

7th International Summit

Next Generation

Steering Systems USA 2024 APRIL 23-24 Dearborn, MI I USA















APRIL 23-24, 2024 | Dearborn, MI | USA



Dear Colleagues,

I am thrilled to welcome you to the **RedCabin Next Generation Steering Systems USA conference** on **April 23-24**, in the Automotive Hall of Fame in Dearborn, MI.

Our program will include a dynamic discussion on the evolution of automotive systems, highlighting the increased prevalence of "by-wire" technology and the ongoing rollout of 48V architecture.

Our dialogue will span the transformative impact of AI on design and manufacturing, exploring its revolutionary role.

We will also delve into the safety implications of ADAS/AD, emphasizing he crucial interaction between vehicle systems and the human element for a safer road experience. The event will conclude with a reflection on collaborative efforts within the industry, underscoring our shared commitment to making a positive impact and collectively shaping a better world. Looking forward to seeing you all.

Roger Lahoud

Technical Center Director, *JTEKT North America* Conference Chairman

ADVISORY BOARD



Ade Badiru Steering Technical Expert *GM*



James Burghardt
Vice President
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Robert Bosch
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Joshua Dawson
Principal Engineer
Steering Axels and
Suspensions,
Steering System
Function Owner
Volvo Group Trucks
Technology





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APPROVED SPEAKERS



Roger Lahoud Technical Center Director JTEKT North America



Professional of AD/ADAS and Assistant Manager JTFKT



Tomohiro Nakade Dr. Matthiis Klomp Unit Architect -Vehicle Platform Volvo Cars



Ade Badiru Steering Technical Expert GM



Daniel Moreland Sr Proiect Engineer - Vehicle Performance PACCAR Technical Center



Asal Nahidi Functional System Architect - Steering Systems Control GM



Fabian Lischke L4 Steering **Program Expert** Robert Bosch



Mike Dawson Senior Manager, Steering Applications Engineering **ZF** Group



Joe Gobernatz **Executive Vice** President - Sales and Engineering EJOT ATF



Ghislain Poncet Software Design Heimbrock Group Manager JTFKT



Peter Global Head of Technical Sales Knorr-Bremse Svsteme für Nutzfahrzeuge **GmbH**



Jeff Helner Head of Steering Mobis



Göran Butszies Head of Requirements & Project Management by-Wire Volkswagen AG



Stephan Kreutz Global Head of Steering Systems Commercial Volkswagen Passenger Cars, Volkswagen Group Lead Engineer for Steering Systems Volkswagen AG



Julien Dracon Manager of Steering Robert Bosch



Pascal Tuszewski Project Manager Applications for central gear components in **FPS**

thyssenkrupp Presta AG



Dr. Tom Hardy Senior Engineer Nvlacast



Nisha Nagarajan Technical Specialist -Semiconductor Engineering Jaguar Land Rover



Nick Trewhella Senior Manager -Global Systems Architecture Nexteer Automotive



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Employing passionate and diverse teams around the world, we are committed to meeting the needs of the highly dynamic and technically challenging Automotive marketplace. Operating from strategically located sites, Nylacast Automotive manufacture and supply safetycritical products that go into hundreds of vehicle platforms across multiple vehicle brands world-wide. Nylacast Automotive manufacture and supply safety-critical components for:

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Our unique Research and Development capability provides full engineering solutions from initial concepts and raw chemistry, through to final assemblies and components. This comprises materials development, application engineering, product testing and validation that creates real value for our customers and launches many exciting new products every year. For more information please check out nylacast.com.

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EJOT ATF is a family-owned business that specializes in engineered fasteners, cold formed specials, formed & stamped components, and assemblies for the automotive industry.

EJOT ATF is the market leader in steering fasteners over the last 25 years. We are known throughout the industry for our engineering expertise. It's the origin of our products and solutions and what sustains our reputation for quality and precision.



CW Bearing is a medium sized manufacturing company, with North American headquarters located in Northville, Michigan. We are a globally operational company that started in 1984.

With a dozen locations throughout North America, in close proximity to our customers, which allows us to respond quickly and flexibly.

We specialize in the development and production of a wide range of premium quality ball and roller bearings for electric motors, gearboxes, power tools, automobiles, all-terrain vehicles, cycling, and more.

Our customers range from the well-known automotive OEMs and Tier 1 suppliers as well as many other sub-suppliers. In addition, our bearings are installed by well-known OEMs in a wide range of industries.



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WHAT YOU WILL EXPERIENCE ON SITE



WHO IS WHO

Get in touch with other experts before the conference starts. Take a look at the business cards and photos while enjoying your first conversational and networking experience.



AUDIENCE Q&A

Interact with conference speakers and moderators to ensure all of your questions are answered during these sessions.



SPEEDNETWORKING

Break the ice and get to know your industry peers in these fastpaced one-to-one meetings. Greet each participant in this series of brief exchanges and share your professional background.



PANEL DISCUSSION

Benefit from deeper insights by attending panel discussions. Share your ideas and thoughts with peers and receive feedback from dedicated industry experts in this interactive session.



INTERACTIVE WORKING GROUPS

Get an in-depth approach to these hands-on themes. Discuss, brainstorm, elaborate and work together in this interactive session. Tutorials and workshops are also an excellent chance to interact at this perceived as the ,go-to' place for knowledge, best practice and credible solutions.



NETWORKING RECEPTION

RedCabin invites our delegates to enjoy an informal evening gettogether with speakers and peers. Discuss the outcome of the first summit day and expand your network in a relaxed environment.

For sponsorship such as exhibition, logo display, evening event sponsoring, please contact:

Erutode Rume, erutode.rume@redcabin.de | Direct line: +49 30 99 40 489 11 Mobile: +49 162 256 738 2



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THIS IS WHAT EXPERTS OF OUR PAST EVENTS EXPERIENCED

"Excellent conference and great networking opportunity! Thank you!" Mitsubishi Electric Automotive America	"Topics presented & discussions were extremely relevant to todays market, questions & challenges." **Robert Bosch Automotive Steering**
"Great opportunity to understand difficult topics faced in the industry & network with industry members." Toyota	"I liked the presentation variety. Also the initial Meet and Greet 3 minutes speed date was a very good network strategy." Hyundai Mobis North America
"Many informative discussions and opportunities to network with key players at different tier levels." JTEKT North America	"Excellent interaction between OEM`s, Tiers & Academy!" SWOBODA
"Excellent cross-industry discussion. Relevant presentations. Engaging Workshops." General Motors	"The organization ans the location was very good." Daimler
"Well organized! Creates Collaborations! Variety of topics & formats." Autoliv	"Relevant topics for the industry and great networking opportunities." Knorr-Bremse















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APRIL 23-24, 2024 | Dearborn, MI | USA

Summit DAY 1 | TUESDAY, APRIL 23, 2024

08:00 am Registration



Interactive session: Who is who

08:05 am Get in touch with other experts before the conference starts. Take a look at the business cards and photos while enjoying your first conversational and networking experience.

08:45 am Welcome note by RedCabin and Summit Chairperson
 Roger Lahoud - Technical Center Director, JTEKT
 North America

 09:00 am Evolution of ADAS functions with Collaborative Steering
 Tomohiro Nakade - Professional of AD/ADAS and Assistant Manager, JTEKT

09:30 am Software Defined Vehicle - Latest Developments
 Asal Nahidi - Functional System Architect - Steering Systems Control, GM



Interactive session: SPEEDNETWORKING

10:00 am Break the ice and get to know your industry peers in these fast-paced one-to-one meetings. Greet each attendee in a series of brief exchanges and share your professional background. Make sure you bring a whole stack of business cards with you!

10:30 am Networking Coffee Break

Shared control and human machine cooperation enabled by steer-by-wire – the killer app we are looking for?
 Dr. Matthijs Klomp – Unit Architect – Vehicle Platform, Volvo Cars

11:30 am Combining front and rear axle steering systems on vehicle level: ZFs holistic functional and safety approach for steer-by-wire – powered by cubiX
 Mike Dawson – Senior Manager, Steering Applications

Mike Dawson – Senior Manager, Steering Applications Engineering, *ZF Group*



Interactive session: PANEL DISCUSSION

Benefit from deeper insights by attending panel discussions. Share your ideas and thoughts with peers and receive feedback from dedicated industry experts in this interactive session.

12:00 pm Agile methods in steering software development

The Software Defined Vehicle (SDV) is quickly establishing itself as mainstream at major OEMs. SDV initiatives are well aligned with Agile methods for software development (both focused on speed, adaptability, flexibility, & customer satisfaction). This panel will discuss the benefits, drawbacks, and challenges of applying Agile methods to Software development for vehicles in the context of a Software Defined Vehicle future.



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Summit DAY 1 | TUESDAY, APRIL 23, 2024

MODERATOR: **Ade Badiru –** Steering Technical Expert, *GM*

PANELISTS: **Jeff Helner -** Head of Steering, *Mobis*

Dr. Matthjis Klomp – Unit Architect – Vehicle Platform, *Volvo Cars*

Ghislain Poncet – Software Design Group Manager, *JTEKT*

12:45 pm Networking Lunch



Interactive sessions: WORKING GROUPS

The audience will be divided into three groups. Each group will attend all three interactive working groups.



WORKING GROUP - 1

02:00 pm Challenges and advancements of Semiconductors including future manufacturing and consolidation

HOSTED BY: **Nisha Nagarajan -** Technical Specialist - Semiconductor Engineering, *Jaguar Land Rover*



WORKING GROUP - 2

02:00 pm Future of hydraulic systems

HOSTED BY: **Julien Dracon –** Manager of Commercial Steering, *Robert Bosch*



WORKING GROUP - 3

o2:00 pm Heavy Duty Considerations for battery electric and autonomous steering applications

HOSTED BY: **Daniel Moreland -** Senior Project Engineer - Vehicle Performance, *Paccar Technical Center*

04:00 pm Networking Coffee Break

04:30 pm Continuing with WORKING GROUPS 1,2 and 3

05:30 pm Results

Each moderator of the interactive working groups is presenting the outcome of their working group.

 ${\tt 05:45~pm}$ Closing remarks by the Summit Chairperson

Roger Lahoud – Technical Center Director, *JTEKT North America*



Interactive sessions: EVENING NETWORKING RECEPTION

o6:00 pm RedCabin invites our delegates to enjoy an informal evening get-together with speakers and peers. Discuss the outcome of the first summit day and expand your network in a relaxed environment.

END OF SUMMIT DAY 1



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Summit DAY 2 | WEDNESDAY, APRIL 24, 2024

08:10 am Registration

08:50 am Welcome note by our Summit Chairperson Roger Lahoud - Technical Center Director, JTEKT North America

09:00 am Latest view of Steering evolution: concepts, safety architectures. future

- Steer By Wire and the various approaches in the expanding market.
- Power networks, their impacts and Jtekt developed Lithium Ion Capacitor supporting in by wire, Hybrids and new developments
- Artificial Intelligence: development and applications in steering manufacturing

Roger Lahoud – Technical Center Director, *JTEKT North America*

09:30 am SAE L4 truck capabilities

Fabian Lischke – L4 Steering Program Expert, *Robert Bosch*

10:00 am Beyond CV EPS - The next level

Peter Heimbrock – Global Head of Technical Sales, *Knorr-Bremse Systeme für Nutzfahrzeuge GmbH* 10:30 am Networking Coffee Break

11:00 am Virtual Validation for Steer-by-Wire within the Scope of System Engineering

Göran Butszies – Head of Requirements & Project Management by-Wire, *Volkswagen AG*

Stephan Kreutz – Global Head of Steering Systems Volkswagen Passenger Cars, Volkswagen Group Lead Engineer for Steering Systems, *Volkswagen AG*

11:30 am Optimising Gear Manufacturing to Improve Torque to Rotate

- Torque To Rotate (TTR) is an important performance requirement for EPS gearboxes with a significant impact on driver steering feel
- This presentation outlines the collaborative DoE Nylacast performed with Thyssen Krupp used to optimise the polymer gear cutting settings for TTR
- Results from Thyssen Krupp have shown the optimised manufacturing parameters have successfully improved TTR

Dr. Tom Hardy – Senior Applications Engineer, *Nylacast* **Pascal Tuszewski –** Project Manager for central gear components in EPS, *thyssenkrupp Presta AG*



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Summit DAY 2 | WEDNESDAY, APRIL 24, 2024

12:00 pm EJOT ATF Steering Focus and Clamp Bolt Technology

Joe Gobernatz - Executive Vice President - Sales and Engineering, *EJOT ATF*

12:30 pm Networking Lunch



Interactive sessions: WORKING GROUPS

The audience will be divided into two groups. Each group will attend both interactive working groups.



WORKING GROUP - 1

01:30 pm Standardization of the interface between Steer-by-Wire and the vehicle as well between the Steer-by-Wire actuators

HOSTED BY: **Dr. Matthjis Klomp -** Unit Architect - Vehicle Platform, *Volvo Cars*



WORKING GROUP - 2

01:30 pm Availability vs Complexity and understanding the value/tradeoffs

HOSTED BY: **Nick Trewhella -** Senior Manager - Global Systems Architecture, *Nexteer Automotive*

02:30 pm Networking Coffee Break

03:00 pm Continuing with WORKING GROUPS 1 and 2

04:00 pm Results

Each moderator of the interactive working groups is presenting the outcome of their working group.

04:15 pm Closing remarks by our Summit Chairperson

Roger Lahoud - Technical Center Director, *JTEKT*

North America

04:30 pm END OF SUMMIT



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INVESTMENT PER DELEGATE

2 DAY CONFERENCE INVESTEMENT

3.195 €

For further information sponsorship or delegate registration please contact:

Erutode Rume

Head of Business Development Automotive

E-Mail: erutode.rume@redcabin.de

Direct line: +49 30 99 40 489 11 Mobile: +49 162 256 738 2

CONFERENCE VENUE

Automotive Hall of Fame 21400 Oakwood, Dearborn MI. USA

www.automotivehalloffame.org

The Automotive Hall of Fame has honored nearly 800 men and women from around the world.

The museum celebrates outstanding automotive achievements and innovations that have changed the world and revolutionized our way of life.

PARTNER HOTEL

Courtyard Detroit Dearborn 5200 Mercury Drive Dearborn, Michigan 48126 162 USD per night | <u>Book your group rate for RedCabin</u>



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