

# **CALL FOR PAPERS: BEYOND CONVENTIONAL POWERTRAIN: SVT 2015**

Institution of  
**MECHANICAL  
ENGINEERS**

16-17 June 2015  
University of Warwick, Coventry  
[www.imeche.org/events/C6188](http://www.imeche.org/events/C6188)

Automotive Division  
**Conference**



## **CALL FOR PAPERS**

Submit your abstract today to ensure your research is considered.

Submission deadline: **12 January 2015**

# BEYOND CONVENTIONAL POWERTRAIN

16-17 June 2015, University of Warwick, Coventry

## **SUSTAINABLE VEHICLE TECHNOLOGIES (SVT) 2015 WILL CONSIDER THE DEVELOPMENTS IN VEHICLE TECHNOLOGY AND INNOVATIVE PROPULSION SYSTEMS FOR THE DELIVERY OF LOW-CARBON VEHICLES.**

SVT 2015 will examine the advances in propulsion and vehicle efficiency technologies, with a view to understanding the development of systems for carbon dioxide reduction over the entire vehicle lifecycle.

The conference develops the themes studied at the 2009 Low Carbon Vehicle conference and SVT 2012, which considered all areas of environmental pollution in addition to the goals for delivering low-carbon vehicles. SVT 2015 will build on these themes and consider the developments in vehicle technology that are shaping the latest propulsion systems.

### **CALL FOR PAPERS:**

Showcase your professional knowledge, research and expertise alongside the best from industry and academia by producing and presenting a paper at the Institution of Mechanical Engineers' Sustainable Vehicle Technologies conference.

To be considered for this programme you will need to submit a 250 word abstract of your presentation. Topics to be addressed can include:

#### **PROPULSION SYSTEMS**

- Alternative propulsion systems including hybrids, electric and mechanical systems
- Engine downsizing and power-pack design
- Hydrogen and fuel cells
- CAE and simulation methodologies for propulsion system optimisation

#### **VEHICLE EFFICIENCY**

- Rolling resistance and aerodynamic improvements
- Reduction or management of parasitic losses and hotel loads including HVAC and electrical systems
- Weight reduction technology using lightweight or high-strength materials
- Simulation and optimisation methods for vehicle efficiency measurement across various cycles
- Human machine interface and telematics systems for energy management
- Energy recuperation
- Thermal comfort including integrated systems for thermal management
- Total resource usage including material and business sustainability, lifetime CO<sub>2</sub> analysis and low CO<sub>2</sub> processes for product development

Find out more and submit your work at [www.imeche.org/events/C6188](http://www.imeche.org/events/C6188)

# **BEYOND CONVENTIONAL POWERTRAIN: SVT 2015 WILL COVER THREE MAIN TOPICS:**

The conference will be structured around the notion of a split between the efficiencies of both the vehicle and the propulsion system. Specifically a vehicle platform will require a certain amount of energy to propel it over a particular drive cycle.

A more efficient vehicle platform will require less propulsion energy to take it over the cycle and/or might have lowered parasitic or hotel loads.

The more efficient the propulsion system is over a specific cycle the more energy will be disposed towards propulsion and waste will be minimised.

There will also be interest in how developing legislation has driven and is driving technology.

## **TECHNOLOGIES**

The conference will have a powertrain focus, inviting contributions from a range of sectors including two-wheelers, passenger cars, light duty commercial, PSV, HGV, and non-road mobile machinery. Technologies to discuss include conventional, hybridised and electric powertrains, as well as alternative approaches and driver information systems.

We would love to hear contributions that document the interactions between vehicle and driver behaviour in the real world operating environment.

## **DEVELOPMENT METHODS**

We are looking for contributions detailing the effect of regulation changes on test and development methods, test equipment and instrumentation including Portable Emission Measurement Systems (PEMS) and laboratory representations of real world behaviour, for example the experiences of/ tools used by OEMs to respond to EU6.2 in the vehicle development process.

## **FUTURE DEVELOPMENTS**

Widening the scope of emissions-type approval to consider full life-cycle assessment, life-cycle assessment of EVs and hybrids, this section will consider the recent research and future prospects of sustainable vehicle technology.

As powertrain technologies and fuel sources diversify, measures of vehicle emissions taken at the tailpipe will not account for CO<sub>2</sub> emissions and wider environmental impacts arising from raw material extraction, transportation, manufacture, power generation, use, maintenance and disposal. We ask what are the appropriate techniques to assess these impacts, how can we make sure we are measuring the right things and aiming at the right targets and what influence will improved data in this area have on future powertrain architectures?

# HOW TO SUBMIT

Your abstract should outline the contents of a 20 minute presentation and include:

- Your full name and contact details
- A working title for your presentation
- A 250 word summary of the topic you intend to cover
- A 50 word outline of how your research can be applied to industry

## THE DEADLINE FOR ABSTRACTS IS 12 JANUARY 2015

Please email your proposal with full contact details to:

**s\_clayton@imeche.org**

Alternatively please call **Sian Clayton** on **+44 (0)20 7973 1245**

Following this deadline, the Organising Committee will select the authors they wish to invite to submit a full draft paper and contact them individually.

All accepted papers will be published in a soft-bound volume available to all conference delegates.

We encourage authors to submit their work to Proceedings of the IMechE, Part D: Journal of Automobile Engineering, or the International Journal of Engine Research, which can both be accessed from <http://journals.publishing.com>. Work submitted to the Journals needs to be an extension of the paper to the conference and be original and innovative. This will then undergo a full peer-review.

## EVENT TIMELINE:

- Deadline for abstracts 12 January 2015
- Draft Papers due 1 April 2015
- Refereeing completed by 17 April 2015
- Final Papers due by 8 May 2015
- Event 16-17 June 2015

## IMECHE ORGANISING COMMITTEE

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