Hear about the latest case studies and benefit from our interactive sessions, panel discussions, workshops and social gatherings. Experts from over 17 prestigious OEMs and research institutes from 8 countries will share their knowledge in this exclusive event for aerodynamic experts in the motorsport, passenger and commercial vehicle field.

Scientific Committee & Keynote Speakers:

- **Dr. Antonia Terzi**
  Functional Manager Aerodynamics, Bentley Motors Limited, UK

- **Dr. Moni Islam**
  Head of Aerodynamics Audi AG, Germany

- **Prof. Dr. -Ing. Jochen Wiedemann**
  Member of the Board of Management - Automotive Engineering FKFS, Germany

- **Dr. Thomas Schütz**
  Leader Aerodynamics Concepts and Motorcycles BMW AG, Germany

- **Adrian Gaylard**
  Technical Specialist - Computational Aerodynamics Jaguar Land Rover, UK

**Identify latest trends in:**

- Vehicle aerodynamics performance, active and passive flow control for drag reduction
- Vehicle track testing, CFD methods and capabilities and advanced wind tunnel technologies

**Explore advanced technologies in:**

- Aerodynamic design and optimization processes and be updated on aerodynamics and legislation
- Motorsport aerodynamics and aerodynamic development transfer between motorsport and production industries
- Commercial vehicles aerodynamics for enhanced performance

**Find out about innovative concepts in:**

- WLTP and aerodynamics as well as future CO2 compliance testing for aerodynamics solutions
- Aesthetics and aerodynamics to overcome the challenges between styling and engineering requirements
- Aero-Thermal developments, design processes for efficiency and cabriolet cabin comfort

To Register: T +44 1618 841 208 | E info@internect.co.uk
http://www.internect.co.uk/content/91/international-forum-advanced-automotive-aerodynamics-
Welcome to the International Forum  
**Advanced Automotive Aerodynamics**

The field of **Automotive Aerodynamics** has seen the introduction of new challenges in the passenger – motorsport and heavy vehicle sector. Advanced CFD methods and wind tunnel technologies, WLTP, future CO2 compliance testing, innovative approaches in aero-thermal development and drag reduction, downforce and styling are among the engineering research scope, while current legislative constraints and limits have to be taken into consideration.

The International Forum Advanced Automotive Aerodynamics 2015, not only enlightens these challenges through case studies and presentations from leading international companies and institutions, but also offers a unique opportunity for networking and interaction with your international counterparts through panel discussions, interactive topic-oriented sessions, exhibitions, workshops as well as social gatherings.

We are pleased that experts from over 17 prestigious OEMs and research institutes from 8 different countries have agreed to present their approaches and share their knowledge with us.

We are looking forward to welcoming you in the hometown of Bentley Motors and make this conference another success in the global automotive engineering calendar.

Kind regards

The organisers

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Dr. Antonia Terzi  
Functional Manager Aerodynamics  
Bentley Motors Limited, UK

Maria Nikolopoulou  
Managing Director  
Intersect Limited, UK
Sponsorship and Exhibition Opportunities:

**Are you looking for effective means to:**

- Raise the profile of your business
- Enhance the perception of your brand and to
- Interact with a targeted international participant field of your prospective and existing clients?

**Are successful marketing strategies and fruitful networking opportunities among your biggest challenges?**

With our strategic marketing campaign ahead of the event we contribute to your brand recognition, positioning you as a dominant supplier through verbal and online means. At the conference we offer you an excellent platform to display your solutions, services and products, network with your target audience and influence other companies' budgeting.

**How?** Please contact us for detailed information:
Tel. +44/(0) 161 8841208, Email info@internect.co.uk
Featured Experts & Speakers:

Atsushi Ogawa, Head of Aerodynamics - Production & Racing Cars, Honda R&D Co., Ltd, Japan

Dr. Kentaro Zens, Aerodynamicist
Audi AG, Germany

Mark Waskett, Technical Manager Aerodynamics
Bentley Motors Limited, UK

Andreas Kremheller, Aerodynamicist
Nissan Technical Centre Europe, UK

Christian Taucher, CFD Engineer
Sauber Motorsport AG, Switzerland

Yasuyuki Onishi, Assistant Chief Engineer
Honda R&D Co., Ltd, Japan

Jan Jagrik, Chief Aerodynamicist
Škoda Auto, Czech Republic

Maximilian Ludwig Ganis, Senior Aerodynamics Engineer, MAN Truck & Bus AG, Germany

Dr. Per Elofsson, Senior Technical Manager Aerodynamics, Scania CV, Sweden

Michal Sumec, Aerodynamicist
Škoda Auto, Czech Republic

Darren Coe, Aerodynamics Manager
Aston Martin, UK

Franck Sanchez, Principal Aerodynamicist
Scuderia Toro Rosso, UK

Mark Hesmondhalgh, Engineer Aerodynamics
Bentley Motors Limited, UK

Tim Walker
Technical Specialist Aerodynamics T&D
Jaguar Land Rover, UK

Jeff Howell, Visiting Research Fellow
Loughborough University, UK

Alexander Thomas Link, Research Associate
IVK - University of Stuttgart, Germany
CONFERENCE PROGRAMME

Forum Day One / Tuesday, 9 June 2015

9:30-9:45  Welcome & opening speech by the organisers
Maria Nikolopoulou
Managing Director
Internect Limited, UK
Dr. Antonia Terzi
Functional Manager Aerodynamics
Bentley Motors Limited, UK

9:45-10:15  Cabriolet open-cabin environment and occupants comfort
Mark Waskell
Technical Manager
Aerodynamics
Bentley Motors Ltd, UK
Mark Hesmondhalgh
Engineer Aerodynamics
Bentley Motors Ltd, UK

10:15-11:00  Interactive session: Internéct at speed
Introduce yourself to the other participants with this series of brief one to one meetings.
Get to know the other delegates and “break the ice”.

11:00-11:30  Refreshment & networking break

11:30-12:00  The new Jaguar XE: a case study in computational aerodynamics development
Adrian Gaylard
Technical Specialist - Computational Aerodynamics
Jaguar Land Rover, UK

12:00-12:10  Altair Engineering presentation

12:10-12:20  ANSYS presentation

12:20-12:50  Thermal and aerodynamic development for New NSX - New Honda FIT/JAZZ/Accord
Atsushi Ogawa
Head of Aerodynamics - Production & Racing Cars
Honda R&D Co., Ltd, Japan
Yasuyuki Onishi
Assistant Chief Engineer
Honda R&D Co., Ltd, Japan

12:50-13:00  Exa Corporation presentation

13:00-13:15  Networking lunch

13:15-14:30  WLTP - Significance and consequences for aerodynamics development
Dr. Thomas Schütz
Leader Aerodynamics Concepts and Motorcycles
BMW AG, Germany

14:30-15:00  Interactive session - Panel discussion: Scale model testing for aerodynamics development
Darren Coe, Aerodynamics Manager
Aston Martin, UK

14:40-15:40  Interactive session: Internéct at speed
Introduce yourself to the other participants with this series of brief one to one meetings.
Get to know the other delegates and “break the ice”.

15:00-15:10  Numeca presentation

15:10-15:40  Interactive session - Panel discussion: Scale model testing for aerodynamics development
Darren Coe, Aerodynamics Manager
Aston Martin, UK

15:40-16:10  Refreshment & networking break

16:10-16:40  The effect of drag rise at yaw on the wind-averaged-drag coefficient for passenger cars
Jeff Howell, Visiting Research Fellow
Loughborough University, UK
Co-author Sumit Panigrahi, Lead Engineer - Aerodynamics, Tata Motors European Technical Centre, UK

16:40-17:00  Closing remarks by the organisers and surprise lottery

17:00-17:30  Refreshment & networking break

17:30-19:00  Evening Workshops: Led by the Workshop leader, the aim of this session is to offer you the chance to interact with your peers, raise questions, share views and opinions in a targeted participant field.

Workshop A: CFD methods, resources & innovation
- Adrian Gaylard, Technical Specialist - Computational Aerodynamics
  Jaguar Land Rover, UK
- Tim Walker, Technical Specialist
  Aerodynamics T&D
  Jaguar Land Rover, UK

Workshop B: Wind tunnel testing, present and future
- Dinner and evening event
  Enjoy our evening get-together with your colleagues in a relaxed atmosphere with live music entertainment, dinner and drinks.
Forum Day Two / Wednesday, 10 June 2015

8:30-9:00 Registration with coffee & tea

9:00-9:10 Opening address by conference chairperson
Dr. Antonia Terzi
Functional Manager Aerodynamics
Bentley Motors Limited, UK

9:10-9:40 Aerodynamics of super-sportscars
Dr. Kentaro Zens
Aerodynamicist
Audi AG, Germany
• Motivation
• Significance for overall performance
• Limitations and boundary conditions
• Aerodynamic features

9:40-10:10 Impact of new technical & sporting regulations on F1 aerodynamic development
Franck Sanchez, Principal Aerodynamicist
Scuderia Toro Rosso, UK
• Main F1 technical regulations’ changes
• Impact on aerodynamics and car design
• Engine and sub-systems' integration and cooling requirements
• Wind tunnel testing restrictions (F1 sporting regulations)
• Impact on testing techniques and tools

10:10-10:40 Aerodynamic development of the Škoda Fabia RS Rally Car – Aspects, challenges & lessons learned
Michal Sumec
Aerodynamicist
Škoda Auto, Czech Republic
• General intro – Rally & Škoda; rally & aerodynamics
• Project goals & constraints
• Processes & method utilised
• Results
• Lessons learned for series projects etc.

10:40-11:10 Refreshment & networking break

11:10-11:40 Formula 1 aerodynamics and the impact of aerodynamic testing restrictions applied to development
Christian Taucher
CFD Engineer
Sauber Motorsport AG, Switzerland
• Impact of aerodynamics on the performance of a Formula 1 car
• Aerodynamics of Formula 1 car and requirements on CFD and wind tunnel testing
• Aim for reduced costs in F1 led to restrictions applied in the way aerodynamic development resources and testing is applied
• Finding the path between CFD and wind tunnel aerodynamic development
• Implication of resource restriction on wind tunnel management and aerodynamic testing
• Optimized usage of the available resources and each strengths rather than opting for maximum parts throughput

11:40-12:10 Interactive Session - panel discussion:
Transient aerodynamics - Ready to be considered for production vehicle development or still only a research subject?
Andreas Kremheller
Aerodynamicist, Nissan Technical Centre Europe, UK
• On-road transients can increase aerodynamic drag and reduce vehicle stability
• Production vehicles are usually developed in a ‘clean’ wind tunnel environment
• The simulation of on-road turbulence in CFD and conventional wind tunnels is complex and expensive
• Target setting is difficult: Vehicle development is driven by legislations (i.e. NEDC cycle) that don't consider on-road transients

12:10-12:40 Aerodynamic ventilation drag of a rotating disc
Alexander Thomas Link
Research Associate, IUK - University of Stuttgart
• Ventilation drag
• Rotating discs
• Wind tunnel measurements
• CFD simulations

12:40-14:10 Networking lunch

14:10-14:40 Aero-Thermal development of the Neoplan CityLiner at MAN Truck and Bus AG
Maximilian Ludwig Ganis
Senior Aerodynamics Engineer
MAN Truck & Bus AG, Germany
• Commercial vehicles aerodynamics fundamentals
• CFD and aerodynamics at MAN Truck and BUS AG
• Aerodynamic reduction potential in commercial vehicles
• Cx reduction through aerodynamic design optimization
• Dimensioning of cooling packages: Underhood aero-thermal analysis
• Example of optimized aero-thermal design process for a bus: CityLiner
• Some considerations on passenger cabin comfort

14:40-15:10 Recent development in truck aerodynamics
Dr. Per Elofsson
Senior Technical Manager Aerodynamics
Scania CV, Sweden
• Aerodynamics at Scania CV
• CFD requirements for heavy vehicles
• Drag reduction potential
• Opportunities and risks with future legislation

15:10-15:40 Interactive session: Team debate with Q&As
Collaborate with your teammates from different companies and share your views in a lively debate while asking and answering mutually agreed questions.

15:40-16:00 Closing remarks by the organisers
Maria Nikolopoulou
Managing Director
Internet Limited, UK
Dr. Antonia Terzi
Functional Manager Aerodynamics
Bentley Motors Limited, UK

16:00-16:30 Refreshment & networking break

16:30-18:00 Evening Workshops: Led by the Workshop leader, the aim of this session is to offer you the chance to interact with your peers, raise questions, share views and opinions in a targeted participant field.

Workshop C: Passive and active flow control for drag reduction
Dr. Moni Islam
Head of Aerodynamics
Audi AG, Germany

Workshop D: (WLTP) Worldwide harmonized light vehicles test procedures & aerodynamics
Dr. Thomas Schütz
Leader Aerodynamics Concepts and Motorcycles
BMW AG, Germany

19:00-21:00 Drinks and canape reception to be held at Bentley at CW1 House
Dislay of the full Bentley model range - Bespoke Mulliner Configuration area, which demonstrates the bespoke options over and above the standard Bentley features - Bentley Boutique display area - Hospitality Area - Bespoke Bar Area - Bentley Experience Guide’s on hand to answer questions regarding Bentley/Bentley Heritage
Delegate participation packages

<table>
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<tr>
<th>Conference Packages</th>
<th>Price</th>
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<tr>
<td><strong>Premium Package</strong> (2-day conference + 2 workshops)</td>
<td>£600 + VAT</td>
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<tr>
<td><strong>Upgraded Package</strong> (2-day conference + 1 workshop)</td>
<td>£570 + VAT</td>
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<tr>
<td><strong>Basic Package</strong> (2-day conference)</td>
<td>£500 + VAT</td>
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Dinner on the 9/6/2015 (Price £100 + VAT)  
☐ Yes  ☐ No

(Informal evening dinner including drinks and live music entertainment on the 9th June as an evening get-together)

Please choose evening workshop on the 9th and the 10th June 2015:

9/6/2015:  ☐ Workshop A: CFD methods, resources and innovation
9/6/2015:  ☐ Workshop B: Wind tunnel testing, present and future
10/6/2015: ☐ Workshop C: Passive and active flow control for drag reduction
10/6/2015: ☐ Workshop D: (WLTP) Worldwide harmonized light vehicles test procedures & aerodynamics

NOTE: Workshops A and B on the 9th June as well as C and D on the 10th June run simultaneously

Delegate Details:

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<tr>
<th>Title</th>
<th>First Name</th>
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<th>Job Title</th>
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| Billing Address:  
Postal Address:  
Telephone:  
Signature:  
Payment must accompany this registration form. Registration will be confirmed only on receipt of full payment

Payment Details

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Conference Location & Accommodation:

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Accommodation and travel costs are not included in the conference registration fees.

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