRB AFD90 Committee
Patte Hahn,
National Center for Pavement Preservation
Rob Crandall,
VDOT
Robert Orthmeyer,
FHWA
Samer Katicha,
Virginia Tech
Scott Mathison,
Pathway Services
Tanveer Chowdhury,
VDOT
Thomas Ván,
FHWA
Trenton Clark,
Virginia Asphalt Association
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