

THERMAL ENGINEERING FOR TRANSPORT: DESIGN, MEASUREMENT AND OPTIMISATION

Institution of
**MECHANICAL
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27 APRIL 2018

13 June 2018
Hyatt Regency Birmingham

SEMINAR SPEAKERS INCLUDE:

Cedric Rouaud, Chief Engineer
Ricardo UK

Neil Glover, Head of Materials Research
Rolls-Royce

Arun Muley, Thermal Management Lead,
Power Systems
Boeing Research and Technology

Ali Tabbal, Chief Aerodynamics Engineer
ALSTOM S.A

Richard Owen, Senior Engineer,
Thermal Energy Management
Jaguar Land Rover



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THERMAL ENGINEERING FOR TRANSPORT: DESIGN, MEASUREMENT AND OPTIMISATION

13 June 2018, Hyatt Regency Birmingham

THIS SPECIALIST ONE-DAY SEMINAR ADDRESSES THE DEVELOPMENTS IN THERMAL MANAGEMENT ACROSS THE AEROSPACE, AUTOMOTIVE AND RAIL SECTORS.

With pressure from both government and consumers to make vehicles more efficient, join thought leaders across transport to expand your knowledge of innovative new solutions and approaches. This event will showcase the latest technological advances in heat transfer, energy management, materials engineering and the integration and control of thermal systems within different vehicles.

Learn from experts adapting to the changing requirements of electrified vehicles. Understand how design, simulation and testing are adapting across manufacture and operation for aviation, automobiles and high speed rail. The one day seminar provides a great opportunity to network with technical experts and leaders within industry.

KEY PROGRAMME HIGHLIGHTS:

- **Jaguar Land Rover** discuss the role of thermal energy management in reducing automotive energy consumption
- **Airbus** reveal how their engineers are implementing novel integration of models for aircraft thermal assessment
- **Alstom** discuss thermal management of a power car for high speed operations
- **Ricardo UK** explore the thermal considerations in system design around electric automotive components
- **SAIC Motor UK** share methods of maximising direct exhaust heat recovery

WITH THANKS TO:

Cedric Rouaud, Chief Engineer
Ricardo UK

ATTEND THIS SEMINAR TO:

- Gain unique access to thermal specialists across various related engineering industries
- Hear from leading **transport OEMs** and **tier one manufacturers** about how they are designing systems to optimise thermal management
- Understand how challenges such as **hybridisation** and **electrification** are impacting the requirements for thermal management systems
- Explore core challenges you have encountered through interactive **panel sessions** and **roundtable discussions**
- Network with cross-industry experts with knowledge of thermal engineering requirements, and the solutions and technologies available

FEEDBACK FROM THE LAST EVENT:

“The audience was treated to interesting thermal engineering material, presented by a diverse range of experts in the automotive, rail and aerospace world”

Senior Systems Engineer, BAE Systems

“An excellent event for understanding principles, tools and exploring technological discussions from many industrial viewpoints. This event also provides a good networking opportunity and a chance to see things from different industry perspectives”

Research and Design Engineer,
Avon Automotive

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**TERMS AND
CONDITIONS
APPLY**

PROGRAMME

WEDNESDAY, 13 JUNE 2018	
08:30	REGISTRATION AND REFRESHMENTS
09:00	CHAIR'S OPENING REMARKS
	HEATING AND COOLING FOR OPTIMISED TEMPERATURE
09:10	MAXIMISING DIRECT EXHAUST HEAT RECOVERY POTENTIAL ON SMALL GASOLINE ENGINES Mitch Hiscock, Performance Engineer, SAIC Motor UK George Corfield, Engine Technology Senior Manager, SAIC Motor UK
09:35	THERMAL MANAGEMENT OF A POWER CAR HIGH SPEED OPERATION Ali Tabbal, Chief Aerodynamics Engineer, ALSTOM S.A.
10:00	QUESTION AND ANSWER SESSION
10:10	PANEL: BALANCING THERMAL MANAGEMENT WITH OTHER ENGINEERING CONSIDERATIONS WITHIN A SYSTEM <ul style="list-style-type: none"> • Ensuring that all components are taken into consideration within a system • Challenges in system design • Balancing priorities for greater efficiency and reduced waste heat
10:40	NETWORKING REFRESHMENT BREAK
11:10	USE OF PHASE CHANGE MATERIALS FOR AUTOMOTIVE THERMAL MANAGEMENT Amrid Mammeri, Components Advanced Engineering, Valeo Thermal Systems
	SIMULATION, MODELLING AND ASSESSMENT
11:35	A NOVEL INTEGRATION OF MODELS FOR AIRCRAFT THERMAL MANAGEMENT Bruno Estebe, Expert of Thermal Tech Centre, Airbus
	MANAGING ASSETS AND INNOVATING
12:00	NEXT GENERATION HEAT EXCHANGER AND THERMAL TECHNOLOGY FOR AEROSPACE APPLICATIONS: A DESIGN AND MANUFACTURING PERSPECTIVE Arun Muley, Chair Heat Transfer Division 2017-18, ASME and Thermal Management Lead, Power Systems, Boeing Research and Technology Mike Stoia, Research and Development Engineer, Boeing
12:25	QUESTION AND ANSWER SESSION
12:40	NETWORKING LUNCH
13:40	ROUNDTABLE DISCUSSIONS <ul style="list-style-type: none"> • Challenges in Advanced Thermal Management for components and materials in transportation systems • Addressing the impact of increased electrification on thermal engineers • Getting the most out of Computer Aided Engineering (CAE) from a thermal perspective
14:40	ROUNDTABLE FEEDBACK
14:55	NETWORKING REFRESHMENT BREAK
	THERMAL ENERGY MANAGEMENT SYSTEMS
15:25	THERMAL CONSIDERATIONS IN SYSTEM DESIGN AROUND ELECTRIC AUTOMOTIVE COMPONENTS INCLUDING ELECTRIC MOTOR, BATTERY AND POWER ELECTRONICS Cedric Rouaud, Chief Engineer, Ricardo UK
15:50	ROLE OF THERMAL ENERGY MANAGEMENT IN REDUCING AUTOMOTIVE ENERGY CONSUMPTION Richard Owen, Senior Engineer - Thermal Energy Management, Jaguar Land Rover Mike Farley, Lead Engineer - Thermal Energy Management, Jaguar Land Rover
	MATERIALS ENGINEERING
16:15	MATERIALS TECHNOLOGY FOR NEXT GENERATION AEROSPACE PROPULSION Neil Glover, Head of Materials Research, Rolls-Royce
16:40	QUESTION AND ANSWER SESSION
16:55	CHAIR'S CLOSING REMARKS
17:00	END OF SEMINAR

For the most up-to-date and detailed programme for the event, please visit www.imeche.org/thermalengineering

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

HOW TO BOOK YOUR PLACE

FEES AND CHARGES

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

Seminar	Early Bird Rate Until 27 April 2018	Standard Rate
Member, Institution of Mechanical Engineers / Supporting Organisation	£299 + VAT = £358.80	£359 + VAT = £430.80
Non-member	£429 + VAT = £514.80	£499 + VAT = £598.80
Full-time Student/Retired	£120 + VAT = £144	£190 + VAT = £228

Group booking discounts are available. Contact us for more information.

THREE WAYS TO BOOK

- 1 Online:
www.imeche.org/thermalengineering
- 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 this form.

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

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2 Bridge Street
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13TH INTERNATIONAL CONFERENCE ON TURBOCHARGERS AND TURBOCHARGING

16-17 May 2018, London

Hear an exclusive keynote from the FIA with technical presentations from Honeywell, BorgWarner Turbo, Cummins Turbo Technologies, Volkswagen, Ford Werke AG and many more on the latest technologies and novel solutions for turbocharging and boosting systems.

www.imeche.org/turbo



NOISE, VIBRATION AND HARSHNESS

22 May 2018, Birmingham

Attend this technical one-day seminar to address the challenges in design, measurement and analysis of noise, vibration and harshness across complex systems.

www.imeche.org/nvh2018

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