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ON-BOARD DIAGNOSTICS SYMPOSIUM

September 25-28, 2017

Wyndham Anaheim Garden Grove

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MPH



DIAGNOSTIC LIFE-CYCLE SOLUTIONS



MAHLE Powertrain specializes in the design and development of advanced internal combustion engines, hybrid powertrain systems and transmissions. We are engaged in extensive research, focused on the application and optimization of new engine and driveline technologies into cost-effective, production feasible solutions for enhanced efficiency, improved fuel economy and lower emissions.

Driving Advanced Powertrains

Furthermore, we provide a full spectrum of OBD development services as part of our complete powertrain development capabilities. MAHLE Powertrain is your dedicated partner for delivering your future powertrain innovations.

www.mahle-powertrain.com

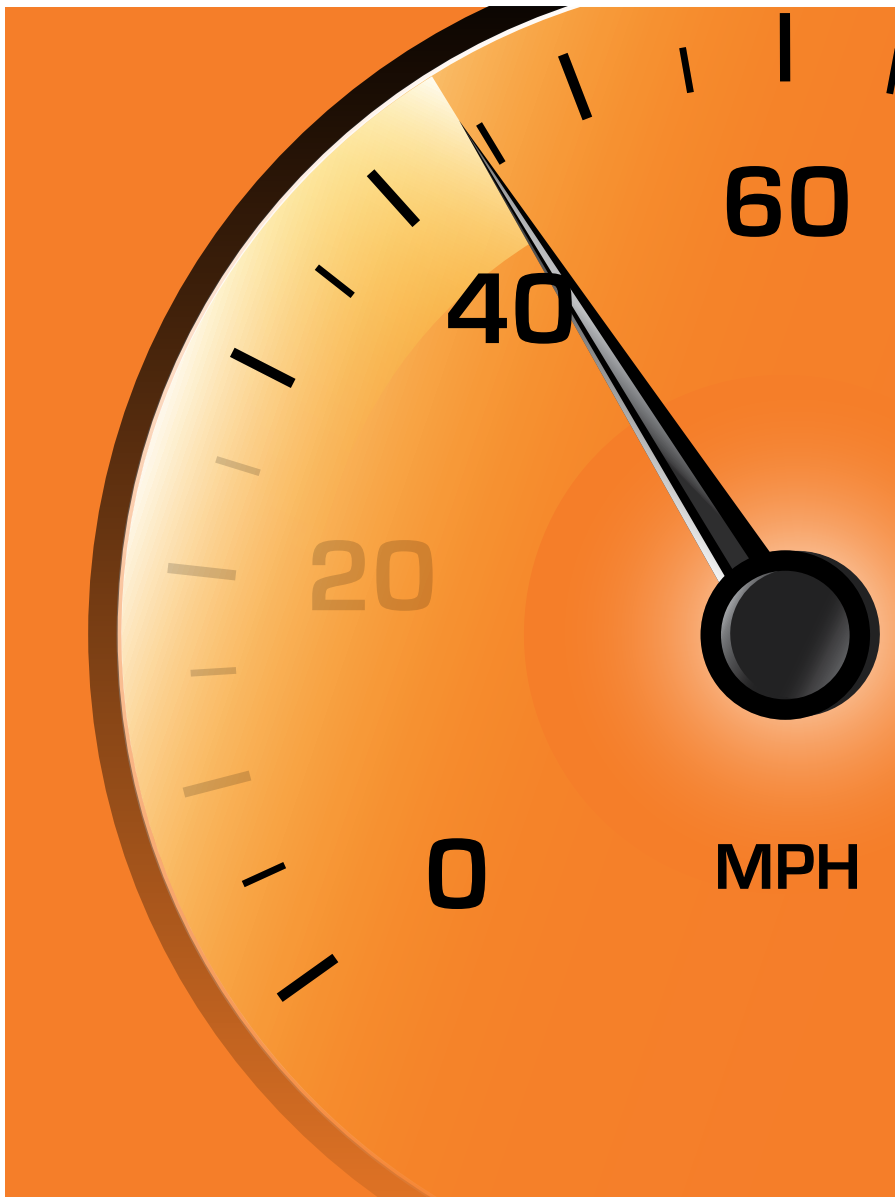


MAHLE
Powertrain

ON-BOARD DIAGNOSTICS SYMPOSIUM

CONTENTS

Sponsors	2
General Information	3
Event-At-A-Glance	5
Agenda	6
Exhibitor Profile	12



EMERGENCY PROCEDURES DURING THE ON-BOARD DIAGNOSTICS SYMPOSIUM

During the event attendees are to follow the established emergency guidelines of the facility where the emergency occurs.

Based on the location of the incident, report emergencies to the nearest venue representative and/or security personnel if available, or report to the SAE registration area.

Should a catastrophic event occur, attendees should follow the safety and security instructions issued by the facility at the time of the event. This includes listening for instructions provided through the public address system and following posted evacuation routes if required.

In the event of an emergency or a major disruption to the schedule of events at the event, attendees and exhibitors may call this number to receive further information about the resumption of this event. Updates will also be provided via the SAE website at www.sae.org.

SAE EMERGENCY HOTLINE

+1.724.772.4044

+1.800.581.9295

Attendees are permitted to bring camera equipment onto the show floor. Exhibitors retain the right to restrict photography of their products or displays and such decisions are within the discretion of the exhibitor and are not controlled by SAE International.

Open exchange of ideas

The purpose of this session is to provide an open exchange of ideas. Remarks made by participants or members of the audience cannot be quoted or attributed to the individual or their company unless express permission has been granted by the individual and their company. Any record of remarks, discussion, or photographs may not be used unless express permission has been granted by the individual and their company.

Consent to use of images

Please note that photographs and video taken by or on behalf of SAE International of event activities and attendees shall be the property of SAE International. By registering for an SAE International event, you consent to the use by SAE International of any photograph or video in which you appear, including for promotional purposes, in print, digital, or other format, without notice or compensation to you.

SPONSORS

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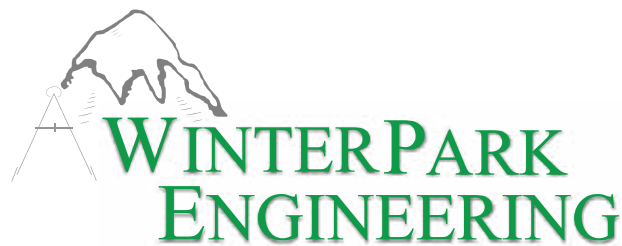


BOSCH

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GENERAL INFORMATION

Registration

Santa Rosa Pre-Function

Monday, September 25
12 – 5 p.m.

Tuesday, September 26
7 a.m. – 5 p.m.

Wednesday, September 27
7 a.m. – 5 p.m.

Thursday, September 28
7 a.m. – 2 p.m.

Exhibit Hours

Exhibits are located in the Santa Rosa Pre-Function area and will be available Tuesday through Thursday throughout the day.

Networking Lunches

Catalina Ballroom

Tuesday, September 26
11:15 a.m. – 12:30 p.m.

Wednesday, September 27
12:30 – 1:30 p.m.

Thursday, September 28
12:30 – 1:30 p.m.

Networking Reception

Santa Rosa Pre-Function

Tuesday, September 26
5:30 – 6:30 p.m.

Sponsored by:

CONTROLTEC
UNLOCKING THE POWER OF DATA

Wi-Fi Information

*Complimentary wireless internet is available in the meeting space. Select **Wyndham Guest** to connect.*

ORGANIZING COMMITTEE

Paul Baltusis, Ford Motor Company
Bernard Challen, Shoreham Services
Frank Dorer, Volkswagen
Robert Gruszczynski, Volkswagen of America
Farah Hindi, Delphi Diesel Systems
Mark Laleman, Ford Motor Company
Andrew Noble, Ricardo UK Ltd
Mike Regenfuss, California Air Resources Board
Marcel Romijn, FEV
John Van Gilder, General Motors LLC
Michael Vawter, Cummins
Hal Zatorski, FCA US LLC
Andrew Zettel, General Motors LLC

Jet Toy Competition

Wednesday, September 27
The JetToy Competition offers students, teachers and volunteers who have participated in the A World in Motion® JetToy Challenge an opportunity to come together and share what they have learned through their experience. The JetToy event is set up as a friendly competition between 30 LAUSD students (in Engineering Design Teams of 3). SAE International will host this competition through the gracious sponsorship of Cummins.



Keynote Speaker

Tuesday, September 26
8:30 – 9:15 a.m.

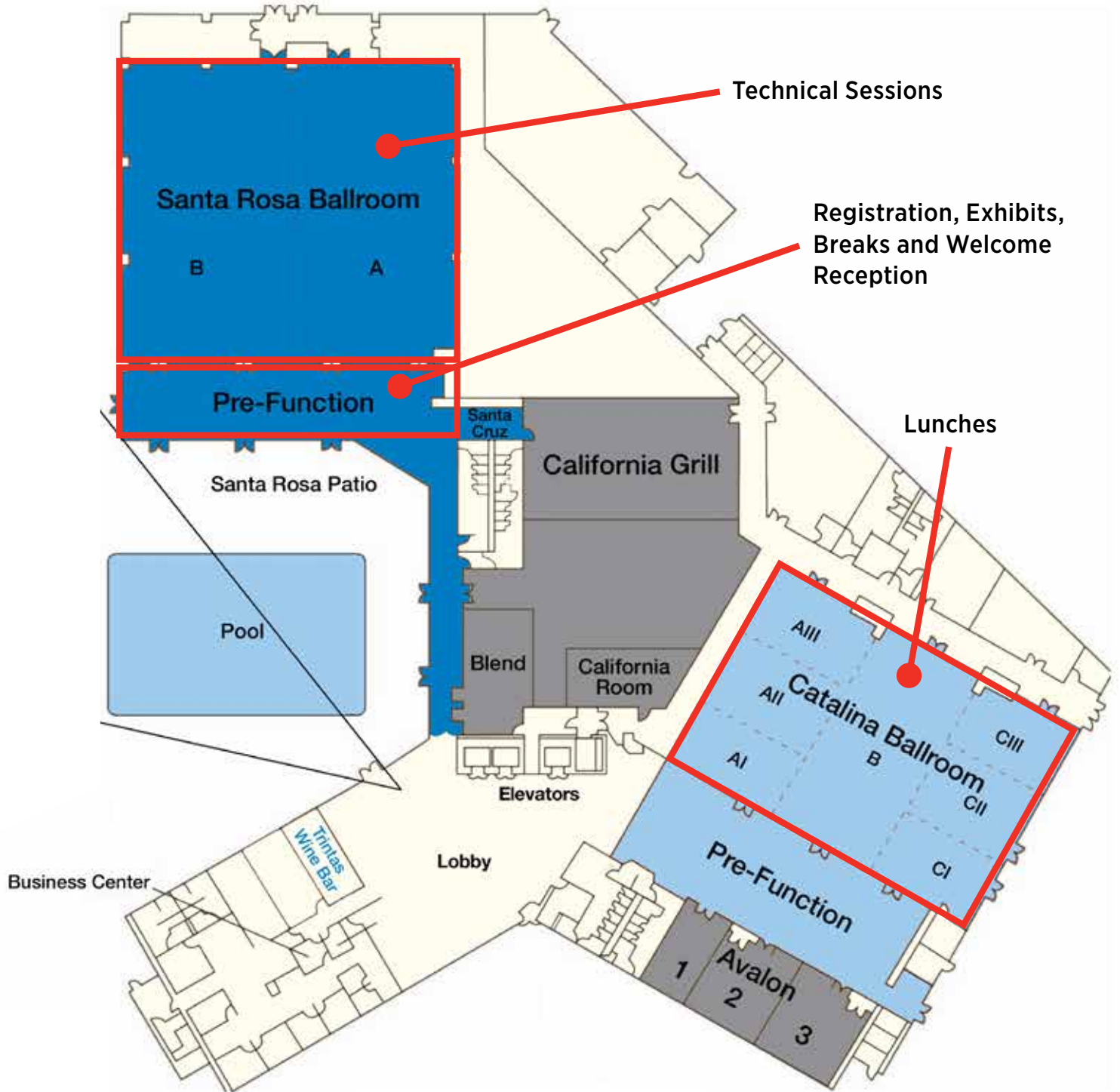
Annette Hebert

Chief, Emissions Compliance,
Automotive Regulations and
Science (ECARS) Division
California Air Resources Board

Real World Emissions, Is it Time to Evolve the Role of Onboard Diagnostics?

Onboard diagnostics (OBD) has been a great tool in detecting emission control issues on in-use vehicles and assisting in their repairs. But is it time to evolve OBD beyond just a diagnostic tool to help track real world emission performance? As sensors become more advanced, it is time to consider expanding the OBD system to a system that tracks real world emission performance of motor vehicles across all modes of operation and determine the true emission impacts of the fleet.

FLOOR PLAN



EVENT-AT-A-GLANCE

September 25
MONDAY

1-2 p.m.
Introduction to OBD, Part 1:
Historical Legal & Logical
Background of OBD

2-3 p.m.
Introduction to OBD, Part 2:
History of OBD and
Implementation World Wide

3-3:30 p.m.
Networking Break

3:30-4:30 p.m.
Introduction to OBD, Part 3:
Common Acronyms

4:30-5 p.m.
Q&A with Presenters

September 26
TUESDAY

8:15-8:30 a.m.
Welcome and Symposium
Opening

8:30-10 a.m.
Keynote and Technical
Presentations

10-10:30 a.m.
Networking Break with Exhibits

10:30-11 a.m.
Technical Presentations

11-11:15 a.m.
Exhibitor Introductions

11:15 am -12:30 p.m.
Networking Lunch

12:30-2:45 p.m.
Technical Presentations

2:45-3:15 p.m.
Networking Break with Exhibits

3:15-5:15p.m.
Technical Presentations

5:30-6:30 p.m.
Welcome Networking Reception
with Exhibits
Sponsored by ControlTEC

September 27
WEDNESDAY

8-10 a.m.
Technical Presentations

10-10:15 a.m.
Exhibitor Introductions

10:15-10:45 a.m.
Networking Break with Exhibits

10:45 a.m.-12:30 p.m.
Breakout Sessions
- Signal Analysis and Classification
Requirement (Safety)
- Communication Standards

12:30-1:30 p.m.
Networking Lunch

1:30-2 p.m.
Breakout Session Summaries with
Q&A

2-3:30 p.m.
Technical Presentations

3:30-4 p.m.
Networking Break with Exhibits

4-5:30 p.m.
Technical Presentations

September 28
THURSDAY

8-10 a.m.
Technical Presentations

10-10:15 a.m.
Exhibitor Introductions

10:15-10:45 a.m.
Networking Break with Exhibits

10:45 a.m.-12:30 p.m.
Breakout Sessions
- Diesel
- China 6

12:30-1:30 p.m.
Networking Lunch

1:30-2 p.m.
Breakout Session Summaries with
Q&A

2-3 p.m.
Technical Presentations

3-3:30 p.m.
Networking Break with Exhibits

3:30-5:00 p.m.
Technical Presentations

5:00 p.m.
Conclusion of Symposium

EXHIBIT HOURS

Exhibits are located in the Santa Rosa Pre-Function area and will be available Tuesday through Thursday throughout the day.

REGISTRATION HOURS

Monday 12 -5 p.m.
Tuesday 7 a.m.-5 p.m.
Wednesday 7 a.m.-5 p.m.
Thursday 7 a.m.-2 p.m.

AGENDA

Monday, September 25

Time	Title
1:00 p.m.	Introduction to OBD, Part 1: Historical Legal & Logical Background of OBD <i>Mike Regenfuss, California Air Resources Board</i>
2:00 p.m.	Introduction to OBD, Part 2: History of OBD and Implementation World Wide <i>Janean Kowalkowski, General Motors</i>
3:00 p.m. – Networking Break	
3:30 p.m.	Introduction to OBD, Part 3: Common Acronyms <i>Paul Baltusis, Ford Motor Company</i>
4:30 p.m.	30 Minutes of Q&A with All Participants



AGENDA

Tuesday, September 26

Time	Title
8:15 a.m.	Welcome & Symposium Opening
8:30 a.m.	Keynote: Real World Emissions, Is it Time to Evolve the Role of Onboard Diagnostics? <i>Annette Hebert, California Air Resources Board</i>
9:15 a.m.	Light Duty OBD Update <i>John Ellis, California Air Resources Board</i>
10:00 a.m. – Networking Break with Exhibits	
10:30 a.m.	Split Injection Certification Lessons <i>Wei Lu, Nissan Technical Center</i>
11:00 a.m.	Exhibitor Introductions
11:15 a.m. – Networking Lunch	
12:30 p.m.	Methodology for Establishing, Implementing and Verifying Diagnostic Robustness <i>Hal Zatorski and Scott Henson, FCA US LLC</i>
1:15 p.m.	OBD Experiences: A Ford Perspective <i>Paul Baltusis, Ford Motor Company</i>
1:45 p.m.	OBD Experiences: A Toyota Perspective <i>Morton Smith, Toyota Motor North America Inc.</i>
2:15 p.m.	The New Prognostics Paradigm <i>Steven Holland, General Motors</i>
2:45 p.m. – Networking Break with Exhibits	
3:15 p.m.	Jaguar Land Rover’s Experiences with OBD II Compliance for a 2.0 Gasoline Engine with Continuously Variable Valve Lift <i>Martin Hagggett, Jaguar Land Rover Ltd.</i>
3:45 p.m.	Monitoring SCR Catalysts Under Similar Conditions <i>Michiel Van Nieuwstadt, Ford Motor Company</i>
4:15 p.m.	Update to DOC Diagnostic Challenges for Future NA Emissions Regulations – GM Perspective <i>Igor Anilovich, General Motors LLC</i>
4:45 p.m.	From Dumb Fan to an OBD Smart Device <i>John Van Gilder, General Motors LLC</i>
5:30-6:30 p.m. – Networking Reception with Exhibits - Sponsored by ControlTEC	

AGENDA

Wednesday, September 27

Time	Title
8:00 a.m.	Worldwide OBD Update <i>Janean Kowalkowski, General Motors</i>
8:45 a.m.	OBD Standards Review <i>Paul Baltusis, Ford Motor Company; Robert Gruszczynski, Volkswagen of America</i>
9:30 a.m.	Real-Time Aftertreatment System Diagnostics and Prognostics Using Radio Frequency Sensors <i>Alexander Sappok, CTS</i>
10:00 a.m.	Exhibitor Introductions
10:15 a.m. – Networking Break with Exhibits	
10:45 a.m.	Breakout Sessions <ul style="list-style-type: none">• Signal Analysis and Classification Requirement (Safety), moderated by Andrew Zettel, General Motors LLC• Communication Standards, moderated by Paul Baltusis, Ford Motor Company
12:30 p.m. – Networking Lunch <i>Please show your support of the AWIM competition sponsored by Cummins taking place during lunch!</i>	
1:30 p.m.	Breakout Session Summaries with Q&A
2:00 p.m.	Diesel Regen Distance PID Analysis and Common Diesel OBD Emissions Calculations <i>Ace Kue and John Bogema, Ford Motor Company</i>
2:30 p.m.	Security Gateway System Impact on OBD <i>Yichao Guo, Nissan Technical Center NA</i>
3:00 p.m.	Cyber Security Presentation <i>Robert Gruszczynski, Volkswagen of America</i>
3:30 p.m. – Networking Break with Exhibits	
4:00 p.m.	Using Calibration Identification and Verification Numbers to Quantify Vehicle Modification Activity <i>Allen Lyons, California Air Resources Board</i>
4:30 p.m.	California Smog Check Implementation of Permanent DTCs <i>Greg Coburn, Bureau Of Automotive Repair</i>
5:00 p.m.	California Smog Check OBD Fraud Detection <i>Garrett Torgerson, Bureau Of Automotive Repair</i>

AGENDA

Thursday, September 28

Time	Title
8:00 a.m.	Heavy Duty OBD Update <i>Thomas Montes, California Air Resources Board</i>
8:45 a.m.	OBD Experiences: A Cummins Perspective <i>Michael Vawter, Cummins Inc.</i>
9:30 a.m.	SAE J1939 Standards Update for HD OBD <i>Eric Swenson, Navistar Inc.</i>
10:00 a.m.	Exhibitor Introductions
10:15 a.m. - Networking Break with Exhibits	
10:45 a.m.	Breakout Sessions <ul style="list-style-type: none">• Diesel, moderated by Michael Vawter, Cummins Inc.• China 6, moderated by John Van Gilder, General Motors LLC
12:30 p.m. - Networking Lunch	
1:30 p.m.	Breakout Session Summaries with Q&A
2:00 p.m.	Fuel Injector with Electronics as a Smart Device <i>Farah Hindi, Delphi Diesel Systems</i>
2:30 p.m.	Challenges with Launching an OBD-certified SI, NZ NOx, HD Natural Gas Engine <i>Benjamin Zwissler, Cummins Inc.</i>
3:00 p.m. - Networking Break with Exhibits	
3:30 p.m.	OBD Challenges and Benefits with 48V Diesel Mild Hybrid Application <i>Joel Deussen, FEV Inc.</i>
4:00 p.m.	DEF Quality Sensor Monitoring Using the Hydraulic Characteristic of a Gear Pump <i>Issam DJEMILI, Plastic Omnium Advanced Innovation</i>
4:30 p.m.	Introduction of On Board Diagnostics and Emission Control Strategies for Cost Sensitive Markets <i>Anuja Karadkhedkar, John Deere Technology Center</i>
5:00 p.m. - End of Symposium	



SAVE THE DATE

ON-BOARD DIAGNOSTICS SYMPOSIUM – EUROPE

5–7 March 2018 | Barcelona, SPAIN

Call for Presentations

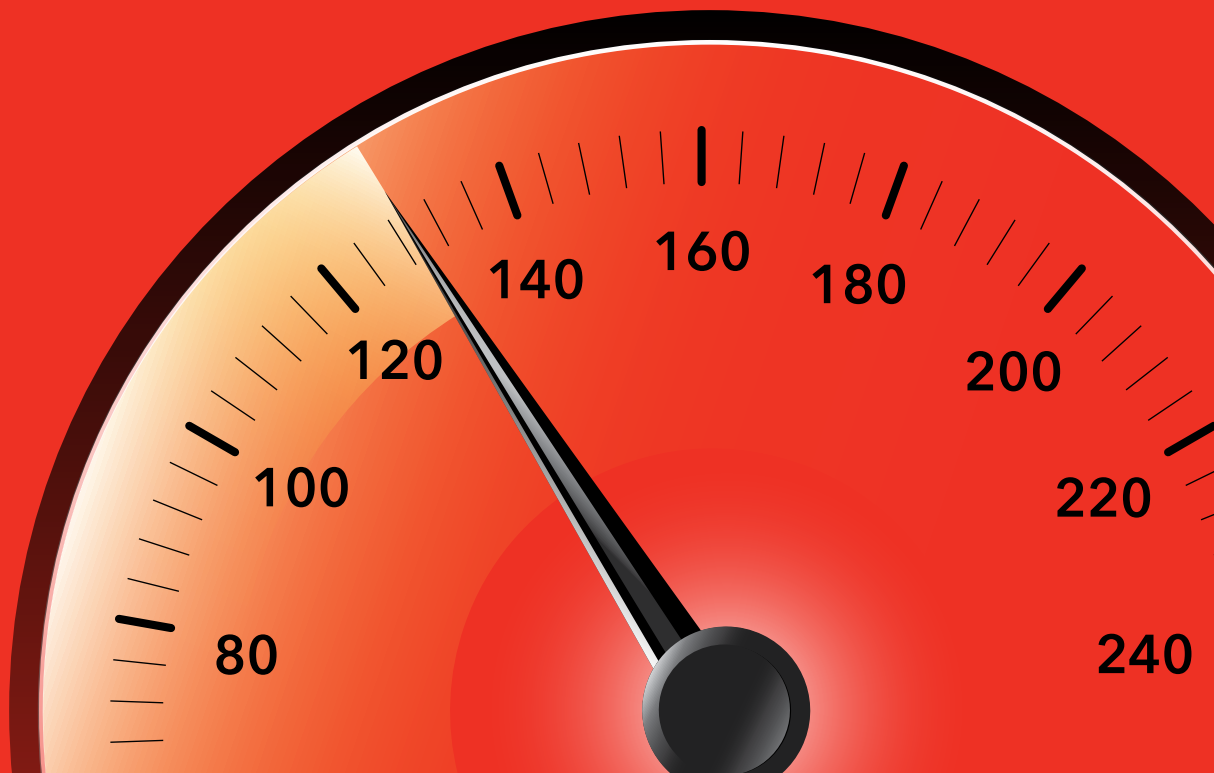
You are invited to submit a technical presentation for the SAE 2018 On-Board Diagnostics Symposium-Europe.

Submit your presentation by **30 November 2017**.

For questions, contact: Brandie Schandelmeier

Brandie.Schandelmeier@sae.org

sae.org/obd-eu





P1658747

A NEW WAY TO VOLUNTEER

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EXHIBITOR PROFILE

Exhibitor Directory text is published as submitted by exhibiting companies.

BOSCH ENGINEERING GMBH Booth 12

Robert Bosch Allee 1
Abstatt 74232
Germany
bosch-engineering.de

GOLD SPONSOR

As development partner, Bosch Engineering – a wholly owned Bosch subsidiary – offers the adaptation of electronics systems of proven and tested Bosch technology for small series production. The range of services includes the development of systems, functions and software. Our focus is on cross-domain and inter-systematic developments.

CONTROLTEC Booth 5

999 Republic Dr Ste 100
Allen Park, MI 48101
United States
control-tec.com

PLATINUM SPONSOR

Control-Tec, a Delphi company, is a leading telematics and analytics solutions provider for Pre- and Post-Production applications serving Light-duty, Heavy-duty, Recreational, Agriculture and Industrial sectors. Control-Tec combines data acquisition with edge and cloud computing architecture resulting in enterprise capabilities for fleet management, product development, validation and connected vehicle applications.

CTS CORPORATION Booth 8

2375 Cobot Dr
Lisle, IL 60532
United States
ctscorp.com

CTS (NYSE: CTS) is a leading designer and manufacturer of products that Sense, Connect and Move. CTS manufactures sensors, actuators and electronic components in North America, Europe and Asia, and supplies these products to OEMs in the aerospace, communications, defense, industrial, information technology, medical and transportation markets.

EPOD LLC Booth 1

565 E 34th Ave Ste 5
Apache Junction, AZ 85119
United States
eepod.com

EEPod LLC is a provider of low-cost, high-performance vehicle electronics and software for diagnostics, data-acquisition, network simulation and reprogramming.

ETAS INC Booth 2

3021 Miller Rd
Ann Arbor, MI 48103
United States
ETAS.com

ETAS provides a comprehensive product portfolio of integrated tools designed to increase quality and efficiency in the development and maintenance of embedded systems, with solutions for software modeling/integration, hardware-in-the-loop simulation, virtual and rapid-prototyping, measurement/calibration and functional safety and security. Our tools are widely deployed in automotive, off-highway, and adjacent segments of the embedded industry.

FEV NORTH AMERICA INC. Booth 9

4554 Glenmeade Ln
Auburn Hills, MI 48326
United States
fev.com

FEV is a global propulsion system and vehicle engineering services company. We offer design, analysis, benchmarking, prototyping, powertrain and transmission development, NVH, vehicle/systems integration, and calibration for conventional and electrified systems. We are cyber security/connected vehicle engineering experts and offer ADAS and autonomous system development and testing.

INTREPID CONTROL SYSTEMS, INC. Booth 4

31601 Research Park Dr
Madison Heights, MI 48071
United States
intrepidcs.com

Intrepid Control Systems creates tools for vehicle, test, and embedded engineering. Intrepid provides embedded communication interfaces for AUTOSAR, CAN, LIN, FlexRay, CAN FD, Automotive Ethernet, Keyword, UART, J1939, ISO14229 and GMLAN. Intrepid is part of the Automotive Engineering Tool Alliance (www.aeta-rice.com), a comprehensive tool chain for automotive electronics development.

EXHIBITOR PROFILE

MAHLE POWERTRAIN LLC

Booth 6

PO Box 2840
Farmington Hills, MI 48333
United States

mahle-powertrain.com

MAHLE Powertrain (MPT) is an engineering services provider for the global vehicle market, specializing in product development, calibration, test, and integration of traditional and hybrid powertrains. MPT is an industry leader in vehicle cybersecurity providing tailored risk/vulnerability assessments, penetration testing and vehicle hardening services for the Commercial, Passenger, Off-Highway industries.

See our ad on the inside front cover.

VECTOR CANTECH INC

Booth 7

39500 Orchard Hill Pl Ste 400
Novi, MI 48375
United States

vector.com

Vector North America Inc (formerly Vector CANtech) was established in 1997 as a wholly owned North American subsidiary of Vector Informatik GmbH. Vector is the leading provider of software tools, embedded software components and services to OEMs, their suppliers and various other industries. Vector tools equip engineers with the finest capabilities for design, diagnostics, calibration and testing of distributed networking systems.

NGK SPARK PLUGS (USA) INC

Booth 10

46929 Magellan
Wixom, MI 48393
United States

ngksparkplugs.com

NGK Spark Plugs – The World Leader in Spark Plug and Oxygen Sensor Technology. Since 1936, NGK Spark Plugs has been the world leader in technology, innovation, and world-class quality in the design of spark plugs and oxygen sensors. NGK has built a reputation for quality and reliability, and a commitment to excellence continues to be the driving force behind the company's advanced research and development programs.

RA AUTOMOTIVE SOFTWARE SOLUTIONS INC

Booth 3

31601 Research Park Dr
Madison Heights, MI 48071
United States

rac.de/en

Focused on vehicle and ECU diagnostics, RA's software tools comprehensively and conveniently cover all worldwide OBD-Standards (J1939, J1979, ISO 27145). The products are used for OBD validation and development by OEMs and by governmental agencies for compliance testing and tamper detection. Advanced diagnostics using ISO 14229 (UDS) and custom diagnostic solutions for special purpose vehicles are also available.

SGS TRANSPORTATION - TESTING SERVICES

Booth 11

2022 Helena St
Aurora, CO 80011
United States

sgs.com/transportation

SGS's network of transportation industry testing facilities are equipped with an array of test cells and equipment that allow our experts to test anything from components and small engines all the way to larger engines and vehicles. Let our independent lab complement your current testing program.

2017

New Energy Vehicle Forum

September 12-13
Shanghai, China

North American International Powertrain Conference

September 13-15
Chicago, IL

COMVEC 17

September 18-20
Rosemont, IL

Brake Colloquium & Exhibition

September 24-27
Orlando, FL

Intelligent and Connected Vehicles Symposium

September 26-27
Kunshan City, Jiangsu, China

On-Board Diagnostics Symposium

September 26-28
Anaheim, CA

AeroTech Conference & Exhibition

September 26-28
Fort Worth, TX

Thermal Management Systems Symposium

October 10-12
Plymouth, MI

From ADAS to Automated Driving

October 10-12
Columbus, OH

International Powertrains, Fuels & Lubricants Meeting

October 16-19
Beijing, China

Engine and Materials Convergence Conference

November 8-9
Wiesbaden, Germany

Range Extenders for Electric Vehicles Symposium

November 14-15
Dearborn, MI

Transmission and Driveline Symposium

November 14-15
Dearborn, MI

JSAE/SAE Small Engine Technology Conference

November 15-17
Jakarta, Indonesia

Vehicle Electrification and Connected Vehicle Technology Forum

November 29-30
Shanghai, China

Defense Maintenance and Logistics Exhibition

December 4-6
Salt Lake City, UT

DOD Maintenance Symposium

December 4-7
Salt Lake City, UT

2018

Connect2Car at CES

January 9
Las Vegas, NV

Government/Industry Meeting

January 24-26
Washington, DC

Hybrid and Electric Vehicle Technologies Symposium

February 20-22
San Diego-Mission Valley, CA

On-Board Diagnostics Symposium

March 5-8
Barcelona, Spain

Additive Manufacturing in Motion

March 13-14
Cleveland, OH

Augmented + Virtual Reality (AR/VR) Technologies Symposium

March 21-22
Stuttgart, Germany

High Efficiency IC Engine Symposium

April 8-9
Detroit, MI

WCX™: SAE World Congress Experience

April 10-12
Detroit, MI

Connect2Car at WCX

April 10-12
Detroit, MI

Waste Heat Recovery in Internal Combustion Engines Symposium

May 23-24
Haifa, Israel

SAE Battelle CyberAuto Challenge™

August
Warren, MI

COMVEC 18

September 11-13
Rosemont, IL

On-Board Diagnostics Symposium

September 11-13
Indianapolis, IN

North American International Powertrain Conference

September 12-14
Chicago, IL

International Powertrains, Fuels & Lubricants Meeting

September 17-19
Heidelberg, Germany

Aerospace Manufacturing and Automated Fastening Conference and Exhibition

October 2-4
Charleston, SC

Thermal Management Systems Symposium

October 9-11
San Diego, CA

Brake Colloquium & Exhibition

October 14-16
Palm Desert, CA

Heavy Duty Diesel Emissions Control Symposium

October 16-17
Gothenburg, Sweden

SAE/JSAE Small Engine Technology Conference

November 6-8
Dusseldorf, Germany

Aerospace Systems + Technology Conference

November
London

Defense Maintenance and Logistics Exhibition

December 17-19
Tampa, FL

Defense Maintenance and Logistics Symposium

December 17-20
Tampa, FL