

# PEMS 2022 Conference Agenda

## Day 1 – Thursday, March 17<sup>th</sup>, 2022

- **Keynote Speaker:** Chris Frey | U.S. EPA

- **Government Policy**

*Non-road Mobile Machinery in Service Monitoring Based on PEMS-JRC Experiences in the Development of the Regulatory Proposal*

Roberto Gioria | European Commission

*Mini-PEMS: A Technical Review on What is Needed for Using It as a Screening and Compliance Tool*

Carl Fulper | U.S. EPA

*Onboard Sensing, Analysis, and Reporting (OSAR)*

Kent Johnson | University of California - Riverside, CE-CERT

- **New approaches/methods**

*Easier, Cheaper, Deeper: A Novel Approach to Tailpipe Emission Measurement*

Nick Molden | Emissions Analytics

*Low NOx Real World Cycle PEMS and NOx Sensor*

Chris Sharp | Southwest Research Institute

*ECM's miniPEMS and microPEMS Systems and Components*

Ron Patrick | Engine Control and Monitoring (ECM) Company

*Low-cost On-board Electrostatic PM Sensing for Continuous Compliance Monitoring and Geofencing*

Patrick Thompson | EmiSense Technologies, LLC

*Performance Evaluation of a MiniPEMS: Results of Intercomparison Studies and Implications for its Potential Use for Road-side Inspection, Fleet Screening, and Road Worthiness*

Daisy Thomas | 3DATX Corporation

*Advanced Portable Emissions Measurement System for New Measurement Components (NH<sub>3</sub>, N<sub>2</sub>O & SPN<sub>10</sub>)*

Shun Fukami | Horiba

- **International Research Developments**

*Real World Emissions Analysis Using Sensor-based Emissions Measurement System for Light-duty Direct-Injection Gasoline Vehicle*

Susumu (Mu) Sato | Tokyo Institute of Technology

*Measuring Emissions From a Heavy-duty Diesel Vehicle Demonstrator Under Real World Conditions Using on-board Sensors and Advanced Portable Instruments*

Tommaso Selleri | European Commission, Joint Research Centre

*RDE Plus – Rapid Characterization of Vehicle and Powertrain Performance and Emissions using Digital Twin, Powertrain-in-the-Loop and Chassis Dynamometer Methodologies*

Phil Roberts | Horiba Mira Ltd.

*Developing a Low-cost PEMS for Flex Fuel Cars*

Andre Luiz Silva Forcetto | Universidade de Sao Paulo

*NH3 and N2O Real World Emissions Measurement from a CNG Heavy Duty Vehicle Using Advanced On-Board Measurement Systems*

Ricardo Suarez-Bertoa | European Commission, Joint Research Centre

- **PEMS Panel Discussion: TBA**

- **Tours at California Air Resources Board (CARB) Headquarters**

*Location: 4001 Iowa Ave, Riverside, CA 92507*

- **PEMS 2022 Reception**

## Day 2 – Friday, March 18<sup>th</sup>, 2022

- **Research Developments**

*Improved Vehicle Cabin Air Quality by Control of Air Recirculation Using Spatiotemporally-Resolved Interactive Map*

Herve Borrel | Airlib Inc.

*The Influence of Portable and Built-in Ionizers on Ozone Concentration In Vehicle Cabin*

David Mendez-Jimenez, Grace Johnson, Heejung Jung | University of California - Riverside, CE-CERT

*Brake Activity of a Heavy-Duty Vehicle*

Brenda Lopez, Kent Johnson, Heejung Jung | University of California - Riverside, CE-CERT

*Development of a Mini-PEMS with High HC Capability*

Scott Miers & Brian Eggart | Michigan Technological University

*MiniPEMS use for Advanced Inspection and Maintenance Methods to Identify High Emitters*

Daisy Thomas | 3DATX Corporation

*Centre Onboard Sensing, Analysis, and Reporting NOx Real World Emissions Measurement from a Euro 6d-ISC Light Duty Vehicle Using On-Board Sensors*

Tommaso Selleri | European Commission, Joint Research

*Collecting Real-World Evidence on Factors Affecting Bus Fleet Non-Exhaust Emissions*

Karl Ropkins | University of Leeds

- **New approaches/methods**

*“Opening the “Can” - Exploiting the Wealth of Data Within a Vehicle’s ECM*

Carl Fulper | U.S. EPA

*Communication with Unfamiliar Off-Road Vehicle Controller Area Network (CAN) Systems in the Field*

Andrew Burnette | MeasureMission

- **Featured Speakers**

*Community Level Environmental Policy Developments*

Kathryn Higgins | South Coast Air Quality Management District