

# **POWERTRAIN SYSTEMS AND FUELS GROUP ANNUAL LECTURE: THE INTERNAL COMBUSTION ENGINE – AN OUTDATED OBJECT?**

Institution of  
**MECHANICAL  
ENGINEERS**

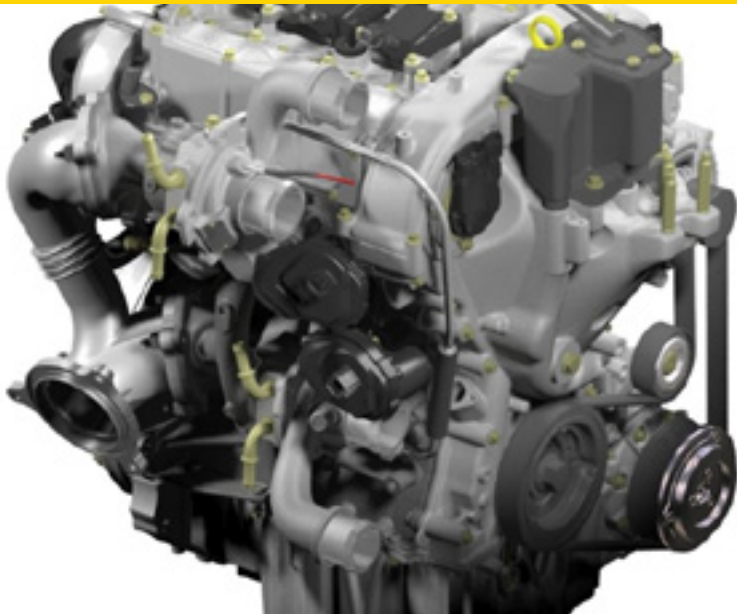
**13 November 2018**

Institution of Mechanical Engineers, London

**PRESENTED BY:**

Carsten Weber

Manager, Powertrain Research & Advanced Engineering Europe  
**Ford**



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**Lecture**  
Powertrain Systems and Fuels Group

# THE INTERNAL COMBUSTION ENGINE – AN OUTDATED OBJECT?

13 November 2018, Institution of Mechanical Engineers, London

## JOIN THE PSFG ANNUAL LECTURE TO DISCUSS THE FUTURE OF AUTOMOTIVE PROPULSION SYSTEMS.

In principle the combustion engine is a highly developed, sophisticated machine that transfers chemical into mechanical energy following the natural laws of science. In the ongoing discussion it is under enormous pressure with regard to cleanliness and environmental friendliness.

Often the fact that efficiency and emissions are related to the chemical properties of the used energy carrier, is neglected. Furthermore, efficiency and emissions are often inversely proportional to each other and cannot be optimized simultaneously.

A very promising alternative to classical fuels based on fossil sources is the usage of sustainable fuels produced on basis of renewable energy. Recent developments in the field power to gas and power to liquid are predestined for a wider use in the energy sector including automotive applications.

The majority of the next generation propulsion systems will continue to have an internal combustion engine as an integral part of an electrified system to ensure the best compromise regarding performance, operating range, cleanliness and cost. Therefore, the ongoing optimisation of the internal combustion engine is essential for the future of automotive propulsion systems.

## PROGRAMME

**18:00** Registration and refreshments

**18:30** Lecture begins

**19:10** Q&A session

**19:30** Lecture ends

FOR MORE INFORMATION:

VISIT: [www.imeche.org/PSFGlecture2018](http://www.imeche.org/PSFGlecture2018)

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**MANAGER POWERTRAIN RESEARCH**  
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### **2009 – Present**

Manager Powertrain Research  
& Advanced Engineering Europe

### **2007 – 2009**

Chief Program Engineer, Midsize Gasoline  
Engines, Powertrain Engineering  
(International Assignment in United  
Kingdom)

### **2004 – 2007**

Manager Powertrain Testing  
& Vehicle Testing

### **2002 – 2004**

Supervisor Powertrain Research  
& Advanced Engineering

### **2000 – 2002**

Technical Specialist Research  
& Advanced Racing Europe

### **1996 – 2000**

Test Specialist & Team Leader Powertrain  
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### **1994 – 1996**

Test Engineer Powertrain Testing