Faculty of Mechanical Engineering at RWTH Aachen University
Outline

• The Faculty’s position as part of RWTH Aachen University
• Studying at the Faculty of Mechanical Engineering
• Structure and Funding
• Excellence Initiative and Interdisciplinary Research Partnerships
• Faculty International
The Faculty’s position as part of RWTH Aachen University
Dean‘s Office

Univ.-Prof. Dr.-Ing. Jörg Feldhusen
Dean

Univ.-Prof. Dr.-Ing. Christian Hopmann
Associate Dean of Finances

Univ.-Prof. Dr.-Ing. Dirk Müller
Associate Dean of Structure

Univ.-Prof. Dr.-Ing. Katharina Schmitz
Vice Dean
Dean’s Representative

Univ.-Prof. Dr.-Ing. Achim Kampker MBA
Associate Dean of Studies
Management

Ruth Heßberger, M. A.
Managing Director
- Faculty Council, Council of Elders, Dean‘s Meeting
- Appointments, Controlling, Habilitations

Dipl.-Ing. Julia Meul
Substitute Managing Director
- Head of Teaching and Learning Division
- Lecture Hall Management
Divisional Management

Olaf Straube  
Head of IT and Media Division  
• Network  
• Databases

Marco Pingen  
Head of Budget and Human Resources Division  
• Advisor for Accounting, Budget and Human Resources  
• Quality Improvement Funds
Dean’s Office Administration

Sophia Blomeyer, LL.M.
Advisor of the Study Advisory Council
- Study Advisory Council
- Examination Boards
- Application Review

Nabil Bouarga
Apprentice
- Trainee in Office Management

Marko Breuer
- Reception Faculty Head Office
Dean’s Office Administration

Maria Camacho van den Hurk, M. Sc.
Mentoring and Psychological Counselling
• Mentoring, Psychological Counseling and Learning Strategies for all students of the Faculty of Mechanical Engineering

Monika Dahmen-Göbbels
Doctoral Studies
• Doctorate Procedure
• Graduation Statistics
• Teaching Obligations

Andrea Dohms, M. A.
Academic Advisor and Gender and Diversity
• Gender and Diversity
• Coordination Commission for Equal Opportunities
• Study Counselling
• RWTH Education Fund
Dean’s Office Administration

Thomas Fieder, B. Sc.
PuL and RWTHonline - Support
  • RWTHonline Modulemanagement

Jan Gniazdowski, M. Sc. RWTH
Assistant to the Dean
  • Examination Board Mechanical Engineering
  • Study Counselor Mechanical Engineering
  • Application Review

Dr. phil. Sabrina Grübener
International Strategy Coordinator
  • Advisor for the International Strategy of the Faculty
  • Double Degree programs and agreements of doctoral joint
    thesis supervision (Cotutelle)
  • Advisor of the Student Learning Assessment Committee
Krista Haldenwang
IT Specialist
• Application and Database Development

Jessica Hill
Eventmangement
• Event Planning
• Organization and realization of events

Inge Hombrecher-Muckel
Controlling and Accounting
• Accounting of the Faculty
Farah Jumpertz, M. A.
Coordinator for International Relations and Assistant to the Dean
- Establishment and Support of Faculty Contacts Abroad
- International Cooperation
- Study Abroad Counsel
- Examination Board Mechanical Engineering

Dipl.-Kff. Jessica Koch
Assistance of the Managing Director
- Advisor of the Strategy Committee
- Appointments

Stefan Köpke
Internship Office
- Accreditation of performed internships
**Dean’s Office Administration**

**Tim Lehmkuhl**  
Apprentice  
- Trainee in Office Management

**Dennis Leukel, M. Sc. RWTH**  
Assistant to the Dean  
- Examination Board Mechanical Engineering  
- Study Counselor Mechanical Engineering  
- Application Review

**Alexandra Levay**  
Public Relations and Media  
- Photography and Graphics  
- External Presentation, Print Media  
- Website, Social Media
Dean’s Office Administration

Eva Maintz
Apprentice
• Trainee in Office Management

Vera Mattner
Coordinator for International Relations and Assistant to the Dean
• Establishment and Support of Faculty Contacts Abroad
• International Cooperation, Study Abroad Counsel
• Examination Board Computational Engineering Science and Simulation Sciences

Dipl.-Wirt.-Ing. Martin Müller
Assistant to the Dean
• Examination Board Business Administration and Engineering
• Study Counselor Business Administration and Engineering
• Study Counselor of mechanical engineering related teaching degrees
Dean’s Office Administration

Daniel Nikolic
IT Specialist
  • Application and Database Development

Vone Nanthasone, M. Sc.
Assistant to the Dean and Coordinator for International Relations
  • Examination Board Business Administration and Engineering
  • Study Counselor Business Administration and Engineering
  • Establishment and Support of Faculty Contacts Abroad and international Cooperation

Pascal Pütz
  • Organisation of Academic Matters
  • Teaching Assignments
Dean’s Office Administration

**Pouya Saadat, M. Sc. RWTH**
Assistant to the Dean
- Examination Board Mechanical Engineering
- Study Counselor Mechanical Engineering

**Seda Sancaktar**
Coordinator for International Relations
- Establishment and Support of Faculty Contacts Abroad
- International Cooperation
- Study Abroad Counsel

**Simone Schneider, M. Sc.**
Mentoring and Psychological Counselling
- Mentoring, Psychological Counseling and Learning Strategies for all students of the Faculty of Mechanical Engineering
We are…

at the leading edge of research
are confirmed by the rankings for mechanical engineering

also committed internally
Speaker in 4 of 8 profile areas and in 4 of 26 SFB

powerful in terms of third-party funding
is responsible for 38% of the third-party funds at the RWTH

well established in teaching
9 Bachelor and 19 Master Degree Programs

one of the largest mechanical engineering faculties worldwide
2,954 New enrolments in WS 2018/2019
Advertising Mechanical Engineering
Activities at Faculty of Mechanical Engineering

- RWTH Study Information Day
- Girls’ Day & Boys’ Day
- Science Nights “5 vor 12”
- Lecture series “What’s a steam engine?”
  Technological phenomena in the engineering sciences
- Chemical Engineering Day
- RoboScope - Interdisciplinary Robotics Laboratory
- CAMMP - Computational and Mathematical Modeling Program (RWTH Education Laboratory)
- Unihits for Kids and Kids University
- Visits to Institutes
- Speeches in High Schools
Studying at the Faculty of Mechanical Engineering
# Degree Programs of the Faculty of Mechanical Engineering (34 Degree Programs)

<table>
<thead>
<tr>
<th>9 Bachelor Programs (including 5 Teacher Training)</th>
<th>19 Master Programs (including 5 Teacher Training)</th>
<th>6 Privately offered by the International Academy</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Mechanical Engineering</td>
<td>• Automotive and Transportation Engineering</td>
<td>• Computer Aided Conception and Production in Mechanical Engineering</td>
</tr>
<tr>
<td>• Business Administration and Engineering</td>
<td>• Aerospace Engineering</td>
<td>• Production Systems Engineering</td>
</tr>
<tr>
<td>• Computational Engineering Science</td>
<td>• Chemical Engineering</td>
<td>• Management and Engineering in Computer Aided Mechanical Engineering</td>
</tr>
<tr>
<td>• Technical Communication, 2nd Major Basic Principles of Mechanical Engineering</td>
<td>• General Mechanical Engineering</td>
<td>• Management and Engineering in Productions Systems</td>
</tr>
<tr>
<td>• Teacher Training Programs (B. Ed.) for Vocational Schools in the fields:</td>
<td>• Development and Design Engineering (discontinuing)</td>
<td>• Textile Engineering</td>
</tr>
<tr>
<td>• Machine Technology</td>
<td>• Energy Engineering</td>
<td>• Robotic Systems Engineering</td>
</tr>
<tr>
<td>• Supply Technology</td>
<td>• Plastics and Textile Engineering</td>
<td></td>
</tr>
<tr>
<td>• Textile and Clothing Technology</td>
<td>• Production Technology</td>
<td></td>
</tr>
<tr>
<td>• Automotive Technology</td>
<td>• Product Development</td>
<td></td>
</tr>
<tr>
<td>• Manufacturing Technology</td>
<td>• Business Administration and Engineering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Computational Engineering Science</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Automation Technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Simulation Sciences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Automotive Engineering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Technical Communication, 2nd Major Basic Principles of Mechanical Engineering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Teacher Training Programs for Vocational Schools (M. Ed.)</td>
<td>→ see vocational field of study Bachelor</td>
</tr>
<tr>
<td></td>
<td>• Computer Aided Conception and Production in Mechanical Engineering</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Production Systems Engineering</td>
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</tr>
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<td></td>
<td>• Robotic Systems Engineering</td>
<td></td>
</tr>
</tbody>
</table>

- Bachelor Programs:
  - 9 Bachelor Programs (including 5 Teacher Training)
  - Mechanical Engineering
  - Business Administration and Engineering
  - Computational Engineering Science
  - Technical Communication, 2nd Major Basic Principles of Mechanical Engineering
  - Teacher Training Programs (B. Ed.) for Vocational Schools in the fields:
    - Machine Technology
    - Supply Technology
    - Textile and Clothing Technology
    - Automotive Technology
    - Manufacturing Technology

- Master Programs:
  - 19 Master Programs (including 5 Teacher Training)
  - Automotive and Transportation Engineering
  - Aerospace Engineering
  - Chemical Engineering
  - General Mechanical Engineering
  - Development and Design Engineering (discontinuing)
  - Energy Engineering
  - Plastics and Textile Engineering
  - Production Technology
  - Product Development
  - Business Administration and Engineering
  - Computational Engineering Science
  - Automation Technology
  - Simulation Sciences
  - Automotive Engineering
  - Technical Communication, 2nd Major Basic Principles of Mechanical Engineering
  - Teacher Training Programs for Vocational Schools (M. Ed.)

- Privately Offered by the International Academy:
  - 6 Privately offered by the International Academy
  - Computer Aided Conception and Production in Mechanical Engineering
  - Production Systems Engineering
  - Management and Engineering in Computer Aided Mechanical Engineering
  - Management and Engineering in Productions Systems
  - Textile Engineering
  - Robotic Systems Engineering
Structure of the Mechanical Engineering Program at RWTH Aachen University

**Bachelor**
- 7 semesters
- 1 bachelor program
- 1st – 4th semester equal for all
- As of 5th semester: 5 occupational field-related modules
- Transition to any master program possible

- 20 weeks internship
- 1 project work (6 weeks)

**Master**
- 3 semesters
- 9 master programs

- Bachelor's Thesis (10 weeks)
- Master's Thesis (22 weeks)

Start of Studies

Time
Structure of the Business Administration and Engineering in the field Mechanical Engineering Program at RWTH Aachen University

Bachelor
- 7 semesters
- 1 bachelor program
- 1st – 4th semester equal for all
- As of 5th semester: 5 occupational field-related modules

Master
- 3 semesters
- 1 master program
- 6 fields of specialization

20 weeks internship

Bachelor's Thesis (10 weeks)

Master's Thesis (22 weeks)
Structure of the Computational Engineering Science Program at RWTH Aachen University

Bachelor
- 7 semesters
- 1 bachelor program

Master
- 3 semesters
- 1 master program
- 3 fields of specialization

12 weeks internship

Bachelor's Thesis (10 weeks)

Master's Thesis (22 weeks)

Start of Studies

Time

B. Sc.

M. Sc.
## Structure of Modules of the Bachelor Program Mechanical Engineering

<table>
<thead>
<tr>
<th>Modules</th>
<th>Share (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Principles of Engineering</td>
<td>40 %</td>
</tr>
<tr>
<td>Basic Principles of Mathematics and Natural Sciences</td>
<td>20 %</td>
</tr>
<tr>
<td>Basic Principles of System Sciences</td>
<td>15 %</td>
</tr>
<tr>
<td>Basic Principles of Social Sciences</td>
<td>7 %</td>
</tr>
<tr>
<td>Occupational Field-Related Modules</td>
<td>18 %</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>
Students by Faculty

<table>
<thead>
<tr>
<th>Fac.</th>
<th>Faculty Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Faculty of Mathematics, Computer Science and Natural Sciences</td>
</tr>
<tr>
<td>2</td>
<td>Faculty of Architecture</td>
</tr>
<tr>
<td>3</td>
<td>Faculty of Civil Engineering</td>
</tr>
<tr>
<td>4</td>
<td>Faculty of Mechanical Engineering</td>
</tr>
<tr>
<td>5</td>
<td>Faculty of Georesources and Materials Engineering</td>
</tr>
<tr>
<td>6</td>
<td>Faculty of Electrical Engineering and Information Technology</td>
</tr>
<tr>
<td>7</td>
<td>Faculty of Arts and Humanities</td>
</tr>
<tr>
<td>8</td>
<td>Faculty of Business Administration and Economics</td>
</tr>
<tr>
<td>10</td>
<td>Faculty of Medicine</td>
</tr>
</tbody>
</table>
Series of new registrations as persons

--- | --- | --- | --- | ---
Mechanical Engineering: 1.381 | 1.233 | 1.175 | 1.144 | 1.157
Business Adm. and Eng. (field ME): 361 | 378 | 395 | 416 | 442
CES: 75 | 82 | 78 | 129 | 161
Total: 2,177 | 2,121 | 2,234 | 2,233 | 2,427

Source: Dezernat 6
Structure and Funding
## Financing (actual expenses)

- **Total Revenue**: €1.036M
- **Third-party funds**: €422.3M
- **Budgetary funds**: n.a.

## Personnel (in full-time equivalent)

- **Total**: 9,655
- **Professorships**: 564
- **Research assistants**: 5,695
- **Non-academic staff**: 2,834
- **Student and scientific assistants**: 3,042

## Teaching (for the winter semester)

- **Degree programs (bachelor, master, teacher training)**: 162
- **Students total**: 45,628
- **New enrollments**: 12,435
- **Internationale students**: 11,280
- **Graduates**: 7,164

## Research

- **Third-party funds**: €422,3M
- **Doctoral Studies**: 1007

Source: Dezernat 6, Dean's Office
## The Faculty of Mechanical Engineering in Figures - 2019

### Financing (actual expenses)

- **Total Revenue**: €300.2M
- **Third-party funds**: €169.1M
- **Budgetary funds**: €119.9M

### Personnel (in full-time equivalent)

- **Total**: 2,181
- **Professorships**: 60
- **Research assistants**: 1,531
- **Non-academic staff**: 689
- **Student and scientific assistants**: 1,189

### Teaching (each winter semester)

- **Degree programs**
  (Bachelor, Master, Teacher Education): 35
- **Students total**: 12,435
- **New enrolments**: 2,532
- **Students international**: 3,528
- **Graduates**: 2,174

### Forschung

- **Third-party funds**: €169.1M
- **Doctoral Studies**: 235

Source: Dezernat 6, Dean's Office
Third-party Funds of RWTH Faculties 2019

Fac. 1: Faculty of Mathematics, Computer Science and Natural Sciences
Fac. 2: Faculty of Architecture
Fac. 3: Faculty of Civil Engineering
Fac. 4: Faculty of Mechanical Engineering
Fac. 5: Faculty of Georesources and Materials Engineering
Fac. 6: Faculty of Electrical Engineering and Information Technology
Fac. 7: Faculty of Arts and Humanities
Fac. 8: Faculty of Business Administration and Economics
Fac. 10: Faculty of Medicine
## Assets Planning

<table>
<thead>
<tr>
<th>Basic Assets</th>
<th>Teaching Load</th>
<th>Research Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>W3 (C4):</td>
<td>Lectures, tutorials, exams etc., 50% of study and final theses</td>
<td>Doctorates, publications and third-party funds, 50% of study and final theses</td>
</tr>
<tr>
<td>3 research assistants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>W2 (C3):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 research assistant</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Faculty job pool
Long-term control of teaching load
Quota: ± 20 % of the faculty average

<table>
<thead>
<tr>
<th>Total:</th>
<th>Teaching load:</th>
<th>Research load:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ca. 70%</td>
<td>ca. 30%</td>
</tr>
</tbody>
</table>
Excellence Initiative and Interdisciplinary Research Partnerships
# Excellence Initiative at the RWTH Aachen University

## The three funding lines

<table>
<thead>
<tr>
<th>Graduate School</th>
<th>Exzellenzcluster</th>
<th>Institutional Strategy II</th>
</tr>
</thead>
<tbody>
<tr>
<td>AICES Aachen Institute of Advanced Study in Computational Engineering Science</td>
<td>Internet of Production (IoP)</td>
<td><strong>RWTH 2020: Meeting Global Challenges – The Integrated Interdisciplinary University of Technology</strong></td>
</tr>
<tr>
<td></td>
<td>The Fuel Science Center (FSC)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Matter and Light for Quantum Computing (ML4Q) (Speaker University Uni Köln)</td>
<td></td>
</tr>
</tbody>
</table>
# Institutional Strategy (2012 – 2017)

## Internationally Recognised Scientific Profile
- Strengthening the Natural Sciences
- Fostering Interdisciplinary Research

### Science Faculty Seed Funds
- Exploratory Research Space

### Undergraduate Research Funds
- Project House HumTec
- Project House IMF
- Project House CMT
- I³ Technology for Medicine

## JARA
- Focusing Competences – Shaping the Future

### Sections
- BRAIN, ENERGY, FAME, FIT, HPC, SOFT
- JARA-Professorships
- JARA-Institutes
- SimLabs

## Place to Be
- Diversity Fund
- Re-entry Positions
- RWTH Start up
- RWTH Lecturer
- RWTH Fellow

## Corporate Governance and Structures
- Profile Areas
- Cooperative Structures
- Strategy Fund
- Recruitment Strategy
- Child Care
Excellence Initiative
Participation of the Faculty of Mechanical Engineering

First, second and third round of application
Applications approved by DFG and Science Council under the leadership of the Faculty of Mechanical Engineering

• Graduate Schools for promoting young academics
  **First line of funding**
  – AICES Aachen Institute for Advanced Study in Computational Engineering Science
    - Spokesperson: Univ.-Prof. Marek Behr, Ph. D.

• Exzellenzcluster to promote excellence in research
  **Second line of funding**
  – Integrative Production Technology for High-Wage Countries (ending 12/2018)
    - Coordinator: Univ.-Prof. Dr.-Ing. Christian Brecher
  – Tailor-Made Fuels from Biomass (ending 12/2018)
    - Coordinator: Univ.-Prof. Dr.-Ing. Stefan Pischinger

  **Third line of funding**
  – The Fuel Science Center (starting 01/2019) – Adaptive Conversion Systems for Renewable Energy and Carbon Sources
    - Spokesperson: Univ.-Prof. Dr.-Ing. Stefan Pischinger
  – Internet of Production (starting 01/2019)
    - Spokesperson: Univ.-Prof. Dr.-Ing. Christian Brecher
Excellence Initiative
Participation of the Faculty of Mechanical Engineering

Third round of application
Activities of the Faculty of Mechanical Engineering within the framework of the Future Concept II RWTH 2020 – Meeting Global Challenges

• Measure 1 - Internationally Recognized Scientific Profile
• Measure 2 - JARA: Focusing Competences – Shaping the Future
• Measure 3 - Place to Be
• Measure 4 - Corporate Governance and Structures
Enhancing Multi-Disciplinary Collaboration

- **CompSE** Computational Science & Engineering
  - Spokesperson: Univ.-Prof. Dr.-Ing. Wolfgang Schröder
- **ECPE** Energy, Chemical & Process Engineering
  - Spokesperson: Univ.-Prof. Dr.-Ing. Stefan Pischinger
- **ICT** Information & Communication Technology
  - Spokesperson: Univ.-Prof. Dr.-Ing. Stefan Kowalewski
- **MatSE** Material Science & Engineering
  - Spokesperson: Univ.-Prof. Dr. rer. nat. J. Mayer
- **MedST** Medical Science & Technology
  - Spokesperson: Univ.-Prof. Dr. med. Rolf Rossaint
- **MSE** Molecular Science & Engineering
  - Spokesperson: Univ.-Prof. Dr. rer. nat. Carsten Bolm
- **MTE** Mobility & Transport Engineering
  - Spokesperson: Univ.-Prof. Dr.-Ing. Lutz Eckstein
- **ProdE** Production Engineering
  - Spokesperson: Univ.-Prof. h.c. Dr.-Ing. Fritz Klocke
I³ - Interdisciplinary Integrated Institutes

Development and continuation of established interdisciplinary fields of research with a particular strategic meaning

• I - Cubes recognised as such by RWTH:
  – CWD - Center for Wind Power Drives
  – TM - Technology in Medicine

• Other I³ - Cubes identified by Faculty:
  – FDC – Fuel Design Center
  – HIA - Helmholtz-Institute for Biomedical Engineering of the RWTH Aachen
  – iCBT - Center for Human Centered Building Technology
  – MS - Modeling and Simulation
  – NGP² - Center for Next Generation Processes and Products
  – ZMB - Center for Metallic Design
Project Houses

Intensively working on current and particularly relevant research fields in the context of global challenges

• Project Houses recognised as such by RWTH:
  – ACA - Center for Automotive Catalytic Systems
  – CMT - Center for Molecular Transformations
  – P2F - Power to Fuel

• Project Houses identified by Faculty:
  – CERM - Center for European Research on Mobility
  – CMM - Center for Mobile Machinery
  – CMP - Center for Mobile Propulsion
  – TESA – Technical-Based Energy System Analysis
  – ZEP – Center for Electric Car Production
Collaborative Research Centers and Transregio SFBs

• **SFB 1120**  Precision manufacturing by controlling melt dynamics and solidification in production  
  – Spokesperson: Univ.-Prof. Dr. rer. nat. Reinhart Poprawe

• **TRR 129**  Oxyflame - Development of Methods and Models to Describe Solid Fuel Reactions within an Oxy-Fuel Atmosphere  
  – Spokesperson: Univ.-Prof. Dr.-Ing. Reinhold Kneer

Collaborative Research Centers and Transregio SFBs with Participation from RWTH Researchers

• **TRR 96**  Thermo-Energetic Design of Machine Tools  
  – Coordinating at RWTH: Univ.-Prof. Dr.-Ing. Christian Brecher  
  – Spokesperson University: University of Dresden

• **TRR 40**  Technological Foundations for the Design of Thermally and Mechanically Highly Loaded Components of Future Space Transportation Systems  
  – Coordinating at RWTH: Univ.-Prof. Dr.-Ing. Wolfgang Schröder  
  – Spokesperson University: University of Munich
DFG - Research Units

• **FOR 1779**  Active Drag Reduction by Transversal Surface Waves  
  – Spokesperson: Univ.-Prof. Dr.-Ing. Wolfgang Schröder

• **FOR 1087**  Damping Effects in Machine Tools  
  – Spokesperson: Univ.-Prof. Dr.-Ing. Christian Brecher

DFG – Research Units with RWTH Involvement

• **FOR 2089**  Durable Pavement Constructions for Future Traffic Loads Coupled System Pavement-Tyre-Vehicle  
  – RWTH Participants: Univ.-Prof. Dr.-Ing. Lutz Eckstein

• **FOR 1585**  Multi-Port Bone Surgery Using Otobasis as an Example (MUKNO)  
  – RWTH Participants: Univ.-Prof. Dr.-Ing. Robert Schmitt
DFG - Research Training Groups

• **GRK 1856** Integrated Energy Supply Modules for On-Road Electromobility - mobilEM
  – Spokesperson: Univ.-Prof. Stefan Pischinger

• **IGK 2379/1** Modern Inverse Problems: From Geometry and Data to Models and Applications
  – Spokesperson: Univ.-Prof. Marek Behr, Ph.D.

• **DFG – Graduate School**

• **AICES** Aachen Institute for Advanced Study in Computational Engineering Science
  – Scientific Director: Univ.-Prof. Marek Behr, Ph. D.
Other Programs

Marie-Curie-Initial Training Networks (ITN)

- **BiolImplant** European Training Network to develop improved Bioresorbable Materials for Orthopaedic and Vascular implant Applications
  - Coordinator: Univ.-Prof. h. c. (MGU) Dr.-Ing. Dipl.-Wirt. Ing. Thomas Gries

- **Super-W** Sustainable Product, Energy and Resource Recovery from Wastewater
  - Coordinator: Univ.-Prof. Dr.-Ing. Matthias Wessling

- **ModLife** Advancing Modelling for Process-Product Innovation, Optimization, Monitoring and Control in Life Science Industries
  - Coordinator: Univ.-Prof. Alexander Mitsos, Ph. D.

GRS  German Research School for Simulation Sciences

- Spokesperson: Univ.-Prof. Marek Behr, Ph. D.
**EU Projekte coordinated by RWTH Aachen**

- **TETRAMAX** Technology TRAnsfer via Mulinational Application eXperiments  
  - Coordinator: Univ.-Prof. Dr.-Ing. Lutz Eckstein

- **MeBeSafe** Measures for behaving safely in traffic  
  - Coordinator: Univ.-Prof. Dr.-Ing. Lutz Eckstein

**FET Flagships and EIT KICs with RWTH Involvement**

- **Climate-KIC** Knowledge and Innovation Community  
  - RWTH Associated Partner: Univ.-Prof. Dr.-Ing. André Bardow

**ERC Advanced Grant**

- **MILESTONE** Multi-Scale Description of Non-Universal Behavior in Turbulent Combustion  
  - Grantholder: Univ.-Prof. Dr.-Ing. Heinz Pitsch

- **ConFluRem** Controlling Fluid Resistances at Membranes  
  - Grantholder: Univ.-Prof. Dr.-Ing. Matthias Wessling
Appropriation of Tuition Fee Substitutes
### Tuition Fee Substitutes

#### Appropriation Procedures Basics

<table>
<thead>
<tr>
<th>Basics for the appropriation of tuition fee substitutes:</th>
<th>„White Paper on the utilization of tuition fee substitutes: at the Faculty of Mechanical Engineering of RWTH Aachen University“</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Key principles of the white paper:</th>
<th>„Improvement of the quality of education as a primary goal for the utilization of funds from tuition fee substitutes“</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Target to be achieved by the following measures:</th>
<th>Measures for a significant increase of the success rate and support of the core subjects of mechanical engineering“</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>„Measures to promote excellent students“</td>
</tr>
</tbody>
</table>

(Faculty Council Decision on Dec. 12th, 2006)
Tuition Fee Substitutes
Appropriation Control Loop

Revenue from tuition fee substitute

Subcommittee tuition fee substitutes

Dean's Office

Other measures, if necessary

Budget Committee

Study Advisory Council

Faculty Council

Evaluation Committee

Institutes

Other measures, if necessary from budget and study advisory council.
Faculty International
Faculty International
Study Abroad

• ERASMUS
  – More than 70 European partnerships on faculty and institute level
• International Study and Education Partnerships: USA, Australia and Mexico
  – Institute contacts with US and Australian universities through the DAAD ISAP Program
• Korea University and Hongik University
  – Study abroad South Korea
• Zhejiang University, Northwestern Polytechnical University (NPU) and University of Michigan - Shanghai Jiao Tong University Joint Institute
  – Study Stay at the prestigious Universities in the People’s Republic of China
• Joy Programm
  – Cooperation with the Yokohama National University (YNU) in Japan
• ITESM
  – Cooperation with Instituto Tecnológico y de Estudios Superiores de Monterrey in Mexico
• Tsinghua (Double Degree)
  – Joint Degree with Tsinghua University in Beijing
• Ecole Mines de Douai and DFH/T.I.M.E. France (Double Degree)
  – Double Diploma Program with five Grandes Écoles in France
• T.I.M.E. Japan (Double Degree)
  – Double Diploma Program with one of Japan’s leading technical universities
• T.I.M.E. Valencia (Double Degree)
  – Double Diploma Program with one of Spain’s leading technical universities Universidad Politécnica de Valencia (UPV)
• Wroclaw (Double Degree)
  – Double Diploma Program with one of Polen’s leading technical universities Wroclaw University of Science and Technology (WUST)
• German University of Technology (GUtech)
  – Internships and stays as tutor at technical university in Oman
• Free Mover
  – Support for self-organized exchanges
• Recommended mobility time slots (B.Sc.) from 5th semester on

1 2 3 4 5

• Recommended mobility time slot (M.Sc.): 2nd/3rd semester

1 2
Faculty International
Study Abroad Counseling

Exchange Programs
Application Process
Accreditation Procedure

"Outgoings"

Cultivation and development of contacts

"Incomings"

Faculty of Mechanical Engineering

Study Abroad Counseling

Foreign University

Mentoring
Exam Registration
Course Selection
Faculty International

International students at the RWTH Aachen in WS 2018/19 sorted by faculties

<table>
<thead>
<tr>
<th>Fac. 1</th>
<th>Fac. 2</th>
<th>Fac. 3</th>
<th>Fac. 4</th>
<th>Fac. 5</th>
<th>Fac. 6</th>
<th>Fac. 7</th>
<th>Fac. 8</th>
<th>Fac. 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.861</td>
<td>431</td>
<td>874</td>
<td>3.264</td>
<td>1088</td>
<td>1.668</td>
<td>383</td>
<td>315</td>
<td>571</td>
</tr>
</tbody>
</table>

18% 4% 7% 31% 11% 16% 4% 3% 6%

Source: Department 6