

Welcome to ...

FH Aachen

University of Applied Sciences

1st Industrial FAST Workshop @ Aachen September 2015

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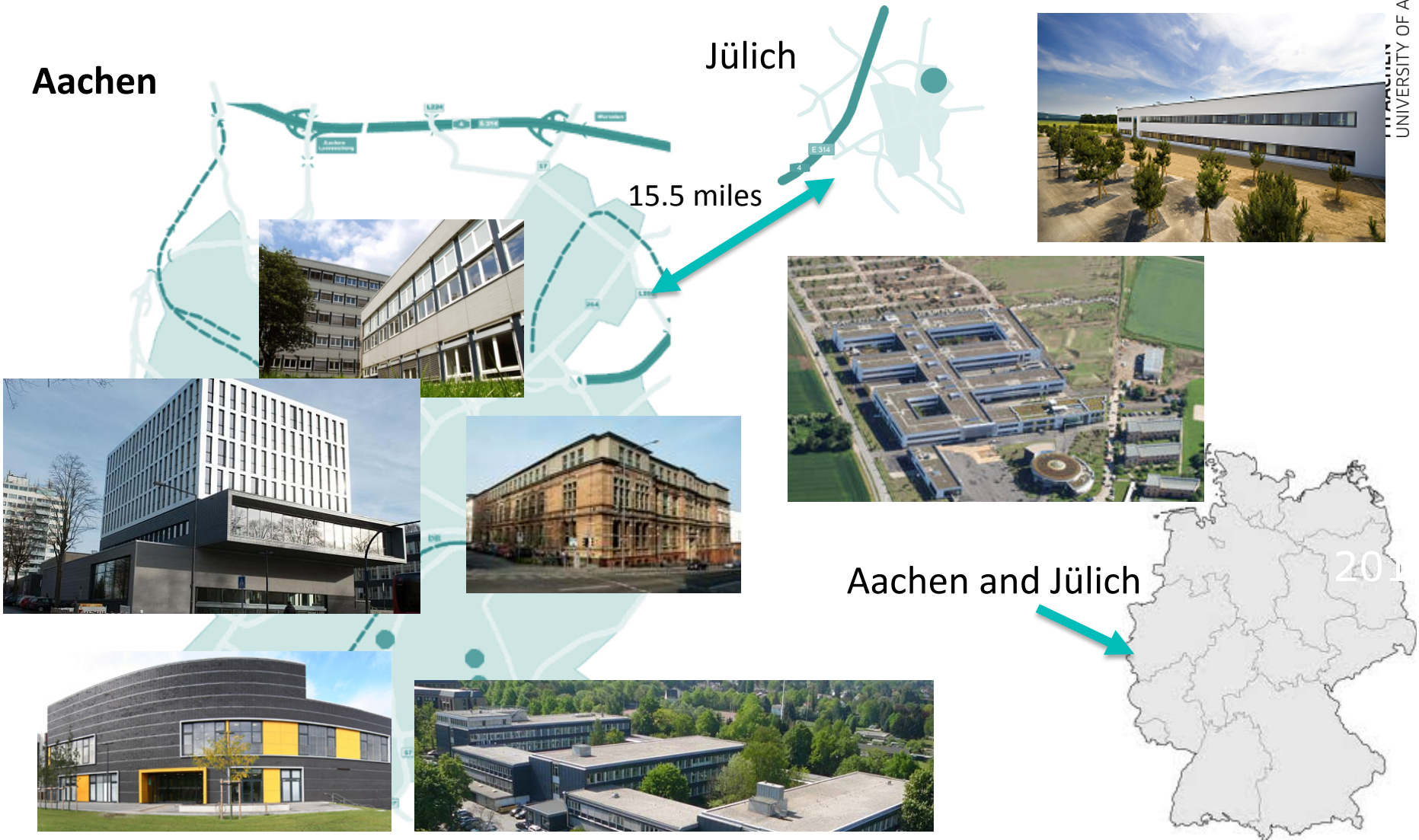
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The Sites of FH Aachen

Aachen

Jülich

15.5 miles



Aachen and Jülich

201

- Founded in 1898 (Mech. Eng.)
- University status in 1971
- Since 1999: Degrees up to a Master level (5 years), cooperative Ph.D. studies
- Since 2004: Introduction of the Bachelor / Master schedule according to the Bologna declaration
- 2009: Member of the European University Association
- 2009: Founding Member of the HAWtech (German Alliance for Universities of Applied Sciences)

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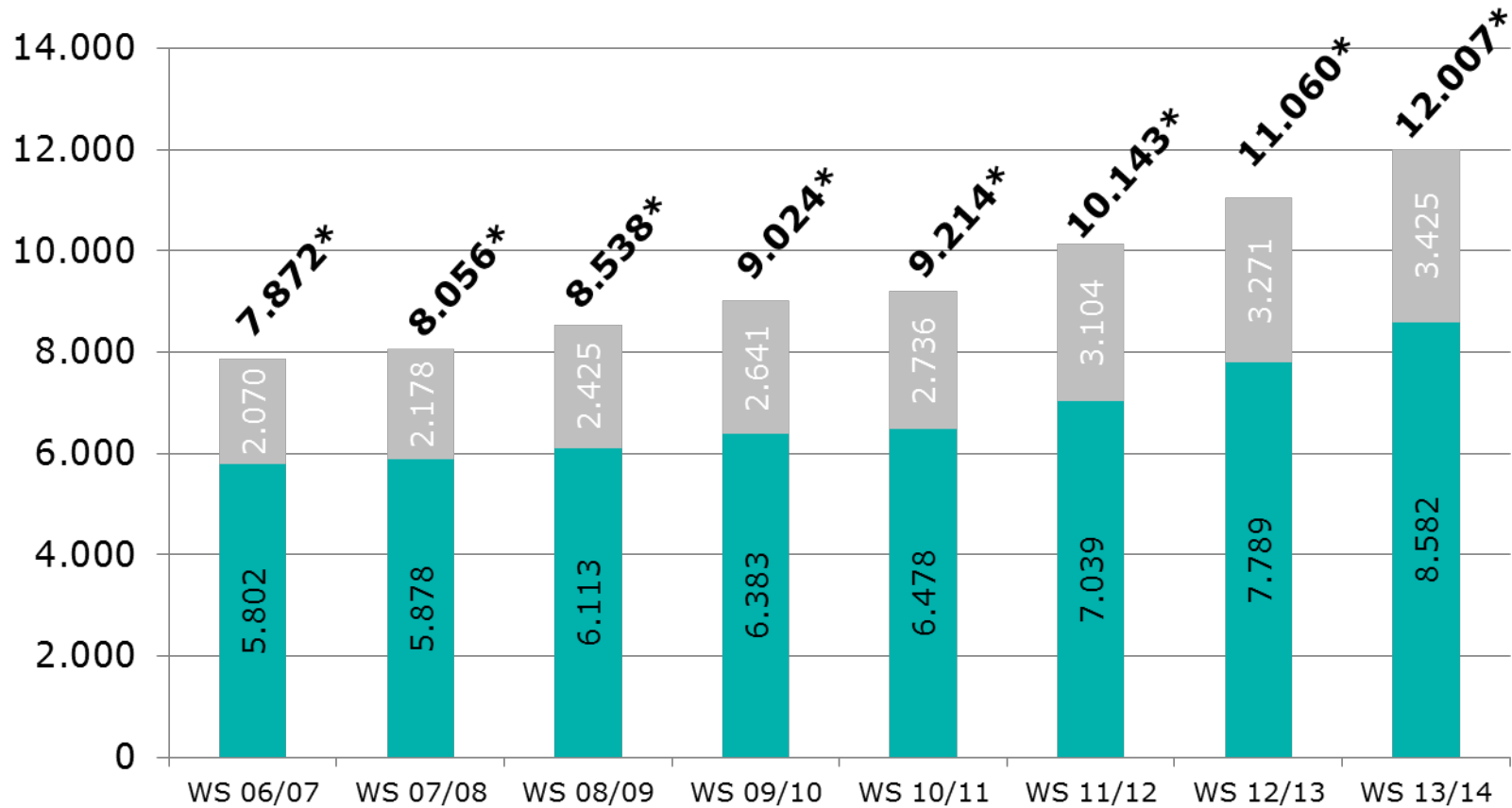
Figures

- 10 Faculties, 48 bachelor degree courses, 22 master degree courses
- > 12.000 students
- Approx. 19 % international students
- 241 full professors
- Approx. 300 contract lecturers (part time)
- Approx. 700 scientific assistants and employees
- Approx. 220 laboratories
- Annual Budget: approx. 113.9 million € (2013)
- Third-party funds: approx. 15.2 million € (2013 – disbursed)



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Development of student enrollment numbers



*Total

■ Aachen ■ Juelich

Teaching



Studies and teaching at FH Aachen

Some characteristics

Key elements of studies and teaching at FH Aachen are:

- **Practical Relevance**
(e.g. curricula, integrated degree courses, innovative projects etc.)
- **Continuous Improvement**
of teaching (e.g. quality assurance, evaluation etc.)
- **Internationality**



Together with **professional schools, employers and the industry**, FH Aachen has developed a number of integrated degree courses, in which **the non academic professional education is embedded in a bachelor degree course**. This enables the student to gain an additional qualification and allows the industry to upgrade the qualification of trainees.

- Aerospace Engineering & Pilot Training
- Integrated Degree Course Applied Chemistry
- Integrated Degree Course Business Studies PLS
- Integrated Degree Course Physiotherapy
- Integrated Degree Course Electrical Engineering PLS
- Integrated Degree Course Mechanical Engineering PLS
- Integrated Degree Course Civil Engineering
- Integrated Degree Course Process Engineering
- Integrated Degree Course Scientific Programming

Scientific Research



Research at FH Aachen

Some characteristics and figures

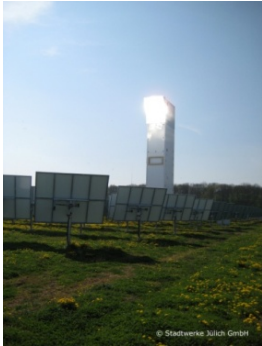
- Main research areas : **mobility**, **energy** and **life science**
- Further expertise in: design, architecture and constructional engineering
logistics, electrical engineering and information technology
- Approach:
 - Focus: from **scientific research** to **industrial application**
 - “Learning by research” as one key element (various **student projects**)
 - Support of doctoral students (graduate programme, financial support)
- there are currently 40 **doctoral students** (2015)



Research at FH Aachen

Research Institutes

Solar-Institute
Jülich (SIJ)



Institute
Nowum-Energy



Institute for Nanotechnology
and Biotechnology (INB)



Institute of Applied Polymer
Chemistry (IAP)

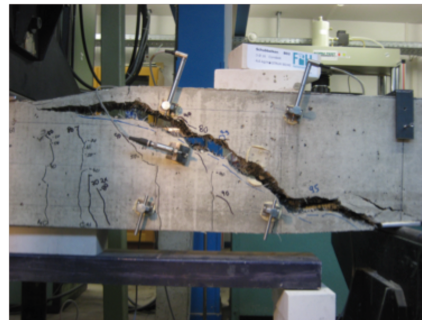


Institute for Bioengineering (IfB)



European Center for
Sustainable Mobility (ECSM)

Institute for Building Material
and Building Construction (IBB)



Further (associated research) institutes:

- Institute for Industrial Aerodynamics (I.F.I.)
- 3win-IfiM-Institute for Innovative Engine Construction

Research at FH Aachen

Project: “ec2go”

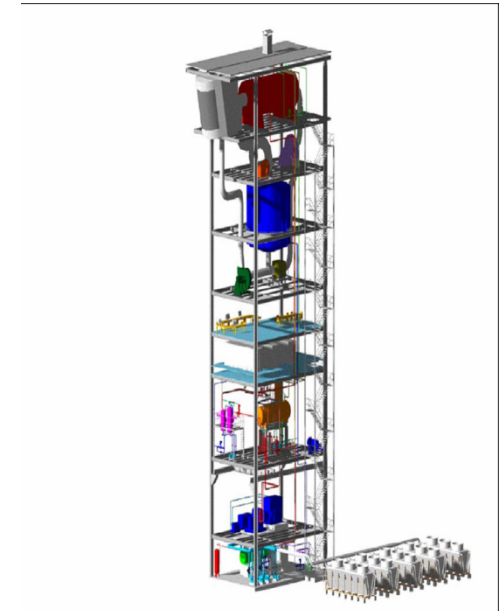
- **ec2go** (electric car 2 go): “Personal Public Vehicle”, length: 2,48 meters
- development of an integrated concept for **urban electric-car-sharing**
- **funding** sum nearly 1 Million €



Research at FH Aachen

Experimental Solar Thermal Power Plant

- first German Solar Thermal Power Plant
- **joint project** of the Solar Institute at FH Aachen, Federal and State Ministries, the German Aerospace Center (DLR), the town of Juelich and KAM as industry partner
- project volume more than **23 Million €**

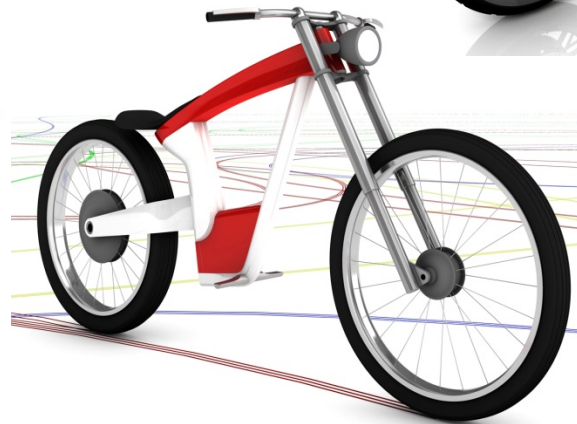


Student Projects



Student projects at FH Aachen

Electric two-wheelers

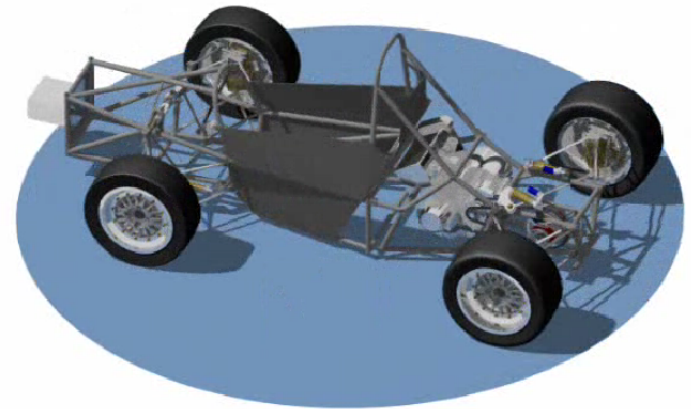


- 19 Students developed diverse ideas for innovative motorbikes, which are compatible to **E-Mobility**

Student projects at FH Aachen

“Aixtreme Racing” (Formular Student Team)

- students build a single seat formula **race car**
- competition against teams from all over the world with the vehicle AIX FS-613, “**Karl der Große**” (Charlemagne)
- 38th place (out of 75 teams) in the class “Formula Student Combustion” (FSC)



- good relations with the RWTH Aachen
- regular meetings of the rectors and vice-rectors
- Regular meetings of technology transfer
- Research Cooperation “Anfahrt”
 - alternative forms of propulsion in buses and lorries
 - the primary goal is to reduce fuel consumption and emissions
- The doctoral program promotes for a period of three years,
(which serves five at the FH Aachen)

- **Connecting** researchers, institutions and entrepreneurs to promote the transfer of technical expertise between industry and science
- Information on **funding programs** and submission of proposals
- Support for invention-disclosure and patent applications as well as **intellectual property rights**
- Support for **founders** (e.g. start-ups)
- Representation at **trade fairs**
- **Collaborations** management and networking
- Coordination of **dual degree education**
- **Project coordination** for EU-programs and Interreg-projects, e.g. TeTRRA
- Realization of tangible **R&D-projects** between the university and regional small-and-medium enterprises (SME)

- The **“Early Birds”-technology breakfast** is a networking-event series, bringing together entrepreneurs and highschool members from ca. 8-10 o'clock
- The meeting is hosted at a company, which can meanwhile present itself
- A professor from the University of Applied Sciences gives an incentive presentation to initiate contacting
- The FH Aachen cooperates with regional economic developers to host several breakfasts per year



At Rei-Lux, Heinsberg 08.05.2012 Photo: Bedbur/FH Aachen



At Rei-Lux, Heinsberg 08.05.2012 Photo: Bedbur/FH Aachen

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Summary

- strong in **teaching** as well as **development** and **research**
One of the leading German Universities of Applied Sciences concerning the recruitment of **third-party funds** for research and development
=> 15 million € disbursed in 2014
- main focus on **MINT-subjects**, **design** and **economics**
- wants to expand its current amount of students
(according to the expansion program and the HP II)
- internationally well positioned and networked
- wants to expand its international activities to:
 - **Netherlands**
 - **Belgium**
 - other **countries**
- is an expert in being a **first contact** for **development and research** for **small- and medium-sized business** in the region of Aachen



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