INFORMATIONS

**REGISTRATION FEE**

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<tr>
<th>Course</th>
<th>Title</th>
<th>Dates</th>
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<tr>
<td>Course 1</td>
<td>Basics in Hybrid Electric Vehicles</td>
<td>8 - 10 July 2019</td>
<td>1.900 € + VAT</td>
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<td>Course 2</td>
<td>Vehicle Aerodynamics and Aeroacoustics</td>
<td>10 - 12 July 2019</td>
<td>1.900 € + VAT</td>
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<td>Course 3</td>
<td>System Integration, Simulation and Energy Management of Hybrid Electric Vehicles</td>
<td>15 - 17 July 2019</td>
<td>1.900 € + VAT</td>
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<tr>
<td>Course 3a</td>
<td>Overview of System Integration, Simulation and Energy Management of Hybrid Electric Vehicles (One day only)</td>
<td>15 July 2019</td>
<td>950 € + VAT</td>
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The registration fee includes:
- A comprehensive set of notes
- Lunch, cold drinks and coffee at break times
- Access to a social evening

Group Discounts:
3 participants of the same organization registering at the same time: 10 % discount.

**ACCOMMODATION**

A hotel contingent is available at:

Conference Hotel Campus.Guest
Universitätsstraße 34
70569 Stuttgart
Germany
+49 711 97 44-2333
reservierung@campus-guest.de
www.campus-guest.de

Please make your own reservations. Room allotment available until two weeks before start of the course.
Reservation keyword: Summer School

**LOCATION**

FKFS | Paffenwaldring 12 | 70569 Stuttgart

**FORMAT AND DELIVERY METHOD**

Each course is a non-credit graduate level seminar consisting of lectures and exercises or lab sessions.

**COURSE TIMES**

Day 1: 8:30 - 17:30
Day 2: 8:30 - 17:30
Day 3: 8:30 - 16:00

**SOCIAL EVENING**

On the first or second evening of the course there will be a social get together during which the participants of the Stuttgart International Summer School will have the opportunity to network in a relaxed and comfortable atmosphere. Taking part in the social evening is optional and included in the registration fee.

**CONTACT**

FKFS Forschungsinstitut für Kraftfahrwesen und Fahrzeugmotoren Stuttgart
Paffenwaldring 12
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www.stuttgart-summerschool.de

**WEBSITE**

For more information and a more detailed description of the courses please go to www.stuttgart-summerschool.de

**REGISTRATION**

Sign up now: www.stuttgart-summerschool.de/registration
Registration until 3 June 2019 (thereafter subject to availability)
Course Objectives:

This course is designed to provide a detailed understanding of vehicle aerodynamics and vehicle aerocoesthetics. The participants will be trained to be able to carry out respective development work at car manufacturers and suppliers under consideration of the various interfaces to other disciplines.

Objective 1: Understand fundamental aerodynamic physics and relationships; apply fundamental aerodynamic equations on standard flow situations; assess aerodynamic coefficients and aerodynamic influences on vehicle drag and lift as well as vehicle dynamics.

Objective 2: Understand the principal acoustic and aerodynamic physics; choose the appropriate measurement instrumentation and setup; acquire expertise to assess aerasonic analyses and results.

Objective 3: Understand the approaches when implementing computational methods in aerodynamics and aeroacoustics; being able to realistically assess the possible field of application and the advantages and disadvantages concerning the various numerical methods.

Objective 4: Learn to plan and conduct aerodynamic and aeroacoustic investigations under experimental conditions in our modern wind tunnel facilities (full-scale aerodynamic and scale-model wind tunnel and, briefly, thermal wind tunnel) and to evaluate the data measured.

Goals:

After having completed this course, the participants will have fundamental knowledge about hybrid vehicle drivetrains and their specific characteristics. Key aspects are the understanding of the electrical components and the differences in operating the engine combination within a hybrid drivetrain.

Lecturer:

Hans-Jürgen Berner, FKFS
Hans-Jürgen Berner is Head of the department Automotive Propulsion Systems at FKFS. He received his diploma in mechanical engineering from University of Stuttgart, Germany, in 1992 and started at FKFS as a scientific assistant in the Internal Combustion Engines Department. In 1995 he became a group leader in this department, and in 1999 Division Head of Thermodynamics and Combustion Process Development. His field of responsibility includes coordination of vehicle application, function development, operating strategy hybrid powertrain and coordination of simulation projects.

Dr. Thomas Riemer, FKFS
Dr. Thomas Riemer is Head of the department Automotive Mechanics/ Mobility at FKFS. He received his diploma in mechanical engineering from University of Stuttgart, Germany, in 2004 and his doctorate in mechanical engineering, also from University of Stuttgart, in 2011. His research focuses on the impacts of new forms of mobility on vehicle construction.

Co-Leaders: Dr. Omar Abu Mohareb, Frank Brosi, André Ebel, Sven Eberts, Nils Widdecke, IVK/FKFS, Head of Aerodynamics and Thermal Management, Dr. Daniel Stoll, FKFS, Team Leader Aerodynamics, Dr. Felix Wittmeier, FKFS, Head of Model-scale Wind Tunnel and Wind Tunnel Research.