place: Széchenyi István University, Mobilis Interactive Science Center, AUDI Hungaria Vehicle Engineering Department Group - Department for Internal Combustion Engines

8.00 – 9.00 Registration

9.00 – 9.45 I. Presentation, Martin Streckel - Title work in progress

10.00 – 11.30 Workshop block – 7 simultaneous workshops, plant visit:
1. Dr. Peter Schöggl - Key criteria to win races
2. Thomas Pels - Hybrid Powertrain System Design
3. Energotest - Test energy management
4. Gergely Bári - Racecar setup
5. Hannes Dettmann - Tuning Vehicle Handling By Adjusting Tire Characteristics
6. AUDI Hungaria Motor Kft. - Plant visit
7. Karl Durst - The future is black - lightweight-design with CFRP
8. Workshop by Continental (ABS implementation into FS car - case study)

12.00 – 12.45 II. Presentation. Karl Durst - Audi ultra-lightweight technology

13.00 - 14.15 Lunch

14.15 – 15.00 III. Presentation block
SZEngine - The first unique single cylinder in the FS KA-Racing & joanneum racing - The FS133 - A Formula Student engine designed by KA-Racing and joanneum racing graz

15.15 - 16.45 Workshop Block - 7 simultaneous workshops
1. Dr. Peter Schöggl - Key criteria to win races
2. Thomas Pels - Hybrid Powertrain System Design
3. Energotest - Test energy management
4. Gergely Bári - Racecar setup
5. Hannes Dettmann - Tuning Vehicle Handling by Adjusting Tire Characteristics
6. Karl Durst - The future is black - lightweight-design with CFRP
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17.00 - 17.30 Engineering and music - seemingly different

17.45 V.I.P. Reception

19.00 - 20.00 Battle of the Nations (Competitive games)

20.00 - FSES Club Open
<table>
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<th>Time</th>
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<tr>
<td>08.00 – 09.00</td>
<td>Registration</td>
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<td>09.00 – 09.45</td>
<td>V. Presentation, DUT Racing - Formula Student: What could possibly go wrong?</td>
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| 10.00 – 11.30 | Workshop block – 7 simultaneous workshops, plant visit:  
1. Dr. Peter Schöggl - Key criteria to win races  
2. Thomas Pels - Hybrid Powertrain System Design  
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8. Workshop by Continental (ABS implementation into FS car - case study) |
| 12.00 – 12.45 | VI. Presentation, Dr. Peter Schöggl - Formula 1 Technology 2013-2014 |
| 13.00 – 14.15 | Lunch                                                                 |
| 14.15 – 15.00 | VII. Presentation, Donatus Wichelhaus - Development of the VW WRC Engine |
| 15.15 – 16.45 | Workshop block – 7 simultaneous workshops:  
1. Dr. Peter Schöggl - Key criteria to win races  
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3. Energotest - Test energy management  
4. Dr. Jörg Ross - The new engine regulation in F1 - How to define a concept  
5. Gergely Bári - Racecar setup  
6. Hannes Dettmann - Tuning Vehicle Handling By Adjusting Tire Characteristics  
7. Workshop by Continental (ABS implementation into FS car - case study) |
| 17.00 – 17.30 | Martin Schuster – Each gram counts - Efficiency technologies and lightweight manufacturing |
Barna Hanula Phd  
Vice dean for industrial cooperation of the Széchenyi University, Head of the Audi Institute

He made his studies at TU Budapest. He has been one of the initiators of the universities racing team and won the Hungarian championship with his self-designed and built race car. At Schrick GmbH (later AVL Schrick GmbH) he led several projects, later the engine development and used to be the managing director for the last 12 years. His scope of activities covered engine development, electric- and hybrid vehicle development, engine design and business development. Participating in the development of the W16 Bugatti Veyron engine he considers one of the greatest successes of his career.

Dr. Jörg Ross  
Head of IAV’s new Advanced Development division

At the beginning of his career he worked for FEV Motorentechnik in Aachen as Responsible Engineer of FEV Valve-Train Projects. At Ford Werke AG in Germany he was the Supervisor of Zetec SE Engine Development. In 2001 he joined Ferrari and being Head of Base Engine Development he was responsible for developing Formula 1 engines. Since 1st January, 2009 he is employed by IAV GmbH filling the role Executive Vice President of Advanced Powertrain Engineering.

Dr. Peter Schöggl  
Head of Business Field Racing in AVL, Powertrain Engineering and Technology AVL List GmbH, Graz, Austria

Leading AVL’s Motorsport activities since more than 10 years with leading customers in Formula 1, DTM, F3, NASCAR, and Indycar. Multiple international Motorsport publications together with Racing customers (e.g. Ferrari Formula 1 in 2001, 2003 and 2005). Chief Judge in Formula Student since 2008

After working as a calculation engineer, his route lead to Ferdinand Porsche AG in Weissach to become a test engineer in the thermodynamics team of engine research. The next milestone was Adam Opel AG in Rüsselsheim, where he was working as a test engineer for the MOFI (Motor Fuel Injection) Department. From industry he headed to racing. At Opel Motorsport Europe, Opel Team Rosberg, as the technical leader of OPC GmbH many championship titles hallmark his career. For three years he was busy leading the development and introduction of the Opel Vectra OPC with a two-stage turbocharged diesel engine. Currently he is the leader of Engine Development at VW Motorsport GmbH and also a lecturer at the University of Stuttgart, Institute of Internal Combustion Engines and Automotive Engineering

Active motorsport
1985-1987 Official test driver of Formula Ford 2000 program in Austria
1988 1st place in the 1600cc category in the Styrian Mountain Championship
1989 1st place in the 1600cc category in the International Alpen-Donau-Bergpokal, 1 race in Pecs, Hungary
1990 2nd place in the Austrian Championship Mountain Race 1600cc
Since 2007 Participation in Regularity Rallies, e.g. Ennstal Classic, Planai Classic

Dr.-Ing. Donatus Wichelhaus  
VW Motorsport GmbH, Leader of Engine Development

As a student of Technische Universität München and the University of Karlsruhe, he acquired knowledge about the physics of internal combustion engines and also got familiar with general relativity theory.

After working as a calculation engineer, his route lead to Ferdinand Porsche AG in Weissach to become a test engineer in the thermodynamics team of engine research. The next milestone was Adam Opel AG in Rüsselsheim, where he was working as a test engineer for the MOFI (Motor Fuel Injection) Department. From industry he headed to racing. At Opel Motorsport Europe, Opel Team Rosberg, as the technical leader of OPC GmbH many championship titles hallmark his career. For three years he was busy leading the development and introduction of the Opel Vectra OPC with a two-stage turbocharged diesel engine. Currently he is the leader of Engine Development at VW Motorsport GmbH and also a lecturer at the University of Stuttgart, Institute of Internal Combustion Engines and Automotive Engineering

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Hannes Dettmann
Graduate Student at Continental AG.

In 2007 he began studying mechanical engineering at the UAS Stralsund where he joined “Baltic Racing”, Germany’s first Formula Student Team (founded in 1999). As a driver & the head of suspension department, he focused intensely on vehicle dynamics & suspension design. In 2009/2010 he became the technical director of the team until he left for Continental AG to complete his internship & bachelor thesis. His tasks at Continental included the further development of the Continental Formula Student Tire & the execution of several Tire Workshops for Formula Student Teams. Throughout the last 6 years he gained a respectable understanding of vehicle dynamics & tires interaction, both theoretically and practically and closely related to the challenges of Formula Student. Currently he is finishing his Master Thesis in the Segment “Suspension System” at Continental AG, Hanover.

Max Wink
Chief Engineer Rennteam Uni Stuttgart

Max Wink is 21 and currently a Bachelor Student in Applied Physics. He expects to finish his degree at Delft University of Technology in 2013. In the previous academic year, Max has been involved with Formula Student as Team Manager of the DUT Racing Team 2012. Before that, he was also partly involved in the DUT 2011 year, always being busy with the management side of the story. He is a true people manager, always trying to get the best out of every team member.

Jim Rojer
Jim Rojer is 21 years old and currently a Bachelor Student in Aerospace Engineering. He aims to finish his Bachelor degree at the Delft University of Technology in 2014. In the previous year, Jim has been involved with Formula Student as the Operations and Finance Manager of the DUT Racing Team 2012. He gained a lot of experience in identifying if plans are realistic or not, and what could possibly go wrong in an event as Formula Student. He always managed to keep the team satisfied on major events, being a crucial factor on the way to the team’s victory.

Paul Achtsnit
Born: 24.11.1987 in Horn (Austria)
Automotive Engineering since 2009 (FH Joanneum Graz)

Formula Student:
Joanneum racing since august 2011
CFD-Simulation
Lubrication system
Internship and diploma thesis at Mercedes-AMG
Optimization cylinder head
Simulation inlet duct

Simon Mörsdorf
Born: 18.07.1990 in St. Wendel
(Germany)
Mechanical Engineering since 2009 (Karlsruhe Institute of Technology)

Formula Student:
KA-RaceIng since august 2011
Shifting system
Drivetrain
Internship at Mercedes-AMG
Project management

Thomas Pels
Global Head of Hybrid and Electric Powertrain at AVL

Thomas Pels has a diploma in Mechanical Engineering / Automotive Engineering. As a development engineer his professional career began at Continental AG in 1995. Later he became the team leader of IESG Development. From 1999 to 2003 he worked for LuK GmbH & Co. managing Hybrid Propulsion Systems in the advanced engineering division. Currently he is employed by AVL as the Head of Hybrid and Electric Powertrain Systems since November 2008. The key aspects of this skill area are system analysis and simulation, powertrain system design and integration, functional safety, prototype vehicle build as well as system V&V