

Graz/Spielberg, May 9 to 10, 2019

Electrification & All-Wheel Drive Congress

Congress Program

May 9, 2019



Venue: Messe Congress Graz, Messeplatz 1, 8010 Graz, Austria

07:30 - 08:30	Registration	
08:30 - 10:10	Plenary: Keynotes: New Energy for All-Wheel Drive	
08:30 - 08:50	Welcome and Opening	
08:50 - 09:10	Formula E, a case for AWD technology or not Roger Griffiths, Andretti Autosport	
09:10 - 09:30	Keynote BorgWarner	
09:30 - 09:50	Highly efficient drivetrains for the mobility of the future Hannes Prenn, GKN ePowertrain	
09:50 - 10:10	New Technologies for All-Wheel Drive A journey through the challenges of electrified AWD Powertrains Harald Naunheimer, Magna Powertrain	
10:10 - 10:25	Short Break	
10:25 - 11:00	Panel Discussion - New Energy for All-Wheel Drive	
11:00 - 11:30	Coffee Break	
11:30 - 13:00	Forum A: All-Wheel Drive Performance	Forum B: Trends & Future All-Wheel Drive Concepts
11:30 - 12:00	The new Mercedes Benz SUV All Wheel Drive Systems Ralf Koesling, Daimler AG	GKN's ActiveConnect All-Wheel Drive System as an energy-efficient solution for electrified vehicles Christoph Schmahl, GKN Driveline International GmbH
12:00 - 12:30	TwinAWD: A new approach on standard AWD Hang on Systems Michael Höck, GKN	Electrification: Effects on vehicle architecture Franco Cimatti, Lotus Geely
12:30 - 13:00	Alfa Romeo Q4: Four Wheel Drive for four-leaf clover Alessandro Avallone, Maserati S.p.A.	All Wheel Control for electric drive vehicles Kaoru Sawase, Mitsubishi Motors Corporation
13:00 - 14:00	Lunch Break	
14:00 - 15:30	Forum A: Batteries & Power Electronics	Forum B: 48 Volt Systems for All-Wheel Drive Efficiency
14:00 - 14:30	Electrification trends call for (R)evolution in BEV battery pack technology. Samsung SDI's scaleable high performance EV battery design. Dr. Nikolaus Hochgatterer, Samsung SDI	The next generation Mild Hybrid Systems 48V Mgi Hans Aulin, BorgWarner
14:30 - 15:00	Battery Immersion Cooling 2.0 - The new battery generation Markus Kreisel, Kreisel Electric	The new high efficient AWD-System – now introduced as part of the Mild Hybrid Electrification Anders Gregorius, Volvo Cars
15:00 - 15:30	Innovative adhesive solutions for Electric Drive Systems (E-axis) and Power Electronics Erwin Rauh, Henkel AG	48V E-Machine solutions for CO₂ reduction and traction assist Thomas Hackl, Magna Powertrain
15:30 - 16:00	Coffee Break	
16:00 - 17:30	Forum A: Electrification	Forum B: Electrified Performance
16:00 - 16:30	P2 Modular Hybrid Architectures Tim Olsson, BorgWarner	GKN Technology Demonstrator – All Twinster Hybrid System and P4-PHEV Gerd Kaiser, GKN Driveline GmbH
16:30 - 17:00	Innovative planetary electric drive module with AC Induction Motor Dipl.-Ing. Hans-Joachim Schmeink, GKN ePowertrain	Scalable performance and driving dynamics through Modular eDrive Systems Simon Kaimer, Magna Powertrain
17:00 - 17:30	Comparison of various All-Wheel Drive powertrain topologies for electric vehicles Christian Angerer, Lehrstuhl für Fahrzeugtechnik, Technische Universität München	Schaeffler 4ePerformance - test bench on wheels Benedikt Locker, Schaeffler
17:30 - 17:45	Short Break	
17:45 - 18:30	Plenary: Closing Keynote	
17:45 - 18:30	How Graz became the Center of All-Wheel Drive - A Success Story since 60 Years Prof. Dipl.-Ing. Dr. h. c. Jürgen Stockmar	
18:30	End of the First Congress Day	
19:00	Evening Event at the Alte Universität Graz, Hofgasse 14, 8010 Graz, Austria	

Program is subject to change.

Graz/Spielberg, May 9 to 10, 2019

Electrification & All-Wheel Drive Congress

Congress Program

May 10, 2019



Venue: Red Bull Ring, 8724 Spielberg/Knittelfeld, Austria

08:00	Bus Transfer from Graz to the Red Bull Ring / Spielberg	
09:30 - 11:00	Forum A: Testing & Simulation	Forum B: AWD Development
09:30 - 10:00	Experimental analysis of Dynamic Rolling Radius of tyres at high speed in different working conditions Marco Sbroisi, PhD, Pirelli Spa	Advanced gear optimization for AWD-Systems Michael Braunstingl, BSc, AVL List GmbH
10:00 - 10:30	Powertrain multibody modelling of front engine - RWD to analyse idle dynamic and NVH Gianluca Quattromani, Politecnico di Milano	Comparison of AWD vehicle powertrains Nikola Holjevac, Politecnico di Milano
10:30 - 11:00	Frontloaded e-AWD development with automated system optimization Joachim Ecker, AVL List GmbH	Conception und Simulation for the electrified powertrain Alexander Kluger, AKKA
11:00 - 11:30	Coffee Break	
11:30 - 13:00	Forum A: Torque Control Systems	Forum B: Building Blocks for Conventional and Electric AWD Systems
11:30 - 12:00	Torsen LSD in conventional and electric axles with EPS Tuning Paolo Sacchetti, JTEKT	Transfer Case Oils – How to master the challenge of multifunctional Gear Lubricants Dr. Erik Schuster, Fuchs Schmierstoffe GmbH
12:00 - 12:30	High-performance Friction Systems for active torque management Andreas Promberger, Miba Frictec	The rolling bearing in the electrified powertrain – requirements and solutions Dipl.-Ing. Thomas M. Wolf, SKF GmbH
12:30 - 13:00	Electric Torque Vectoring Derek Ward, Ford	The sixth generation of integrated AWD Actuators Mattias Magnusson, BorgWarner
13:00 - 13:30	Plenary: Closing Keynote	
13:00 - 13:30	Closing Keynote	
13:30	Lunch & End of the lectures	

Test Drive Program May 10, 2019

10:00 - 16:00	Ride&Drives: Off-Road and Driving Dynamics Simon Kaimer, Daniel Held, Magna Powertrain
	Participants can experience driving demonstrations with a wide range of demonstration vehicles. - Driving Dynamics - Hybrid and Electric Vehicles - Offroad Performance
	The driving event of the 2019 Electrification & All-Wheel Drive Congress will take place at the "Red Bull Ring" motorsport circuit in Spielberg.
	Built in 1969 and formerly known as "Österreichring", it hosted the Formula One Austria Grand Prix from 1970 to 1987 and from 1997 to 2003. After being renovated and modified, it was re-opened in 2011 and nowadays hosts a variety of national and international motorsport events, such as the DTM Series or the Truck Race Trophy. In 2014, also Formula One returned to the Red Bull Ring.
	Offering various on- and offroad tracks as well as a conference area, the Red Bull Ring is located in Spielberg, Austria, around 45 minutes away from Graz. Free shuttle buses will circulate to allow participants a comfortable travel between Spielberg and Graz or Graz Airport on Congress Day 2.
16:00	Official End of the Congress

Shuttle Buses

Shuttle buses will run between Graz & Spielberg and Spielberg & Graz Airport / Downtown for the convenience of our participants.	
08:00	Bus Transfer from Graz to the Red Bull Ring / Spielberg
14:15	Bus 1: Transfer back to Graz airport / downtown
15:15	Bus 2: Transfer back to Graz airport / downtown
16:15	Bus 3: Transfer back to Graz airport / downtown

Program is subject to change.