AUTOMATED AND AUTONOMOUS VEHICLES: OVERCOMING ENGINEERING CHALLENGES FOR FUTURE MOBILITY

20 June 2019
MIRA Technology Institute, Nuneaton

Seminar

More details available at:
www.imeche.org/autonomousvehicles

SEMINAR SPEAKERS INCLUDE:
Michael Steinberg, Head of Strategy, Programme and Communications
Centre for Connected and Autonomous Vehicles (CCAV)
Hayder Wokil, Driver Support Automated Driving Director
Volvo Trucks
Paul Newman, Co-founder, CTO
Oxbotica
Chris Reeves, Head of CAV
HORIBA MIRA
AUTOMATED AND AUTONOMOUS VEHICLES: OVERCOMING ENGINEERING CHALLENGES FOR FUTURE MOBILITY

20 June 2019, MIRA Technology Institute, Nuneaton

ACCORDING TO RECENT RESEARCH, THE AUTONOMOUS VEHICLES MARKET COULD BE WORTH $10.40 BILLION BY 2031 AND PIONEERING PROJECTS HAVE BEEN FUNDED TO MANAGE THE REMAINING SIGNIFICANT BARRIERS TO A FULLY AUTONOMOUS FUTURE.

Join the Automated and Autonomous Vehicles 2019 seminar to learn how current and planned autonomous projects are addressing key challenges within this ever-growing industry.

Ranging from the legal, regulatory and technological developments through to testing and validation of autonomous systems, gain valuable insights into the end to end development of autonomous systems from those at the forefront of the industry. This is an opportunity to hear directly from the Centre for Connected and Autonomous Vehicles about the future roadmap to ensure you are ready for the next funding competitions.

Discuss the future of the industry with a variety of stakeholders, including OEMs, CCAV funded projects, autonomous system developers, autonomous software providers and more. Plus, see the technology in action and be inspired by a live demonstration of the Formula Student AI vehicle.

ATTEND THIS SEMINAR TO:

• Hear from key pioneers of autonomous vehicles projects including Volvo Trucks, Bristol Robotics Laboratory, Connected Places Catapult and HORIBA MIRA
• Gain insight into the latest progress in validation and verification testing to ensure successful implementation and integration onto our roads
• Learn about how the industry is focused on human factor orientated design both on the road and behind the wheel when developing autonomous systems
• Experience the next generation of engineering through a live demonstration of a Formula Student AI car
• Network with representatives from OEMs, CCAV funded projects, autonomous system developers, autonomous software providers

MEMBER CREDITS:
Aaron Mandalia, Autonomous Vehicle Engineer
Jaguar Land Rover
Lisa Bingley, Operations Director
MIRA Technology Institute
Madeline Cheah, Cyber Security Innovation Lead
HORIBA MIRA

KEY PROGRAMME HIGHLIGHTS:

• The Law Commission provide an update on their review of the regulatory framework for the safe deployment of automated vehicles in the UK
• Volvo Trucks share their automation story so far including truck industry automation levels and other industries
• Connected Places Catapult discuss the creation of a scenario library and a smart verification framework
• Oxbotica highlight the key challenges and opportunities of the changing landscape of transport
• HORIBA MIRA share their work in cooperative driving in mixed environments
**THURSDAY 20 JUNE 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>REGISTRATION AND REFRESHMENTS</td>
</tr>
</tbody>
</table>
| 09:00 | **CHAIR’S OPENING REMARKS**  
George Filip, Knowledge Transfer Manager Connected & Autonomous Vehicles, Knowledge Transfer Network |
| 09:10 | **CURRENT AUTONOMOUS PROGRESS**                                                            |
|       | **CONNECTED AND AUTONOMOUS VEHICLE POLICY LANDSCAPE, FUTURE FUNDING AND ROADMAP**  
Michael Steinberg, Head of Strategy, Programme and Communications, Centre for Connected and Autonomous Vehicles (CCAV) |
| 09:40 | **AUTOMATION INSIGHTS FROM VOLVO**                                                          |
|       | Hayder Wokil, Driver Support Automated Driving Director, Volvo Trucks                       |
| 09:45 | **FINDING THE RIGHT BALANCE BETWEEN SIMULATION AND REAL-WORLD TESTING IN VERIFICATION AND VALIDATION (V&V) FOR THE CAV SECTOR**  
Tony Pipe, Deputy Director, Bristol Robotics Laboratory |
| 10:30 | **QUESTION AND ANSWER SESSION**                                                            |
| 10:45 | NETWORKING REFRESHMENT BREAK                                                                |
| 11:15 | **VALIDATION AND VERIFICATION OF TECHNOLOGY**                                              |
|       | **REVIEWING THE REGULATORY FRAMEWORK FOR THE SAFE DEPLOYMENT OF AUTOMATED VEHICLES IN THE UK**  
Jessica Uguccioni, Lawyer, Law Commission  
Connor Champ, Research Associate, Law Commission |
| 11:40 | **LATEST APPLICATIONS OF TESTING AND VALIDATION**                                          |
|       | A Representative, Warwick Manufacturing Group                                               |
| 12:05 | **ENSURING CAVS ARE SAFE: CREATING A SCENARIO LIBRARY AND A SMART VERIFICATION FRAMEWORK**  
Zeyn Saigol, Principal Technologist, Connected Places Catapult |
| 12:30 | **QUESTION AND ANSWER SESSION**                                                            |
| 12:45 | NETWORKING LUNCH                                                                            |
| 13:45 | **DESIGNING WITH HUMAN FACTORS IN MIND**                                                    |
|       | **DRIVEN TO BE DRIVERLESS**  
Paul Newman, Co-founder, CTO, Oxbotica                                                        |
| 14:10 | **COOPERATIVE DRIVING IN MIXED ENVIRONMENTS**                                              |
|       | Pawel Jaworski, Senior Research Engineer, HORIBA-MIRA                                       |
| 14:35 | **DEVELOPMENTS IN IDENTIFICATION TECHNOLOGY**                                              |
|       | **DEVELOPMENTS IN SENSOR INTEGRATION**                                                     |
|       | Representative, AVL                                                                        |
| 15:00 | **MOVING TOWARDS A MORE CONNECTED FUTURE**                                                  |
|       | Chris Reeves, Head of CAV, HORIBA MIRA                                                      
Zeyn Saigol, Principal Technologist, Connected Places Catapult  
Tony Pipe, Deputy Director, Bristol Robotics Laboratory  
Natasha Merat, Chair in Human Factors of Transport Systems, Fellow of the TRL Academy, Leader, Human Factors and Safety Group, Institute for Transport Studies, University of Leeds |
| 15:20 | NETWORKING REFRESHMENT BREAK                                                                |
| 15:50 | **FORMULA STUDENT AI CAR DEMONSTRATION**                                                    |
|       | Take the opportunity to see one of the autonomous vehicles in action through a live demonstration. The car will be competing in the Formula Student, the largest educational engineering competition in the UK inspiring the next generation of engineers. |
| 17:00 | END OF SEMINAR                                                                              |
HOW TO BOOK YOUR PLACE

FEES AND CHARGES

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

<table>
<thead>
<tr>
<th>Delegate Type</th>
<th>STANDARD RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member, Institution of Mechanical Engineers / Supporting Organisation</td>
<td>£300 + VAT = £360</td>
</tr>
<tr>
<td>Non-member</td>
<td>£90 + VAT = £108</td>
</tr>
<tr>
<td>Full-time Student/Retired</td>
<td>£110 + VAT = £132</td>
</tr>
</tbody>
</table>

THREE WAYS TO BOOK

1. online: www.imeche.org/autonomousvehicles
2. email: eventenquiries@imeche.org
3. phone: +44 (0)20 7973 1251

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, for loss or damage to their luggage and/or personal belongings.

CONFERENCE VENUE

MIRA Technology Institute
MIRA Technology Park
1 Eastern Avenue
Nuneaton
CV10 0UX

SPONSORSHIP & EXHIBITION OPPORTUNITIES

GET INVOLVED

Attending this event as either an exhibitor or sponsor will give you the opportunity to display your solutions, services and products to the right people at the right time.

BENEFITS OF SPONSORING

• Showcase new products
• Raise awareness of your operation
• Improve perception of your brand
• Influence other organisations’ spending plans

This is an excellent way to enhance your company profile and communicate effectively to your target audience.

For more information please call +44 (0)20 7973 1309 or email sponsorship@imeche.org

FORMULA STUDENT 2019

19-21 July 2019, Silverstone

Watch all the action as student teams from around the world build and race petrol, electric, hybrid and autonomous vehicles at the home of British Motorsport.

www.formulastudent.com

REDUCING DRIVING EMISSIONS: ENSURING COMPLIANCE WITH RDE AND WLTP

9 July 2019, One Birdcage Walk, London

Attend to hear about the latest testing techniques and technologies to ensure your processes are efficient and mitigate the risk of failure.

www.imeche.org/emissions

OTHER EVENTS TO LOOK FOR

FOLLOW US ON TWITTER

TWITTER.COM/IMECHEEVENTS

GET INVOLVED

We are the market leader among professional engineering bodies. We’ve been supporting engineers since 1847 and have 120,000 members in over 140 countries, working in the world’s most dynamic and important industries. Our comprehensive events programme brings you the latest research and best practice from industry and academia.

FORWARD THINKING