DEVELOPMENTS IN TRANSMISSION AND DRIVELINE TECHNOLOGY

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27 January 2015
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Automobile Division
Seminar

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DEVELOPMENTS IN TRANSMISSION AND DRIVELINE TECHNOLOGY
27 January 2015, Coventry

“”

DEVELOPMENTS IN TRANSMISSION AND DRIVELINE TECHNOLOGY EXPLORES THE EVOLUTION OF TECHNOLOGY AND WHAT IS REQUIRED TO MEET EVER INCREASING EMISSIONS TARGETS.

This unique seminar will address transmission and driveline strategies and problems faced by passenger cars, heavy duty vehicles and off-highway vehicles.

This event will provide an exclusive opportunity to meet representatives of car OEMs and driveline suppliers for on and off-highway heavy vehicles. The increasing capability of electronic control systems has helped to facilitate joint developments of engines, drivelines and gearboxes.

OUR EXPERT SPEAKING PANEL INCLUDES:

MARK STANTON KEYNOTE SPEAKER
DIRECTOR VEHICLE ENGINEERING, JAGUAR LAND ROVER
Mark Stanton began his career at Ford Motor Company and worked in various roles in Chassis and Vehicle Engineering before becoming Chief Program Engineer for small cars. Eight years ago he moved to Jaguar Land Rover to take up his current role of Director of Vehicle Engineering running a team of over 500 engineers. He is also the Executive Chairman for all JLR virtual activities and the Executive Chairman for the increasingly important China market.

JÉRÔME MORTAL KEYNOTE SPEAKER
CHIEF ENGINEER TRANSMISSIONS & DRIVELINE & POWERTRAIN SYSTEMS, JAGUAR LAND ROVER
Jérôme Mortal started his career at Peugeot Research Centre in 1993 as an Engineer. He then went to work within Renault Powertrain, Renault-F1 and Renault Sport Technologies. In 2012 Jérôme became the Deputy Director of Mechanical Division at AVTOVAZ before taking his current role at Jaguar Land Rover in 2014 as Chief Engineer, Transmission & Driveline & Powertrain Systems.

WHY SHOULD YOU ATTEND?

• Access a comprehensive guide to R&D in electric vehicles and transmissions
• Ensure that your business is achieving long-term reductions in emissions
• Participate in detailed discussions regarding modelling techniques
• Explore current and future technologies and applications
• Network with key suppliers, OEMs, manufacturers and researchers

WHAT WILL YOU HEAR ABOUT?

• New requirements for off road capability, performances, NV, fuel economy and weight
• New concepts not reliant on conventional architecture
• The latest modelling and simulation technologies
• Known and novel technologies for passenger car, off-highway and truck sectors
• CO₂ impact for transmission variants and subsystems
• ‘Real world’ fuel consumption and its impact running up to 2025
• Mobility, energy efficiency and stability of terrain multi-wheel vehicles
• Unique applications including military trucks, construction equipment and farm tractors

See page 3 for full speaker list

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<td>08:30</td>
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<tr>
<td>09:00</td>
<td>Chair’s opening remarks</td>
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| 09:15 | Keynote: The Opportunities and Challenges of Delivering the Next Generation of Premium Luxury Vehicles | Mark Stanton, Director Vehicle Engineering, Jaguar Land Rover | • Global positioning of JLR and automotive industry  
• How to navigate through the design options available for transmissions and driveline  
• Explore the difference of lightweight transmission systems for overall fuel economy |
| 10:15 | Question and answer session with Jaguar Land Rover speakers              |                                                                         |                                                                                                |
| 10:30 | Networking refreshment break                                             |                                                                         |                                                                                                |
| 11:00 | Sustaining success for the UK automotive industry                        | Jonathan Horsley, Lead Technologist - Low Carbon Vehicles Innovation Platform, Innovate UK | • Explore the delivery plan for off-highway vehicles and IDP11  
• Gain insight into the latest innovations in design, production, deployment and business  
• Understand the investment criteria with the UK’s innovation agency |
| 11:30 | Ensuring product excellence in performance and reliability               | Neil Gladstone, Bus Market Engineer, ZF Service UK | • Hear the latest innovation from ZF in the field of driveline and chassis technology  
• Understand the ZF Step2 development piece and reporting on cause analysis  
• Explore the methods in improving fuel efficiency within gearboxes |
| 12:00 | Panel discussion: Transmission and driveline efficiency                  | Vladimir Vantsevich, Director, Vehicle and Robotics Engineering Laboratory, The University of Alabama at Birmingham | • Question the latest modelling and simulation technologies and the impact they can have on your business  
• Explore the challenges of powertrain at high combustion pressures  
• Gain insight into how to navigate through the design options |
| 12:30 | Networking lunch                                                         |                                                                         |                                                                                                |
| 13:30 | Critical transmission technologies for 2025 and beyond                   | Lee Sykes, Global Director – Driveline & Transmission Systems, Ricardo | • Gain insight into Ricardo’s perspective for layshaft and planetary transmissions with hybrid variants  
• Adapting known and novel technologies for passenger car, off-highway and truck sectors  
• Quantify the CO₂ impact for transmission variants and subsystems – myths, results and process |
TRANSMISSIONS, POWERTRAINS AND INTEGRATED DRIVELINES FOR ON/OFF-HIGHWAY APPLICATIONS
Confirmed Senior Representative, JCB
• How to avoid high expenditure on R&D and testing, through integrated drivelines
• Hear insight into JCB’s perspective on the financial impact of carbon emissions targets
• Discover the secret to streamlining production and reducing inventory

PANEL DISCUSSION: ADDRESSING REAL WORLD FUEL CONSUMPTION
Lee Sykes, Global Director – Driveline & Transmission Systems, Ricardo
Jonathan Horsley, Lead Technologist - Low Carbon Vehicles Innovation Platform, Innovate UK
• Address the robustness of hybrid and electric vehicles - can they live up to the hype?
• Incorporating emissions targets into the initial design process
• How to access the latest technologies with mass production and reduced costs

WHEEL POWER OPTIMISATION AND DRIVELINE SYSTEM DESIGN WITH TERRAIN VEHICLES
Vladimir Vantsevich, Director, Vehicle and Robotics Engineering Laboratory, The University of Alabama at Birmingham
• Explore the mobility, energy efficiency and stability of terrain multi-wheel vehicles
• Understand the optimisation of wheel power distribution and driveline system design
• Gain insight into unique applications including military trucks, construction equipment and farm tractors

VLADIMIR VANTSEVICH
DIRECTOR, VEHICLE AND ROBOTICS ENGINEERING LABORATORY, THE UNIVERSITY OF ALABAMA AT BIRMINGHAM
Vladimir Vantsevich recently joined the UAB Department of Mechanical Engineering as a Professor and Director of Vehicle and Robotics Engineering Laboratory. Prior to UAB he was a Professor and the founding Director of the M.Sc. in Mechatronic Systems Engineering Program and the Laboratory of Mechatronic Systems at Lawrence Technological University, Michigan. He was also a co-founder and the Associate Director of the LTU Automotive Engineering Institute.

Find out more about our speakers at www.imeche.org/events/S6187
• This programme is subject to change.
• The Institution is not responsible for the views or opinions expressed by individual speakers.

SPEAKERS AND CONTRIBUTORS

JONATHAN HORSLEY
LEAD TECHNOLOGIST - LOW CARBON VEHICLES INNOVATION PLATFORM, INNOVATE UK
Jonathan Horsley is the Lead Technologist for the Low Carbon Vehicles Innovation Platform within the Technology Strategy Board. Prior to joining the TSB in November 2010, he was a self-employed carbon reduction consultant for two years, having read a Carbon Management MBA at University of East Anglia in 2008. Before then, he held a number of posts over a 17-year employment with Zytek including leading the EV/HEV group from 1998-2002 and, most recently, the JV with Continental GmbH until he left in December 2007.

JON HILTON
PRODUCT DEVELOPMENT & SALES DIRECTOR, TOROTRAK
Jon Hilton is the Product Development & Sales Director of Torotrak PLC. Jon started his engineering career at Rolls-Royce where he designed gas turbine engines for helicopters. A 15-year career in Formula One followed, culminating in the role of Technical Director Engine Division at Renault F1. In January 2007 Jon started Flybrid Automotive to develop high-speed flywheel based kinetic energy recovery systems. In January 2014 Torotrak acquired Flybrid Automotive and Jon was retained in a Board Director role. Jon is a Vice President of the Institution of Mechanical Engineers (IMechE).

LEE SYKES
GLOBAL DIRECTOR – DRIVELINE & TRANSMISSION SYSTEMS, RICARDO
Lee Sykes is the Global Director for Driveline & Transmission Systems at Ricardo, a world-class, fully integrated capability company for driveline and transmission system engineering. Its engineers have been responsible for an extremely wide range of products on a global basis, from cost-optimised manual transmissions for developing markets to advanced and high performance systems such as the dual clutch transmission of the Bugatti Veyron.

VLADIMIR VANTSEVICH
DIRECTOR, VEHICLE AND ROBOTICS ENGINEERING LABORATORY, THE UNIVERSITY OF ALABAMA AT BIRMINGHAM
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27 January 2015
Coventry

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FEES AND CHARGES Please complete the appropriate box.

Registration fees include entry to the sessions, refreshments, lunch and a copy of the event proceedings.

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<td>£230.00+VAT</td>
<td>£275.00+VAT</td>
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Payment must accompany this registration form. Registration will be confirmed only on receipt of full payment.

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3 Phone: +44 (0)20 7973 1258
4 Post completed booking form to: Event Registrations Institution of Mechanical Engineers 1 Birdcage Walk London SW1H 9JJ
5 Fax: +44 (0)20 7304 6845

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