

CONNECTED AND AUTOMATED VEHICLE ENGINEERING 2017: ENGINEERING FOR ADOPTION OF AUTONOMY ON THE ROAD

Institution of
**MECHANICAL
ENGINEERS**

IET The Institution of
Engineering and Technology

KEY SPEAKERS INCLUDE:

Iain Forbes
**Head of the Centre for Connected
and Autonomous Vehicles**

Francois Guichard, Manager,
UN Secretary – Active Safety –
Mechanical Engineer
**United Nations Economic
Commission for Europe**

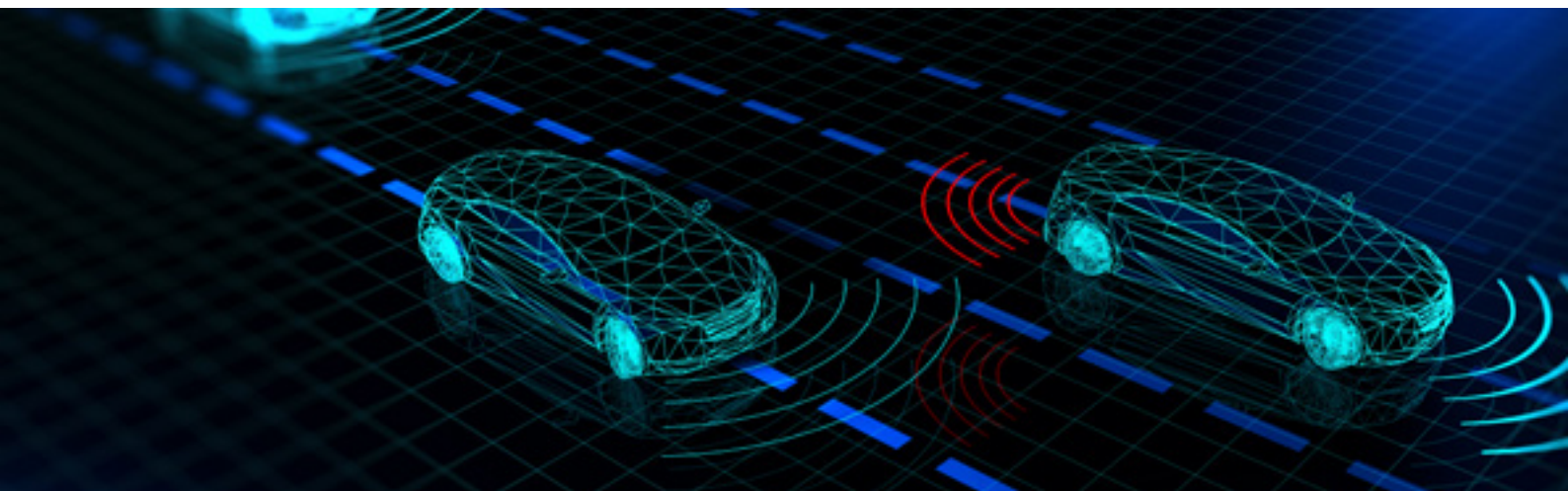
Nigel Clarke, Manager -
Peerless Effortless All-Terrain
Vehicle Mega-Project and
Advanced Sensing
Jaguar Land Rover Research

Simon Morley, Lead Project
Manager for MOVE_UK Project,
Original Equipment Division
Robert Bosch Limited

Julian Turner, Managing Director
Westfield Sportscars Limited

25–26 September 2017
Hotel La Tour, Birmingham

Conference



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CONNECTED AND AUTOMATED VEHICLE ENGINEERING 2017: ENGINEERING FOR ADOPTION OF AUTONOMY ON THE ROAD

25–26 September 2017, Hotel La Tour, Birmingham

GAIN KEY INSIGHTS ACROSS THE ELECTRICAL AND MECHANICAL SPHERES AT CONNECTED AND AUTOMATED VEHICLE ENGINEERING 2017.

The route towards fully automated vehicles on the road raises multiple engineering challenges. Understand the limitations of sensor systems and processing technologies to develop intelligent and adaptable autonomous vehicles. Improve your understanding of functional safety, human factors and user system interaction for safe road adoption. Hear from those conducting vehicle testing to ensure reliability and strengthen cyber security.

KEY PROGRAMME HIGHLIGHTS:

- Regulatory and governmental updates from the **Centre for Connected and Autonomous Vehicles** and the **United Nations Economic Commission for Europe**
- **Jaguar Land Rover** share an update on sensor technologies for all terrain vehicles
- Hear about the latest successes in UK-based trials and future plans from project leaders across the country and **Transport Systems Catapult**
- Understand how automotive manufacturers are accelerating automated driving through connected validation and big data analysis from **Robert Bosch Ltd**
- Gain insight on driver acceptance and human factors and find out what impact this has on vehicle adoption from **Transport for London, TRL** and the **University of the West of England**

ATTEND THIS EVENT TO:

- Take the unique opportunity to hear engineering insights from the **Institution of Mechanical Engineers** and the **Institution of Engineering and Technology**
- Hear from key automotive manufacturers including **Jaguar Land Rover, Robert Bosch** and **Westfield Sportscars**
- Benefit from the insightful panel discussions including core projects trialling autonomy with **GATEway in Greenwich, Venturer in Bristol** and the **Autodrive Project**
- Receive guidance from governmental bodies including the **Centre for Connected and Autonomous Vehicles** and the **United Nations Economic Commission for Europe**
- Network and engage with colleagues, peers and industry innovators from across the field of connected vehicles and automated driving

WITH THANKS TO THE TECHNICAL ADVISORY BOARD:

Tony Pixton, Managing Director
Tony Pixton Consulting Limited

Siddhartha Khastgir, Chartered Engineer
PhD Researcher: Automated Vehicles

Alan Stevens, Chief Scientist and Research Director
TRL

Neil Fulton, Programme Director
Transport Systems Catapult

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PROGRAMME

DAY 1	MONDAY 25 SEPTEMBER 2017
10:00	REGISTRATION AND REFRESHMENTS
10:25	CHAIRS OPENING REMARKS Alan Stevens, Chief Scientist and Research Director, TRL
	ONGOING PROJECTS: UPDATES AND RESULTS FROM THE DELIVERY OF ON-ROAD AUTONOMOUS VEHICLE TRIALS IN THE UK
10:30	AUTODRIVE: COVENTRY AND MILTON KEYNES Mike Waters, Head of Policy and Strategy, Transport for West Midlands Neil Fulton, Programme Director, Transport Systems Catapult
10:50	GATEWAY: GREENWICH Richard Cuerden, Chief Scientist, Engineering & Technology, TRL
11:10	VENTURER: BRISTOL Tony Pipe, Deputy Director of the Bristol Robotics Laboratory, University of the West of England
11:30	NETWORKING REFRESHMENT BREAK
11:50	UK CONNECTED VEHICLE TRIALS: RESULTS AND NEXT STEPS Mike Waters, Head of Policy and Strategy, Transport for West Midlands Phil Proctor, Future Technologies Team Leader at Highways England, Highways England
12:15 PANEL	HOW SUCCESSFUL HAVE THE CURRENT TRIALS BEEN AND IS THE UK DOING ENOUGH IN AUTONOMOUS VEHICLE TECHNOLOGY? Vinnett Taylor, Head of IoT Specialist, O2 Neil Fulton, Programme Director, Transport Systems Catapult Tony Pipe, Deputy Director of the Bristol Robotics Laboratory, University of the West of England Phil Proctor, Future Technologies Team Leader at Highways England, Highways England
12:45	NETWORKING LUNCH
	GOVERNMENT INSIGHT
13:45	THE LATEST UPDATES ON THE RELEVANT INTERNATIONAL REGULATIONS, AGREEMENTS AND CONVENTIONS FROM THE UNECE Francois Guichard, Manager, UN Secretary – Active Safety – Mechanical Engineer, United Nations Economic Commission for Europe
14:15	UK GOVERNMENT STRATEGY ON CONNECTED AND AUTONOMOUS VEHICLES Iain Forbes, Head of the Centre for Connected and Autonomous Vehicles <ul style="list-style-type: none"> • How the UK Government is approaching reform of regulation to prepare for connected and autonomous vehicles • The Government's work with industry to ensure the UK is a world class development location for innovative technology • Some of the challenges that remain to be solved to enable the benefits of new vehicles technology
14:45 PANEL	LEGISLATION, REGULATION AND STANDARDS FOR TESTING Iain Forbes, Head of the Centre for Connected and Autonomous Vehicles Alan Thomas, Director, CAVT Ltd Ben Gardner, Associate, Pinsent Masons LLP <ul style="list-style-type: none"> • Interaction between autonomous vehicle design and testing standards • Current legislation and ensuring compliance • Making regulation fit for purpose
15:15	NETWORKING REFRESHMENT BREAK
	HUMAN FACTORS AND HUMAN MACHINE INTERFACE
15:45	CAMERA BASED MONITORING FOR INCREASED VEHICLE AUTONOMY Jim Braithwaite, Human Machine Interface Research Manager, Jaguar Land Rover
16:15 HOTSPOT	DRIVER ACCEPTANCE AND HUMAN FACTORS Iain Macbeth, Automotive & Intelligent Mobility Programme Manager, Transport for London Nick Reed, Head of Mobility R&D, Robert Bosch Ltd Tony Pipe, Deputy Director of the Bristol Robotics Laboratory, University of the West of England <ul style="list-style-type: none"> • Addressing driver acceptance in the vehicle and on the road • Trust and acceptance • The implications for jobs and society • Insurance and responsibility with increasingly autonomous vehicles
17:00	CHAIR'S CLOSING REMARKS
17:05	END OF DAY ONE

PROGRAMME

DAY 2	TUESDAY 26 SEPTEMBER 2017
09:00	REGISTRATION AND REFRESHMENTS
09:25	CHAIR'S OPENING REMARKS Tony Pixton, Managing Director, Tony Pixton Ltd
09:30 HOTSPOT	AUTONOMOUS VEHICLES AND THEIR IMPACT ON THE FUTURE Paul Markwick, Managing Director of Operations, The Manufacturing Technology Centre Steve Croyley, Chief Editor, Autocar Geoff Davis, Chief Strategy Officer, HORIBA MIRA Jim Campbell, Chair, Connected Autonomous Vehicles Project
	FUNCTIONAL SAFETY AND RELIABILITY
10:10	SAFETY CONSIDERATIONS FOR HIGHLY AUTOMATED VEHICLES John Birch, Chief Engineer - Functional Safety, HORIBA MIRA
10:40	DESIGNING AND TESTING SAFETY CRITICAL, FAIL SAFE SOFTWARE Kate Thorne, Pilot Engineer, MathWorks
11:10	AUTOMATION IS ON ITS WAY WITH SAFETY AND CONVENIENCE Maurizia Bagnato, Sales Director, Robert Bosch Limited
11:40	NETWORKING REFRESHMENT BREAK
	TESTING AND VALIDATION
12:10	APPROPRIATE TESTING OF CONNECTED AND AUTONOMOUS VEHICLES Paul Jennings, Professor, WMG International Digital Laboratory
12:40	MOVE UK: ACCELERATING AUTOMATED DRIVING BY CONNECTED VALIDATION AND BIG DATA ANALYSIS Simon Morley, Lead Project Manager for MOVE-UK Project, Original Equipment Division, Robert Bosch Limited
13:10	THE INTACT PROJECT: INNOVATIVE TESTING OF AUTONOMOUS VEHICLES Simon Brewerton, Chief Technical Officer, RDM Group
13:40	NETWORKING LUNCH
	SENSOR TECHNOLOGIES, SENSING AND RESPONSE
14:40	AUTONOMY: ALL TERRAIN, NO BARRIERS Nigel Clarke, Manager - Peerless Effortless All-Terrain Vehicle Mega-Project and Advanced Sensing, Jaguar and Land Rover Research
15:10	THE CHALLENGES OF NAVIGATING COMPLEX URBAN ENVIRONMENTS: ULTRA-POD SELF-DRIVING PROTOTYPE Julian Turner, Managing Director, Westfield Sportscars Limited Jim Hutchinson, CEO, Fusion Processing
15:40	NETWORKING REFRESHMENT BREAK
	CYBER SECURITY AND CONNECTIVITY
16:10	ADDRESSING CHALLENGES IN ENSURING CYBER SECURITY FOR AUTONOMOUS VEHICLES Peter Davies, Technical Director, Thales e-Security
16:40 PANEL	ADDRESSING CYBER SECURITY ISSUES WITH EXAMPLES AND CASE STUDIES Peter Davies, Technical Director, Thales e-Security Jeremy Bryans, Research Fellow in Automotive Cybersecurity: Centre for Mobility and Transport, Coventry University Eric Chan, Global Technical Expert – Connected & Automated Vehicles, Ricardo UK <ul style="list-style-type: none"> • The security challenges for autonomous vehicles • Ethical dilemmas for Artificial Intelligence: when a crash is unavoidable
17:10	CHAIR'S CLOSING REMARKS
17:15	END OF CONFERENCE

For the most up-to-date and detailed programme for the event, please visit:
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- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

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WHO SHOULD ATTEND?

ENGINEERS WITH DIRECT OR INDIRECT INTEREST IN CONNECTED AND AUTOMATED DRIVING AT THE FOLLOWING TYPES OF ORGANISATIONS...

- Vehicle OEMs
- Tier 1 and Tier 2 suppliers
- Sensor and Advanced Driver Assistance Systems (ADAS) suppliers
- Software companies
- Computer Hardware companies

...AS WELL AS THOSE PROVIDING ANY OF THE FOLLOWING:

- Vehicle Automation
- Sensors
- LiDAR Technology
- Reliability
- Research
- Consulting
- Automated Driving
- Human Machine Interface (HMI)
- Strategy / Implementation
- Product Liability
- Software Development
- Vehicle-to-Everything (V2X) Communication
- Components
- Testing
- Advanced Driver Assistance Systems (ADAS)
- Connected Drive
- Vehicle Safety
- Security
- Simulation and Modelling

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E: sponsorship@imeche.org

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FEES AND CHARGES

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

Delegate Type	Standard Rates
Member, Institution of Mechanical Engineers / Institution of Engineering and Technology / Supporting Organisation	£450 + VAT = £540
Non-member	£550+ VAT = £660
Student/Retired	£250 + VAT = £300

THREE WAYS TO BOOK

1 Online:
www.theiet.org/cave

2 Email:
eventenquiries@imeche.org

3 Phone:
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Please read the information listed below as each booking is subject to the Institution's standard terms and conditions.

CONDITIONS OF BOOKING

Completed application forms should be returned to the address above, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

SPECIAL REQUIREMENTS

Please inform us of any special requirements, ie dietary or access, on the relevant section of the booking form or email eventenquiries@imeche.org

Cancellation

For a refund (minus £25+VAT admin charge), cancellations must be received at least 30 days prior to the event. Replacement delegates are welcome at any time. The Institution reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. In the event that the Institution postpones an event for any reason and the delegate is unable or unwilling to attend on the rescheduled date, they will receive a full

refund of the fee paid. The Institution is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. The Institution shall assume no liability whatsoever if this event is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For the purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.

Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. The Institution reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on the event's webpage as soon as possible.

LIABILITY

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

CONFERENCE VENUE

Hotel La Tour
Albert Street
Birmingham
B5 5JE

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3RD BUS AND COACH ENGINEERING SEMINAR

19 September 2017, London

This seminar will focus on the reliability and whole life costs associated with low emission buses, based on real experiences in the field. Learn directly from bus operators and manufacturers whilst engaging with budget holders and engineering decision makers.

www.imeche.org/bus



VEHICLE RIDE AND HANDLING: SPECIALIST ENGINEERING FOR AN IMPROVED EXPERIENCE

18 October 2017, Birmingham

Hear from pioneers in this sector to find out how they are improving vehicle dynamics and ensuring expectations are met in vehicle control and ride comfort. Network with OEMs, academic researchers and Tier 1 suppliers to discuss the current state of the art and future technology roadmap for vehicle ride and handling.

www.imeche.org/vehiclerideandhandling

The Institution of Mechanical Engineers organises over 120 events a year, including free-to-attend lectures as well as conferences, seminars, annual luncheons and dinners. Please visit www.imeche.org/events for the complete list of events.

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