

"The society dedicated to advancing mobility engineering worldwide"

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# SAE 2012 **Government/Industry** Meeting

January 25-27, 2012 Walter E. Washington Convention Center\* Washington, DC, USA



**ENERGY CONSERVATION** 







2012 Host



\*This meeting is co-located with www.washingtonautoshow.com





# SAE 2012 **Government/Industry** Meeting

January 25-27, 2012 Walter E. Washington Convention Center\* Washington, DC, USA

Each year, the SAE Government/Industry Meeting organizes an ideal opportunity for you to connect with the leading technical authorities from government, industry, and academia to discuss the regulation, legislation, and technical issues impacting the future, including energy conservation, the environment, and safety.

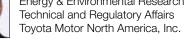
The 2012 Government/Industry Meeting provides a professional, neutral forum where participants showcase achievements, share technological solutions, and discuss recent regulations and pending legislation. The entire event is designed to provide networking opportunities for meaningful interaction between the people driving advanced automotive technology and those regulating or legislating key safety, environmental, and energy issues.

#### This is the event that your organization can't afford to miss!

#### **General Chair**



**Bob Wimmer** National Manager Energy & Environmental Research



Mr. Wimmer is National Manager of Toyota Motor North America's (TMA) Energy and Environmental Research Group. He has been with Toyota eight years and currently directs a team of research engineers assessing how changes in energy and environmental technology, policy and regulation will affect the automotive industry. Recent research areas have included alternative fuels, advanced vehicle technologies and power generation.

#### **Event Highlights**



Wednesday **Opening Address David Strickland** Administrator NHTSA



#### Wednesday **Luncheon Address** Philip Gott

Managing Director **IHS** Automotive



#### Friday **Opening Address**

Henry Kelly Acting Assistant Secretary U.S. Department of Energy



Moderator

#### Thursday **Luncheon Address Dave Shepardson**

**Detroit News** Washington Bureau Chief

#### Plenary Session and Official Opening of the Washington Auto Show

#### Thursday, January 26 8:00 a.m. - 10:00 a.m.

The automobile industry is entering a period of unprecedented challenge and change. Continuing focus worldwide on reducing petroleum use and greenhouse gases is leading governments, including the US EPA, NHTSA and CARB, to propose dramatic increases in fuel efficiency. Meanwhile demand for personal mobility is expected to spike in many developing countries. Consumers and governments worldwide continue to expect improvements in crashworthiness and inclusion of crash avoidance technologies. How can all the stakeholders - government, industry, consumers, environmentalists and policy makers best work together to meet these steep and sometimes conflicting priorities? Join our distinguished panelists as they discuss and debate these daunting challenges.

#### Panelists:



Mitch Bainwol CEO, Alliance of Automobile Manufacturers



Transportation Program Director, National Resources Defense Council

Roland Hwang



President, Insurance Institute for Highway Safetv

Adrian Lund

Ronald Medford Deputy Administrator, National Highway Traffic Safety Administration



Margo Oge Director Office of Transportation & Air Quality, U.S. Environmental Protection Agency

**David Sargent** Vice President, Global Automotive, J.D. Power and Associates



Jason Vines

Senior Vice President,

Fleishman-Hillard

Heather Zichal Deputy Assistant to the President for Energy & Climate Change Policy. The White House



## **Event Overview**

Wednesday January 25	Thursday January 26	Friday January 27
7:00 a.m. – 5:00 p.m.	7:00 a.m. – 5:00 p.m.	7:00 – 11:00 a.m.
Registration Hours	Registration Hours	Registration Hours
8:30 – 9:00 a.m.	7:30 – 8:00 a.m.	8:30 – 9:00 a.m.
Coffee / Networking	Continental Breakfast	Continental Breakfast
	Sponsored by	Sponsored by
	NISSAN	KIV
		KIA MOTORS
9:00 – 10:00 a.m.	8:00 – 10:00 a.m.	9:00 – 10:00 a.m.
Opening Address	Plenary Session	Opening Address and Award Presentations*
10:30 a.m. – 12:30 p.m.	10:30 a.m. – 12:30 p.m.	10:30 a.m. – 12:30 p.m.
Technical Sessions	Technical Sessions	Technical Sessions
12:30 – 2:00 p.m.	12:30 – 2:00 p.m.	
Luncheon Address	Luncheon Address	
Sponsored by	Sponsored by	
Diesel Good Clean Fun		
GOOD Clean Fun	HYUNDAI	
2:30 – 4:30 p.m.	2:30 – 4:30 p.m.	
Technical Sessions	Technical Sessions	
4:30 p.m. – <b>Reception</b>	5:00 – 8:00 p.m.	
Sponsored by	Washington Auto Show	
ΤΟΥΟΤΑ	Sneak-Peak Preview & Networking Reception	
5:00 p.m. – <b>SAE Washington</b> DC Section Event & Program		

#### Preliminary schedule, subject to change. Visit www.sae.org/govind for updates.

\* Awards to be Presented: Barry D. McNutt Award for Excellence in Automotive Policy Analysis, Forest R. McFarland Award, Henry Souther Standards Award, John Connor Environmental Award

The 112th Congress 2nd Session 2012 Congressional Directory



Will be mailed to registered attendees of the SAE Government & Industry Meeting after April 15, 2012



Sneak-Peak Preview & Networking Reception Thursday, January 26

As a registered SAE Government/Industry Meeting attendee, you'll get to attend Public Policy Day which includes the exclusive invitation-only VIP Preview and Reception at no additional cost – compliments of The Washington Auto Show. Visit www.washingtonautoshow.org/ for more details.

An evening honoring the recipient of the 2012 Keith Crain/Automotive News Lifetime Achievement Award, **Roger Penske**. For details and registration visit www.washingtonautoshow.com

## TECH SESSIONS WEEK AT A GLANCE

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Biomechanics (G202)	-	-	~	-	-	7
Child Safety (G209)	-	-	-	~	-	9
Crash Avoidance I: Technologies (G200)	~	-	-	-	-	3
Crash Avoidance II: Connected Vehicles (G201)	-	~	-	-	-	4
Crashworthiness I: Frontal Impacts (G206)	~	-	-	-	-	3
Crashworthiness II: Rollover and Side Impacts (G207)	-	~	-	-	-	5
Data Collection and Analysis (G213)	-	-	-	~	-	9
Driver Distraction (G208)	-	-	~	-	-	8
Electric Drive Part 2 - The Infrastructure (G101)	-	~	-	-	-	5
Electric Drive Part I - The Vehicles (G100)	~	-	-	-	-	4
Enforcement (G210)	~	-	-	-	-	4
Integrated Safety and Advanced Restraints (G204)	-	-	-	-	~	11
Joint Safety-Energy Session - Lightweighting vs Economy/Safety (G109)	-	-	-	-	~	11
Light-Duty Fuel Economy and Regulations - Part I (G102)	-	-	~	-	-	8
Light-Duty Fuel Economy and Technologies - Part 2 (G103)	-	-	-	~	-	10
Natural Gas and Other Alternative Fuels (G106)	-	~	-	-	-	6
Opening Address (G500)	~	-	-	-	-	3
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Plenary Session (G501)	-	-	~	-	-	7
Quiet Car and Pedestrians: Includes Pedestrian GTR Developments (G205)	-	-	-	-	~	12
Safety and Cybersecurity of Automotive Electronic Control Systems (G211)	-	~	-	-	-	6
The Next Generation of Biofuels (G105)	~	-	-	-	-	4
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Welcome to the Future of GHG Rules for Medium and Heavy Duty Trucks - Part 2 (G108)	-	-	-	~	-	8
Welcome to the Future of GHG Rules for Medium and Heavy Duty Trucks - Part I (G107)	-	-	~	-	-	10

## WEDNESDAY January 25

#### **Opening Address** (G500)

9:00 a.m.

Keynote Speaker: David Strickland, Administrator, National Highway Traffic Safety Administration

#### Crash Avoidance I: Technologies (G200)

#### 10:30 a.m.

This session will cover in-vehicle technologies to assist in avoiding a crash. These will include adaptive lighting of head lamps, forward crash warning, automatic braking, lane keeping assistance, and studies to assess the benefits of such systems. The government and industry cooperative efforts related to crash avoidance will also be presented.

Organizers:

James M. Funke, NHTSA; Michael Hernandez, Toyota Motor North America Inc.

10:30 a.m.

(Oral Only)

#### Advanced Headlamp Concepts (Oral Only)

Stephan Berlitz, Wolfgang Huhn, Audi AG

10:50 a.m.

(Oral Only)

#### A FCW, CIB and DBS Benefit Estimation Method Developed in ACAT Program (Oral Only)

Masami Aga, Hirofumi Aoki, Yoshiki Miichi, Yoshiaki Matsuo, Shin Tanaka, Toyota Motor Corporation

11:10 a.m.

(Oral Only)

#### Safety Impact Methodology (SIM): Application and Results of the Advanced Crash Avoidance Technologies (ACAT) Program (Oral Only)

James M. Funke, NHTSA; Gowrishankar P. Srinivasan, Raja Ranganathan, August Burgett, Bowhead Systems Management

11:30 a.m.

(Oral Only)

## Evolution and Expansion of Collision Avoidance Assist Technology (Oral Only)

Tomosaburo Okabe, Tetsuya lijima, Nissan Motor Co., Ltd.

11:50 a.m.

(Oral Only)

#### Comprehension of Advanced Collision Warning System Displays (Oral Only)

Emanuel Robinson, Neil D. Lerner, Jeremiah Singer, James W. Jenness, Westat

12:10 p.m.

(Oral Only)

#### Insurance Crash Analyses of Crash Avoidance Systems and Implications for Consumer Information Testing (Oral Only)

Matthew Moore, Highway Loss Data Institute; David S. Zuby, Insurance Institute for Highway Safety

#### Crashworthiness I: Frontal Impacts (G206)

**TECHNICAL, BUSINESS & EXECUTIVE** 

10:30 a.m.

Frontal crashes with low offset or oblique angle of impact will be the focus of this session. Presentations will include crash test results from various institutions including NHTSA and IIHS using a variety of pole, barrier, and MDB test methods. Also, analyses of real-world crash data will be presented.

Organizers:

Raul A. Arbelaez, Insurance Institute for Highway Safety; James Saunders, NHTSA

10:30 a.m.

(Oral Only)

SESSIONS

#### An Investigation of Injury Factors Concerning Drivers in Vehicles Involved in Small-Overlap Frontal Crashes (Oral Only)

Tomosaburo Okabe, Hidetsugu Saeki, Taisuke Watanabe, Nissan; Tomoyuki Nakao; Takahiro Kikuchi, Nissan

10:50 a.m.

(Oral Only)

## An Update on NHTSA's Small Overlap/Oblique Research (Oral Only)

James Saunders, NHTSA

11:10 a.m.

(Oral Only)

The Role of the Vehicle Structure in Reducing Injuries in Small Overlap Crashes (Oral Only)

Charles M. Thomas, Honda R&D Americas Inc.

11:30 a.m.

(Oral Only)

#### Development of Evaluation Method for Small Overlap Frontal Collision (Oral Only)

Hiroshi Kato, Yoshihisa Kanno, Shigemi Mase, Sathoshi Funabashi, Toyota Motor Corporation

11:50 a.m.

(Oral Only)

HIII 5th Female Rear Occupant Response in Small Overlap/Oblique Crash Tests (Oral Only) Matthew Craig, NHTSA

12:10 p.m.

(Oral Only)

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## An Update on the IIHS Small Overlap Research Program (Oral Only)

Christopher P. Sherwood, Insurance Institute for Highway Safety

#### Electric Drive Part I - The Vehicles (G100)

#### 10:30 a.m.

Multiple electric drive vehicles are on sale today with more models coming soon. Are these the initial entries in a new high-volume market segment or just an interesting low-volume niche? Auto manufactures have billions riding on the answer. This session will examine current and future electric drive vehicle offerings, their benefits and challenges and the policy incentives designed to spur demand. This session may include the status of battery and fuel cell technologies. Speakers from the OEMs, academia, and the government will explore these issues to provide insight into the potential for electric drive vehicles.

#### Organizers:

Robert C. DeVault, Oak Ridge National Laboratory; Aaron Hula, US EPA; Sascha Simon, Mercedes-Benz USA LLC

10:30 a.m.	(Oral Only)
BMW EV Roadmap (Oral Only) Rich Steinberg, BMW of North America	
10:50 a.m.	(Oral Only)
Title TBD (Oral Only) Sascha Simon, Mercedes-Benz USA LLC	
11:10 a.m.	(Oral Only)
Title TBD (Oral Only) Christopher Eric Borroni-Bird, General Motors LLC	
11:30 a.m.	(Oral Only)
Advanced Technology Vehicle Testing (Oral C James E. Francfort, Idaho National Lab.	Only)
Enforcement (G210)	
10:30 a.m.	
This session will cover odometer fraud and issues electronic tampering devices. It will also cover rate	

electronic tampering devices. It will also cover rates of completion for vehicle recalls.

Organizers: Jay Joseph, American Honda Motor Co. Inc.; Vince Williams, NHTSA

**10:30 a.m.** (Oral Only)

#### Digital Odometer Tampering via OBDII & the Controller Area Network (Oral Only) David Sparks, NHTSA

David Sparks, Nill

10:50 a.m.

(Oral Only)

#### Recall Completion Rates (Oral Only) Jennifer Timian, NHTSA

11:10 a.m.

(Oral Only)

#### Current and Future Odometer Disclosure Strategies (Oral Only)

Douglas Greenhaus, NADA

## WEDNESDAY January 25

#### The Next Generation of Biofuels (G105)

#### 10:30 a.m.

This session will explore the next generation of biofuels and some of the regulatory and practical hurdles for commercialization.

Organizers:

Robert Anderson, EPA; Valerie Ughetta, Alliance of Automobile Manufacturers Inc.

10:30 a.m. (Oral Only)
Title TBD (Oral Only)
Lamos W. Coldwell, U.S. Environmental Protection Agency.

James W. Caldwell, U.S. Environmental Protection Agency

10:50 a.m.

Title TBD (Oral Only)

Kristin Moore, Renewable Fuels Association

11:10 a.m.

(Oral Only)

(Oral Only)

#### Title TBD (Oral Only)

Brian West, Oak Ridge National Laboratory

#### Crash Avoidance II: Connected Vehicles (G201)

#### 2:30 p.m.

This session focuses DSRC communications-based crash avoidance systems. Topics will include the technical and policy aspects of the US DOT Connected Vehicle initiative and vehicle-to-vehicle communications research, with a focus on DSRC security, the USDOT Safety Pilot and policy research.

Organizers:

Michael R. Lukuc, US Dept. of Transportation; Mary Wroten, Ford Motor Co.

2:30 p.m.

#### (Oral Only)

Safety Pilot Overview, Status, Activities Planned in 2012 (Oral Only)

Michael C. Schagrin, Federal Highway Administration

 2:45 p.m.
 (Oral Only)

 Policy Overview, Status, Activities Planned in 2012 (Oral

**Only)** Valerie Briggs, U.S. Dept. of Transportation

3:00 p.m.

(Oral Only)

## Connected Vehicle Driver Acceptance Clinics (Oral Only)

Michael R. Lukuc, U.S. Dept. of Transportation

3:15 p.m.

#### (Oral Only)

#### USDOT - CAMP V2V Security System Research (Oral Only)

Tom Schaffnit, Honda R&D Americas Inc.

Preliminary papers/presentations under consideration. For up-to-date event information, visit www.sae.org/govind.

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## WEDNESDAY January 25

3:30 p.m.	(Oral Only)	
VIIC Security (Oral Only) Mary Wroten, Ford Motor Co.		
3:45 p.m.	(Oral Only)	
Safety Pilot Security System (Oral Only) Walton L. Fehr, U.S. Dept. of Transportation		
4:00 p.m.	(Oral Only)	
Safety Pilot Model Deployment Evaluation (Oral Only)		

4:15 p.m.

James R. Sayer, UMTRI

(Oral Only)

#### Safety Pilot Independent Evaluation (Oral Only) Emily Nodine, Volpe Natl Transportation Systems Center

#### **Crashworthiness II: Rollover and Side** Impacts (G207)

#### 2:30 p.m.

Rollover and side impacts crashes remain a significant priority for crash safety. Special consideration will be given to rollover test methods, vehicles stability control and ejection mitigation. Real world crash and injury evaluations will also be presented.

Organizers: Charles A. Kawashima, Toyota; Allison E. Louden, NHTSA

2:30 p.m.

(Oral Only)

#### Influence of FMVSS 226 on Side Airbag Out of Position Injury Assessment (Oral Only)

Jeff Dix, Selim A. Hammoud, Alex V. Cardinali, Nissan North America Inc.: Abe Mitchell. Autoliv North America

#### 2:50 p.m.

Epidemiology of Rollover Injuries (Oral Only)

Dipan Bose, Jason R. Kerrigan, Jeff Crandall, Univ. of Virginia

3:10 p.m.

(Oral Only)

(Oral Only)

(Oral Only)

#### The Characteristics of Rollover Crashes in Run-Off Road Events (Oral Only)

H. Clay Gabler, Virginia Tech.

3:30 p.m.

#### Kinematics of Children and Adults in Lateral and **Oblique Low Speed Loading (Oral Only)**

Emily Mathews, Drexel Univ.; Thomas Seacrist, Sriram Balasubramanian, Children's Hospital of Philadelphia; Richard W. Kent, Francisco Jose Lopez-Valdes, Univ. of Virginia; Schuyler St. Lawrence, TK Holdings Inc.; Hiromasa Tanji, Takata Holdings Inc.; Kazuo Higuchi, TK Holdings Inc.; Kristy B. Arbogast, Children's Hospital of Philadelphia

**TECHNICAL, BUSINESS & EXECUTIVE** 

#### 3:50 p.m.

#### Impact and Injury Patterns in Side Crashes of Vehicles with Good Ratings for Side Crash Protection (Oral Only)

Becky C. Mueller, Matthew L. Brumbelow, Raul A. Arbelaez, David S. Zuby, Insurance Institute for Highway Safety

4:10 p.m.

#### 50th Percentile Male WorldSID Update: Seating Procedure and Crash Tests (Oral Only) Allison E. Louden, NHTSA

#### **Electric Drive Part 2 - The Infrastructure** (G101)

2:30 p.m.

Electric drive infrastructure needs vary greatly depending on vehicle technology. HEVs can use existing gasoline stations, while fuel cells require a brand new hydrogen infrastructure. Plug-in vehicle needs lie between those extremes. This session will explore the range of infrastructure options and their impacts for the consumer, utilities, energy providers and OEMs. Specific topics will include charging levels, locations and control, hydrogen production, distribution and refueling, and the policy incentives to jump-start infrastructure construction. Speakers from the utilities, gas suppliers, OEMs, and the government will discuss these and other infrastructure related issues.

Organizers:

Susan Burke, US Environmental Protection Agency; Robert C. DeVault, Oak Ridge National Laboratory

#### 2:30 p.m.

#### Title TBD (Oral Only)

Mike Rowand, Duke Energy Corp.

2:50 p.m.

(Oral Only)

(Oral Only)

#### How an Electric Charging Infrastructure Affects the Market Penetration of Alternative Technology Vehicles (Oral Only)

Jonathan Ford, Sentech Inc. (Now part of SRA International)

(Oral Only)

SESSIONS

(Oral Only)

#### Natural Gas and Other Alternative Fuels (G106)

#### 2:30 p.m.

With the recent expansion of U.S. natural gas reserves, due in large part to fracking, natural gas has emerged -- again -as a significant potential energy source for transportation in heavy- and light-duty vehicles. This session would examine various ways of using natural gas in transportation and the consequences thereof (e.g.,GTLs vs CNG/LNG vs electricity; medium-/heavy-duty only vs. LDV; in LDVs, dedicated vs bi-fuel; etc.). Also covered, perhaps, might be a high-level survey of the current state of environmental (and health) impacts of fracking. What's the real world proposition of natural gas for fleet vehicles? Are new technologies like clean diesel more or less competitive with natural gas? This session may explore the rhetoric and reality of potential for seismic shifts in fuels and infrastructure and the challenges of bringing these fuels to market.

#### Organizers:

William P. Chernicoff, Toyota Motor North America Inc.; Steven Przesmitzki, U.S. Department of Energy

2:30 p.m.	(Oral Only)
Title TBD (Oral Only) Larry Walker, Cornell Univ.	
2:50 p.m.	(Oral Only)
<b>Title TBD (Oral Only)</b> Mary Barcella, IHS	
3:10 p.m.	(Oral Only)
Title TBD (Oral Only) Leslie Pezzulo, U.S. Dept. of Energy	
3:30 p.m.	(Oral Only)

#### Title TBD (Oral Only)

Kristi Moriarty, National Renewable Energy Laboratory

## WEDNESDAY January 25

## Safety and Cybersecurity of Automotive Electronic Control Systems (G211)

#### 2:30 p.m.

This session will focus on the challenges and technical solutions to ensure the safety of electronic control systems and safeguards against cybersecurity threats in current and future motor vehicles. This session will cover the implementation of ISO 26262, software safety assurance, and other safety and reliability topics. This session will also cover the cybersecurity of connected vehicles including dedicated short range communications and other communication technologies, and in-vehicle controller area networks. The synergy between safety and cybersecurity will also be addressed.

Organizers:

Arthur Carter, NHTSA; Stephen G. Gehring, General Motors LLC

f	2:30 p.m.	(Oral Only)	
	Security Considerations for Connected Vehic Only)	cles (Oral	
	Tom Schaffnit, Honda R&D Americas Inc.		
	2:50 p.m.	(Oral Only)	
	Assessment of the ISO 26262 Standard on R Vehicles—Functional Safety (Oral Only) Qi Van Eikema Hommes, Volpe Transportation Systems		
	3:10 p.m.	(Oral Only)	
<b>Objectives of the SAE Functional Safety Committee</b> <b>(Oral Only)</b> David D. Hartfelder, GM Powertrain			
	Washington DC Section Event and Program (G505)	1	
	5:00 p.m.		

4:30 - Reception; 5:00 - Program "Green Racing"

Keynote Speakers: Robert L. Larson; Ed Triolo, American Le Mans Services

## THURSDAY January 26



#### Plenary Session (G501)

#### 8:00 a.m.

#### Moderators:

Jason Vines, Senior VP, Fleishman-Hillard

Panelists:

Mitch Bainwol, CEO, Alliance of Automobile Manufacturers Inc. Roland Hwang, Transportation Program Director, National Resources Defense Council

Adrian Lund, President, Insurance Institute for Highway Safety Ronald Medford, Deputy Administrator, NHTSA

Margo Oge, Director, Office of Transportation & Air Quality, U.S. EPA David Sargent, Vice President, Global Automotive, JD Power And Associates

Heather Zichal, Deputy Assistant to the President for Energy & Climate Change Policy, The White House

#### Alternative Fuel Safety (G212)

#### 10:30 a.m.

This session will focus on the safety of electrical systems in electric cars including battery testing. It will also cover international regulations on hydrogen and CNG and guidelines on modification to convert to electric vehicles.

Organizers: Phil Gorney, NHTSA; Joseph Thompson, Nissan

10:30 a.m.

(Oral Only)

Li-ion Global Safety Standardization (Oral Only)

Robert Galyen, Magna E-Car Systems

10:50 a.m.

(Oral Only)

Safety Performance Advancements for Large scale Liion Batteries through Material Development (Oral Only) Christopher J. Orendorff, Sandia National Laboratories

11:10 a.m.

(Oral Only)

Failure Modes and Effects Analysis of Lithium-Ion Battery Electric and Plug-in Hybrid Vehicles (Oral Only) Denny Stephens, Battelle Memorial Institute

11:30 a.m.

(Oral Only)

Status and Outlook of International Electric Vehicle and Battery Safety Requirements (RESS) (Oral Only) Heiko Mertens, Volkswagen AG

11:50 a.m.

(Oral Only) 1

Updating the Federal Motor Carrier Safety Regulations (FMCSRs) to Accommodate Natural Gas as an Alternative Fuel (Oral Only) Quon Kwan, USDOT - FMCSA

12:10 p.m.

(Oral Only)

Hydrogen and CNG Vehicle Fuel System Safety Research (Oral Only)

Barbara Hennessey, NHTSA

#### **Biomechanics** (G202)

#### 10:30 a.m.

This session addresses the development of anthropomorphic test devices (ATDs), computational human models, injury prediction methodologies, and laboratory test procedures. These complimentary research approaches target the improvement of automotive safety through a better understanding of the human response to impact and associated injury risk in frontal, oblique, and lateral loading conditions.

Organizers: Daniel Parent, NHTSA; Robert Pheiffer, InterRegs, Ltd.

10:30 a.m.

(Oral Only)

#### Preliminary Repeatability and Reproducibility Assessment of the THOR Mod Kit ATD (Oral Only)

Daniel Parent, Stephen Ridella, NHTSA

10:50 a.m.

(Oral Only)

## Thoracic Injury Assessment for Improved Vehicle Safety (Oral Only)

Paul Lemmen, Bernard Been, Humanetics Europe

11:10 a.m.

(Oral Only)

## Dynamic Response of the THOR-NT: Head, Thorax and Abdomen (Oral Only)

Mitsutoshi Masuda, Toyota Motor Corporation; Sabine Compigne, Toyota Motor Europe

11:30 a.m.

(Oral Only)

#### A Theoretical, Probabilistic Framework for the Interpretation of Rib Cortical Bone Strains from Finite Element Simulations (Oral Only)

Jason Forman, Univ. of Virginia; Ola Bostrom, Krystoffer Mroz, Autoliv Research; Maria Segui-Gomez, European Center for Injury Prevention

11:50 a.m.

(Oral Only)

#### The Global Human Body Models Consortium Seated Male Finite Element Model: Project Update and Review of Phase I Development (Oral Only)

Francis S. Gayzik, Daniel P. Moreno, Nicholas A. Vavalle, Joel Stitzel, Ashley Rhyne, Virginia Tech - Wake Forest School of Biomedical Engrg & Sci

12:10 p.m.

(Oral Only)

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#### Loadwall Side Impacts: Implications for Advanced Sensor Deflection Measures in Dummies (Oral Only) John R. Humm, Narayan Yoganandan, Frank A. Pintar, Medical College of Wisconsin

#### Driver Distraction (G208)

#### 10:30 a.m.

This session will cover the latest research on driver distraction. One focus area will be voluntary guidelines and recommended practices for designing portable and integrated devices to mitigate driver distraction. It will also cover technologies designed to combat driver distraction.

Organizers: Sukhbir Bilkhu, Chrysler Group LLC; W. Riley Garrott, NHTSA

10:30 a.m.

(Oral Only)

(Oral Only)

(Oral Only)

#### **Real-World Distracted Driver Accidents - Two Recent NTSB Cases (Oral Only)**

Dennis Collins, NTSB

10:45 a.m.

#### NHTSA's Experimental Testing to Develop NHTSA's Driver Distraction Guidelines (Oral Only) Elizabeth Mazzae, W. Rilev Garrott, NHTSA

11:00 a.m.

#### NHTSA's Driver Distraction Guidelines (Oral Only) W. Riley Garrott, Elizabeth Mazzae, NHTSA

11:15 a.m.

(Oral Only)

#### Driver Drowsiness Detection (Oral Only) Frank Sgambati, Robert Bosch LLC

11:30 a.m.

(Oral Only)

#### Definition of a Task for Distraction Measurement (Oral Only)

Linda Angell, Virginia Tech Transportation Institute

11:45 a.m.

#### (Oral Only)

#### Driver Distraction Update from the SAE Safety & Human Factors Steering Committee (Oral Only) Daniel J. Selke, Mercedes-Benz USA LLC

12:00 p.m.

(Oral Only)

#### Beginning the Analysis of the SHRP 2 Naturalistic Driving study (Oral Only)

Kenneth Campbell, Transportation Research Board

## **THURSDAY** January 26

#### **Light-Duty Fuel Economy and Regulations** - Part | (G102)

10:30 a.m.

This session will cover regulations to improve light duty vehicle fuel economy, reduce green house gasses and criteria pollutants and new fuel standards.

#### Organizers:

Joseph McDonald, US EPA; Reginald Modlin, Chrysler Group LLC

\* Presentations being confirmed. Check the SAE website for the latest information.

#### Welcome to the Future of GHG Rules for Medium and Heavy Duty Trucks - Part I (G107)

#### 10:30 a.m.

This session will explore this landmark rule that will determine the types of engines, fuels and vehicles to serve the commercial sector for decades to come.

Organizers:

Allen Schaeffer, Diesel Technology Forum; Robert M. Wagner, Oak Ridge National Laboratory; Houshun Zhang, EPA

#### 10:30 a.m.

#### Title TBD (Oral Only)

Matthew W. Spears, U.S. EPA

10:50 a.m.

(Oral Only)

(Oral Only)

Impact of the Heavy Duty Vehicle GHG and Efficiency Rule on Truck Manufacturers and Owners (Oral Only) Tony Greszler, Volvo Powertrain Corporation

11:10 a.m.	(Oral Only)

Title TBD (Oral Only) Kenneth Howden, U.S. Dept. of Energy

11:30 a.m.

(Oral Only)

Title TBD (Oral Only) Daniel R. Kieffer, Paccar

#### Applying Safety Technologies: How **Motorcoach and Trucking Industries are** Staying Ahead of the Curve (G203)

#### 2:30 p.m.

While several federal rulemakings are either in process or are being researched, the commercial vehicle industry is staving ahead of the curve by getting these technologies on vehicles. This session will look at where the federal rulemaking activities are heading, what is happening in the motorcoach and commercial trucking industries, and how safety technologies are evolving.

#### Organizers:

Leigh S. Merino, Motor & Equipment Mfrs Association; Alrik L. Svenson, NHTSA

Preliminary papers/presentations under consideration. For up-to-date event information, visit www.sae.org/govind.

## THURSDAY January 26

2:30 p.m.	(Oral Only)
NHTSA Rulemaking and Research Updates (O Shashi M. Kuppa, NHTSA	ral Only)
2:50 p.m.	(Oral Only)
Analysis of Recent NTSB Motorcoach and True Investigations (Oral Only) Robert Molloy, NTSB	ck
3:10 p.m.	(Oral Only)
Motorcoach Fire Testing at NIST (Oral Only) David Sutula, U.S. DOT/NHTSA	
3:30 p.m.	(Oral Only)
Applying Safety Technologies in Motorcoach I (Oral Only)	ndustry

Norm Littler, American Bus Association

3:50 p.m.

(Oral Only)

## Applying Safety Technologies in Trucking Industry (Oral Only)

Ted Scott, American Trucking Associations

#### Child Safety (G209)

2:30 p.m.

This session will cover programs that update NTHSA's side impact test procedure development, along with evaluations of the Q3s three year old dummy and the new Q 10 year old dummy. Other topics will include effectiveness of booster seat laws on injury risk and evaluation of a proposed LATCH rating system vs. the quality of CRS installation by volunteers.

Organizers:

MaryAnn Beebe, General Motors LLC; Lisa K. Sullivan, NHTSA

2:30 p.m.

(Oral Only)

NHTSA Evaluation of the Q3s Three Year-Old Side Impact Dummy (Oral Only)

Dan Rhule, NHTSA

2:50 p.m.

(Oral Only)

#### NHTSA's Initial Evaluation of Child Side Impact Protection - Update (Oral Only)

Cristina G. Echemendia, Lisa K. Sullivan, Allison E. Louden, NHTSA

3:10 p.m.

(Oral Only)

## Effects of Booster Seat Laws on Injury Risk Among Children in Crashes (Oral Only)

Angela H. Eichelberger, Aline O. Chouinard, Jessica Jermakian, Insurance Institute for Highway Safety

#### 3:30 p.m.

## Vehicle Factors Associated with LATCH Usability (Oral Only)

Kathleen DeSantis Klinich, Miriam A. Manary, UMTRI

3:50 p.m.

#### Q10 Dummy Development (Oral Only)

Paul Lemmen, Kees Waagmeester, Mark J. Burleigh, Humanetics Europe

4:10 p.m.

(Oral Only)

(Oral Only)

(Oral Only)

#### A Look Inside American Family Vehicles: National Study of 79,000 Car Seats, 2009-2010 (Oral Only)

Lorrie Walker, Safe Kids Worldwide

#### Data Collection and Analysis (G213)

#### 2:30 p.m.

This session will include new developments in the collection and use of real-world crash data. It will discuss the integration of the FARS and NASS GES for enhanced data quality and improved data analysis. In addition, updates and changes to the NASS including data collection protocol changes, new variables, and sample changes will be discussed. Additional safety data collections may also be discussed.

Organizers:

Chip Chidester, NHTSA; Jeff Dix, Nissan Technical Center North America

2:30 p.m.

(Oral Only)

(Oral Only)

#### Lower Extremity Injuries and Intrusion in Frontal Crashes (Oral Only)

Rory A. Austin, NHTSA

2:45 p.m.

## Collecting Child-Specific Supplemental Crash Data: The NCOSS Project (Oral Only)

Dennis R. Durbin, Allison Curry, Mark Zonfrillo, Rachel Myers, Kristy B. Arbogast, Children's Hospital of Philadelphia

3:00 p.m.

(Oral Only)

Role of Geographic Information (GIS) in FARS Data Collection and Analysis (Oral Only) Rajesh Subramanian, NHTSA

3:15 p.m.

(Oral Only)

#### Linkage of Pre-hospital, Trauma System and Medical Imaging Databases for Crash Injury Analysis (Oral Only) Stewart C. Wang, Carla Kohoyda-Inglis, Univ. of Michigan

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## SESSIONS TECHNICAL, BUSINESS & EXECUTIVE

#### Major Data Changes in the FARS and NASS GES as a Move Toward Pre-crash Data Collection (Oral Only) Barbara Rhea, NHTSA

3:45 p.m.

3:30 p.m.

(Oral Only)

(Oral Only)

rateEFFECT: Effectiveness Evaluation of Active Safety Systems (Oral Only)

Joern Marten Wille, Volkswagen AG

4:00 p.m.

(Oral Only)

#### Data Changes in NASS CDS and EDR Data Collection Updates (Oral Only) John E. Brophy, NHTSA

4:15 p.m.

(Oral Only)

Incorporating the AIS05/08 Injury Data Codes into the NASS CDS (Oral Only) Mark K. Mynatt, NHTSA

#### **Light-Duty Fuel Economy and** Technologies - Part 2 (G103)

#### 2:30 p.m.

This session will explore new, innovative fuel efficient technologies to improve light duty vehicle fuel economy, and reduce green house gasses. and criteria pollutants. Speakers from industry, government, public interest groups and research labs will try to address pertinent Questions such as: How far can conventional IC engine technology take us? How significant will hybrid technology be? Will electric vehicles; replace IC/diesel powered vehicles? What are the constraints/ potentials; of using advanced materials to improve fuel economy?

#### Organizers:

Robert Bienenfeld, American Honda Motor Company; Joseph McDonald, US EPA; Bradley Zigler, National Renewable Energy Laboratory

Moderators:

James Kliesch, Union of Concerned Scientists

2:30 p.m.

(Oral Only)

#### Technology Pathways Towards Achieving the 2025 GHG Standards (Oral Only)

William Charmley, U.S. Environmental Protection Agency

2:50 p.m.

#### Potential Improvements to ICEs Through 2021 (Oral Only)

Nancy L. Homeister, Ford Motor Co.

3:10 p.m.

(Oral Only)

(Oral Only)

#### The Role of HEVs and PHEVs in Achieving the Proposed 2021 GHG Standards (Oral Only) Tom Stricker, Toyota Motor North America Inc.

#### 3:30 p.m.

#### Mass Reduction Opportunities for the Light Duty Vehicle Fleet in the Next Decade (Oral Only)

Gregg Peterson, Lotus Engineering Inc.

3:50 p.m.

**Off-Cycle GHG Reduction Potential (Oral Only)** Michel A. Forissier, Valeo

#### Welcome to the Future of GHG Rules for Medium and Heavy Duty Trucks - Part 2 (G108)

#### 2:30 p.m.

This session will explore this landmark rule that will determine the types of engines, fuels and vehicles to serve the commercial sector for decades to come.

Organizers:

Allen Schaeffer, Diesel Technology Forum; Robert M. Wagner, Oak Ridge National Laboratory; Houshun Zhang, EPA

2:30 p.m.

(Oral Only)

#### Title TBD (Oral Only)

Timothy Johnson, Corning Inc.

2:50 p.m.

(Oral Only)

#### Implementing the First-ever Greenhouse Gas and Fuel **Efficiency Standards for Commercial Vehicle Engines** (Oral Only)

Brian Mormino, Cummins Inc.

3:10 p.m.

(Oral Only)

#### **Powertrain Technologies for Increased Fuel Efficiency** (Oral Only)

Mihai Dorobantu, Eaton Corp.

3:30 p.m.

(Oral Only)

#### Trucking INdustry Perspective on New Medium and Heavy-Duty GHG Rules (Oral Only)

Glen P. Kedzie, American Trucking Associations

3:50 p.m.

#### Title TBD (Oral Only)

Ken McAlinden, Ford Motor Co.

(Oral Only)

(Oral Only)

(Oral Only)

## THURSDAY January 26

## FRIDAY January 27

#### **Opening Address and Award Presentation** (G502)

9:00 a.m.

Kevnote Speaker:

Henry Kelly, Acting Assistant Secretary, U.S. Department of Energy

#### **Integrated Safety and Advanced Restraints** (G204)

#### 10:30 a.m.

This session will cover development and testing of safety systems designed to reduce the severity of an imminent accident. Such systems include those that precharge the brakes, inflate seats for extra support, move the passenger seat, position head rests to avoid whiplash, tension seat belts and automatically apply partial or full braking to minimize impact.

Organizers:

John Frooshani, Subaru of America Inc.; Aloke Prasad, National Hwy Traffic Safety Admin

10:30 a.m.

(Oral Only)

#### Adaptive Brake Assistance Systems – Results from Real World Tests and Proposal for Test Procedures (Oral Only)

Joerg J. Breuer, Daimler AG

10:45 a.m.

(Oral Only)

#### Methods to Objectively Evaluate CIB and DBS Performance on the Test Track (Oral Only) Garrick J. Forkenbrock, NHTSA

11:00 a.m.

(Oral Only)

#### Summary of NHTSA's and CAMP's Advanced Restraints Project (Oral Only)

James Saunders, NHTSA

11:15 a.m.

(Oral Only)

#### Applying Integrated Safety Techniques to Enhance Human Safety (Oral Only)

Tony Bromwell, TASS Americas: Cecil Owens, Roy Bours, TASS BV

11:30 a.m.

#### (Oral Only)

#### Comfort, Convenience, and Pre-Crash Functionality of **TRW Active Control Retractor and Active Buckle Lifter** (Oral Only)

Scott Gilkey, Edgar Schlaps, TRW Vehicle Safety Systems Inc.

11:45 a.m.

(Oral Only)

#### A Comparative Evaluation of Rearview Camera Display Locations: Collision Avoidance Outcomes and Use Patterns (Oral Only)

Genevieve Heckman, Robert Rauschenberger, Robyn Kim, Douglas Young, Robert C. Lange, Exponent, Inc.

## SESSIONS **TECHNICAL, BUSINESS & EXECUTIVE**

#### 12:00 p.m.

(Oral Only)

Bosch Motorcycle ABS: Safety for All (Oral Only) Frank Sgambati, Robert Bosch LLC

#### Joint Safety-Energy Session -Lightweighting vs Economy/Safety (G109)

#### 10:30 a.m.

What are the practical limits for mass reduction to improve light duty fuel economy by 2025? If vehicle size is maintained, what are the safety impacts associated with mass reduction through material substitution, and careful structural design? What are the cost implications of material substitution and enhanced structural design? Assuming secondary weight savings and drive train optimization, what fuel economy improvements are possible through mass reduction?

Organizers:

Scott A. Schmidt, Alliance of Automobile Manufacturers Inc.; Stephen Summers, NHTSA; William H. Walsh, Consultant

10:30 a.m.

(Oral Only)

The Effect of Mass on Injury Risk: A Look at Insurance Injury Rates for Hybrid Vehicles Versus their Non-Hybrid Counterparts (Oral Only)

Matthew Moore, Highway Loss Data Institute

10:50 a.m.

(Oral Only)

Future Safety Challenges Associated with CAFE (Oral Only)

Priva Prasad, Prasad Engg LLC

11:10 a.m.

(Oral Only)

**Relationships Between Fatality Risk, Mass, and** Footprint in Model Year 2000-2007 Passenger Cars and LTVs (Oral Only)

Charles Kahane, NHTSA

11:30 a.m.

(Oral Only)

**Economic Light-Weighting Options for Vehicle** Structures for Year 2020 (Oral Only) Harjinder Singh, EDAG

11:50 a.m.

12:10 p.m.

(Oral Only)

The Effects of Vehicle Size and Mass on Safety (Oral Only) Jeya Padmanaban, JP Research Inc.

(Oral Only)

Assessment of state-of-the-art in predictive capability of CAE for Crash Performance (Oral Only)

Priya Prasad, Prasad Engg LLC; Prakash Krishnaswamy, EASI

Preliminary papers/presentations under consideration. For up-to-date event information, visit www.sae.org/govind. 11

## FRIDAY January 27

#### **Quiet Car and Pedestrians: Includes** Pedestrian GTR Developments (G205)

#### 10:30 a.m.

This session will cover the Pedestrian Safety Enhancement Act requirments to design warning sounds into electric vehicles to alert pedestrians of their presence. It will also cover international standard and consumer vehicle ratings for pedestrian protection.

#### Organizers:

Timothy Johnson, NHTSA; Daniel J. Selke, Mercedes-Benz USA LLC

10:30 a.m. (Oral Only)

#### **Overview of NHTSA Quiet Car Research Program (Oral** Only)

Lisandra Garay-Vega, NHTSA

10:50 a.m.

(Oral Only)

#### **Quiet Hybrid and Electric Vehicles and Pedestrian** Safety - NHTSA's Rulemaking Policy Considerations (Oral Only)

Gayle D. Dalrymple, NHTSA

11:10 a.m.

#### (Oral Only)

SAE Vehicle Sound for Pedestrians Update (Oral Only) Jav Joseph, American Honda Motor Co. Inc.: Daniel J. Selke. Mercedes-Benz USA LLC

#### 11:30 a.m.

(Oral Only)

(Oral Only)

(Oral Only)

WP29 Update on Quiet Cars (Oral Only) Kenneth Feith, Retired U.S. EPA

11:50 a.m.

#### NHTSA Evaluation of the Flex GTR Legform on US Vehicles (Oral Only)

Brian Suntay, Ann E. Mallory, Transportation Research Center Inc.; Jason Stammen, NHTSA

12:10 p.m.

#### Pedestrian Safety GTR Update (Oral Only)

Sukhbir Bilkhu, Chrysler Group LLC

#### Think Globally, Act Globally (G104)

#### 10:30 a.m.

This session will explore global vehicle standards and transportation policies, which are leading or lagging, which make sense and which create conflict? The auto industry is increasingly influenced by global markets and developments outside of North America. Harmonization of standards and global platforms have been both aspirations and accomplishments - where are we going with future fuel and emissions standards and policies-and how will that drive changes in US leadership in policy and technology? What resources will be available to the future, global automobile market? This session may also cover possible future fuel prices, fuel standard, fuel types, assessments of uses and demand for rare earth minerals, and incentives influencing consumers.

#### Organizers:

Rehka Pillai, Oak Ridge National Laboratory; Julia Rege, Global Automakers; Robert M. Wagner, Oak Ridge National Laboratory

10:30 a.m.

(Oral Only)

#### Transforming Transportaiton Globally: The Role of Natural Gas (Oral Only)

Kathryn Clay, Drive Natural Gas Alliance

10:50 a.m.	(Oral Only)	
Electric Vehicles and Petroleum Refining in DOE's 2011 Critical Materials Strategy (Oral Only) Diana Bauer, U.S. Dept. of Energy		
11:10 a.m.	(Oral Only)	

Title TBD (Oral Only)

J. Gary Smyth, General Motors Global R & D

11:30 a.m.

(Oral Only)

#### Renewable and Low-Carbon Fuel Standards for Motor Fuels: Regional and National Initiatives to Address **Global Carbon Emissions and Energy Security (Oral** Only)

Paul Leiby, Oak Ridge National Laboratory; Jonathan Rubin, Univ. of Maine

#### Pre-registration/Cancellation Deadline:

January 09, 2012

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Package 2 – Admittance to the technical sessions, tabletop exhibits, morning keynote speakers, networking receptions, Washington DC Section event and the Washington Auto Show including the Public Preview on Thursday, January 26. (www.washingtonautoshow.com)

#### **Registration Hours**

January 25	7:00 a.m. – 5:00 p.m.
January 26	7:00 a.m. – 5:00 p.m.
January 27	7:00 – 11:00 a.m.

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#### Things to do and see in the Washington D.C. Area

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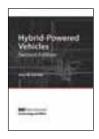
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