

SAE 2016 Government/Industry Meeting

Technical Session Schedule

As of 01/26/2016 07:40 pm

Wednesday, January 20

Crash Avoidance Safety Ratings

Session Code: G100

Room 145 AB

Session Time: 10:30 a.m.

Development of metrics to assess current crash avoidance technologies. Ratings from NCAP (U.S., Europe, and/or Japan), IIHS, Thatcham, and other standardized testing programs.

Organizers - Stephane A. Thiriez, Mitsubishi Motors R&D of America Inc.; David S. Zuby, Insurance Institute for Highway Safety

Time	Paper No.	Title
10:30 a.m.	ORAL ONLY	IIHS Headlight Evaluations Update and Preview Matthew L. Brumbelow, Insurance Institute for Highway Safety
10:50 a.m.	ORAL ONLY	Development of Lane Departure Prevention Technology Ratings in EuroNCAP Matthew J. Avery, Colin Grover, Motor Insurance Repair Research Centre
11:10 a.m.	ORAL ONLY	Stop the Crash: Promoting Crash Avoidance Technologies Around the World David Ward, Global NCAP
11:30 a.m.	ORAL ONLY	Challenges of Developing Crash Avoidance Systems for Diverse NCAP Organizations Frank Sgambati, Robert Bosch LLC
11:50 a.m.	ORAL ONLY	Evaluating AEB for Prevention of Pedestrian and Cyclist Crashes Richard Schram, Euro NCAP
12:10 p.m.	ORAL ONLY	Analysis of Decreasing Traffic Accidents with a Driving Support System Eiji Shibata, Subaru

Wednesday, January 20

Crash Avoidance: New Technologies

Session Code: G101

Room 145 AB

Session Time: 2:30 p.m.

New technologies, solutions and implementation to mitigate collisions and road departure. This session can also include strategies for minimizing false alarms.

Organizers - W. Riley Garrott, NHTSA; Tony Gioutsos, Tass International

Chairpersons - Timothy Johnson, National Hwy Traffic Safety Admin

Time	Paper No.	Title
2:30 p.m.	ORAL ONLY	Development of Objective Tests for Automated Vehicles Frank Barickman, NHTSA
2:50 p.m.	ORAL ONLY	Adaptive Driving Beam Headlighting System Examination and Test Procedure Development Elizabeth Mazzae, NHTSA

3:10 p.m.	ORAL ONLY	Testing Advanced Crash Avoidance Technologies with 3D Surrogate Vehicles <i>Garrick J. Forkenbrock, US Dept. of Transportation</i>
3:30 p.m.	ORAL ONLY	Advanced Physics Based Simulation Approaches for Testing Crash Avoidance Technologies <i>Tony Gioutsos, Tass International</i>
3:50 p.m.	ORAL ONLY	Optimizing Integrated Safety Using Driver and Vehicle States <i>Cecilia Sunnevang, Autoliv Development AB</i>
4:10 p.m.	ORAL ONLY	V2X and ADAS: Complementary Technologies to Improve Safety <i>Roger Berg, DENSO International America Inc.</i>

Wednesday, January 20

Cybersecurity

Session Code: G110

Room 146 A

Session Time: 10:30 a.m.

As active safety and HMI systems become more integrated into the vehicle's DNA and we move from "no automation" to "full automation" the security of these and other vehicle systems becomes increasingly relevant. This session will provide presentations that address the global government programs and industry standards around these important security topics.

Organizers - Arthur Carter, NHTSA; Thomas M. Forest, General Motors Co.

Time	Paper No.	Title
10:30 a.m.	ORAL ONLY	NHTSA Cybersecurity Update <i>Cem Hatipoglu, NHTSA</i>
10:50 a.m.	ORAL ONLY	New NHTSA Cybersecurity Research Projects: Anomaly Detection Systems, Cybersecurity Considerations for Heavy Vehicles, Cybersecurity of Firmware Updates <i>Andre Weimerskirch, UMTRI</i>
11:10 a.m.	ORAL ONLY	DHS Automotive Cybersecurity Program Update <i>Dan Massey, Dept Of Homeland Security</i>
11:30 a.m.	ORAL ONLY	Overview of Recommended Practice - SAE J3061 <i>Lisa T. Boran, Ford Motor Company</i>
11:50 a.m.	ORAL ONLY	Automotive ISAC Update <i>Tom Mooney, Booz Allen Hamilton Inc.</i>
12:10 p.m.	ORAL ONLY	Hardware Protected Security for Ground Vehicles <i>Bill Mazzara, Fiat Chrysler Automobiles</i>

Wednesday, January 20

Real-world Data Collection

Session Code: G111

Room 146 A

Session Time: 2:30 p.m.

This session will feature presentations on TRB and NHTSA's new real-world data collection system. Includes Data portals that may be in place by then as part of data modernization.

Organizers - Chip Chidester, US Dept. of Transportation; Paul Scullion, Association of Global Automakers Inc.

Time	Paper No.	Title
-------------	------------------	--------------

2:30 p.m.	ORAL ONLY	Vehicle Identification Number (VIN), Using Manufacturer VIN Specifications as a Standard <i>Michael D. Frenchik, NHTSA</i>
2:50 p.m.	ORAL ONLY	Precrash Data Collection in NHTSA's Crash Databases <i>Mark K. Mynatt, NHTSA</i>
3:10 p.m.	ORAL ONLY	Upgrades in Technologies for NHTSA's Crash Investigations <i>John Brophy, NHTSA</i>
3:30 p.m.	ORAL ONLY	NHTSA's Data Modernization Project <i>Tina Morgan, NHTSA</i>
3:50 p.m.	ORAL ONLY	Status of SHRP II Naturalistic Driving Project <i>David J. Plazak, Transportation Research Board</i>
4:10 p.m.	ORAL ONLY	An Analysis of SHRP II Naturalistic Driving Project Data <i>Stephen Andrie, Transportation Research Board</i>

Wednesday, January 20

Demonstrating the Benefits of Vehicle Automation and Off-cycle Technologies

Session Code: G200

Room 146 B

Session Time: 10:30 a.m.

Consumers are now looking forward to and beginning to expect increased automation in their vehicles. The session will cover what these vehicle to vehicle and vehicle to infrastructure technologies are, how they will work, how these technologies interact, how they can contribute to individual as well as fleet-wide operational efficiency improvements, and what regulatory and data issues, such as off-cycle credits remain that can help incentivize or enable OEMs to accelerate deployment.

Organizers - *Aaron C. Hula, US Environmental Protection Agency; Chris Nevers, Alliance of Automobile Manufacturers Inc.*

Time	Paper No.	Title
10:30 a.m.	ORAL ONLY	Audi Traffic Signal Connected Technology, an Analysis of Potential Fuel Savings <i>Michael Zweck, Audi AG</i>
10:50 a.m.	ORAL ONLY	Assessing the Energy Impact of Connected and Automated Vehicle Technologies <i>Jeffrey Gonder, National Renewable Energy Laboratory</i>
11:10 a.m.	ORAL ONLY	Roadmap to a Low-carbon Future for Personal Mobility <i>Charlie Johnson, Rocky Mountain Institute</i>
11:30 a.m.	ORAL ONLY	An OEM View of Driving Automation Trends <i>John P. Capp, General Motors LLC</i>
11:50 a.m.	ORAL ONLY	A Framework for Estimating the Transportation System Impacts of Automated Vehicle Technologies <i>Scott B. Smith, US Dept. of Transportation</i>
12:10 p.m.	ORAL ONLY	Beyond Eco-Driving and Torque Smoothing in CAVs: The Opportunity of High Efficiency Powertrain Calibration Using Preview <i>Anna G. Stefanopoulou, University of Michigan</i>

Wednesday, January 20

Advanced Materials / Lightweighting

Session Code: G201

Room 146 B**Session Time: 2:30 p.m.**

The drive for lighter weight vehicles is now a mainstream approach for engineers in designing vehicles to comply with EPA's light duty Greenhouse Gas Standards and NHTSA's Corporate Average Fuel Economy Standards. Challenges include designing lightweight vehicle structures cost effectively while maintaining vehicle performance and safety. The presentations in this session includes whole vehicle studies funded by U.S and Canadian government on mass reduction in light duty pickup trucks and mass penalty to meet small overlap test from Insurance Institute of Highway Safety, respectively. This session also aims to provide information on the latest activities in the use of carbon fiber composites in automotive structural applications; reducing cost of aluminum through new aluminum sheet manufacturing techniques and illustrate the challenges facing steel manufacturers in developing third generation steels. Overall, the objective of this session is to increase the understanding of these complex opportunities and challenges facing the industry.

Organizers - Jay Baron, Center for Automotive Research; Cheryl Caffrey, US EPA; Vinay Nagabhushana, NHTSA

Time	Paper No.	Title
2:30 p.m.	ORAL ONLY	Mass Reduction for Light-Duty Vehicles for Model Years 2017-2025 Harry Singh, EDAG Inc.
2:50 p.m.	ORAL ONLY	IIHS Small Overlap and a 2011 Light Duty Pickup Truck - Mass Evaluation Velayudham Ganesan, EDAG Inc.; Norm Meyer, Transport Canada
3:10 p.m.	ORAL ONLY	High Performance Computing Study for Composite Intensive Vehicle Design Dirk Heider, University Of Delaware
3:30 p.m.	ORAL ONLY	Emerging Alcoa Micromill Automotive Sheet Technology John Thomas, Alcoa Automotive
3:50 p.m.	ORAL ONLY	Steel: The Cost Effective Way for Lightweighting Bernhard Hoffmann, United States Steel Corporation

Wednesday, January 20**Bringing Alternative Fuels to Market****Session Code: G205****Room 146 C****Session Time: 10:30 a.m.**

A critical factor in giving consumers an option to purchase an alternative fuel will be retailers seeing the fuels as a viable option to include in their store offer. Influencing that decision will be the costs associated with installing new fueling equipment, the number of consumers who might have vehicles that can operate on the fuel and the potential customer traffic such fuels may generate. This panel will explore these issues in the Hydrogen, Natural Gas, biofuels and Electricity markets.

Organizers - Susan Burke, US Environmental Protection Agency; John Eichberger, The Fuels Institute; Mark S. Smith, US Department of Energy

Time	Paper No.	Title
10:30 a.m.	ORAL ONLY	Overcoming Barriers to Electric Vehicle Deployment Thomas Turrentine, Univ. of California-Davis
10:55 a.m.	ORAL ONLY	RIN Price Impacts on E85 Retail Prices and Sales Volumes Dallas Burkholder, US Environmental Protection Agency
11:20 a.m.	ORAL ONLY	Retailing CNG Joel Hirschboeck, Kwik Trip Inc.
11:45 a.m.	ORAL ONLY	Establishing the Commercial Hydrogen Fueling Network in California Joe Gagliano, California Fuel Cell Partnership

Wednesday, January 20

Optimization/Integration of Vehicles and Fuels

Session Code: G206

Room 146 C

Session Time: 2:30 p.m.

This session will cover the technical, policy, and regulatory challenges, benefits, and opportunities of pursuing an optimized market for fuels and vehicles to deliver the greatest value to all sectors of the market, including consumers. Using DOE's Optima initiative as a foundation for the discussion, panelists will discuss the perceived ideal conditions and specifications for each sector of the market and what flexibility might exist within those sectors to accommodate and overcome challenges in other areas of the market.

Organizers - John Eichberger, The Fuels Institute; Paul A. Machiele, US EPA; Kevin Stork, US Dept. of Energy

Time	Paper No.	Title
2:30 p.m.	ORAL ONLY	The Increasing Importance of Fuel Octane Thomas G. Leone, Ford Motor Company
2:45 p.m.	ORAL ONLY	Co-Optimizing Fuels & Engines Reuben Sarkar, US Dept. of Energy
3:00 p.m.	ORAL ONLY	From Alternatives to Alternatives. A Petroleum Refiner's Perspective on Future Fuels and Vehicles Derek Regal, Tesoro Companies Inc.
3:15 p.m.	ORAL ONLY	Introducing New Fuels - A Pipeline Perspective Bruce Heine, Magellan Midstream Partners LP
3:30 p.m.	ORAL ONLY	The Quintessential Octane Molecule Shon Van Hulzen, POET LLC
3:45 p.m.	ORAL ONLY	Bringing New Fuels to Retail John Eichberger, The Fuels Institute
4:00 p.m.	Panel	Panel Discussion with Speakers

Wednesday, January 20

Vehicle Safety by PDOF

Session Code: G105

Room 147 AB

Session Time: 10:30 a.m.

This session covers safety topics related to various crash modes and PDOFs. There is an update on NHTSA's oblique testing and research on sunroof ejections. UVA will present their recent vehicle rollover research. HATCI offers a presentation covering design methods to address small overlap crashworthiness. Takata will provide information on occupant response in side impacts obtained with GHBM models. And MCW will present a finite element study of seat loading directed upward into the spine.

Organizers - Timothy Keon, NHTSA; Ravi Tangirala, Hyundai America Technical Center

Time	Paper No.	Title
10:30 a.m.	ORAL ONLY	Update on NHTSA's Oblique Program James Saunders, NHTSA
10:50 a.m.	ORAL ONLY	Assessing Rollover Crashworthiness in Dynamic vs. Static Testing Jason R. Kerrigan, Univ. of Virginia
11:10 a.m.	ORAL ONLY	Update on NHTSA Research on Sunroof Ejection Aloke Prasad, Steve Duffy, Allison E. Loudon, NHTSA
11:30 a.m.	ORAL ONLY	IIHS Passenger-Side Small Overlap Research Rebecca Mueller, Insurance Institute for Highway Safety

11:50 a.m.	ORAL ONLY	Parametric Study for Far Side Occupant Protection using GHBMC Human Body Model <i>Maika Katagiri, Jay Zhao, Richard Wilk, TK Holdings, Inc.</i>
12:10 p.m.	ORAL ONLY	A Parametric Study on the Lower Spine Loads by Varying Structural and Geometric Properties using a Whole Body Finite Element Model <i>Mike W.J. Arun</i>

Wednesday, January 20

Protection of Occupants within Vehicle Compartment

Session Code: G106

Room 147 AB

Session Time: 2:30 p.m.

This session focuses on the occupant-centric aspects of crashworthiness, including occupant technologies. Presentations are related to occupant seating positions, human interface with seats and restraint, and seat belt interlocks.

Organizers - Peter G. Martin, NHTSA; Priya Prasad, Prasad Consulting LLC

Time	Paper No.	Title
2:30 p.m.	ORAL ONLY	Driver Head Position to Head Restraints <i>Matthew Reed, Univ. of Michigan - Ann Arbor</i>
2:50 p.m.	ORAL ONLY	Vehicle Head Restraint Design Influence on Child ATD Response during Oblique Side Impact Sled Tests <i>Hans W. Hauschild, Medical College of Wisconsin</i>
3:10 p.m.	ORAL ONLY	Variation in Rear Seat Safety by Occupant Age and Vehicle Model Year <i>Jessica Jermakian, Insurance Institute for Highway Safety</i>
3:30 p.m.	ORAL ONLY	Functional Assessment of Unattended Child Reminder Systems <i>Rodney Rudd, NHTSA</i>
3:50 p.m.	ORAL ONLY	Defeat Resistant Seat Belt Assurance (The AAM Working Group) <i>Scott A. Schmidt, Alliance of Automobile Manufacturers Inc.</i>
4:10 p.m.	ORAL ONLY	Active THUMS - Pre-Crash and In-Crash Evaluation <i>Cecilia Sunnevang, Autoliv Development AB</i>

Wednesday, January 20

Wednesday Opening Keynote

Session Code: G800

Room TBD

Session Time: 9:00 a.m.

Keynote Speakers - Mitch Bainwol, President & CEO, Alliance of Automobile Manufacturers Inc.;
Mark Dowd, Deputy Assistant Secretary for R&D, NHTSA

Time	Paper No.	Title
	ORAL ONLY	Learn More About the Speakers <i>Mitch Bainwol, Alliance of Automobile Manufacturers Inc.; Mark K. Dowd, NHTSA</i>

Thursday, January 21

Connected Vehicles

Session Code: G102

Room 145 AB

Session Time: 8:00 a.m.

This session will focus on the DOT vision for connected vehicles. The presenters will consider the potential exciting new developments and opportunities along with some of the challenges relating to privacy, security, and integration complexity (vehicle, infrastructure and people).

Organizers - Michelle Chaka, Ford Motor Company; Joshua Fikentscher, NHTSA

Time	Paper No.	Title
8:00 a.m.	ORAL ONLY	Connected Vehicle Developments in Ann Arbor John Maddox, UMTRI
8:20 a.m.	ORAL ONLY	CAMP - Connected Vehicle Security Overview Michael Shulman, Ford Motor Company
8:40 a.m.	ORAL ONLY	Protect Vulnerable Road Users Through Safety Communication Sue Bai, Honda R & D Americas Inc.
9:00 a.m.	ORAL ONLY	5.9 GHz DSRC Spectrum and Potential Band Sharing Volker Fessmann, Department Of Transportation
9:20 a.m.	ORAL ONLY	Privacy in the V2V World Dana Sade, NHTSA Office of the Chief Counsel; Claire Barrett, US DOT
9:40 a.m.	ORAL ONLY	Development of a Basic Safety Message for Heavy Truck Tractor Trailers Arik L. Svenson, NHTSA

Thursday, January 21

Safety Principles for Automated Driving

Session Code: G103

Room 145 AB

Session Time: 10:15 a.m.

Best systems design practices informed by transportation policy, standards, and research to ensure the safe operation of automated vehicles. Topics may include emerging safety-enhancing automated vehicle technologies; design methods to ensure their functional-safety; robust transition strategies for control authority between drivers and vehicles; effective driver status monitoring methods; life-cycle monitoring and maintenance of advanced control systems; advances in sensing and actuation technologies for vehicle automation; and safety performance metrics development and objective test design for automated vehicle functions. Presentations will also focus on reliability/life-cycle considerations.

Organizers - Jade Nobles, Toyota Motor North America Inc.; Paul S. Rau, NHTSA

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	Preliminary Estimates of Target Crash Populations for Concept Automated Vehicle Functions Mikio Yanagisawa, USDOT - Volpe National Transportation Systems Center
10:35 a.m.	ORAL ONLY	Functional Safety of Automated Lane Centering Controls Christopher Becker, USDOT - Volpe National Transportation Systems Center
10:55 a.m.	ORAL ONLY	Prospective Safety Performance Assessment of Assisted and Automated Driving Thomas Helmer, BMW AG
11:15 a.m.	ORAL ONLY	Toyota's Approach for Driving Automation Technologies Derek Caveney, Toyota Motor Eng. & Mfg. NA, Inc. (Toyota Technical Center)

- 11:35 a.m.** **ORAL ONLY** **First Revision of J3016 - Update on Task Force Activities**
Barbara Wendling, Volkswagen Group of America (Presenting as SAE)
- 11:55 a.m.** **ORAL ONLY** **Sensor Redundancy and Next-Gen Event Data Recorders From a Failure Analysis Perspective**
Carmine Senatore, Exponent Inc.

Thursday, January 21

Luncheon Speaker: Chris Cillizza, Washington Post

Session Code: **G600**

Room 145 AB

Session Time: **12:30 p.m.**

Keynote Speakers - *Chris Cillizza, Washington Post Company*

Time	Paper No.	Title
-------------	------------------	--------------

	ORAL ONLY	Learn More About This Keynote Speaker <i>Chris Cillizza, Washington Post Company</i>
--	------------------	--

Thursday, January 21

Plenary Session - Creating the Automotive Future in a Collaborative Environment

Session Code: **G400**

Room 145 AB

Session Time: **3:00 p.m.**

The automotive industry is entering a period of profound change, much of it driven by environmental regulations.

The U.S. government's 2025 greenhouse gas and fuel economy regulations, aggressive greenhouse gas reduction goals at the state-level and international standards are all shaping the cars we drive today, and those we will drive in the future.

What does it all mean, and where are we going?

These plenary panels will explore these important issues from numerous perspectives. What vehicle technologies will automakers use to answer today's environmental and regulatory challenges? What are the costs? Are consumers ready, willing and able to embrace the technological changes to vehicles that will be required to achieve these goals? What are the proper roles for industry, federal and state governments? Do regulations like CAFE requirements and zero-emission vehicle mandates drive change? How significant a role will automated or self-driving car technologies play during this crucial period?

Expert panelists from government and the auto industry will explore these questions, and more. Bring your questions, and plan to attend these timely panel discussions.

Moderators - *Ryan Beene, Reporter, Automotive News*

Panelists - *David Friedman, Principal Deputy Assistant Secretary of the Office of Energy Efficiency and Renewable Energy (EERE), US Dept. of Energy; John Murphy, Managing Director & Lead US Auto Analyst in Equity Research, Merrill Lynch; Mary Beth Stanek, Director, Vehicle Technologies and Government Relations, General Motors LLC; Roland Hwang, Transportation Director & Policy Analyst, Natural Resources Defense Council; Tom Stricker, Vice President, Technical & Regulatory Affairs, Toyota Motor North America Inc.;*

Time	Paper No.	Title
-------------	------------------	--------------

	ORAL ONLY	Learn More About the Speakers <i>Ryan Beene, Automotive News; John Murphy, Merrill Lynch; Roland Hwang, Natural Resources Defense Council; Tom Stricker, Toyota Motor North America Inc.; David Friedman, US Dept. of Energy; Mary Stanek, General Motors LLC</i>
--	------------------	---

Thursday, January 21

Plenary Session - What do Government Agencies Think? - The Role of Government and Industry in the Future of Mobility

Session Code: G401

Room 145 AB

Session Time: 4:00 p.m.

The automotive industry is entering a period of profound change, much of it driven by environmental regulations.

The U.S. government's 2025 greenhouse gas and fuel economy regulations, aggressive greenhouse gas reduction goals at the state-level and international standards are all shaping the cars we drive today, and those we will drive in the future.

What does it all mean, and where are we going?

These plenary panels will explore these important issues from numerous perspectives. What vehicle technologies will automakers use to answer today's environmental and regulatory challenges? What are the costs? Are consumers ready, willing and able to embrace the technological changes to vehicles that will be required to achieve these goals? What are the proper roles for industry, federal and state governments? Do regulations like CAFE requirements and zero-emission vehicle mandates drive change? How significant a role will automated or self-driving car technologies play during this crucial period?

Expert panelists from government and the auto industry will explore these questions, and more. Bring your questions, and plan to attend these timely panel discussions.

Moderators - Ryan Beene, Reporter, Automotive News

Panelists - Blair Anderson, Deputy Administrator, NHTSA; Christopher Grundler, Director Office of Transportation & Air Quality, U.S. Environmental Protection Agency; Fei Meng, Program Manager, China Center for Energy & Transportation, Univ. of California-Davis; Matt Solomon, Transportation Program Manager, NESCAUM; Analisa R. Bevan, Assistant Division Chief, Emissions Compliance, Auto Regs & Science Division, California Air Resources Board;

Time	Paper No.	Title
	ORAL ONLY	Learn More About the Speakers Ryan Beene, Automotive News; Christopher Grundler, US Environmental Protection Agency; Matt Solomon, NESCAUM; Fei Meng, Univ. of California-Davis; Blair Anderson, NHTSA; Analisa R. Bevan, California Air Resources Board

Thursday, January 21

Safety of Alternative Fuels

Session Code: G112

Room 146 A

Session Time: 8:00 a.m.

Topics may include: EV battery design for safety; hydrogen GTR and cylinder tests, computational models, tests run at Sandia.

Organizers - Matthew Forman, FCA US LLC; David Sutula, NHTSA

Time	Paper No.	Title
8:00 a.m.	ORAL ONLY	GTR developments for EV safety Scott A. Schmidt, Alliance of Automobile Manufacturers Inc.
8:20 a.m.	ORAL ONLY	Safety Testing Requirements for CNG Tanks Daniel Bowerson, NGV America
8:40 a.m.	ORAL ONLY	DOE Research on Technologies Relating to Electric Vehicle Safety Lee Slezak, US Dept. of Energy
9:00 a.m.	ORAL ONLY	Overview of DOE Hydrogen and Fuel Cell, C&S Office activities Will James, US Dept. of Energy

Thursday, January 21

Commercial Vehicle Safety

Session Code: G113

Room 146 A

Session Time: 10:15 a.m.

Innovative advanced vehicle safety systems are developing at such a rapid pace it is challenging for policy makers to keep up. Burgeoning technologies that enable complex automated driver assistance systems and autonomous applications are important developments for commercial trucks, buses and motorcoaches. There are also many new and exciting safety technologies for improving heavy vehicle crashworthiness and occupant protection. These technologies are changing the movement of freight and people and also are improving safety by reducing crashes and saving lives. This session will review several of these new technologies and related impacts of government policies and research that will impact the commercial vehicle industry.

Organizers - Leigh S. Merino, Motor & Equipment Mfrs Association; George Reagle, George L Reagle&Assoc.; Alrik L. Svenson, NHTSA

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	The Future of Autonomous Trucks Sean Waters, Daimler Trucks North America LLC; Derek Rotz, Daimler
10:35 a.m.	ORAL ONLY	Can and Will Technology Eliminate Truck and Bus Crashes? Stephen Evans, Pacific Western Group of Companies
10:55 a.m.	ORAL ONLY	Heavy Truck Crash Analysis and Countermeasures to Improve Occupant Safety John Woodrooffe, Univ. of Michigan-Ann Arbor
11:15 a.m.	ORAL ONLY	VTTI Naturalistic Study of Commercial Vehicle Drivers Alrik L. Svenson, NHTSA
11:35 a.m.	ORAL ONLY	Overview of IIHS Crash Test Program and Trailer Manufacturers Improvements to Underride Protection Sean P. O'Malley, IIHS Vehicle Research Center

Thursday, January 21

Future of Mobility for Light Duty Vehicles (Part 1)

Session Code: G202

Room 146 B

Session Time: 8:00 a.m.

A quiet revolution is unfolding under the hoods of conventional passenger cars and light trucks, with a host of innovative technologies aiming to boost fuel economy and reduce vehicle greenhouse gas (GHG) emissions. The Midterm Evaluation of model year 2022-2025 CAFE and GHG standards is prompting renewed looks by both regulatory agencies and industry at the costs, effectiveness, and consumer acceptance of these technologies. Similarly, important third-party assessments are being conducted by groups such as the National Academy of Sciences (NAS). This session examines the state of light duty vehicle technologies expected to play a role in the standards through 2025. Government and industry leaders will discuss opportunities and challenges facing the light duty sector, along with the latest research informing the agencies' Midterm Evaluation process.

Organizers - Kevin Bolon, US Environmental Protection Agency; James Kliesch, American Honda Motor Co. Inc.

Time	Paper No.	Title
8:00 a.m.	ORAL ONLY	NHTSA Research to Inform the Midterm Review James David MacIsaac, NHTSA
8:20 a.m.	ORAL ONLY	What does the NRC Report Say about the 2025 CAFE and GHG Standards? David Greene, University of Tennessee-Knoxville
8:40 a.m.	ORAL ONLY	Automotive Strategies for Driving Toward 2025 Nancy L. Homeister, Ford Motor Company

- 9:00 a.m.** **ORAL ONLY** **ALPHA Effectiveness Modeling of Current and Future LD Powertrain Technologies**
Daniel Barba, US Environmental Protection Agency
- 9:20 a.m.** **ORAL ONLY** **Powertrain Effectiveness, Which Technologies are Delivering Their Promise?**
Gregory Pannone, Novation Analytics

Thursday, January 21

Future of Mobility for Light Duty Vehicles (Part 2)

Session Code: **G203**

Room 146 B

Session Time: **10:15 a.m.**

Electric drive vehicles will have a key role and impact on achieving real-world carbon and petroleum reductions. This session will cover many of the key issues around the widespread introduction of these vehicles, including governments' and manufacturers' respective roles in creating and fostering an expanding electric automotive market. Leading experts will discuss the electric drive technologies, vehicle market, advanced technology regulations, consumer marketing efforts, ways to incentivize progress by aligning regulatory structures with societal goals, and what this all means for electric drive technology and powertrain design moving forward.

Organizers - *Robert Graham, US Dept. of Energy; Robin Moran, US Environmental Protection Agency; Julia Rege, Association of Global Automakers Inc.*

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	Multi-State ZEV Action Plan <i>Kathy Kinsey, NESCAUM</i>
10:35 a.m.	ORAL ONLY	PEV Market Penetration - What will it Take? <i>John Tillman, Mercedes Benz R&D North America</i>
10:55 a.m.	ORAL ONLY	Significant Current and Future Achievements in US Battery Technology <i>David Howell, U.S. Department of Energy</i>
11:15 a.m.	ORAL ONLY	Fuel Cell Electric Vehicles - The Future on Sale Today <i>Robert R. Wimmer, Toyota Motor North America Inc.</i>
11:35 a.m.	ORAL ONLY	Role of Utilities and NRDC/EPRI Report on Climate/Health Benefits of Electrifying Transportation <i>Luke Tonachel, Natural Resources Defense Council</i>
11:55 a.m.	Panel	Q&A with Presenters

Thursday, January 21

Heavy and Medium Duty Fuel Efficiency and GHG Standards: Technologies and Policies

Session Code: **G207**

Room 146 C

Session Time: **8:00 a.m.**

This session will include an opportunity to hear the views from a range of stakeholders on the types of technologies and policy options which can improve fuel efficiency and reduce GHG emissions from the heavy and medium duty transportation sector. This will include discussion on Phase 2 regulations, views from manufacturers (OEMs and suppliers), users, and other stakeholders on various other topics that may include, a look at HDT efficiency beyond just the truck/engine- but in how/where the truck operates, CAFE compliance, emissions tampering, speed limiting mandates, etc.

Organizers - *Allen Schaeffer, Diesel Technology Forum; Houshun Zhang, U.S. EPA*

Time	Paper No.	Title
-------------	------------------	--------------

8:00 a.m.	ORAL ONLY	Update on the Phase 2 Medium and Heavy Duty Greenhouse Gas Truck Rule; US EPA/US DOT Perspective <i>Matthew W. Spears, US EPA; Coralie Cooper, US DOT</i>
8:12 a.m.	ORAL ONLY	Engine Manufacturer's Perspective on Achieving Greater Fuel Efficiency <i>Jacqueline Yeager, Cummins Inc.</i>
8:20 a.m.	ORAL ONLY	Truck Manufacturer Perspective on Achieving Greater Fuel Efficiency <i>Daniel Kieffer, PACCAR Inc.</i>
8:28 a.m.	ORAL ONLY	Research on Available Tractor-Trailer Efficiency Technologies <i>Nic Lutsey, International Council on Clean Transport</i>
8:36 a.m.	ORAL ONLY	SuperTruck in a Regulatory Environment: Where Does it Fit? <i>Roland M. Gravel, US Dept. of Energy</i>
8:44 a.m.	ORAL ONLY	California Perspective and Phase 2 Medium and Heavy Duty Greenhouse Gas Truck Rule <i>Analisa R. Bevan, California Air Resources Board</i>
8:52 a.m.	Panel	Open Panel Discussion with all Speakers

Thursday, January 21

TSCA Regulatory Impacts on the Automotive Industry

Session Code: G208

Room 146 C

Session Time: 10:15 a.m.

With evolving federal TSCA reform legislation, the automotive industry is now faced with potential changes in how EPA will regulate new and existing materials, chemicals and substances, in a time when vehicles are likewise evolving to meet aggressive emissions standards, self-driving vehicle safety requirements, and consumer demands. This session will examine how the federal government is expanding its role in regulating the materials used in current and future vehicles, and how article manufacturers, like automakers, are affected by TSCA reform. Attendance to this session is essential for those needing to understand how TSCA reform and EPA initiatives may impact import/export requirements, significant new use rule (SNUR) requirements, ongoing use requirements, and the supply chain. This session will provide the tools to continue to successfully produce and sell compliant vehicles for the US market.

Organizers - *Pratima Gangopadhyay, Association of Global Automakers Inc.; Daniel J. Selke, Mercedes-Benz USA LLC; Stacy Tatman, Alliance of Automobile Manufacturers Inc.*

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	Update on TSCA Legislation - Senate and House E&C Committee Representatives <i>David McCarthy, Jerry Couri, US House of Representatives; Dimitri Karakitsos, Senate Committee on Environment & Public; Jonathan Black, Senate EPW Committee</i>
10:45 a.m.	ORAL ONLY	TSCA's Impact on the Automotive Industry <i>Lynn L. Bergeson, Bergeson & Campbell PC</i>
11:15 a.m.	ORAL ONLY	TSCA Enforcement Issues <i>Mark Garvey, US Environmental Protection Agency</i>
11:45 a.m.	ORAL ONLY	TSCA's Impact on Articles and Import/Export <i>Jennifer Thomas, Alliance of Automobile Manufacturers Inc.</i>

Thursday, January 21

Biomechanics

Session Code: G107

8:00 a.m.

Room 147 AB

Session Time:

This session contains a variety of biomechanics-related topics, including updates on advanced crash test dummies, human body modeling, injury assessments, and injury prediction.

Organizers - Ellen Lee, NHTSA; Schuyler St. Lawrence, Toyota Motor North America Inc.

Time	Paper No.	Title
8:00 a.m.	ORAL ONLY	Investigation of Repeatability and Reproducibility in Responses from Upper Thorax Central Impacts in THOR Dummies Hiroyuki Mae, Honda R&D Co., Ltd.
8:20 a.m.	ORAL ONLY	Status of NHTSA's THOR 5th female ATD Ellen Lee, NHTSA
8:40 a.m.	ORAL ONLY	Status of GHBMC Phase II Developments John J. Combest, Nissan Technical Center NA
9:00 a.m.	ORAL ONLY	Rear Impact Head and Neck Kinematics of BioRID II and PMHS in Production Seats Yun-Seok Kang, Ohio State University
9:20 a.m.	ORAL ONLY	Development and Validation of the THUMS Version 5 for Estimating Occupant Responses with Muscle Activation during Frontal and Side Impacts Hideyuki Kimpara, Toyota Central R&D Labs Inc.
9:40 a.m.	ORAL ONLY	Injury Risk Sensitivity in Frontal Crashes Reconstructed with Simplified Vehicle and Human Body Finite Element Models Ashley Anne Weaver, Wake Forest Univ. School of Medicine

Thursday, January 21

Vulnerable Population

Session Code: G108

Room 147 AB

Session Time: 10:15 a.m.

Includes: children, pedestrians, rear seat occupants, motorcyclists, bicyclists.

Organizers - Jason Stammen, NHTSA; Jeffrey A. Upchurch, General Motors

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	Development of Fit Envelopes to Promote Compatibility Among Vehicles and Child Restraints Kathleen DeSantis Klinich, Univ. of Michigan - Ann Arbor
10:35 a.m.	ORAL ONLY	Head Position During Naturalistic Riding for Children in Cars Kristy B. Arbogast, Children's Hospital of Philadelphia
10:55 a.m.	ORAL ONLY	Q Dummy Update Program 2015 - 2018 Paul Lemmen, Humanetics Innovative Solutions Inc.
11:15 a.m.	ORAL ONLY	Development of the Large Omni-directional Child (LODC) ATD Jason Stammen, NHTSA
11:35 a.m.	ORAL ONLY	Vehicle-Based Detection of Unattended children & Novel Sensing and Testing Concepts Peter Larsen, IEE S.A.

11:55 a.m. **ORAL ONLY** **CRS Ease of Use & SAE Tool Sensitivity Study for Attachment Force and Clearance Angle Measurements**
David Gotwals, Hyundai-Kia America Technical Center Inc.

Friday, January 22

Friday Opening Keynote - Consumer Acceptance of Advanced Safety and Fuel Saving Technologies

Session Code: G700

Room 145 AB

Session Time: 9:00 a.m.

Keynote Speakers - *Jake Fisher, Consumer Reports*

Time	Paper No.	Title
-------------	------------------	--------------

	ORAL ONLY	Learn More About the Speaker
--	------------------	-------------------------------------

Jake Fisher of Consumer Reports addresses consumer perception of new and emerging technologies intended to increase safety and fuel efficiency and some of their unintended side-effects.

Jake Fisher, Consumer Reports

Friday, January 22

Driver Monitoring and HMI for Crash Avoidance and Automation

Session Code: G104

Room 145 AB

Session Time: 10:15 a.m.

The session will address the latest advances in driver monitoring and HMI engineering, designed to ensure the optimal operation of crash avoidance technologies and automated systems. The presentations will discuss human factors principles, evaluation methods, & technologies that are emerging relative to the transition between automated and non-automated vehicle operation. Topics may include monitoring technology, driver behavior & engagement patterns, fatigue, distraction and other impairments.

Organizers - *Ritchie Huang, NHTSA; Ana M. Meuwissen, Robert Bosch LLC*

Time	Paper No.	Title
-------------	------------------	--------------

10:15 a.m.	ORAL ONLY	Development Nightvision and Driving Monitoring
------------	------------------	---

Joerg Schlinkheider, Audi of America Inc.

10:35 a.m.	ORAL ONLY	Human Factors Evaluation of Level 2 and Level 3 Automated Driving Concepts
------------	------------------	---

Myra Blanco, Virginia Tech. Transportation Institute

10:55 a.m.	ORAL ONLY	Driver Monitoring Performance Testing and Validation
------------	------------------	---

Gerald J. Witt, Delphi Corp.

11:15 a.m.	ORAL ONLY	Creating Temmates of Automation and Driver
------------	------------------	---

James Foley, Toyota Technical Center USA Inc.

Friday, January 22

State Green Chemistry Topics for the Automotive Industry

Session Code: G210

Room 146 A

Session Time: 10:15 a.m.

Designing sustainable, compliant vehicles is becoming more challenging as vehicle manufacturers use new materials, while still complying with a patchwork of requirements in different states. With recent state initiatives focusing on green chemistry, copper in brake pads, and Prop65 warning labels, this session will examine these state requirements that will change how article manufacturers, like automakers, must design compliant products. In particular, it will focus on opportunities to explore solutions unique to the automotive industry.

Organizers - Laurie Holmes, Motor & Equipment Mfrs Association; Daniel J. Selke, Mercedes-Benz USA LLC; Nakia Simon, FCA US LLC

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	Impact of Overall Green Chemistry Laws, a Government Perspective Maureen F. Gorsen, Alston & Bird LLP
10:45 a.m.	ORAL ONLY	CA Copper and Brake Pads MOU Terry L. Heffelfinger, Brake Parts Inc.
11:15 a.m.	ORAL ONLY	CA Brake Friction Material Proposed Rule Evelia Rodriguez, Dept of Toxic Substance
11:45 a.m.	ORAL ONLY	How State Restrictions IMPact Supply Chain Communications Mark Duvall, Beveridge & Diamond PC

Friday, January 22

Panel Discussion: Layer Cake -- Navigating Compliance and Resource Planning Amidst Multiple Regulatory Programs

Session Code: G204

Room 146 B

Session Time: 10:15 a.m.

At the federal and state level, a mix of policies and regulations were developed with the objective of improving the environmental performance of the fleet. This moderated panel will explore the effects, interactions, and unintended consequences of the mix of existing and proposed regulations and policies including CAFE, ZEV, LCFS, and various GHG regulations. A panel of technology and policy experts will discuss technical and socio-economic merits and potential drawbacks, and the effect that they have on vehicle design, technology mix, and evolution of the automotive fleet.

Organizers - William P. Chernicoff, Toyota Motor North America Inc.; Kenneth R. Katz, NHTSA

Moderators - David Hobbs, KAPSARC

Panelists - Analisa R. Bevan, California Air Resources Board; Ryan Keefe, Volpe Natl Transportation Systems Center; Julia Rege, Association of Global Automakers Inc.; Tom Stricker, Toyota Motor North America Inc.;

Friday, January 22

Tires

Session Code: G209

Room 146 C

Session Time: 10:15 a.m.

This session will cover tire improvements on LD and HD vehicles. Topics may include: Fuel economy improvements in reduced rolling resistance from new rubber formulations, reduced air losses with barrier coatings, air maintenance tire technologies, industries' experience with these technologies and NHTSA and EPA's tire testing programs.

Organizers - David Anderson, Department of Energy; L. Joseph Bachman, U.S. EPA

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	USEPA Low Rolling Resistance Tire Testing Activities Anthony Erb, EPA
10:35 a.m.	ORAL ONLY	Tire Rolling Resistance - Laboratory Testing, Alignment, and Ratings Madhura P.N. Rajapakshe, Smithers Rapra Inc.

10:55 a.m.	ORAL ONLY	Advanced Bus and Truck Radial Materials for Fuel Efficiency <i>Lucas Dos Santos Freire, PPG Industries</i>
11:15 a.m.	ORAL ONLY	Truck Tires - Their Role in Transportation Efficiency and Safety <i>Asa C. Sharp, Industry Consultant</i>

Friday, January 22

Inflatable Restraints

Session Code: G109

Room 147 AB

Session Time: 10:15 a.m.

The presentations in this session will address updates on new applications and design challenges for advanced air bags. Challenges include consideration of the diverse population, child restraint systems and new crash modes. Included are protection for rear occupants with inflatable rear seat belts.

Organizers - Robert Pheiffer, InterRegs, Ltd.; Alope Prasad, NHTSA

Time	Paper No.	Title
10:15 a.m.	ORAL ONLY	Rear-seat Occupant Protection: Considering the Needs from a Diverse Population <i>Jingwen Hu, Univ. of Michigan - Ann Arbor; Kurt Fischer, ZF TRW Vehicle Safety Systems Inc.; Paul M. Lange, ZF TRW Occupant Safety Systems Inc.; Angelo J. Adler, ZF TRW Automotive US LLC</i>
10:35 a.m.	ORAL ONLY	Evaluation of Sunroof Ejection Field Data and Proposed Inflatable Roof Airbag for Ejection <i>Mutaz Shkoukani, Key Safety Systems Inc.</i>
10:55 a.m.	ORAL ONLY	Children and Small Occupants - Interaction with Inflatable Seat Belts <i>Srinivasan Sundararajan, Ford Motor Company</i>
11:15 a.m.	ORAL ONLY	Side Airbag Interaction with Children Seated in the Vehicle Environment <i>Aditya Belwadi, Children's Hospital of Philadelphia</i>
11:35 a.m.	ORAL ONLY	Passenger Airbag Design with Passive Adaptive Venting based on Occupant Profile with Single Stage Inflation <i>Marina Elias, Mohamed Eghfaier, Bruce Kalandek, Key Safety Systems Inc.</i>
11:55 a.m.	ORAL ONLY	Advanced Adaptive Restraints Program: Individualization of Occupant Safety Systems with a Focus on Oblique Impact <i>Bernd Cyliax, Takata Corp.</i>