

SAE  
2013  
World Congress

# ACHIEVING EFFICIENCY

THE ESSENTIAL AUTOMOTIVE TECHNOLOGY EVENT

**April 16 -18, 2013**  
**Cobo Center ▪ Detroit, Michigan, USA**

**Announcing SAE 2013  
World Congress Annual Banquet  
and Keynote Speakers!**

- Annual Banquet Keynote Speaker:  
Sergio Marchionne, Chairman and CEO, Chrysler Group LLC
- Opening Ceremony Keynote Speaker:  
Mary D. Nichols, Chairman, California Air Resources Board
- Wednesday Keynote Speaker:  
George Whitesides, CEO and President, Virgin Galactic
- Thursday Keynote Speaker:  
Bob Lutz, Retired Vice Chairman, General Motors Company

***Learn more inside!***

[sae.org/congress](http://sae.org/congress)

Host Company



**CHRYSLER**

Tier One  
Strategic Partner



**SAE**International®

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# Welcome to

**SAE**  
**2013**  
World Congress

## The **Essential** Automotive Technology Event

“As we strive to achieve efficiency, the resulting significant and exciting challenges are once again positioning the automobile industry as the industry of choice for the world’s best and brightest engineering minds. Vast opportunities await those companies and individuals that dare to be creative and dream big.”

Today, efficiency is the new formula for success essential to propel the next generation of automobiles.

Now more than ever, the entire industry must work together to collect and elevate this talent in order to realize responsible mobility and reward those within the engineering community that are good stewards of our natural resources.

### SAE 2013 World Congress Leadership Team



**Dr. Mircea Gradu**  
Vice President  
Powertrain Transmission  
& Driveline Engineering,  
Head of Virtual Analysis  
Chrysler Group LLC  
**General Chairman**



**Dr. Juergen Greiner**  
Executive Vice President  
Powertrain Technology  
Head of Product Development  
ZF Friedrichshafen  
**Tier One Strategic Partner**

### Take advantage of networking opportunities today!

Encourage your team to start connecting with the SAE 2013 World Congress attendees and exhibitors today.

Join the conversation now:



#SAECongress

Learn more at

[www.sae.org/congress](http://www.sae.org/congress)

# About

**SAE**  
**2013**  
World Congress

SAE 2013 World Congress represents an unparalleled opportunity to explore new technology through both technical sessions and the Innovators Only Exhibition. In short, SAE 2013 World Congress is:

- The best venue for automotive technology trends;
- The most outstanding networking and learning experience;
- The gathering place of the best talent in the engineering field;
- The most important meeting place for global networking practitioners;
- And, the greatest event to meet new companies and view new technologies.

## Who Attends SAE World Congress?

ANNUALLY,  
**10,000+**  
PEOPLE ATTEND  
SAE WORLD  
CONGRESS

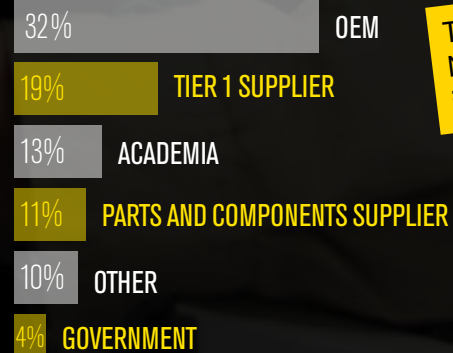
### ATTENDEES CONSISTED OF:

ENGINEERS  
ENGINEERING MANAGEMENT  
INDUSTRY EXECUTIVES  
ACADEMICS  
GOVERNMENT/MILITARY OFFICIALS  
CONSULTANTS

## SAE WORLD CONGRESS IS A GLOBAL EVENT!

IN 2012, SAE WORLD CONGRESS HAD ATTENDEES REGISTERED FROM 45 DIFFERENT COUNTRIES!

### Attendees By Company Type:



The ideal place to NETWORK with OEMs and industry's top auto suppliers!

# Top 4 Reasons to Attend

SAE  
2013  
World Congress



1  
2  
3  
4

## Technical Program

Enhance your skills and creativity as you and your engineers will learn from a large collection of expert engineers through a technical program that is both relevant and stimulating. This event offers you the opportunity to attend technical sessions driven by over **1,500** technical experts on advanced propulsion, safety, and advanced materials.

## Peer-to-Peer Networking

Discuss challenges and ideas with industry peers during designated networking opportunities, as well as between sessions, and leave with invaluable improvements and solutions.

## Management Program

Listen to industry leaders to learn about automotive technology trends and gain insight into the big picture. Here, you will have the opportunity to hear from over 60 of the automotive industry and government's top leaders!

**Perfect for both Engineering Managers and Engineers!** Stay ahead of industry trends by attending these highly anticipated sessions!

## Innovators Only Exhibition

Discover new companies and innovative technologies from OEM, top-tier suppliers, and other industry-related companies worldwide. Take advantage of your exclusive opportunity to meet with over 150 technology companies displaying their latest concepts and products on the show floor.

**NOW, BACK BY POPULAR DEMAND:  
THE FREE EXPO PASS FOR 2013!**



Have a smart phone?  
Scan now to view a video!



**WHY SHOULD YOU  
ATTEND SAE 2013  
WORLD CONGRESS?**

World Congress is the only comprehensive automotive technology event led and developed by the automotive industry itself, showcasing applied technology, innovation and product leadership.

## Comprehensive Technical Program

- Top Technical Program Topics
  - Electronics
  - Emissions/Environment/Sustainability
  - Vehicle Electrification Strategies for Sustainability
  - Integrated Design and Manufacturing
  - Intelligent Transportation Systems
  - Management
  - End of Life Management
  - Materials
  - Propulsion/Powertrain
  - Advanced Hybrid Vehicle Powertrains
  - Fuel Cell Power Systems
  - Advanced Battery Technology
  - Safety/Testing
  - Smart Grid
  - EV Infrastructure

## Outstanding Peer-to-Peer Networking Opportunities

- SAE Fellow Reception and Dinner
- SAE Awards Ceremony
- SAE Detroit Section Vehicle Event
- SAE Annual Banquet
- Chat with the Experts
- Panel Discussions
- Technology Lounges
- Daily Receptions in the Exhibit Hall
- Pre-Event Registration List
- And more!

# Management Program

## AVL Technology Leadership Center Topics



- Predicting Desire
- Driver Distraction Regulation and Autonomous Driving
- CO2 Challenge— What are the most cost effective fuel economy solutions?
- Advanced Propulsion—What are the new and innovative technologies that will be the “Game Changers”?
- Product Development Efficiency—Reducing time to market the right products

## FEV Powertrain Innovation Forum Topics



- New Fuels and High-Tech Innovations: Are engine controls and the CAN bus up to the challenge?
- Start-Stop is coming to North America, but will it Start or Stop sales?
- Take a Load Off: The Increasing Importance of Energy Load Management in Tomorrow's Powertrain Solutions
- Systems Engineering: Breaking Down the Walls to Develop a Better Solution
- Rising Above the Conventional: What Technologies have the Largest Potential to get to the Best Possible Vehicle Fuel Efficiency (and why)?

## Additional SAE 2013 WORLD CONGRESS activities that are perfect for engineering managers and engineers alike:

- AWIM Fuel Cell Olympics
- AWIM Jet Toy Olympics
- AWIM Motorized Toy Car
- Ride and Drive
- SAE Annual Business Meeting
- SAE Career Fair
- SAE Detroit Section Poster Competition
- SAE Detroit Section Student Exhibit Competition
- SAE Detroit Section Vehicle Event
- SAE Foundation Activities
- SAE History Committee Session
- SAE Professional Development Seminars(learn more at [sae.org/congress/seminars](http://sae.org/congress/seminars))
- SAE Standards
- And more!

Learn more and register today  
at [sae.org/congress](http://sae.org/congress)

# Event-at-a-Glance

Professional Development Seminars  
Monday - Friday: 8:30 am - 4:30 pm

Day/Time	Tuesday, April 16	Wednesday, April 17	Thursday, April 18
8:00 a.m.			
8:30 a.m.	Grand Opening		
9:00 a.m.	8:30 - 9:30		
9:30 a.m.			
10:00 a.m.	<b>AVL</b> Technology Leadership Center Sessions	Keynote 9:00 - 9:45	Keynote 9:00 - 9:45
10:30 a.m.	<b>FEV</b> Powertrain Innovation Forum Sessions	<b>FEV</b> Powertrain Innovation Forum Sessions 9:45 - 11:45	<b>FEV</b> Powertrain Innovation Forum Sessions 9:45 - 11:45
11:00 a.m.	<b>Technical Sessions</b> 10:00 - 11:40	<b>AVL</b> Technology Leadership Center Sessions 10:30 - 12:30	<b>Technical Sessions</b> 8:00 - 11:40
11:30 a.m.	Lunch on Exhibit Floor 11:30 - 1:00		Lunch on Exhibit Floor 11:30 - 1:00
12:00 p.m.			
12:30 p.m.			
1:00 p.m.			
1:30 p.m.	<b>AVL</b> Technology Leadership Center Sessions	<b>AVL</b> Technology Leadership Center Sessions 1:30 - 3:30	<b>Technical Sessions</b> 1:00 - 4:00
2:00 p.m.	<b>FEV</b> Powertrain Innovation Forum Sessions 1:00 - 3:00	<b>FEV</b> Powertrain Innovation Forum Sessions 1:00 - 3:00	Chat with the Experts 1:00 - 2:00
2:30 p.m.			
3:00 p.m.			
3:30 p.m.	SAE Annual Business Mtg 3:30 - 4:00		
4:00 p.m.			
4:30 p.m.			
5:00 p.m.			
5:30 p.m.	SAE Awards Ceremony 5:00 - 6:00	SAE Detroit Section Reception 5:30 - 6:30	Attendee Networking Reception 4:30 - 6:00
6:00 p.m.	Awards Reception 6:00 - 7:00		
6:30 p.m.			
7:00 p.m.			
7:30 p.m.		SAE Detroit Section Vehicle Event 6:30 - 8:30	Banquet 6:00 - 8:00
8:00 p.m.			Afterglow 8:00-10:00
8:30 p.m.			

Ride-n-Drive Hours: Tuesday-Thursday  
10:30 am - 4:30 pm

Learn more and register today  
at [sae.org/congress](http://sae.org/congress)

**Exhibit Hours**  
Tuesday, April 16, 10:00 a.m. - 6:30 p.m.  
Wednesday, April 17, 10:00 a.m. - 6:00 p.m.  
Thursday, April 18, 10:00 a.m. - 6:00 p.m.



# Announcing

**SAE**  
**2013**  
World Congress

# Keynotes



## Tuesday, April 16, 2013



**AVL Technology Leadership Center**  
8:30 – 9:30 a.m.

Featured Speaker:  
**Mary D. Nichols**  
Chairman  
California Air Resources Board

## Wednesday, April 17, 2013



**AVL Technology Leadership Center**  
9:00 – 9:45 a.m.

Featured Speaker:  
**George Whitesides**  
CEO and President  
Virgin Galactic

## Thursday, April 18, 2013



**AVL Technology Leadership Center**  
9:00 – 9:45 a.m.

Featured Speaker:  
**Robert A. Lutz**  
Retired Vice Chairman  
General Motors Company  
President and CEO, Lutz Communication

Learn more and register today  
at [sae.org/congress](http://sae.org/congress)

# Innovators Only Exhibition

An Industry Exclusive!

**FREE EXPO PASS IS BACK FOR 2013!**  
Learn more today at [sae.org/congress](http://sae.org/congress)

## April 16-18, 2013, Cobo Center, Detroit, Michigan, USA

This exclusive opportunity is limited to companies who accept the "Innovators Only" challenge and have proven to be top industry innovators and solution providers. The Innovators Only Exhibition supplies the **perfect venue for engaging a qualified audience of reviewers, collaborators, and customers.** Here, you can discover new companies and innovative technologies from OEM, top-tier suppliers, and other industry-related companies worldwide.

### Review Panelists include representatives from:

Automotive Engineering International ▪ BMW of North America, LLC  
Chrysler Group, LLC ▪ Fisker Automotive ▪ Ford Motor Company  
General Motors Company ▪ National Automotive Center ▪ Nissan

## The Automotive News PACE Awards

SAE International is proud to partner with the Automotive News PACE Awards. Our shared belief in the excellence these awards recognize unites the focus of SAE World Congress with the focus of the industry. Through this partnership, all 2012 and 2013 PACE Award finalists are pre-approved for the SAE World Congress Innovators Only Exhibit. No application is required.

Learn more and register today  
at [sae.org/congress](http://sae.org/congress)

## SAE 2013 World Congress Exhibitors

Exhibitors as of 1.14.13.

Please visit [www.sae.org/congress](http://www.sae.org/congress) for the most up-to-date list.

- Advanced Cooling Technologies Inc
- AdvanTech International
- Applus IDIADA
- Auto Harvest Foundation
- Beijing Trend Aofu Fine Ceramics Co LTD
- Bulk Molding Compounds Inc
- CD-adapco
- Centro Estero L'Internazionalizzazione
- CHARGED - Electric Vehicles Magazine
- Chrysler Group LLC
- Convergent Science Inc
- DG Technologies
- dSPACE Inc
- Eastman Chemical
- Enercon Industries
- FEV, Inc.
- Ford Motor Company
- General Motors Company
- Grail Engine Technologies
- Granta Design
- Hart Energy
- Henkel
- Hitachi Metals America Ltd
- Honda R & D
- Horiba
- Hyundai Motor Group
- IAV Automotive Engineering Inc.
- Intertek
- Iwis Engine Systems LP
- JATCO Ltd
- Jing-Jin Electric Technologies
- The Lubrizol Corp
- Luvata Appleton
- MEET Automotive
- Mentor Graphics Corp
- Nissan
- Objet Inc
- PROMEXICO
- Protean Electric
- Proto Manufacturing Inc
- Raydiance
- Reaction Design Inc
- REM Surface Engineering
- Sekisui S-lee America LLC
- Sichuan Zhongzi Exhaust Purge Co Ltd
- SLW Automotive
- SpaceClaim Corporation
- Synergeering Group
- Texas Economic Development
- TM4 Inc
- Transportation Research Center Inc
- Transtek Magnetics Inc
- ULVAC Technologies Inc
- Victrex Polymer Solutions
- WARDSAUTO
- Whitlam Label Co Inc
- Wuhan Hontrust Auto Pulley Ind Co Ltd
- ZF

## SAE 2013 World Congress Sponsors

Sponsors as of 1.14.13.

Please visit [www.sae.org/congress](http://www.sae.org/congress) for the most up-to-date list.

- Aisin
- AVL
- BorgWarner
- China Automotive Technology & Research Center (CATARC)
- Chrysler Group LLC
- Citizens Insurance
- Delphi
- Eaton
- Denso
- FEV, Inc
- Ford Motor Company
- General Motors Company
- Hartland Insurance Group, Inc.
- Henkel
- Hitachi Metals America Ltd
- Honda
- Horiba
- Hyundai Motor Group
- Intertek
- Johnson Controls
- Johnson Matthey EGT
- Liberty Mutual Insurance
- The Lubrizol Corp
- Nissan
- Southwest Research Institute
- The Hanover Insurance Group
- TIMKEN
- Toyota
- TRW
- Umicore
- ZF

## Exhibit. Sponsor. Advertise.

For exhibit or sponsorship information, contact:

Joanna Curtis  
Telephone: 1-724-772-4009  
Fax: 1-724-776-4026  
Email: [jcurtis@sae.org](mailto:jcurtis@sae.org)

For advertising information, contact:

SAE Corporate Sales  
Telephone: 1-724-772-7521  
Email: [advertising@sae.org](mailto:advertising@sae.org)

# Ride and Drive

Looking to engage your engineers even more?

## 'RIDE AND DRIVE' IS BACK FOR 2013!

In 2012, 24 vehicles saw over 1,500 riders with eager attendees waiting for up to an hour for their opportunity to drive the Nissan Leaf, Chevy Volt, Mitsubishi iPmiEV, and many of the other participating OEMs' and suppliers' vehicles.

We're thrilled to report that we expect the same enthusiasm around the Ride and Drive event for 2013.

*Ride and Drive is open to all registered attendees of SAE 2013 World Congress.*

### Dates and Times:

Tuesday, April 16    Wednesday, April 17    Thursday, April 18

10:30 a.m. – 4:30 p.m.

Vehicles provided by multiple OEMs and suppliers will showcase innovative technologies such as advanced propulsion, recent launches, and specialty or halo vehicles. All vehicles are test driven on a 10 minute course—this is one aspect of World Congress that you don't want to miss!

### OEMs and suppliers participating:

(as of January 14, 2013)

- Chrysler
- Nissan
- Ford
- Honda
- Fisker Automotive

Visit [sae.org/congress](http://sae.org/congress) to learn more today.

Learn more and register today  
at [sae.org/congress](http://sae.org/congress)

# Peer-to-Peer Networking Opportunities

## SAE Awards Ceremony

Cobo Center  
Tuesday, April 16

5:00 p.m. – 6:00 p.m. - Awards Ceremony

6:00 p.m. – 7:00 p.m. - Awards Reception

Join SAE in honoring excellence in engineering as we recognize more than 80 outstanding engineers for their exceptional accomplishments and contributions to the mobility industry. We hope you will join us in honoring the accomplishments of your peers at the Awards Ceremony.

## SAE Detroit Section Vehicle Event

*Featuring the 2014 Chrysler Jeep Grand Cherokee Diesel*

Wednesday, April 17

Room: W1-51/52

Cobo Center

5:30 p.m. – Social Hour sponsored by ZF

6:30 p.m. – Dinner

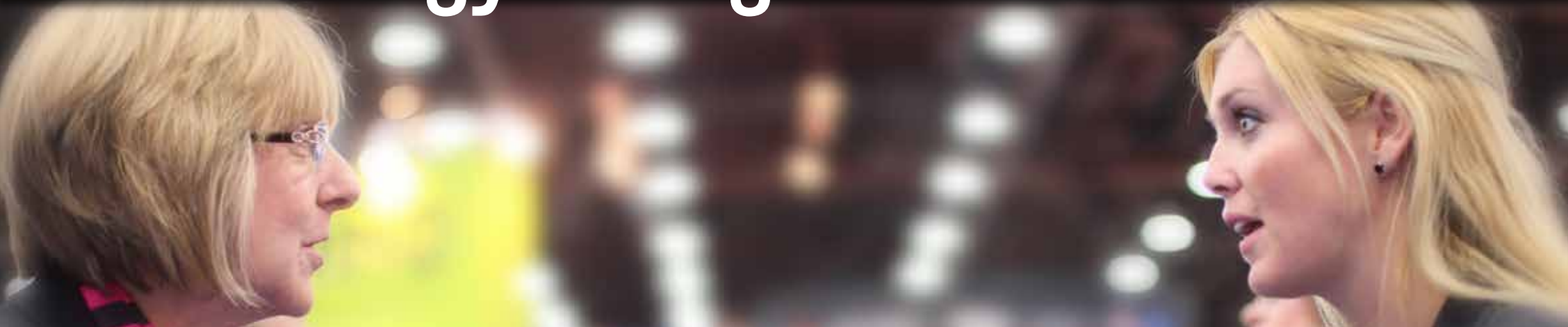
7:30 p.m. – Program

Don't miss the popular SAE Detroit Section Vehicle Event featuring Chrysler's Jeep Grand Cherokee Diesel. Ticket holders are invited to attend the social hour prior to the meeting, providing the perfect opportunity to interact with engineering professionals and peers.

SAE Detroit Section is the largest Section of SAE International with over 9,000 members, from southeastern lower-Michigan, including Ann Arbor, Jackson, and Toledo. The event is open to both industry and SAE members.

*Please note, this event is not included with your SAE 2013 World Congress registration. Tickets can be purchased in advance through the SAE Detroit Section website at [www.sae-detroit.org](http://www.sae-detroit.org). Tickets are \$40/SAE member, \$55/non-member, and \$20/SAE student member or \$500 for a reserved Sponsor Table of ten.*

# Technology Lounges



Technology-focused lounges are open to all attendees throughout the day, located near session rooms, these rooms are intended to create an informal gathering and networking space for those with common interests.

The (3) focused Technology Lounges include:

- Safety and Testing
- Powertrain, Fuels, Propulsion, Emissions, Environment, Sustainability, Management and Marketplace
- Electronics, Integrated Design for Manufacturing, Materials

Electronics Lounge Sponsored by:



Valued Quality. Delivered.

**BACK FOR 2013!** It's now easier to connect with your technology peers. Take advantage of networking opportunities by having lunch in one of the Technology Lounges—lunch tickets will now be accepted in all (3) lounges!

## Daily Receptions in the Exhibit Hall

Daily receptions in the exhibit hall ensure you have ample time to visit the Innovators Only Exhibition and expand your networking opportunities.

Tuesday Attendee Welcome Reception – 5:00 p.m. – 6:30 p.m.

Wednesday Attendee Networking Reception – 4:30 p.m. – 6:00 p.m.

Thursday Pre-Banquet Reception – 4:30 p.m. – 6:00 p.m.

## AVAILABLE SOON! Pre-Event Registration List

The attendee list will soon be available online to help you plan ahead and maximize your networking potential! Please visit the Congress home page at [sae.org/congress](http://sae.org/congress) to access the list and for list updates.

Join the conversation:



#SAECongress

Take advantage of social media sites today!

Learn more and register today  
at [sae.org/congress](http://sae.org/congress)

# Annual Banquet

**Thursday, April 18, 2013, 6:00 p.m.**

Riverview Ballroom • Cobo Center

## **Pre-Banquet Reception**

Wayne/Oakland Hall, 4:30 p.m.

A long-established tradition each year at the SAE World Congress, the Annual Banquet is the largest and most prestigious gathering of automotive industry leaders from around the world. You'll have the opportunity to network with the most influential people in the business during the pre-banquet reception on the exhibit floor. Join us at the industry's premier gala as we celebrate our accomplishments and honor the top OEM and supplier executives.



**Featured Speaker**  
**Sergio Marchionne**  
Chairman and CEO  
Chrysler Group LLC

## **Ticket Sales**

The fee for single tickets is \$150 and for tables of 10 it is \$1500.  
Please contact SAE Customer Service to make your purchase.

### **SAE Customer Service**

Telephone: 1-877-606-7323 (USA and Canada)

Or 1-724-776-4970 (outside of USA and Canada)

Fax: 1-724-776-0790

Email: [CustomerService@sae.org](mailto:CustomerService@sae.org)



# Chat with the Experts

Encourage your engineers to take part in the most popular networking activity at SAE 2013 World Congress!

(Confirmed chats as of January 14, 2013.)

## Emissions/Environment/Sustainability

April 18; 1:00 p.m.

LD/HD Future Emission Technologies

*Tim Johnson, Corning*

## Integrated Design & Manufacturing

April 16; 4:00 p.m.

Why Industrial Companies have Problems with Recalls, Quality and Reliability, and Receive Less Profit than Planned

*Todd Gross, Johnson Controls*

*Lev Klyatis, Sohar Inc.*

*Bryan Dodson, SKF*

April 17; 4:00 p.m.

Making Design Decisions Involving Multiple Performance Attributes

*Efstratios Nikolaidis, University of Toledo*

*Mohamed El-Sayed, Kettering University*

*Vijitashwa Pandey, Oakland University*

*Zissimos Mourelatos, Oakland University*

**NEW FOR 2013!**

Would you like to ask questions of our Experts **NOW**? Submit them today:

TEXT your questions to (724)-612-3884  
OR EMAIL questions to [mjena@sae.org](mailto:mjena@sae.org)

# Chat with the Experts

**NEW FOR 2013!**

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Encourage your engineers to take part in the most popular networking activity at SAE 2013 World Congress!

(Confirmed chats as of January 14, 2013.)

## Powertrain/Propulsion

April 16; 4:00 p.m.

Propane Autogas – The Other Gaseous Fuel

*Alan McEwan, Propane Education & Research Council*

April 16; 4:00 p.m.

Communicating Lubricant and Hardware requirements, limitations and mutual performance expectations; Are we getting our specifications right?

*Organizer: Timothy Newcomb, BorgWarner*

April 17; 4:00 p.m.

LD/HD Control, Calibration, and OBD

*Moderator: Steve Majkowski, American Power Group Inc*

*Panelists:*

*Kody Klindt, IAV Automotive; Zoran Filipi, Clemson University;*

*William Fedor, Delphi Powertrain; Guoming Zhu, Michigan State University*

## Safety/Testing

April 17; 4:00 p.m.

Motorsports

*Panelists:*

*David A. Finch, Raetech Corporation; Raymond Leto, Total Sim USA;*

*Wiley R. McCoy, McLaren Performance Technologies;*

*Bob Welge, Robert's Engineering Development;*

*John Melvin, Tandelta; Kirk Russell, Retired*



# Management Program

Opening Ceremony  
AVL Technology  
Leadership Center  
8:30 – 9:30 a.m.



Featured Speaker:  
**Mary D. Nichols**  
Chairman, California Air Resources Board  
California Environmental Protection Agency  
**Air Resources Board**

AVL Technology Leadership Center



10:00 a.m. – 12:00 p.m.

## Predicting Desire

What will drive consumer purchase decisions of the future? Efficient cost-effective investments must be made far in advance of when consumer trends and priorities are obvious. How should auto engineers think differently about what future consumers around the world will value? This panel will discuss market segmentation, consumer priorities, drivers of customer satisfaction, business models and their impact on hot future vehicle features and functions.



Moderator:  
**Sandy Stojkovski**  
President  
Scenaria, Inc. An AVL Group Company



Panelists:  
**Peter Coffee**  
Vice President &  
Head of Platform Research  
CTO for Automotive Industry  
salesforce.com inc.



**Ralph Gilles**  
President & CEO  
SRT Brand & Motorsports  
Senior Vice President  
Product Design, Chrysler Group LLC



**Michael O'Brien**  
Vice President  
Corporate Planning and Strategy  
Hyundai Motor Company



**John Waraniak**  
Vice President  
Vehicle Technology  
Specialty Equipment Market Association

FEV Powertrain Innovation Forum



10:00 a.m. – 12:00 p.m.

## New Fuels and High-Tech Innovations:

### Are engine controls and the CAN bus up to the challenge?

As powertrain technology evolves, we're beginning to see a future world of complicated and highly engineered solutions to meet a variety of market needs. Fuel flexibility, downsized and highly boosted engines, EV's and Range Extenders, just to name a few all present major challenges in terms of greater functional complexity, distributed architectures, and component sharing. Engine controls are becoming increasingly complex and CAN data bus loading is becoming difficult to manage. Increasing complexity and data management generates concern about functionality and transmission/ receipt of data within required time window. Engine controls and data bus experts from the automotive industry will discuss the challenges and present a forward look at emerging solutions.



Moderator:  
**Dean Tomazic**  
Vice President  
Light-Duty Powertrain  
and Vehicle Engineering, FEV Inc.



Panelists:  
**David E. Helton**  
Chief Engineer  
Gasoline Engine Management Systems  
Delphi Powertrain Systems  
Delphi Corporation



**Gregory Weber**  
Director  
Powertrain Controls Engineering  
Chrysler Group LLC



**Daniel Nicholson**  
Executive Director  
Global Powertrain Driveability  
Calibration & Verification  
General Motors Company



**Philip Yuhasz**  
Director of Controls & Calibration  
Ford Motor Company

# Management Program

## AVL Technology Leadership Center



1:30 – 3:30 p.m.

### Driver Distraction Regulation and Autonomous Driving

NHTSA published “Visual-Manual Driver Distraction Guidelines for In-Vehicle Electronic Devices” and it is moving through the regulatory process. The automotive industry has highlighted issues including “Per Se” lock-outs, the importance of systems integration, nomadic devices and voice activated controls, and ultimately autonomous driving. When will this technology be available, how much will it cost, and will it help or hinder the problem of a distracted driver? In addition, the fundamental issue is how can the driver and vehicle “Connect with Safety?” How can industry, government and regulatory groups work together on solutions which provide value to society? This is the challenge and focus of the panel.



Moderator:  
**Jeffrey J. Owens**  
Chief Technology Officer & Senior Vice President  
Delphi Automotive

Panelists:  
**Christopher Eric Borroni-Bird**  
Vice President  
Strategic Development  
Qualcomm Inc.



**Jay Joseph**  
Senior Manager  
Product Regulatory Office  
American Honda Motor Co., Inc.



**Kazuoki Matsugatani**  
Director  
Corporate R&D Div. 3  
DENSO Corporation



**Christian Schumacher**  
Head of Advanced Driver  
Assistance Systems, NAFTA  
Continental Automotive Systems N.A.



**Peter F. Sweatman**  
Director  
University of Michigan  
Transportation Research Institute



**Robert Yakushi**  
Director  
Product Safety  
Nissan

## FEV Powertrain Innovation Forum



1:00 – 3:00 p.m.

### Start-Stop is coming to North America, but will it Start or Stop Sales?

Start-stop technology may offer significant internal combustion engine efficiency improvements at a modest cost. But a variety of engineering challenges exist when integrating systems into a vehicle such as battery performance, base engine control changes, calibration complexity, reliability, safety/redundancies, NVH and driver perception. This session will look at how OEM's and suppliers are addressing these and other issues and provide an updated prognosis of the issues and solutions affecting North American start-stop systems product launches.



Moderator:  
**Francis M. Fodale**  
Director  
Powertrain Integration  
NAFTA Powertrain Engineering, Fiat-Chrysler



Panelists:  
**Scott Dahl**  
Regional President  
Starters Motors & Generators Division, N.A.  
Robert Bosch LLC



**Michel A. Forissier**  
Marketing  
Research & Development Director  
Valeo Powertrain Systems



**Mazen Hammoud**  
Powertrain Calibration Manager  
Ford Motor Company



**Robert Martin**  
Director  
Engine Electric Group  
DENSO International America Inc.



**Mark Rakoski**  
Executive Director  
Sales & Engineering  
Mitsubishi Electric Automotive America, Inc.

# Management Program

Keynote Address  
AVL Technology  
Leadership Center  
9:00 – 9:45 a.m.



Featured Speaker:  
**George Whitesides**  
CEO and President  
Virgin Galactic

AVL Technology Leadership Center



10:30 a.m. – 12:30 p.m.

## CO2 Challenge- What are the most cost effective fuel economy solutions?

Around the world, rapidly decreasing CO2 standards are just beginning to take effect. These standards and competition over fuel economy bragging rights will drive new technologies into the market representing big opportunities for innovators who can keep pace and roll out a string of hits. What are the future technology knobs that can be turned to improve CO2 of vehicles? How far should they be turned to achieve CO2 reductions most cost effectively? This panel will discuss their perspective on where, when, and why different solutions will emerge.



Moderator:  
**Jeffrey C. Klei**  
President  
NAFTA Region & Vice President of Sales  
General Motors Worldwide  
Continental North America

Panelists:



**Bob Lee**  
Vice President &  
Head of Engine & Electrified  
Propulsion Engineering  
Chrysler Group LLC



**Yasuyuki Sando**  
Vice President  
Powertrain & Performance Programs  
Honda R&D Co., Ltd.



**Makoto Yasuda**  
Makoto Yasuda  
Senior Manager  
Nissan Motor Company, Ltd.



Panelists:  
**Joseph Bakaj**  
Vice President  
Powertrain Engineering  
Ford Motor Company



**Juergen J. Greiner**  
Executive Vice President  
Product Development  
Powertrain Technology  
ZF Friedrichshafen AG

FEV Powertrain Innovation Forum



9:45 – 11:45 a.m.

## Take a Load Off: The Increasing Importance of Energy Load Management in Tomorrow's Powertrain Solutions

Demands on vehicle electrical architectures have skyrocketed as fuel efficiency targets have moved to the forefront in the automotive sector. Newer, mainstream automotive technologies such as steering-by-wire, brake-by-wire, variable valve trains, active suspensions, and heated catalysts, among others, are also placing dramatically greater demands on electrical systems. Powertrain developers are also being tasked with placing much more emphasis on the recovery and use of wasted mechanical and thermal energy as they consider technologies such as kinetic energy recover systems, better management of AC/heating energy use and the potential use of heat pumps to recover exhaust heat. These trends are not unique to just niche market vehicles, but are becoming mainstream considerations for larger volume products. Automotive engineers are being challenged like never before to increase energy efficiency and to efficiently recover waste energy. This session will provide a balanced OEM/supplier assessment of the emerging technologies we can expect to see that address this need.



Moderator:  
**Joachim Wolschendorf**  
Vice President  
FEV, Inc.

Panelists:



**Larry Laws**  
Lead CO2 Strategist  
General Motors Company



**Nizar Trigui**  
Global Chief Engineering  
Vehicle Energy Management  
Ford Motor Company



**Richard D. Smith**  
Vice President  
Thermal Engineering  
DENSO International America, Inc.



**Timothy White**  
Director  
Powertrain Application Engineering  
Chrysler Group LLC

# Management Program

## AVL Technology Leadership Center



1:30 – 3:30 p.m.

### Advanced Propulsion- What are the New and Innovative Technologies that will be the “Game Changers”?

With so many challenges in the area of propulsion for the future vehicles one must wonder what are the “Game Changers” that the industry will face? Certainly new technologies must be invented and introduced. This panel will examine what some of the key industry leaders believe some of these may be.



Moderator:  
**Dimitri Kazarinoff**  
President  
AVL Powertrain Engineering Inc.

Panelists:



**Guenter K. Fraidl**  
Senior Vice President  
Powertrain System Passenger Cars  
AVL LIST GmbH



**Michael Harpster**  
Director  
Propulsion Systems Research Lab  
GM Global Research & Development



**David Johnson**  
CEO  
Achates Power Inc.



**Andreas Schamel**  
Director Global Powertrain Research &  
Advanced Engineering Managing Director  
European Ford Research Centre  
Ford Motor Company



**Christopher P. Thomas**  
Vice President & Chief Technology Officer  
BorgWarner Inc.



**Hakan Yilmaz**  
Chief Engineer  
Gasoline Systems  
Robert Bosch LLC

## FEV Powertrain Innovation Forum



1:00 – 3:00 p.m.

### Systems Engineering: Breaking Down the Walls to Develop a Better Solution

A majority of the engineering community's mindset is to approach solutions from a distinct single-track methodology. The goal of systems engineering is to approach solutions from multiple disciplines and perspectives to generate a solution as a whole. By breaking down the boundaries within specific organizations and working collaboratively to develop a solution that reduces time to market, reduces cost and improves efficiency and reliability. The greatest challenge is buy-in from all of the engineering departments to accept changes (and cost) for the greater good of the technology change.



Moderator:  
**Dennis Moody**  
Group Vice President  
Global Business  
Navistar, Inc.

Panelists:



**John Calabrese**  
Vice President  
Global Vehicle Engineering  
General Motors Company



**Thomas McCarthy**  
Chief Engineer  
Research & Advanced  
Powertrain Engineering  
Ford Motor Company



**Peter Ottenbruch**  
Member of the Board of Management  
ZF Group



**Guenther Raab**  
Director  
Systems Engineering Group  
Continental Automotive Systems US Inc.

WEDNESDAY, APRIL 17

WEDNESDAY, APRIL 17

# Management Program

Keynote Address  
AVL Technology  
Leadership Center  
9:00 a.m.



Featured Speaker:  
**Robert A. Lutz**  
Retired Vice Chairman  
General Motors Company  
President and CEO, Lutz Communication

AVL Technology Leadership Center



10:30 a.m. – 12:30 p.m.

## Product Development Efficiency – Reducing time to market with the right products

Product is king. This panel will focus on challenges and solutions to empowering global engineering organizations to bring innovative new products to market that consumers want in less time, with higher quality, and at lower overall cost. All this while needing to maintain agility in the face of change, achieve economies of scale amongst disparate market needs, adhere to rapidly advancing regulations, and achieve buy-in amongst different silos, cultures, generations, and regions. Executives will discuss their thinking on achieving efficiency through people, processes, and structure.



Moderator:  
**Martin Fischer**  
President  
Hella Corporate Center USA



Panelists:  
**Carla Bailo**  
Senior Vice President  
Research & Development  
Nissan Americas



**Randall W. Stephens**  
Chief Engineer  
Product Development Office  
Toyota Technical Center USA Inc.



**Priya Playle**  
Principal  
P3-Group



**Ben Winter**  
Vice President  
Vehicle Engineering  
Chrysler Group LLC

FEV Powertrain Innovation Forum



9:45 – 11:45 a.m.

## Rising Above the Conventional: What Technologies have the Largest Potential to get to the Best Possible Vehicle Fuel Efficiency (and why)?

There is more focus on fuel efficiency than there has been at any time in recent memory. Myriad technologies are being proposed from many fundamental directions: combustion, materials and mechanical component design, thermodynamics, tribology, chemistry, vehicle dynamics, power transmission, and body in white, just to name a few. Each of the innovations in these fields come with a set of benefits, some potential drawbacks, and a cost. Powertrain developers are faced with having to select the right combination of features to target the highest efficiency gain. This session will compare the emerging technologies from a cost/benefit/timing perspective and provide insight on the technologies that will likely rise to the top of the powertrain developers "short list."



Moderator:  
**Floyd E. Allen**  
Powertrain Systems Executive  
FEV, Inc.



Panelists:  
**Chris Cowland**  
Director  
Advanced & SRT Powertrain  
Chrysler Group LLC



**Douglas A. Hughes**  
Engineering Manager  
Advanced Powertrain  
Eaton Corp.



**Bob Fascetti**  
Director  
Global Engine Engineering  
Powertrain Product Development  
Ford Motor Company



**Prabjot Nanua**  
Director  
Advanced Engineering  
General Motors Company

# Other Activities and Areas of Interest

## SAE Career Fair

The SAE 2013 World Congress Career Fair will provide the opportunity for mobility industry engineers and professionals to explore available jobs, network, and meet with professional recruiters, and representatives from OEMs and suppliers.

Tuesday, April 16, 2013 and Wednesday, April 17, 2013  
Cobo Center, Detroit, Michigan  
10:00 a.m. - 6:00 p.m.

## Resume Critique Clinic

Wednesday, April 17th  
10:00 a.m. - 12:00 p.m.  
Please send email to [mschanno@sae.org](mailto:mschanno@sae.org)  
to reserve your 15 minute critique.

## Career Development Session

Wednesday, April 17, 2013  
1:00 p.m. - 3:00 p.m.

## *“CareerWise for Engineering Professionals: Transforming Your Talents into the New World of Work”*

Career development is no longer something you focus on in your twenties and are set for life, it is ongoing and constant. New technologies, globalization and the world-wide competition for jobs demand that we continue to grow our skills and knowledge throughout our life. This session will provide you with tools to help you meet this demand as an engineering professional. Participants will create a personal mission statement and set career goals, identify the best way to research new opportunities and build their network while also crafting a personal brand with consistent messaging.

*Presented by Caryn L. Mateer and Kathleen Riley,  
Transformational Leaders, Intl.*

Attendance to the Career Fair activities is free for **engineering** professionals.

**Unemployed engineering professionals**-bring your resume to the Career Fair (or email to [mschanno@sae.org](mailto:mschanno@sae.org) for prior approval) to become eligible for a complimentary SAE 2013 World Congress Pass. This pass will provide you with complete access to the World Congress, such as the “Innovators Only” Exhibit, technical sessions, management presentations, keynote speakers, and much more!

Career Fair Exhibiting Companies as of 1.15.13:

- Aisin
- ASG Renaissance
- GTA Professional Staffing
- HELLA
- KSPG
- Volkswagen Group of America, Inc.
- Walsh College

To exhibit at the Career Fair,  
contact Martha Schanno at [mschanno@sae.org](mailto:mschanno@sae.org).



# Other Activities and Areas of Interest

## SAE International Annual Business Meeting

Tuesday, April 16  
3:30 p.m. – 4:00 p.m.

All SAE Members are encouraged to attend as the SAE 2013 President, Donald Hillebrand, and SAE International CEO, David Schutt, announce the 2013 Board of Directors and present the 2012 SAE Annual Report.

## SAE Standards

### Standards Technical Committees

Approximately 60 standards technical committees will meet during Congress including the Motor Vehicle Council which is made up of Chassis, Electrical, Powertrain, Vehicle Engineering and Vehicle Safety, as well as Materials committees. More details will be available soon at [sae.org/congress](http://sae.org/congress).

## SAE Detroit Section High School Poster Competition

Sponsored by



Wayne Hall

Local high school students will incorporate the SAE 2013 World Congress theme "Achieving Efficiency" into their posters. Judging is based on originality, artistic excellence, aesthetic effect and relevance to the theme. The top ten posters will be on display all week.

## SAE Detroit Section Student Exhibit Competition

Sponsored by



*Powering Business Worldwide*

Tuesday, April 16  
Judging: 10:00 a.m. – 12:30 p.m.  
Wayne Hall

SAE Detroit Section will host the Annual Student Exhibit Competition during SAE 2013 World Congress. The exhibits showcase SAE collegiate chapter activities and projects. It is a great opportunity for automotive manufacturers and suppliers, as well as alumni, to learn more about the innovative engineering efforts in which SAE collegiate chapters worldwide are engaged.

Student Exhibits detail the novel design concepts, engineering analyses, and manufacturing methods employed to construct SAE collegiate design competition vehicles. Exhibits will be on display all week. Cash prizes will be awarded to the top three schools. Come see for yourself the remarkable new technologies these enthusiastic and creative students have on display.

Learn more and register today  
at [sae.org/congress](http://sae.org/congress)

*And much more! Please check [sae.org/congress](http://sae.org/congress) often for event updates (including details on SAE Foundation Activities, SAE International A World In Motion® Students Programs, the SAE History Committee Session, and SAE Standards meetings).*

# Registration and Hotel Information

**SAVE**  
Pre-register

## Hotel Reservations

Reservation forms, room rates and deposit policy information are posted on the SAE website at [sae.org/congress](http://sae.org/congress). Click on the Hotel/Travel information link.


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Sponsored By:  
**DENSO**

## Registration Pre-registration/Cancellation Deadline: March 29, 2013

Category	By 3/29/2013	After 3/29/2013
SAE Classic Member	\$189/day	\$229/day
SAE Premium Member	\$174/day	\$214/day
SAE Elite Member	\$139/day	\$179/day
Non-Member	\$370/day	\$410/day
Expo Only	FREE	FREE
<b>Technical Program Participants - Speakers, authors, organizers, chairs, technical paper reviewers, sponsoring committees</b>		
SAE Members	FREE/3 days	FREE/3 days
Non-Members	\$189/day	\$229/day
SAE Student Member	FREE/3 days	FREE/3 days
Non-Member Student <small>Full Time College ID Required</small>	\$25/3 days	\$25/3 days
Student Expo Only	FREE	FREE
Press/Analyst <small>Credentials Required</small>	FREE	FREE
Public Relations	\$189/day	\$228/day
Exhibitor/Sponsor Personnel	Provided with booth/sponsorship purchase	
Exhibitor Expo Only	FREE	
<b>Banquet Tickets</b>		
Single ticket	\$150	\$150
Tables of 10	\$1500	\$1500

All registrations include access to technical sessions, management program, exhibit, lunch, reception on the exhibit floor, networking opportunities. NOTE: Students will receive all amenities noted above except for lunch. Expo only receives access to the exhibit only and do not receive the amenities listed above.

**Conditions of Sale:**  
Registrations received after March 29 will automatically be charged the on-site price. NO CHILDREN UNDER THE AGE OF 16 PERMITTED. All cancellations must be received by SAE prior to March 29. A \$50 processing fee will be assessed for each canceled registration that results in a refund. Refunds for special event/meal tickets will not be processed after March 29. Refunds will not be issued if cancellation occurs on or after March 29.

 If you have a disability that may impact your participation in this seminar, please call 2 weeks prior to the start date so that we can address your needs.

## Registration Hours

Monday, April 15	8:00 a.m. - 5:00 p.m.
Tuesday, April 16	7:00 a.m. - 6:30 p.m.
Wednesday, April 17	7:00 a.m. - 6:00 p.m.
Thursday, April 18	7:00 a.m. - 6:00 p.m.

## Exhibit Hours

Tuesday, April 16	10:00 a.m. - 6:30 p.m.
Wednesday, April 17	10:00 a.m. - 6:00 p.m.
Thursday, April 18	10:00 a.m. - 6:00 p.m.

## To Register

SAE Customer Service  
Online: [sae.org/congress](http://sae.org/congress)  
Toll-free: 1-877-606-7323  
(U.S. and Canada)  
Telephone: 1-724-776-4970  
(Outside U.S. and Canada)  
Fax: 1-724-776-0790  
Email: [CustomerService@sae.org](mailto:CustomerService@sae.org)

## RELATED RESOURCES FROM SAE INTERNATIONAL

### You Asked! We Answered!

Take advantage of the entire World Congress week by attending these symposiums and professional development seminars held in conjunction with SAE 2013 World Congress:

#### SAE 2013 High-Efficiency IC Engines Symposium

April 14-15, 2013  
Detroit, Michigan, USA  
[www.sae.org/hee](http://www.sae.org/hee)

This symposium combines technology presentations with networking opportunities for professionals associated with technologies impacting fuel efficiency. The technical program will include an interactive discussion of technologies such as advanced and partially premixed combustion, cooled EGR boosting, ignition and direct injection technologies, pressure boosting, intelligent combustion, thermal efficiency including waste heat recovery, fully variable valvetrains, and other new and developing technologies.

Register today!







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