ACHIEVING AUTOMATION, FUNCTIONAL SAFETY, AND FLEET EFFICIENCY

FEATURED SPEAKERS:

INDUSTRY INFLUENCER

JONAS LANDSTRÖM
Investment Director and Head of Americas
Volvo Group Venture Capital

PLATOONING EXPERT

CHUCK PRICE
Vice President of Cloud Engineering
Peloton Technology

OEM ADVANCEMENTS

BRENDAN CHAN
Senior Team Lead – CAE Multibody Dynamics
Navistar

TECHNOLOGY VISIONARY

CLAUS BEYER
Vice President and General Manager Controls
Bendix

AUTONOMY LEADER

BILL KAHN
Principal Engineer
Peterbilt Motors

ACTIVE SAFETY GROUNDBREAKER

ALAN KORN
Director - Vehicle Dynamics and Control
Meritor Wabco

ADVANCING TECHNOLOGY IN AUTOMATED COMMERCIAL DRIVING INITIATIVES

- Learn what strides top manufacturers have made toward development of the fully autonomous commercial vehicle
- Address core challenges that are hindering your development efforts head on and benchmark with not only top commercial vehicle OEM’s but lead engineers from other industries utilizing autonomy
- Interface directly with the minds behind the success of the most significant self driving projects
- Improve the range and clarity of your sensors to keep car and driver constantly informed
- Incorporate the most cutting edge user utility and multitasking applications to maximize driver efficiency and realize cost savings
- Ensure that your vehicles receive a clear signal even in environments with heavy interference
- Prepare for the inclusion of ISO 26262 in autonomous vehicles
- Harness the newest techniques in V2V, V2P, and V2I techniques to keep your vehicles moving efficiently and accident free
- Utilize improvements in radar, lidar, and sonar to keep driver and car alike constantly aware of their surroundings
- Implement the newest strategies to solve both technical and regulatory challenges
- Ensure that your vehicles receive a clear signal even in environments with heavy interference
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2015 Sponsors of IQPC’s Autonomous Technology Series:

WWW.AUTONOMOUSTRUCKSEVENT.COM • Carrie.Simon@iqpc.com • 1-800-882-8684
Dear Colleague:

We are excited to bring you our Autonomous Trucks 2015, the first event of its kind fully dedicated to the pursuit of the autonomous commercial vehicle, taking place November 11th-13th, 2015 in Detroit, MI.

There is no question that we are approaching a new era of trucking where the role of the driver is changing to allow for more and higher value work to get done while the fleet spends less and continues to hold functional safety in the highest regard. Commercial Vehicle OEMs that do not innovate to meet the requirements of this changing landscape will surely be working at a disadvantage moving forward.

With this working as the catalyst, 2015 has been a year of big wins, breakthroughs, and exciting new projects. The trucking industry is working tirelessly to innovate and to create new capabilities in driver safety, cost management, and fleet efficiency. Legal hurdles such as licensed autonomous commercial vehicles have displayed progress while technical improvements in areas such as platooning have shown significant gains.

The optimism and dynamic nature of this market is impossible to ignore. However, any OEM, Supplier, or Thought Leader can tell you that the pursuit is far from defined and certainly not straight forward. Enabling technologies necessary for autonomy are still rife with challenges and there certainly is no “one size fits all” approach.

As a result, this conference is designed to help you overcome your biggest challenges while incorporating the latest solutions.

You’ll find:

- The most up-to-date best practices in functional safety including the implementation of ISO 26262 in the heavy duty vehicle market
- Insights into the most cutting edge techniques being used by colleagues and competitors
- Collaborative opportunities to further your autonomous initiatives
- Best practices in cyber security as you develop autonomous capabilities
- Products and services you’ll need to implement the newest ideas

Our program is designed for automotive professionals in engineering, research and development, safety, electronics, cyber security, sensors, optics, intelligent braking, steering, programming, infotainment, and navigation among others. This summit will stretch your thinking, provide collaborative benchmarking opportunities, and leave you with practical tools and ideas for action. After attending, we hope you will go back with a plan that will allow you to enhance, upgrade, and develop your initiatives in autonomy.

Sincerely,

Trevor Sosvielle
Program Director

P.S. Don’t miss our industry benchmarking sessions to capitalize on the autonomy mastered in related verticals!

2015 AUTONOMOUS TRUCKING DEVELOPMENTS INCLUDE:

- Freightliner unveiled the inspiration semi-autonomous truck at Hoover Dam this May
- Recent studies have shown that any vehicle with an IP address is vulnerable to an “in motion” hack
- Nevada became the first state this year to allow licensing of self-driving commercial vehicles
- Volvo has unveiled a predictive pedestrian tracking system that will be ready for market in five to ten years
- Volvo Group Venture Capital, a subsidiary of the Volvo Group, announced an investment in Peloton Technology, which is developing a truck platooning system
- Komatsu and Caterpillar have developed systems that facilitate fully autonomous mining sites
- The American Trucking Association claims that there’s a current shortage of between 35,000 and 40,000 truck drivers nationwide.
- This June Suncor Energy Inc. confirmed that it has entered a 5-year agreement with a Japanese manufacturer of autonomous vehicles
achieving that balance hasn’t wavered. With the comfort and safety needs of the driver. Our commitment to was to build trucks that met the rigorous demands of the job in balance.

Volvo built its first truck in 1928 to serve a growing transport industry. At

Each new or used purchase is supported by a strong dealer network and

link lets the rear driver see the road ahead of the platoon. The more extensive

economy savings for both the trailing and the leading truck. A real-time video

reduction in aerodynamic drag in these platoons provides unprecedented fuel

The system controls braking and acceleration, similar to adaptive cruise control,

They currently have four system operations underway in the three engineering

and enhanced convenience utilizing the latest achievements in information

The key to advancing automobile-related technologies is

electromechanical and electronics engineering. Hitachi Automotive Systems is

and drivers remain fully engaged and retain steering control. The dramatic

While the truck industry is steadfastly making it’s way toward the fully autonomous commercial vehicle it is not the only industry that has identified this as a ground breaking technology to pursue. Exclusive to Autonomous Trucks 2015 we’re bringing autonomy professionals from sister industries to discuss the specific success they’ve had in their goals and how the truck industry can learn from and incorporate this progress.

Navistar

Navistar is a leading manufacturer of commercial trucks, buses, defense vehicles and engines. Wherever ingenuity drives global markets, you’ll find us taking the lead. Their subsidiaries and affiliates produce International® brand commercial and military trucks, MaxxForce® brand diesel engines, and IC Bus™ brand school and commercial buses. The company also provides truck and diesel engine service parts and financing services. Navistar has four operating segments: North America Truck, North America Parts, Global Operations and Financial Services.

Hitachi

For the next generation of automobiles, significant advances in technology are required to achieve near-zero emissions and ultra-low fuel consumption for global environment preservation; improve preventive safety through measures such as hazard and collision avoidance; and enhance convenience utilizing the latest achievements in information technology. The key to advancing automobile-related technologies is, electromechanical and electronics engineering. Hitachi Automotive Systems is now focusing its broad range of technological strength and rich expertise in total design and production, which the Hitachi Group has fostered as a general electrical and electronic manufacturer in the R&D of auto-related technologies. They currently have four system operations underway in the three engineering fields of “environment”, “safety” and “information”.

Volvo

Volvo Trucks is one of the leading heavy truck and engine manufacturers in the world. Today, Volvo Trucks manufactures a broad line of on-highway and vocational Class 8 vehicles. Each new or used purchase is supported by a strong dealer network and by industry-leading parts and service programs to smooth your ride on the road to success.

Volvo built its first truck in 1928 to serve a growing transport industry. At the time, roads were roughly carved out of the countryside. The challenge was to build trucks that met the rigorous demands of the job in balance with the comfort and safety needs of the driver. Our commitment to achieving that balance hasn’t wavered.

Peloton

Peloton is an automated vehicle technology company that utilizes vehicle-to-vehicle communications and radar-based active braking systems, combined with sophisticated vehicle control algorithms, to link pairs of heavy trucks. The safety systems are always active, and when the trucks are out on the open road, they can form close-formation platoons. The system controls braking and acceleration, similar to adaptive cruise control, and drivers remain fully engaged and retain steering control. The dramatic reduction in aerodynamic drag in these platoons provides unprecedented fuel economy savings for both the trailing and the leading truck. A real-time video link lets the rear driver see the road ahead of the platoon. The more extensive data flowing from the trucks also allows new levels of diagnostics and prognostics, while empowering better drivers and stronger fleet management.

Peterbilt Motors Company

Peterbilt Motors Company, founded in 1939, is an American manufacturer of medium- and heavy-duty Class 5 through Class 8 trucks headquartered in Denton, Texas. Peterbilt operates manufacturing facilities in Denton, Texas (1980), and Sainte-Thérèse, Quebec. From the early 1960s until the mid-1980s, the company was based in the San Francisco Bay Area of Northern California, with its headquarters, and main plant all in Newark, California.

Meritor WABCO

Meritor WABCO is dedicated to the delivery of advanced safety technology and efficient, integrated brake systems. Since 1990, this North American joint venture has focused on the development and delivery of proven, integrated safety technology and efficiency components, including braking systems and controls, active safety systems, and suspension and control systems for commercial vehicles in North America. Two leading global suppliers back Meritor WABCO, each with more than 100-year legacies. Meritor, Inc., a supplier of drivetrain, mobility, braking and aftermarket solutions for commercial vehicles and industrial markets, provides the JV with the industry’s most extensive service and support network. WABCO Automotive Control Systems, Inc., a wholly owned subsidiary of WABCO Holdings, Inc. provides breakthrough technologies and control systems for the safety and efficiency of commercial vehicles.

Bendix

For over 80 years, Bendix has been setting the industry safety standard for commercial vehicle air brake charging and control systems. Now they are applying that leadership and momentum to advanced safety technologies. Bendix is a member of the Knorr-Bremse Group, the global leader in braking technologies. Their 2,000+ dedicated Bendix employees throughout North America are driven to deliver powerful, effective solutions for improved vehicle performance, safety, and overall operating cost through the absolute highest levels of technology, service and product reliability.

Autonomous Industry Landscape

While the truck industry is steadfastly making it’s way toward the fully autonomous commercial vehicle it is not the only industry that has identified this as a ground breaking technology to pursue. Exclusive to Autonomous Trucks 2015 we’re bringing autonomy professionals from sister industries to discuss the specific success they’ve had in their goals and how the truck industry can learn from and incorporate this progress.
### Workshop Day

**November 11th, 2015**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>08:00</td>
<td>Registration</td>
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<tr>
<td>08:45</td>
<td><strong>Chairperson Welcome and Opening Remarks</strong></td>
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<td><strong>Sam Kherat</strong>&lt;br&gt;Autonomy Leader&lt;br&gt;Bradley University</td>
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<tr>
<td>09:00</td>
<td><strong>WORKSHOP A: Establishing National Licensing Standards for the Autonomous Commercial Vehicle</strong>&lt;br&gt;Michigan has seen enormous success recently by facilitating safe road testing of the autonomous vehicle. This forward thinking has allowed the foresight to identify a need for national licensing standard to avoid significant potential consequences.&lt;br&gt;This session will explore:&lt;br&gt;- A frame work for what potential national autonomous regulations committee or board could look like and how it would function&lt;br&gt;- Potential drawbacks to consumers, operators, OEMs, law enforcement, and insurers if regulations don’t match&lt;br&gt;- Understanding the necessity to achieve community buy in from all affected groups&lt;br&gt;- Highlights of major issues that need to be addressed in a national frame work&lt;br&gt;<strong>Jude Hurin</strong>&lt;br&gt;Senior DMV Services Manager&lt;br&gt;Nevada DMV</td>
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<tr>
<td>10:30</td>
<td>Morning Networking &amp; Refreshment Break</td>
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<td>10:45</td>
<td><strong>WORKSHOP B</strong>&lt;br&gt;This session presented by Steve Underwood and UMI will explore the collaboration being conducted to set up a truck platooning system with leader-follower capabilities that will be tested in June on I-69 in Michigan. Here we will discuss UMI’s current priorities in autonomous truck operation and development.&lt;br&gt;<strong>Steve Underwood</strong>&lt;br&gt;Director, Connected Vehicle Proving Center&lt;br&gt;University of Michigan - Dearborn</td>
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<td>12:15</td>
<td>Lunch</td>
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<td>1:15</td>
<td><strong>WORKSHOP C: Understanding Driver Distraction and Safety Challenges of HMI Systems</strong>&lt;br&gt;As autonomous trucks become more and more adopted as the primary choice for commercial transportation, increasing driver task efficiency will become more of a priority. As the future of trucks means more administrative work for drivers and more relaxed down time we have to ensure the safety remains the top priority.&lt;br&gt;This session will explore:&lt;br&gt;- Developing driver warning systems that can pull driver attention away from non-critical tasks&lt;br&gt;- Establishing alert priority to know how best to inform a driver and how to grab a drivers attention immediately&lt;br&gt;- Ensuring non-critical driver alerts do not distract from primary driving functions&lt;br&gt;<strong>Richard Wallace</strong>&lt;br&gt;Director&lt;br&gt;Center for Automotive Research</td>
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<tr>
<td>2:30</td>
<td>Afternoon Refreshment Break and Site Tour Registration</td>
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<td>2:45</td>
<td>End of Workshop Day</td>
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MCITY SITE TOUR

November 11th, 2015

2:45  MCity Site Tour Registration & Board Bus

3:00  Site Tour Departure

3:30  MCITY SITE TOUR: Next Generation Testing for the Autonomous Vehicle

Testing new technologies in a realistic off-roadway environment is an essential step before a significant number of highly automated vehicles can be deployed safely on actual roadways. Working with the Michigan Department of Transportation, U-M researchers have designed Mcity, a unique test facility for evaluating the capabilities of connected and automated vehicles and systems. Occupying 32 acres at the University’s North Campus Research Complex, Mcity simulates the broad range of complexities vehicles encounter in urban and suburban environments. It includes approximately five lane-miles of roads with intersections, traffic signs and signals, sidewalks, benches, simulated buildings, street lights, and obstacles such as construction barriers.

Roadway Attributes:
• 1000’ North/South straight
• Various road surfaces (concrete, asphalt, brick, dirt)
• Variety of curve radii, ramps
• Two, three, and four-lane roads
• Round-about and “tunnels”
• Sculpted dirt and grassy areas

Roadside Attributes:
• Variety of signage and traffic control devices
• Fixed, variable street lighting
• Cross walks, lane delineators, curb cuts, bike lanes, grade crossings
• Hydrants, sidewalks, etc.
• “Buildings” (fixed and movable)

By attending this exclusive tour and demonstration, automated driving stakeholders will learn how to:
• Utilize MCity for testing and validation of cutting edge autonomous technology
• Identify fracture points in your research and development
• Create realistic driving environments to meet safety requirements
• Develop “proof of concept” for the most forward thinking capabilities not yet available

Peter Sweatman
Director of the Mobility Transformation Center
University of Michigan

5:15  End of Site Tour

5:45  Arrive Back to Venue
08:00  Registration & Coffee

08:45  Chairperson’s Welcome and Opening Remarks

Sam Kherat
Autonomy Expert

09:00  KEYNOTE: The Future Fleet: Volvo Insights

Start-ups and Technology companies are playing an increasing role in changing the future of Transportation. Companies like Tesla Motors, Google and Uber are putting significant resources into autonomous vehicle technology with the typical disruptive Silicon Valley approach. New Start-ups funded by significant amounts of Venture Capital are also increasing their attention to the sector. Finding ways for existing companies in the market to collaborate with fast moving new entrants could be key for future competitiveness. Jonas Landström runs Volvo Group’s US Venture Capital arm and will talk about these trends and how Volvo Group are working with Start-ups to extend their internal capabilities.

Jonas Landström
Investment Director and Head of Americas
Volvo Group Venture Capital

09:45  Improving Performance and Compatibility in Evolving Safety Control

As the push for autonomous truck operation becomes closer and closer to reality the latest and greatest in active safety allows more fail safes for the truck operator than ever before. The remaining challenge is how to we ensure we introduce such breakout technologies seamlessly? This session will explore:

- Ensuring implementations do not interfere with other on board technology
- Facilitating harmonious interaction between features rather than independent functionality
- Predicting, detecting, and improving potential errors and faults
- Improving active safety performance

Alan Korn
Director - Vehicle Dynamics and Control
Meritor WABCO

10:30  Morning Networking and Demo Drive

11:15  PANEL: Cyber Security and Physical Security Implications for Autonomous Commercial Vehicles

The Connected Vehicle Trade Association presents a panel that looks carefully at the implications of a compromised autonomous commercial vehicle. This panel will bring together Tier 1’s, OEM’s and leading industry experts to discuss the latest in resiliency, tracking, and identification of cyber vulnerabilities.

Moderator: Scott McCormick
President and Founder
Connected Vehicle Trade Association

12:00  Networking Luncheon

1:00  INDUSTRY BENCHMARKING SESSION: Human Detection and Avoidance

The mobile robotics industry has a reduced risk factor involved in operation. This has led to significant advances when it comes to human detection and response. This session will provide learning lessons that can help bridge the gap from simply detecting and stopping for humans to actually co-interacting:

- Human path prediction and avoidance
- Operating fluidly in a frequent stop environment
- Mitigating risks of injury caused by human error
- Identified improvement areas for the next generation of mobile robotics

Steve Toebes
Vice President of Engineering
Harvest Automation

1:45  Self Driving Trucks Low Hurdles High Impacts

The pursuit of the Autonomous Vehicle is one that carries profound implications at the business and social level. While representative of many benefits this initiative also carries certain challenges that must be overcome for successful implementation. This session will explore:

- Technical, legal, and ethical requirements
- Industry implications for cost and return
- Associated costs and benefits at each stage of autonomy

Stephan Keese
Senior Partner
Roland Berger

2:30  Afternoon Networking & Refreshment Break

November 12th, 2015
3:15 **PANEL: The commercial vehicle path towards automated vehicles**

This panel will present insider views on intelligent vehicles – from world leading Active Safety systems towards automated vehicles. This will look closely at driving forces such as fuel economy, productivity and safety for global truck brands. This panel will also closely analyze thoughts and findings from research projects in the area – from on road automation to confined area automation

- Views on the driving forces behind vehicle automation for commercial vehicles
- The path from active safety towards vehicle automation
- Frameworks for a technical automation platform
- Volvo findings from projects in Europe, Japan and US regarding C-ACC and platooning and the needs of a global standard
- The path forward to a higher level of on road automation for on-road use
- Research on fully automated trucks for use in restricted areas (e.g. mining, harbour areas, agriculture, load terminals etc)

**Magnus Rilbe**
Manager Vehicle Dynamics, Active Safety and Vehicle Automation
AB Volvo

**Christian Grante**
Research Engineer
AB Volvo

4:15 **Harnessing Cloud Computing to Enhance Platooning Capabilities**

The first round of prototypes and experimentations into vehicle platooning has yielded some very exciting early data with potential in safety, fuel efficiency, and efficiency. As platooning technology gets closer to mainstream adoption in future autonomous trucks a number novel approaches have emerged to potentially maximize these benefits. This session will explore:

- Utilizing cloud computing to cut down on potential interference based flaws as well as capture operator data
- Developing a primary control center that can make adjustments to vehicles in the fleet on the fly to reduce flaws and potential hazards
- Harnessing an unprecedented level of driver data to scorecard and manage performance

**Josh Switkes**
CEO
Peloton Technology

5:00 **PANEL: Fleet Owner Requirements for Autonomous Technology**

As the OEM’s in the industry work tirelessly to create a product that moves closer to total autonomy it is important that the fleet owners remain part of the conversation. To ensure that the OEM’s are delivering a product that delivers on the greatest in safety, efficiency, and fuel economy it is critical that they are getting the latest in needs and requirements from their industry customers. This panel will bring together some of the most prominent fleets to have an honest discussion with the trucking OEMs to shed light on some of the pressing issues.

**Jim Mele**
Editor-in-Chief
Fleet Owner

6:00 **INDUSTRY BENCHMARKING SESSION: Automation Challenges in Mining and Construction Sites**

While the engineering may be similar, autonomous heavy duty mining trucks have seen a separate track of progress and challenges in their development. While it’s extremely beneficial to be free of the constrictions of roads there are quite a few physical challenges they face in autonomy. This session will help you realize some of the benefits they’ve realized by overcoming these obstacles.

- Overcoming environmental sensory interference
- Ensuring autonomous features can adapt to changing weights and loads
- Maximizing human safety in close range autonomous movement

**Sam Kherat**
Autonomy Leader
Bradley University

7:00 **Chairperson’s Closing Remarks**

7:15 **End of Main Conference Day One**

7:30 **Cocktail Reception**
Registration & Coffee

Chairperson’s Recap of Conference Day One
Sam Kherat
Autonomy Expert

KEYNOTE: Peterbilt: The Pathway to Advanced ADAS
Peterbilt has made headlines in recent years with several product unveilings that brought new features to the industry that both improved driver engagement and closely followed fleet feature requirements. This session will take a closer look at some of the latest and greatest features Peterbilt has brought into the industry:
- The implementation path for advanced ADAS features such as Lane keeping, Traffic Jam Assist, and Mixed Traffic Operation.
- An overview of current technology and planned future implementations
- Priorities in partnerships and technology developments
Bill Kahn
Principal Engineer
Peterbilt Motors

Incorporating ADAS into Hydraulic Steering
The patented and award-winning iHSA® (intelligent Hydraulic Steering Assist) by tedrive Steering for the first time enables the incorporation of driver assistance systems into hydraulic steering systems of vehicles with high axle loads. This session will show you how tedrive’s innovative steering solutions can contribute on the way to autonomous driving in these vehicle classes.
- Front axle load independent steering technology for Trucks, Commercial Vehicles & Buses
- No significant packaging impact, weight optimized
- Low electrical power requirements
- Can be implemented as a modular “plug & play” solution onto all tedrive steering gears
- iHSA® enables all safety & comfort features coming along with ADAS and autonomous driving
Harald Schoenebeck
Director, Sales New Technologies
TD Steering

Morning Networking & Refreshment Break

INDUSTRY BENCHMARKING SESSION:
Defining Safety Requirements for the Off-road Autonomous Vehicle
There have been significant developments in offroad autonomy as it tackles separate challenges from the commercial trucking industry. This session will look closely at the factors that necessitate key offroad developments and how these benefits get realized.

Evolving Capabilities in Driver Engagement and Infotainment
As autonomy becomes closer and closer to reality the driver will become more and more able to free his hands and mind for additional tasks.
This session will closely look at what advancements are being achieved today and explore what the potential future of infotainment could look like:
- The latest in driver convenience, utility, and entertainment
- Harnessing the infotainment system to create a suite of alerts both critical and non disruptive
- Translating the benefits of car infotainment systems into the truck industry
- Systems that can facilitate multitasking capabilities allowing drivers to manage administrative tasks as well as relax

Rob Gee
Head of Product Management Software and Connected Solutions
Continental

Automated Truck Testing and Architecture
This panel presented by Steve Underwood and UMI will explore the collaboration being conducted to set up a truck platooning system with leader-follower capabilities that will be tested in June on I-69 in Michigan. This collaboration is happening with contributions from UMI, TARDEC, MDOT, USDOT and the Michigan Trade Corridor and should yield beneficial data industry wide. Learn more about the specifics that are facilitating this project at this panel.

Steve Underwood
Director, Connected Vehicle Proving Center
University of Michigan - Dearborn

Alex Kade
TARDEC
Osman Altan
USDOT
Matt Smith
MDOT
2:15 Sense to Reaction: Ensuring Quick and Reliable Automated Braking
Operator and fleet confidence in autonomous vehicles is complete reliant on their faith in equipment reliability. For this new technology to fully succeed braking systems must know when to brake, how hard to brake, and they must hit these requirements with precision. This session will explore the latest in:
• Detection/Reaction algorithms
• Sensory fusion and redundancy
• Failsafes for controls signaling

Claus Beyer
VP and General Manager of Controls
Bendix

3:00 Using Machine Learning to Improve an Entire Autonomous Fleet
Machine learning represents an interesting frontier as a fundamental part of the developing autonomous vehicle portfolio. The idea of a vehicle storing and recalling each incident it came across where it either had to come up with a solution or didn’t possess a solution can be invaluable to drastically increasing the rate autonomous vehicles improve at. This session will explore:
• How shared machine learning can ensure that vehicles improve at a rate that is exponentially increased by the number of vehicles on that road.
• Understanding the capabilities that may be left in the table by not investing in appropriate processing power
• Mastering the hardware software relationship behind this technology

Geoff Ballew
Lead, Ecosystem Development
Autonomous Driving
NVIDIA

3:45 Afternoon Networking & Refreshment Break

4:30 Testing and Planning Sensor Capabilities and Placement
2015 has been a banner year of developments as several milestones have been passed and many breakthroughs have been made in the enabling technologies behind autonomy. This session will look closely at some of the technical benefits realized by the cars industry and help outline how the trucking industry can share in them:
• Designing a suite of integrated low cost sensors
• Executing a robust series of fail tests avoiding significant cost and safety consequences
• Ensuring sensory placement that is unaffected by changing vehicle dynamics and accessories

Harsha Badarinarayan
Laboratory Manager – Automotive Research Lab
Hitachi

5:15 Assembly Line Verification for the Autonomous Truck
The autonomous truck will ultimately feature a large number of new parts and components that in many cases will not have been featured on previous vehicle models. This doesn’t create significant issues for small, limited production prototypes but can have a significant impact on large scale assembly line production as this becomes a main stream product. This session will explore:
• Calibrating and expanding the capabilities of existing inspection arms
• Recalibrating fixed inspection components to account for external or hidden sensors and optics
• Understanding changing requirements in metrology and laser radar

Brendan Chan
Senior Team Lead – CAE Multibody Dynamics
Navistar

6:00 Chairperson’s Closing Remarks

6:10 End of Main Conference Day Two
Audio recordings and presentations are made available post-event at www.B2BiQ.com. This is a great way for your team to experience the educational benefits of the speaker presentations with audio from the convenience on your own desktop or device. For all presentation and audio purchases, please contact Paul Rocco at 212-885-2732 or enquiryiqpc@iqpc.com today!

### PRICING & REGISTRATION

A limited number of discounts are available for the non-profit sector, special discounts available:

- **Team Discounts:** A limited number of discounts are available for the non-profit sector, special discounts available:

  - **discount may be applied per registrant.**
  - **contact IQPC Customer Service at 1-800-882-8684. Only one**
  - **Team Discounts:**
  - **For information on team discounts, please**
  - **6.35% sales tax.**
  - **CT residents or people employed in the state of CT must add**
  - **MAKE CHECKS PAYABLE IN U.S. DOLLARS TO: IQPC**
  - **A $99 processing charge will be assessed to all registrations not**
  - **IQPC reserves the right to determine who is considered an End-**
  - *****Team Discounts are off of the standard rates and cannot be combined with any other offers**
  - **PAYMENT POLICY:** Payment is due in full at the time of registration
  - **Please note multiple discounts cannot be combined. A $99 processing charge will be assessed to all registrations not accompanied by credit card payment at the time of registration.
  - **MAKE CHECKS PAYABLE IN U.S. DOLLARS TO: IQPC**
  - **CT residents or people employed in the state of CT must add 6.35% sales tax.
  - **Team Discounts:** For information on team discounts, please contact IQPC Customer Service at 1-800-882-8684. Only one discount may be applied per registrant.
  - **Special Discounts Available:** A limited number of discounts are available for the non-profit sector, government organizations and academia. For more information, please contact customer service at 1-800-882-8684.

### Vendors:

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<th>Vendors:</th>
<th>Register &amp; Pay By October 30</th>
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<td>ECONOMY: Main Conference</td>
<td>$1,995</td>
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<td>PREMIUM: Main conference + 3 Workshops</td>
<td>$2,995</td>
<td>$3,395</td>
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<tr>
<td>SUPER PASS: Main Conference + 3 Workshops + Site Tour</td>
<td>$3,195</td>
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<td>One Workshop</td>
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<td>MCity Site Tour</td>
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### Number of Attendees

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Details for making payment via EFT or wire transfer: JP Morgan Chase & Co. Name on Account: Penton Learning Systems LLC dba IQPC Account #: 937-332641 ABA/Routing #: 021000021 Reference: IQPC: 25740.001 Payment Policy: Payment is due in full at the time of registration and includes lunches and refreshment. Your registration will not be confirmed until payment is received and may be subject to cancellation. For IQPC’s Cancellation, Postponement and Substitution Policy, please visit www.iqpc.com/cancellation Special Dietary Needs: If you have a dietary restriction, please contact Customer Service at 1-800-882-8684 to discuss your specific needs.

### Team Discounts*

Progress in Autonomy requires a fundamental understanding cross functionally in order to maximize your development efforts. In order to maximize the engineering results generated by your organization, take advantage of our group discounts by attending with your entire manufacturing team!

- **ECONOMY: Main Conference**
  - $2,795
  - Save $200
  - $2,995

- **PREMIUM: Main conference + 3 Workshops**
  - $4,195
  - Save $200
  - $4,395

- **SUPER PASS: Main Conference + 3 Workshops + Site Tour**
  - $4,395
  - Save $200
  - $4,595

- **One Workshop**
  - $595

- **MCity Site Tour**
  - $795

- **Conference Audio Recordings - Paid Attendee Rate (Made Available Post-Event on B2BiQ.com)**
  - $399

- **Conference Audio Recordings - Non-Paid Attendee Rate (Made Available Post-Event on B2BiQ.com)**
  - $999

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*IQPC reserves the right to determine who is considered an End-User or a Vendor upon registration for an event. Those who are determined a vendor will be denied access to End-User pricing. These prices are featured as a limited time only promotion. IQPC reserves the right to increase these prices at its discretion. Please note multiple discounts cannot be combined. A $99 processing charge will be assessed to all registrations not accompanied by credit card payment at the time of registration.

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*CT residents or people employed in the state of CT must add 6.35% sales tax.

Team Discounts: For information on team discounts, please contact IQPC Customer Service at 1-800-882-8684. Only one discount may be applied per registrant.

Special Discounts Available: A limited number of discounts are available for the non-profit sector, government organizations and academia. For more information, please contact customer service at 1-800-882-8684.

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