

# SAE 2009 World Congress

The Premier Automotive Technology Event

April 20-23, 2009 • Cobo Center • Detroit, Michigan, USA



RACING TO   
**GREEN MOBILITY**

**SAE Members attend FREE\*—  
An \$850 Value!**

*\*Requires event pre-registration by April 3, 2009*

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

Host Company:

**HONDA**

Tier 1 Strategic Partner:



**BOSCH**

Invented for life

# RACING TO **GREEN MOBILITY**

## **Our need for viable solutions is urgent.**

As a global community of automotive engineers, we are facing monumental challenges that are complex and far reaching. These challenges will impact our energy resources, our environment, our economy—and our future.

The **SAE World Congress** is the one-and-only event that brings the automotive industry's engineering talent together at one time, and in one place. Congress provides a highly interactive atmosphere perfect for sharing knowledge, igniting creativity, and fostering collaboration—what we need most now.

## **Be a part of it.**



"Your support of SAE and of the 2009 World Congress is important to our industry—to your individual companies—and to each of us as engineers."

### **Masaaki Kato**

President, Honda R&D Co., Ltd.

**SAE 2009 World Congress  
General Chairman**

Host Company:

**HONDA**

Tier 1 Strategic Partner:



### **Thank You!**

SAE 2009 World Congress Session Organizers—for your technical expertise, time and efforts.

SAE World Congress Industry Leadership Coalition—  
OEM and supplier senior executives—for your advice,  
guidance and participation.

## Who Should Attend

- Engineers
- Engineering Management
- Industry Executives
- Academics
- Purchasing Influencers
- Government/Military Officials

## Benefits of Attending

**Technical Knowledge**—gather relevant and stimulating information that you can use to enhance your skills and creativity today

**Peer-to-Peer Networking**—discuss challenges and ideas with your colleagues and leave with invaluable improvements and solutions

**Industry Leadership Insights**—share in the vision of current industry leaders and gain clarity and direction

**Exhibition**—discover the latest offerings from OEM, top-tier supplier, and other industry-related companies worldwide

### Special SAE Activities and Areas of Interest

- Standards Information Session
- Detroit Section Dinner and Meeting
- Young Engineers Exchange
- SAE Store
- History Committee Sessions
- SAE Booth
- SAE's A World in Motion® Student Programs—Jet Toy Olympics
- SAE Career Center and Career Fair

### Special Meetings/Lectures

- SAE Annual Business Meeting
- Institution of Mechanical Engineers (IMechE)
- Cliff Garrett Award Lecture
- Buckendale Lecture



## Benefits of Attending

**Technical Knowledge**—gather relevant and stimulating information that you can use to enhance your skills and creativity today

- Technical Sessions
- Theater Presentations
- Exhibits
- SAE Standards Activities
- SAE Store
- SAE Seminars

## TECHNICAL SESSIONS

### Electronics Session Topics

- In-Vehicle Networks
- System Level Architecture Design Tools and Methods
- Vehicle Diagnostics
- Model-Based Design of Embedded Systems
- Simulation and Modeling Machatronics
- Software/Hardware Systems
- Systems Engineering
- Vehicle Sensors and Actuators
- Testing and Instrumentation
- Electrical Wiring Harnesses
- Automobile Electronics and Systems
- Electromagnetic Compatibility
- In-Vehicle Software
- Hardware-in-the-Loop Testing and Technology
- Intelligent Transportation—System Safer, Smarter, Faster
- Multi-Media Systems
- Safety-Critical Systems
- Intelligent Vehicle Initiative (IVI)
- Technology Advanced Controls and Navigation Systems
- Distributed Embedded Systems Engineering
- Design Tools, Digital Modeling and Rapid Prototyping

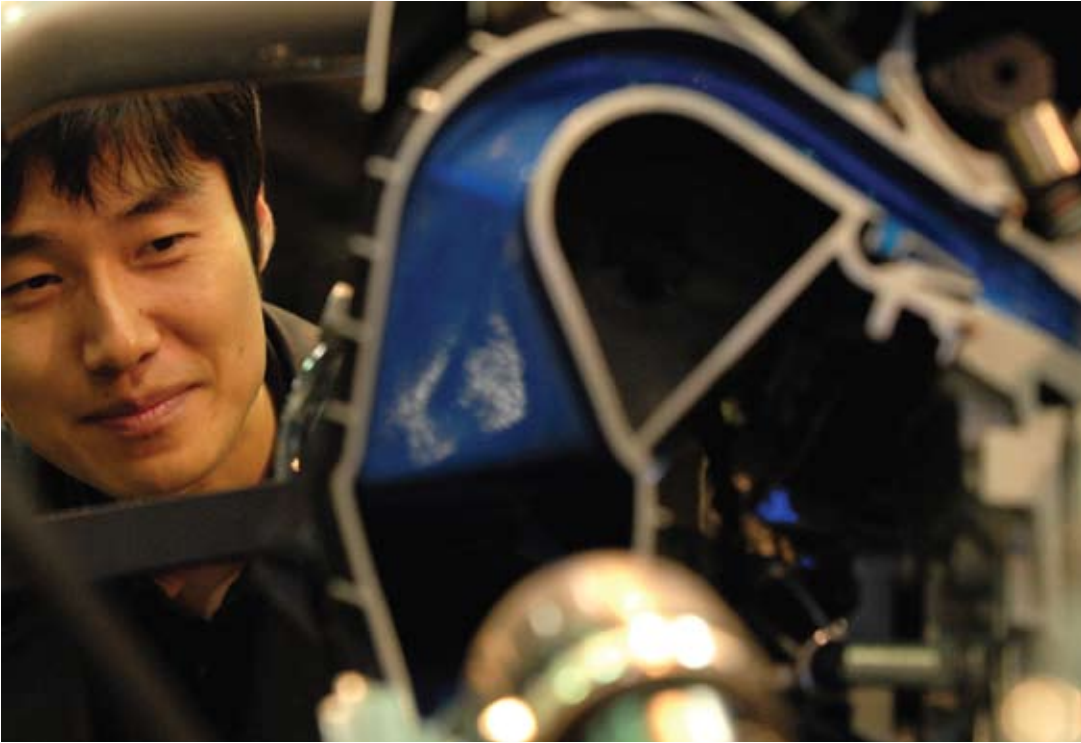
### Related Theater Presentations

- Electronics in the Green Space

### Related Exhibits as of 12.15.08

Akron Rubber  
Ansoft, LLC  
Brainin Advance Industries  
CPU Technology Inc.  
dSPACE Inc.  
Dearborn Group Technology  
Detroit Testing  
Docter Optics Inc.  
Fluke Thermography  
Hess Industries Inc.  
Hitachi America Ltd.  
Hong Kong Auto Parts Industrial Assoc.  
InterRegs Ltd.  
Ironwood Plastics Inc.  
Maplesoft  
National Instruments  
Opal-RT Technologies Inc.  
Optical Research Associates  
PCB Piezotronics Inc.  
PTM Electronics Inc.  
Photonics Spectra  
RCO Engineering Inc.  
The MathWorks Inc.  
US Army TARDEC  
Vector CANtech Inc.  
Wauconda Tool & Engineering  
Yazaki North America

Technical session dates/times subject to change.  
Look for updates at [www.sae.org/congress](http://www.sae.org/congress)



### **Emissions/Environment Session Topics**

- Thermal Management Systems
- Climate Control
- Thermal Systems Components
- Thermal Systems Modeling
- Advanced Catalysts and Substrates
- Diesel Exhaust Emission Control
  - System Integration and Durability
  - DPF Systems
  - HC-DeNOx
  - New Development
  - SCR
  - Modeling
  - Substrates
- Emission Measurement and Testing
  - Particulate Emissions from Combustion Sources
  - In-Use Engine Emissions Measurements
- General Emissions
- Analysis, Improvement and Sustainability of Automotive Related Materials, Emissions and Serviceability
- Sustainable GHG Emissions
- Traffic Congestion Reduction
- Enhanced Global Mobility
- E2T Environmentals Awards
- Sustainable and Energy Efficient Manufacturing

### **Related Theater Presentations**

- Green Mobility—The Long View
- Energy: Field to Wheel/Part II
- Total Vehicular Energy Use Management

### **Related Exhibits as of 12.15.08**

BorgWarner Inc.  
Delphi  
Husco International  
The Scuder Group  
Torotrak (Development Ltd.)  
UltraFit Manufacturing Inc.  
VCA North America  
Woodward  
YAMADA North America Inc.

## TECHNICAL SESSIONS (continued)

### Integrated Design and Manufacturing Session Topics

- Body Engineering and Design
- CAD/CAM/CAE Technology
- Design Optimization—Methods and Applications
- Reliability and Design in Automotive Engineering—Accelerated Testing and Vehicle Reliability
- Lean and Six Sigma: Getting the Most Out of Your Quality Toolbox
- Reliability and Design in Automotive Engineering:
  - Accelerated Testing and Vehicle Reliability
  - Reliability-Based Design Optimization and Robustness
  - Axiomatic Design
  - Assessment of Reliability and Robustness and Reliability Applications
  - Military Applications
  - Reliability Testing and Design of Experiments
  - Decision Under Uncertainty/Uncertainty Modeling
  - Reliability and Robust Designing Automotive Aero-Thermal and Fluid Systems
  - Model Validation and Verification
  - Design for Six Sigma
  - Multidisciplinary Design Optimization
- Virtual Design and Engineering
- Constructing Models of Uncertainty with Limited Data Panel
- OEM Global Supply Chain
- Lean Tools for Labeling Process Improvement

### Related Theater Presentations

- A Production Strategy for the Future: How to Change from Producing Cars to a Flexible Solutions Configuration

### Related Exhibits as of 12.15.08

Aisin Group  
American Showa  
Amino North America  
Arnold & Shinjo Corp.  
Banner Stamping Co.  
Craft Originators Inc.  
COB Bearing Inc.  
C&U USA Inc.  
Canadian Consulate General  
ECM USA Inc.  
Elsevier  
Flexible Circuit Technologies  
General Motors Corp.  
Hsiung Jen Industrial Co. Ltd.  
Inductoheat Inc.  
Jason Co. Ltd. (BAW)  
Kay Automotive Graphics  
Keihin Indiana Precision Technology Inc.  
Kumi North America  
Lubrizol Corp.  
Meriam Process Technologies  
Minitab Inc.  
Minnesota Rubber & QMR Plastics  
Moriroku Technology  
Sensor Products Inc.  
Severstal North America  
Smalley Steel Ring Company  
Superior Controls  
Tekscan Inc.  
The Lee Company  
ThermoAnalytics Inc.  
TS Tech Co. Ltd.  
USA Tolerance Rings  
Valor Manufacturing Inc.  
Vehma International

### SAE International Store

*The SAE Store has gone green!* The conference papers will be available to download on the Friday before the start of the meeting. Visit [store.sae.org](http://store.sae.org) for complete information. This year's on-site store will offer Special Publications, best selling and new titles.

### Management and Marketplace Session Topics

- Engineering Education
- A Proposal for an NSF Advanced Technological Education Center for Advanced Automotive Propulsion Technology
- Career Development Session
- Management and Leadership in Engineering and Manufacturing Organizations
- Celebrating Leadership Workshop

### Related Theater Presentations

- What Lies Over the Horizon? Five Analysts Forecast a Global Mix of Economic and Environmental Policy Issues that Could Define Our Industry's Future
- How Much Does Going Green Matter in the Most Critical Vehicle Markets?
- Selling in a Downturn: How to Optimize Economic Returns in a Fickle Market
- A Production Strategy for the Future: How to Change from Producing Cars to a Flexible Solutions Configuration
- Partnering for Profitability and Growth: Why You Will Embrace Non-Automotive Partnering Opportunities

### Related Exhibits as of 12.15.08

State of Tennessee-Economic & Comm. Dev.  
Texas Economic Development and Tourism

Technical session dates/times subject to change.  
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## TECHNICAL SESSIONS *(continued)*

### Materials Session Topics

- Corrosion Prevention
- Glass Applications
- Advances In Light Weight Materials—Aluminum
- Advances in Instrument Panels and Interiors
- Advances in Plastic Components, Processes, and Technologies
- Advances in Coating
- Advances and Applications in Sealings and Gaskets
- Front and Rear Bumper Systems
- Welding and Joining and Fastening
- Modeling, Testing, and Design of Materials for Dummies and Structures for Crash Safety Applications
- Automotive Engineering Testing and Test Methods: Chassis and Body Performance and Durability Testing
- Automotive Engineering Testing and Test Methods: Powertrain and Driveline Performance and Durability Testing
- Casting Technology
- Load Simulation and Analysis in Automotive Engineering:
  - Driver Modeling and Vehicle Ride Comfort Analysis
  - Influence of Load on Vehicle Handling Dynamics and its Control
  - MultibodyDynamics Systems Modeling and Applications
  - Road Test Simulator Techniques
  - Test/Simulation Correlation and Durability CAE Application
  - Tire and Terrain Modeling Techniques and Applications
- CAE Simulation/Test Correlation and Optimization in Automotive Engineering:
  - Vehicle Crashworthiness/Occupant Safety CAE Simulation/Test Correlation
  - Vehicle Durability CAE Simulation/Test Correlation and Optimization
  - Vehicle Mulit-Body Dynamics Simulation
  - Vehicle NVH Simulation/Test Correlation and Optimization
- Automotive Composites
- Castings Design Seminar
- Nanotechnology for Automotive Applications: Nanomaterial for Energy Devices
- Copper Alloys
- Optical Techniques in Automotive Engineering
- Applications of Advanced High-Strength Steels for Automotive Structures
- Magnesium Technologies
- Residual Stress Applications and Measurements
- Achieving Light Weight Vehicles
- Innovations in Steel Bar Products and Processing
- Fatigue Research and Applications
- Sheet/Hydro/Gas Forming Technology and Modeling
- Advances in OEM Topcoat Testing

#### Related Exhibits as of 12.15.08

Alfot Technologies Co. Ltd.  
Band-It-Idex Inc.  
East Montgomery Co. Improvement District  
Fraunhofer USA Center for Coatings & Laser Appl  
ITW Drawn Metals Group  
Jarden Zinc Products LLC  
Kluber Lubrication North America LP  
Kyodo Yushi USA Inc.  
Oerlikon Balzers  
Production Tube Cutting Inc.  
Shanghai Talen Plastic Industry Co. Ltd.  
Solvay Solaxis Inc.  
Thixomat Inc.  
ThyssenKrupp Steel AG  
Tsang Yow Industrial  
United Soybean Board

Technical session dates/times subject to change.  
Look for updates at [www.sae.org/congress](http://www.sae.org/congress)



## Propulsion/Powertrain Session Topics

- New Revelations in Mobility History, Parts 1-2
- Calibration Optimization
- Military Vehicle: Advanced Propulsion System Technology
- Advanced Hybrid Vehicle Powertrains
- Fuel Cell Vehicle Applications
- Hydrogen IC Engines
- Advanced Battery Technology
- Filtration and Separation for Vehicle Emissions Compliance
- CI Engine Performance for Use with Alternative Fuels
- Combustion and Flow Diagnostics
- Compression Ignition Combustion Processes
- Diesel Fuel Injection and Sprays
- Direct Injection SI Engine Technology
- Fundamental Advances in Thermal and Fluid Sciences—Experimental and Numerical Analyses
- HCCI
- HCCI Controls
- In-Cylinder Diesel Particulate and NOx Control
- Modeling of SI and Diesel Engines:
  - Engine Breathing, Boosting and NHV
  - Models for Controls
  - Diesel Combustion Models
  - SI Combustion Models
  - Engine Process Simulation and Integrated Simulation Methods
  - Mechanical Systems Simulation
  - Thermal Systems Simulation and Emissions Modeling
- Multi-Dimensional Engine Modeling
- SI and CI Engine Cold Start and Transient Emissions and Control
- SI Combustion
- Combustion Sensing and Control
- Control and Optimization in Hybrid Powertrains
- Electronic Engine Controls, Parts 1-4
- Variable Valve Actuation
- CI and SI Power Cylinder Systems
- New Diesel Engines and Components
- New SI Engine and Component Design
- Power Boost Technology
- Transmission and Driveline
  - Transmission Systems/Drive Unit
  - Hybrid
  - All Wheel Drive

- IVT/CVT
- Controls
- Launch Devices
- NVH
- Components/Subsystems
- Simulation/Modeling

### Related Theater Presentations

- Cliff Garrett Award Lecture
- Near Term Powertrain Solutions—Technology Improvements Possible Soon
- Energy: Field to Wheel/Part II
- Future Powertrain Technology Solutions—2015 and Beyond
- Total Vehicular Energy Use Management
- The Road Map to 35MPG: What Technologies Will Get Us There?
- New Control System Technologies for Green Powertrain Concepts: What Solutions Present the Most Promise
- Making Green Cool While Staying in the Black
- New Battery Technology: The Path to the Best Combination of Range, Durability and Cost
- How Will Fuel Price Trends Influence the Technology Mix?
- Which Hybrid Concepts Will Rise To the Top? The Race to the Marketplace
- A View from the Top: Essential Results from the SAE 2008 North American International Powertrain Conference

### Related Exhibits as of 12.15.08

AdvanTech international  
 CD-adapco  
 Centro Estero Per L' Internazionalizzazione  
 DOE Vehicle Technologies Program  
 DOE's Advanced Vehicle Testing Activity  
 Esco Diesel Industrial Co. Ltd.  
 FCC (North America) Inc.  
 FEV Inc.  
 General Engine Products Inc.  
 Horiba Instruments Inc.  
 IAV Automotive Engineering Inc.  
 IFP  
 Nissan Motor Co. Ltd.  
 O-Stain Precision Casting Co.  
 Principal Mfg. Corp.  
 REM Surface Engineering  
 Seissenschmidt Corporation  
 TM4 Inc.  
 Transonic Combustion Inc.  
 Ultraseal America Inc.  
 Zeroshift

## TECHNICAL SESSIONS *(continued)*

### Safety/Testing Session Topics

- Brake Technology, Parts 1-3
- Steering and Suspension Technology Symposium: Steering
- Steering and Suspension Technology Symposium: Suspensions
- Tire and Wheel Technology
- Vehicle Dynamics and Simulation
- Primary Ride
- Wiper Systems
- Fire Safety
- Automotive Lighting Technology
- Human Factors in Driver Vision and Lighting
- Human Factors in Driving and Automotive Telematics
- Human Factors in Seating Comfort
- Occupant Protection:
  - Accident Reconstruction
  - Biomechanics
  - Occupant Restraints
  - Pedestrian Safety
  - Rear Impact
  - Rollover
  - Safety Test Methodology
  - Side Impact
  - Structural Crashworthiness and Occupant Safety
  - Electronic Data Recorders
- Vehicle Aerodynamics:
  - Turbulence and Unsteady Aero
  - Aero Acoustic
  - CFD Tool Development for Aero
  - Aerodynamic Development
  - Ground Simulation Wheels and Tires
- Military Vehicle: Human Modeling and Simulation

### Related Theater Presentations

- Green Safety

### Related Exhibits as of 12.15.08

American Stress Technologies Inc.  
AR RF/Microwave Instrumentation  
Correlated Solutions Inc.  
DC Safety Sales Co. Inc.  
DTS Inc.  
Elesys North America Inc.  
Faro Technologies  
Kistler Instrument Corp.  
Lambda Research Corp/Brandenburg GmbH  
Proto Manufacturing Inc.  
Sakor Technologies Inc.  
Sensor Developments Inc.  
TEC  
Transportation Research Center Inc.  
Trialon Corporation



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# Technical Knowledge

## SAE STANDARDS ACTIVITIES

**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.

### Standards Information Session

Learn about the latest SAE Standards Committee projects in progress. Committee representatives will share the technological details and industry implications that will impact you and your company. Time will be allotted for audience participation and questions.

### Standards Lounge/Hot Spot

SAE standards committee members—and prospective committee participants—are invited to visit the Standards Lounge for refreshments, networking, wireless internet access, and more. Enjoy a break from your day and use this opportunity to meet informally with your colleagues—SAE volunteers who create standards for the industry—and the SAE staff team who can help you learn more about how you can play a role in SAE standards development.

## SAE SEMINARS

Maximize your learning experience at the SAE 2009 World Congress by taking advantage of any one of the 40 Seminars offered in conjunction with the event. Topics include SAE's most popular titles relevant to the sessions and exhibits featured at Congress. Registration fees apply. **Some Seminars sell out, so be sure to register early.**

### Electronics

- Automotive Lighting: Design and Technology
- Automotive Lighting: LED Applications
- Automotive Lighting: Testing and Requirements
- Designing On-Board Diagnostics for Light and Medium Duty Emissions Control Systems
- Fundamentals of Shielding Design for EMC Compliance

### Emissions/Environment

- Advanced Diesel Particulate Filtration Systems
- Catalytic Converters: Design and Durability
- Diesel Emissions and Control Technologies

### High Performance

- Fundamentals of Aerodynamics Applied to Race Cars
- High Performance Engine Design and Development
- Race Engine Calibration for Optimal Performance

### Management/Marketplace

- Design of Experiments for Engineers
- Design Reviews for Effective Product Development
- Engineering Project Management
- Geometric Dimensioning and Tolerancing—Level I
- Global Product Development
- Introduction to FMEA for Product Design and Manufacturing Process Design
- Managing Engineering and Technical Professionals
- Model-Based Design: Delivering Quality Electronic Products Faster
- Patent Law for Engineers
- Principles of Cost and Finance for Engineers
- Weibull-Log Normal Analysis Workshop

### Materials

- Fundamentals of Metal Fatigue Analysis
- Sound Package Materials for Vehicle Noise Control
- Static and Dynamic Sealing

### Powertrain/Propulsion

- Advanced Electric Motor/Generator/Actuator Design and Analysis for Automotive Applications
- A Familiarization of Drivetrain Components
- Compact Heat Exchangers for Automotive Applications
- Fundamentals of All-Wheel Drive Systems
- Fundamentals of Automotive Fuel Delivery Systems
- Fundamentals of Modern Vehicle Transmissions
- Fundamentals of Hybrid Electric Vehicles
- Introduction to Hybrid and Electric Vehicle Battery Systems
- The Basics of Internal Combustion Engines

### Safety/Testing

- Accelerated Test Methods for Ground and Aerospace Vehicle Development
- Chassis and Suspension Component Design for Passenger Cars and Light Trucks
- Commercial Vehicle Braking Systems
- Fundamentals of Heavy Truck Dynamics
- Fundamentals of Steering Systems
- Introduction to Brake Control Systems: ABS, TCS, and ESC
- Vehicle Accident Reconstruction Methods

### Added Value

Seminar registrants are admitted to the SAE 2009 World Congress at NO ADDITIONAL CHARGE

### Attention Managers

Register 3 or more people at the same time and save 10% off of the registration fee\*.

\*All registrants must be submitted together from the same company and for the same course. There will be no refunds after the cancellation deadline date; substitutions may be made.

## Benefits of Attending

# Peer-to-Peer Networking—discuss challenges and ideas with your colleagues and leave with invaluable improvements and solutions

- Detroit Section Dinner and Meeting
- Awards Ceremony
- Annual Banquet
- SAE Booth
- Young Engineers Exchange

### Detroit Section Dinner and Meeting

Kick off the week at the popular SAE Detroit Section monthly meeting featuring the Honda Insight. Ticket holders are invited to attend the social hour prior to the meeting, providing the perfect opportunity to interact with engineering professionals and peers.

The SAE Detroit Section is the largest SAE section with more than 16,000 members, from southeastern lower Michigan, including Ann Arbor, Jackson and Toledo. The event is open to both industry and SAE members.

*This event is not included with registration. Tickets can be purchased in advance through the Detroit Section website at [www.sae-detroit.org](http://www.sae-detroit.org). Only a limited number of tickets will be available for purchase onsite. Tickets are \$40/SAE member, \$45/non-member, and \$15/SAE student member.*

### SAE Awards Ceremony

The awards ceremony and reception will recognize excellence in engineering. This special networking event is hosted by SAE Past Presidents and SAE Fellows. We hope you will join us in honoring the accomplishments of your engineering colleagues for their contributions to SAE and the mobility industry.

*This event is not included with registration. Tickets can be purchased in advance through the SAE World Congress online registration.*

### Annual Banquet

A long-established tradition at the SAE World Congress, the Annual Banquet is the largest and most prestigious gathering of automotive industry leaders from around the world—allowing guests an opportunity to network with the most influential people in the business during the Pre-Banquet Reception and Afterglow. Join us at the industry's premier gala as we celebrate our accomplishments and honor top OEM and supplier executives.



Keynote Speaker  
**Takeo Fukui**  
President and Chief  
Executive Officer  
Honda Motor Co., Ltd.

*This event is not included with registration. Tickets can be purchased in advance through the SAE World Congress online registration. Seating is limited.*

### SAE Booth

Visit the SAE booth for information on the benefits of SAE membership, as well as products and services including SAE Standards, publications, professional development offerings and opportunities, and more. You can also pick up a complimentary copy of the *Automotive Engineering International* or other SAE magazines.

### Young Engineers Exchange

Be among the first to participate in the new SAE Young Engineers Exchange. Connect with your peers—people who share your technology interests, your on-the-job challenges, and who are at a similar place in their careers and lives. Learn more about SAE Sections and SAE opportunities for young engineers. More details to follow.



## Benefits of Attending

# Industry Leadership Insights—share in the vision of current industry leaders and gain clarity and direction

- AVL Technology Leadership Theater
- FEV Powertrain Innovation Forum
- SAE Executive Business Theater

### AVL Technology Leadership Theater

An executive management conference within a conference, the AVL Technology Leadership Theater will feature provocative keynote presentations and panel discussions from top level executives and officials from industry, government, research and academia. Don't miss this dynamic exchange focused on critical issues impacting the automotive industry.

#### Topics Include:

- Green Mobility—The Long View
- Energy: Field to Wheel/Part II
- Near Term Powertrain Solutions—Technology Improvements Possible Soon
- Future Powertrain Technology Solutions—2015 and Beyond
- Electronics in the Green Space
- Total Vehicular Energy Use Management
- Green Safety

### FEV Powertrain Innovation Forum

The FEV Powertrain Innovation Forum will feature an impressive mix of industry experts discussing some of the most profound topics impacting current and future powertrain technology.

#### Topics Include:

- The Road Map to 35MPG: What Technologies Will Get Us There?
- New Control System Technologies for Green Powertrain Concepts: What Solutions Present the Most Promise
- Making Green Cool While Staying in the Black
- New Battery Technology: The Path to the Best Combination of Range, Durability and Cost
- How Will Fuel Price Trends Influence the Technology Mix?
- Which Hybrid Concepts Will Rise To the Top? The Race to the Marketplace
- A View from the Top: Essential Results from the SAE 2008 North American International Powertrain Conference

### SAE Executive Business Theater

The SAE Executive Business Theater provides a forum for today's automotive leaders to share collective experiences, best practices and insights. This year, we will incorporate executive learning into the overall environmental theme of the conference and share challenges executives are facing with regard to the eco-direction. Key areas such as how to drive revenue growth and how to deliver on the promise of quality, reliability, and design appeal will be critical discussion points.

#### Topics Include:

- What Lies Over the Horizon? Five Analysts Forecast a Global Mix of Economic and Environmental Policy Issues that Could Define Our Industry's Future
- How Much Does Going Green Matter in the Most Critical Vehicle Markets?
- Selling in a Downturn: How to Optimize Economic Returns in a Fickle Market
- A Production Strategy for the Future: How to Change from Producing Cars to a Flexible Solutions Configuration
- Partnering for Profitability and Growth: Why You Will Embrace Non-Automotive Partnering Opportunities



## Benefits of Attending

# Exhibition—discover the latest offerings from OEM, top-tier supplier, and other industry-related companies worldwide

- SAE 2009 World Congress Exhibition
- OEM/Supplier Park
- Technology Pavilions
- SAE Booth

### SAE 2009 World Congress Exhibition

The SAE 2009 World Congress Exhibition, featuring the OEM Supplier Park, is representative of the global automotive supply chain.

### OEM/Supplier Park

The OEM/Supplier Park contains displays for six OEM companies and a variety of top industry suppliers—located on the exhibition floor

- **OEM Companies** include Chrysler, Ford, General Motors, Honda (2009 Host Company), Nissan, and Toyota
- **Supplier Companies** include Aisin Group, BOSCH (2009 Tier 1 Strategic Partner), BorgWarner Inc., C&U USA Inc., Delphi, Keihin Indiana Precision Technology Inc., The Lubrizol Corp., The Scuder Group, Transonic Combustion Inc., TS Tech Co. Ltd., and Yazaki North America Inc.

*Exhibitors as of 12.15.08*

### Technology Pavilions

The Technology Pavilions feature exhibitors focused on Powertrain, Emissions and Environment; Materials; Electronics and Telematics; Safety, Testing and Simulation.

### SAE Booth

Visit the SAE booth for information on the benefits of SAE membership, as well as products and services including SAE Standards, publications, professional development offerings and opportunities, and more. You can also pick up a complimentary copy of *Automotive Engineering International* or other SAE magazines.

### Exhibition Hours

Monday - Wednesday, April 20-22

9:00 a.m. - 4:30 p.m.

Thursday, April 23

9:00 a.m. - 2:00 p.m.

### Other SAE 2009 World Congress Exhibitors —as of 12.15.08

#### OEM Exhibitors

Chrysler LLC  
Ford Motor Co.  
General Motors Corp.  
Honda North America Inc.  
Nissan Motor Co. Ltd.  
Toyota Motor Corporation

#### Miscellaneous Products and Services

American Foundry Society  
BOSCH  
Korea Trade Center  
Michigan Economic Development Corporation  
Realtime Technologies Inc.  
Solo World Partners LLC  
Spectrum Industries  
SUHNER Manufacturing Inc.  
Technical Translation Services  
Wards Automotive Group

**For exhibitors by technology track, see pages 2-9.**





SAE 2009 World Congress Sponsors—as of 12.15.08

Platinum Level:



Gold Level:



Silver Level:



Friends of the Industry:



**SAE Marketing Solutions**

If you are not yet signed up to exhibit at the SAE 2009 World Congress, or if you are already an exhibitor and would like to find out how to promote your participation in the event through advertising or sponsorship, contact:

SAE Customer Sales and Support

Phone: 1-888-875-3976 toll-free (U.S. and Canada), or  
1-724-772-4086

E-mail: [CustomerSales@sae.org](mailto:CustomerSales@sae.org)

# Special SAE Activities and Areas of Interest

- Standards Information Session
- Detroit Section Dinner and Meeting
- Young Engineers Exchange
- SAE Store
- History Committee Sessions
- SAE Booth
- SAE's A World in Motion Student® Programs—Jet Toy Olympics
- SAE Career Center and Career Fair

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Tickets can be purchased in advance through the Detroit Section website at [www.saedetroit.org](http://www.saedetroit.org).

## Young Engineers Exchange

Be among the first to participate in the new SAE Young Engineers Exchange. Connect with your peers—people who share your technology interests, your on-the-job challenges, and who are at a similar place in their careers and lives. Learn more about SAE Sections and SAE opportunities for young engineers. More details to follow.

## SAE Store

*The SAE Store has gone green!* The conference papers will be available to download on the Friday before the start of the meeting. Visit [store.sae.org](http://store.sae.org) for complete information. This year's on-site store will offer Special Publications, best selling and new titles.

## SAE History Committee Sessions

New Revelations in Automotive History

Oral presentations will cover several facets of early automotive history—including the centennial of the Hudson Motor Car Company—as well as early motorsports history including the Indianapolis 500 and the Chrysler Ramcharger racing program.

## SAE Booth

Visit the SAE booth for information on the benefits of SAE membership, as well as products and services including SAE Standards, publications, professional development offerings and opportunities, and more. You can also pick up a complimentary copy of the *Automotive Engineering International* or other SAE magazines.

## Best Engineered Vehicle of 2009

*Automotive Engineered International* magazine, the official publication of the SAE 2009 World Congress, presents the Best Engineered Vehicle of 2009. Watch for details.

### **SAE's A World in Motion® Student Programs—Jet Toy Olympics**

Join us for SAE International's A World In Motion® 3<sup>rd</sup> Annual Jet Toy activity. Students will compete in individual categories including accuracy, weight carrying, and design log. Speed, distance, force, and friction are all terms that become familiar as students put their knowledge to use constructing the balloon-powered Jet Toy cars. Come and watch as more than 300 middle school students from Detroit and surrounding areas fill the room with excitement and nervous anticipation as each team competes for gold, silver, and bronze awards.

To find out how you can get involved, or for general information about SAE's A World In Motion® K-12 student programs, visit [www.awim.org](http://www.awim.org).

### **SAE Career Center and Career Fair**

The SAE 2009 World Congress will provide the opportunity for engineers and professionals to explore available jobs, make contacts, and learn valuable career tips. The Congress will feature a Career Fair Exhibit Monday and Tuesday, April 20-21 including representation from major OEMs, suppliers and recruiters looking to fill open positions. Attendees can post their resumes in the Career Center and browse hundreds of open positions. There will be a Career Development Session with a panel of human resource experts to provide tips on career skills and a free Resume Critique Clinic with preferred appointments for SAE members.

For more information, visit [www.saecareercenter.org](http://www.saecareercenter.org) or contact:

Martha Schanno  
Recruitment Sales Manager  
Phone: 1-724-772-7155  
Fax: 1-724-776-3087  
Cell: 1-412-512-7055  
Email: [mschanno@sae.org](mailto:mschanno@sae.org)

## **Special Meetings/Lectures**

- SAE Annual Business Meeting
- Institution of Mechanical Engineers (IMechE) Lecture
- Cliff Garrett Award Lecture
- Buckendale Lecture

### **SAE Annual Business Meeting**

Please join James E. Smith, Ph.D., SAE 2009 President, as he presents the composition of the SAE 2009 Board of Directors, the SAE 2008 Annual Report and SAE Bylaws' revisions.

All SAE Members are encouraged to attend.

### **IMechE Lecture**

Engineering the Future in a Changing Climate

*Professor Richard Folkson, Chairman, Automobile Division, IMechE*

### **Cliff Garrett Award Lecture**

### **Buckendale Lecture**

# Registration Information

**Pre-registration/Cancellation Deadline:**

April 3, 2009

**Register Now!**

**Maximum Savings!**

Become an SAE Member and pre-register by April 3, 2009

Registration Categories and Fees		
Category	By 4/3/09	On-Site and after 4/3/09
SAE Member*	\$99*	\$199*
Non-Member	\$600	\$850
Technical Program Participant**	FREE	FREE
Partnering Organization Member***	\$99	\$199
SAE Student Member	FREE	FREE
Non-Member Student (full-time college ID required)	\$25	\$25
Press/Analyst (credentials required)	FREE	FREE
Public Relations (credentials required)	\$75	\$150
Exhibit Booth Personnel (limit 25 per booth)	FREE	FREE
Exhibit Only	\$75	\$150
Complimentary Exhibit Pass (source code required)	FREE	FREE
<b>Additional Ticket Items</b>		
SAE Awards Ceremony (Tuesday)	\$35	\$35
SAE World Congress Banquet (Thursday)	\$150	\$150 (tables of 10 - \$1500)
Professional Development Seminars	Registration fees vary per class. Visit <a href="http://www.sae.org/congressseminars">www.sae.org/congressseminars</a> for pricing.	

**Conditions of Sale** - All cancellations must be in writing and received by SAE prior to 04/03/09. A \$50 processing fee will be assessed for each cancelled registration that results in a refund. Refunds will not be issued if cancellation occurs on or after 04/03/09. This policy includes special event and meal fees. For the SAE membership registration rates, member dues must be current at the start of the event. Children under 16 years of age are not permitted. For seminar registrations, if you cannot attend, you may send a substitute or transfer to a future offering. A full refund is issued if you notify SAE at least 14 days prior to seminar start date. If canceled less than 14 days prior, the full fee is charged. For \$50, you may process a one-time transfer to a future offering within one year of canceled seminar. Canceling may reduce group discounts.



SAE will do what is feasible to make its events reasonably accessible to attendees. If you have special accommodation needs, please let us know in advance by calling 1-877-606-7323 (1-724-776-4970 outside U.S. and Canada). Accommodations requested on site will be provided only if possible for us to do so on short notice.

\*SAE members now have the opportunity to attend any one of SAE's three main industry events for free. This benefit allows members to choose from among the World Congress, the Commercial Vehicle Engineering Congress & Exhibition, and the AeroTech Congress & Exhibition (alternating with the biennial Wichita Aviation Technology Congress & Exhibition). In order to take advantage of the benefit, each member will be required to pre-register online for his or her desired event at a cost of \$99 on or before the deadline. Before completing the pre-registration process, members will have an opportunity to apply their \$99 discount, which will then yield them a gratis conference registration. Members who do not register by the pre-registration deadline will be able to apply their \$99 discount to the \$199 on-site registration fee; however, this will result in members having to pay a \$100 registration fee

\*\*Includes authors, co-authors, session chairs, organizers, presenters, moderators, panelists and sponsoring committees.

\*\*\*Includes MPIF, ASQ, TACOM

**TO REGISTER:**

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

or contact **SAE Customer Service** at:

Phone: 1-877-606-7323  
toll-free (U.S. and Canada)  
or 1-724-776-4970

Fax: 1-724-776-0790

E-mail: [CustomerService@sae.org](mailto:CustomerService@sae.org)

**Registration Hours**

**E-Badge Registration (pre-registered)  
and On-Site Registration**

**Cobo Center Lobby**

Friday, April 17	3:00 p.m. - 5:00 p.m. ( <i>Exhibitor Only</i> )
Saturday, April 18	10:00 a.m. - 4:00 p.m. ( <i>Exhibitor Only</i> )
Sunday, April 19	10:00 a.m. - 4:00 p.m. ( <i>Exhibitor</i> ) 2:00 p.m. - 4:00 p.m. ( <i>Attendee</i> )
Monday, April 20	7:00 a.m. - 6:30 p.m.
Tuesday, April 21	7:00 a.m. - 5:00 p.m.
Wednesday, April 22	7:00 a.m. - 5:00 p.m.
Thursday, April 23	7:00 a.m. - 2:00 p.m.



## Hotel Information

Special room rates are available at many Detroit area hotels when you make your reservations through the designated SAE agent, The Housing Connection. Individual reservations (for up to nine rooms) may be made online, or by phone, fax or mail. Group reservations for 10 or more rooms must be faxed or mailed. Reservation forms, room rates and deposit policy information are posted on the SAE website at [www.sae.org/congress](http://www.sae.org/congress).

**To make telephone reservations, call:**

**The Housing Connection**

Monday – Friday

7:00 a.m. – 6:00 p.m. Mountain Time

1-800-847-5810 (toll-free)

1-801-534-4953 (international)

Or e-mail: [thc@housingregistration.com](mailto:thc@housingregistration.com)

**Cut-off date for hotel reservations is April 1, 2009.**

## MySAE Event Planner

**Personalize your SAE World Congress Experience**

Easily identify the sessions and exhibits by technology that you plan to attend, then download the details directly to your personal calendar.

Pre-event, present your itinerary to your supervisor for travel justification. On-site, use your customized itinerary to maximize your time and benefit of attending.

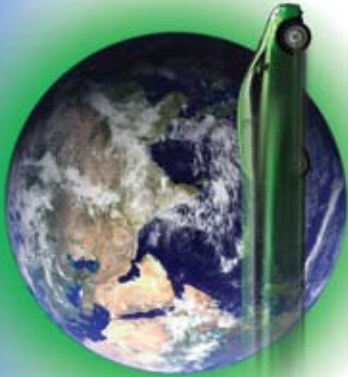
You'll find the link for MySAE Event Planner at [www.sae.org/congress](http://www.sae.org/congress).



# SAE 2009 World Congress

The Premier Automotive Technology Event

April 20-23, 2009 • Cobo Center • Detroit, Michigan, USA



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