2012 PEMS Conference and Workshop

“Sharing the latest advancements in the development and application of Portable Emission Measurement Systems”

Reception: 6:30-9:30 PM Wednesday, March 28, 2012
Conference: 8:30 AM-5:00 PM Thursday, March 29, 2012
Workshop: 9:00 AM-4:00 PM Friday, March 30, 2012

All Events take place at:
1084 Columbia Ave.
University of California, Riverside
College of Engineering-Center for Environmental Research and Technology
Riverside, CA 92507
www.cert.ucr.edu
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<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker(s)</th>
<th>Topic</th>
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<tr>
<td><strong>08:30</strong></td>
<td><strong>INTRODUCTION:</strong></td>
<td>J. Wayne Miller</td>
<td>Welcome</td>
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<td></td>
<td>UCR</td>
<td>Board Member</td>
<td>Contribution of Mobile Source Emissions to the Southern California Air Basin</td>
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<td></td>
<td>SCAQMD</td>
<td>Kent Johnson</td>
<td>In-use Testing: Highlights with MythBusters</td>
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<td><strong>09:10</strong></td>
<td><strong>REGULATORY PERSPECTIVE:</strong></td>
<td>Larry Oeler &amp; Justin Greuel</td>
<td>Updates on the U.S. In-use Compliance Testing Program: Regulatory Status and Policy Development Using PEMS</td>
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<td></td>
<td>JRC</td>
<td>Alessio Provenza</td>
<td>Updates on the PEMS Developments for the European Emissions Legislation: Towards a Better Control of Real-World Emissions</td>
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<td><strong>09:50</strong></td>
<td><strong>LESSONS AND APPLICATIONS:</strong></td>
<td>Mohan Krishnamurthy</td>
<td>In-use Testing of Late Model Heavy-duty Diesel Trucks Using a Portable Emissions Measurement System</td>
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<td>CARB</td>
<td>John Bowman</td>
<td>Lessons and Applications in PEMS for On-Highway Measurements</td>
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<td>Cummins</td>
<td>John Koval</td>
<td>Use of PEMS from a Research and Modeling Perspective, Including Future Plans</td>
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<td><strong>10:30-10:50</strong></td>
<td><strong>BREAK</strong></td>
<td>Daniel Carder</td>
<td>Future Considerations for In-use Compliance Testing</td>
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<td>WVU</td>
<td>John Koupal</td>
<td>Use of PEMS from a Research and Modeling Perspective, Including Future Plans</td>
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<td>U.S. EPA</td>
<td>Michael Block</td>
<td>Development of Test Cycles, Data Analysis, and Replicating Real-World Equipment Operation</td>
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<td>EmiStar</td>
<td>John Karim</td>
<td>Preliminary Investigation of the Correlation Between In-use Diesel Engine PM Emission Rates and Opacity</td>
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<td>CARB</td>
<td>Steve Trevitz</td>
<td>HDIUT Compliance Project, “Lessons Learned” with Combined Gaseous &amp; PM PEMS</td>
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<td><strong>12:30-13:30</strong></td>
<td><strong>LUNCH</strong></td>
<td>George Scora</td>
<td>Development of a Mobile Energy and Emissions Telematic System (MEETS)</td>
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<td>Caterpillar</td>
<td>Eric Walker</td>
<td>Latest Advances in PEMS and their Features: Off-Road Applications</td>
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<td><strong>15:30-15:50</strong></td>
<td><strong>NEW DEVELOPMENTS AND RESEARCH:</strong></td>
<td>Kent Johnson</td>
<td>Comprehensive Evaluation of AVL’s Gaseous PEMS: Laboratory and In-use Correlations: Pre- and Post-2010 Emissions</td>
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<td>UCR</td>
<td>Michael Arndt</td>
<td>AVL M.O.V.E. – Comprehensive and Integrated In-Vehicle Measurement Platform</td>
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<td>AVL</td>
<td>Bertrand Lanher</td>
<td>LASAR: High Speed Tools for the In-use Measurement of Nitrogen Containing Species</td>
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<td>Sensors</td>
<td>David Booker</td>
<td>Updates on Sensors Latest ECOSTAR Products and Emerging Tools</td>
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<td><strong>15:50</strong></td>
<td><strong>BREAK</strong></td>
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<td><strong>15:50</strong></td>
<td><strong>PANEL DISCUSSION:</strong></td>
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<td>Consider the above issues and examine pathways to resolutions including testing improvements, limitations of PEMS for in-use testing, and what applications require 1065 compliant PEMS.</td>
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Workshop, March 30th

09:00-12:00 &  RIDE AND DRIVE EVENT (1 hour duration)
13:00-16:00

Vehicle#1:  AVL VW Jetta Diesel – M.O.V.E car (5 minutes)
Vehicle#2:  AVL VW Golf GDI – PEI’s demonstrator (5 minutes)

Station#1:  AVL InMotion (15 minutes)
Title of the Station: High-performance Virtual Vehicle-driver-road-traffic HIL Environment
Station Owner: Felix Pfister
Supporters: PJ Pankratz, Phil Shaw
Data Analysis: Jetta vehicle

Station#2:  AVL M.O.V.E PEMS (15 minutes)
Title of the Station: Real-World, In-use PEMS and EPA Reporting
Station Owner: Roland Wanker
Supporters: Paul Clark, Karl Oberguggenberger
Data Analysis: Jetta vehicle

Station#3:  AVL M.O.V.E Combustion and Fuel Consumption Measurement (15 minutes)
Title of the Station: Real-World Portable Combustion and Fuel Consumption Measurement
Station Owner: Dennis Shen
Supporters: Siegfried Roeck
Data Analysis: Jetta and Golf vehicles

11:00-13:00  TRAINING SEMINAR AND LUNCH: “How-to for PEMS Testing”

TUEV  Karsten Mathies  Mobile In-use Measurement in Real Agricultural Applications Following
       the EU-PEMS Pilot Program for Non-road Mobile Machinery

UCR  Joseph Menke & Kent Johnson  CAN Interfacing for PEMS: Uncovering the
       Details of CAN Messaging and Interfacing with Application

WVU  Daniel Carder  Tips for High Quality and Reliable PEMS Testing

UCR  Bill Welch  Ocean Going Vessel Testing: A Comparison Between The Semtech DS and the Horiba PG250

UCR  Tanfeng Cao  The Nuts & Bolts of a Complete 1065 Audit

15:00  PANEL DISCUSSION:
This final round table panel will be to consider the previous day’s
discussion, today’s discussions, and the need for future tools to help
address issues raised.
Thank You to Our Sponsors

AVL
Air Quality Management District
Engine Manufacturers Association

California Air Resources Board
U.S. Environmental Protection Agency

Bourns Automotive Division
Dewetron
ECM Engine Control and Monitoring
EmiSense
Horiba
Sensors