

Technische Universität Ilmenau

WELCOME

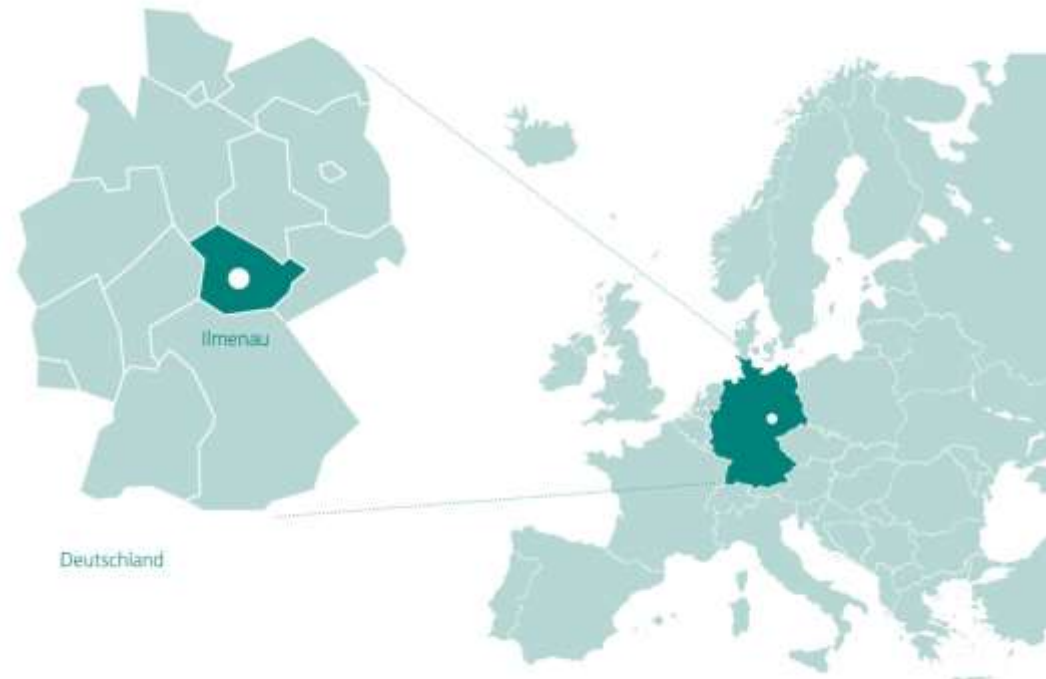


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Technische Universität Ilmenau

Welcome to Ilmenau



Technische Universität Ilmenau

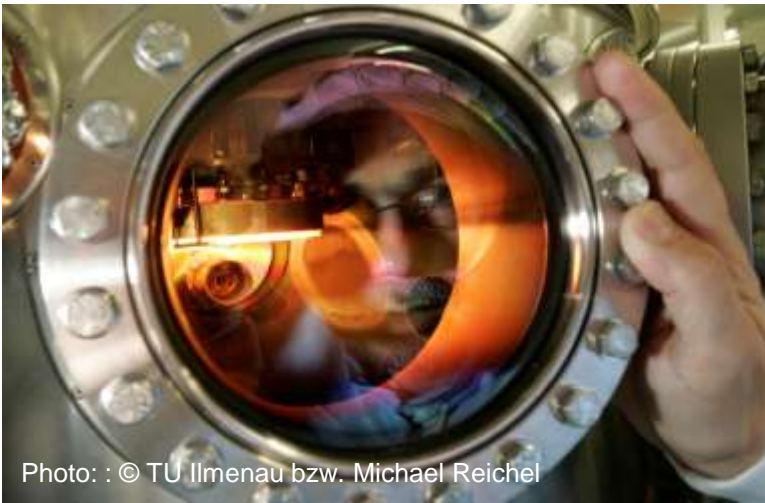


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Technische Universität Ilmenau

Our partners in new ventures:

- 300 industrial companies active in Thüringen and abroad: Jenoptik Jena, Carl Zeiss Jena, Sony, Philips, DaimlerChrysler, Bosch, Telekom etc. and more
- Approx. 130 universities in East, West and Central Europe, Asia, Africa and America

<http://www.tu-ilmenau.de/tuiis/partnerschaften/>

Technische Universität Ilmenau



Faradaybau



Curiebau

Photo: © TU Ilmenau

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Röntgenbau

Photo: © TU Ilmenau



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Helmholtzbau



Kirchhoffbau

Photo: © TU Ilmenau

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Zusebau

Photo: Sebastian Stern, Jens Hauspurg



Technische Universität Ilmenau



Newtonbau (Building for Department of Mechanical Engineering)

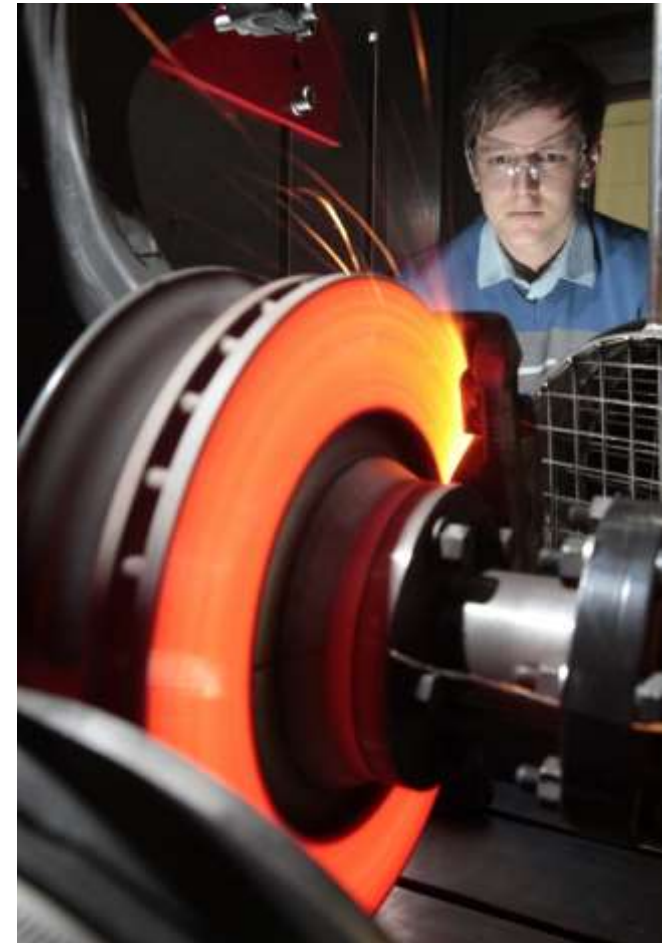


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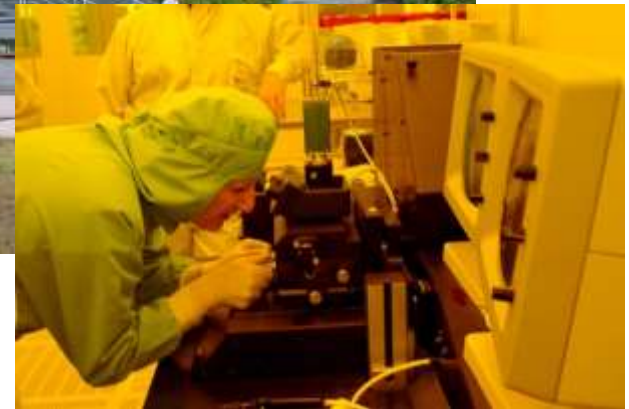
Ernst-Abbe-Zentrum for research and transfer

Technische Universität Ilmenau



Inter-departmental Center of Micro- and Nanotechnologies

Photo: © TU Ilmenau/Michael Reichel



Technische Universität Ilmenau



Leibnizbau with
Thuringia's Patents Center (PATON)
and University Library



Photo: © TU Ilmenau/Sebastian Trepesch / Michael Reichel

Technische Universität Ilmenau



Students' cafeteria and dormitory

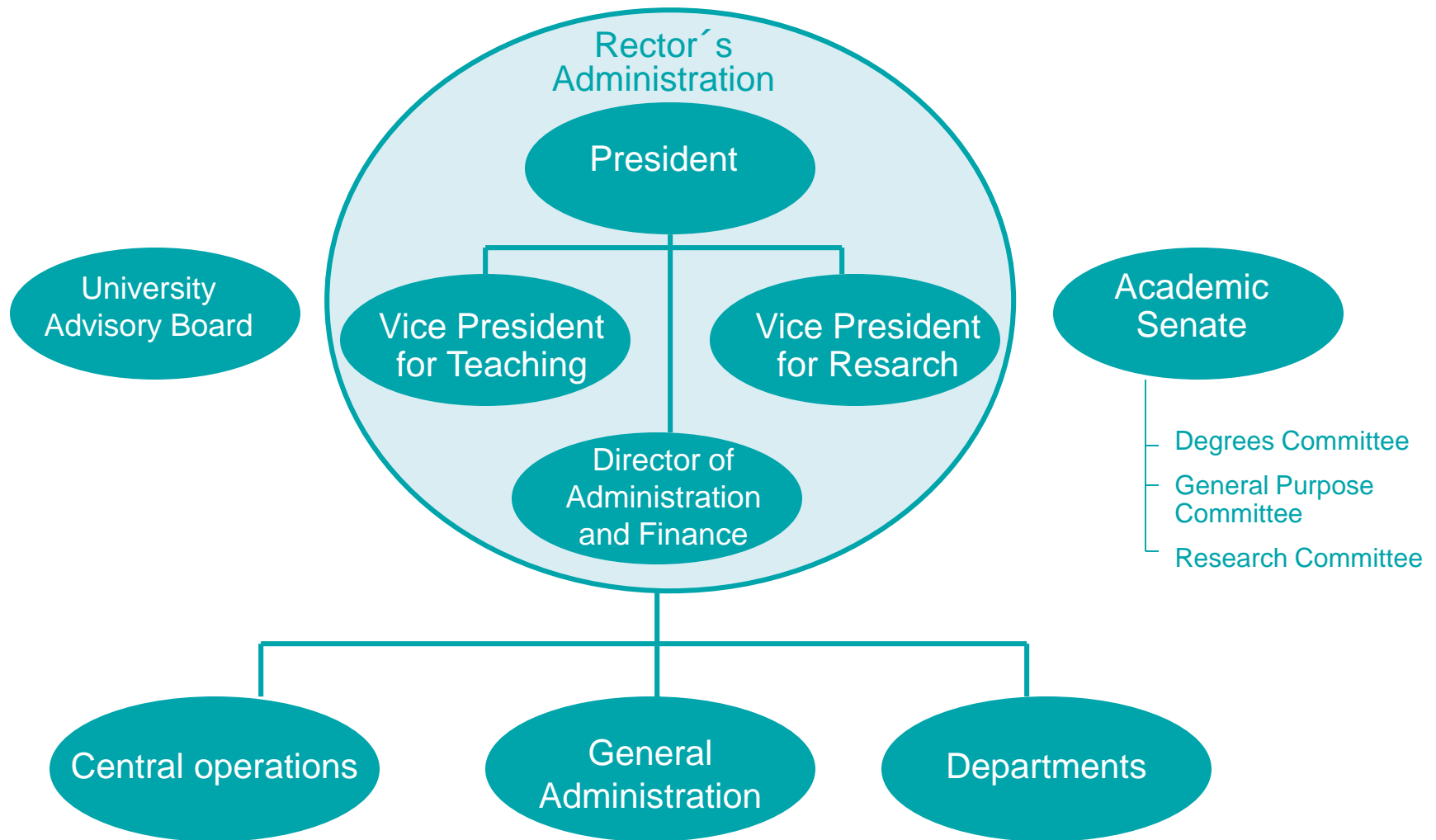
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Technische Universität Ilmenau

- History -

- 24.06.1894 Contract signed for the foundation of the **Thüringisches Technikum Ilmenau**
- 1926 Ilmenau Thüringisches Technikum renamed as Ilmenau Engineering School
- 1950 The Engineering School acquires the title of Training College for Electrical and Mechanical Engineering
- 16.09.1953 **HfE**, THE Hochschule für Elektrotechnik, is opened. Matriculation ceremony for 268 students
- 1955 The Training College for Electrical and Mechanical Engineering closes its doors.
- 14.10.1963 The GDR Minister's Council confers status of **Technische Hochschule (TH)** on the HfE
- 08.07.1992 The ThürHG (Thüringen Universities Act) is passed in the Thüringen Parliament and the TH becomes **Technische Universität Ilmenau**



President's staff



Prof. Peter Scharff
President
TU Ilmenau



Prof. Jürgen Petzoldt, Vice
President for Teaching



Prof. Klaus Augsburg, Vice
President for Research



Dr. Margot Bock, Director
for Adm. & Finance

Departments

- **Department of Electrical Engineering and Information Technology**
- **Department of Computer Science and Automation**
- **Department of Mechanical Engineering**
- **Department of Mathematics and Natural Sciences**
- **Department of Economics Sciences and Media**
- ❖ **6 Inter-departmental Institutes**
- ❖ **Competency Center „Nanopositioning and Nanomeasuring Machines“**
- ❖ **TU Ilmenau International School**

Central operations

- **ZMN – Inter-departmental Centre of Micro- and Nanotechnologies**
- **ZET – Inter-departmental Centre for Energy Technologies**
- **ZAP – Inter-departmental Centre for Automotive and Production Engineering**
- **ZIB – Central Institute for Continuing Education**
- **University Computer Center**
- **University Library**
- **Thuringia's Patent Center (PATON)**
- **University Athletic Complex**

Departments + Inter-departmental Institutes

Automotive & Production
Engineering

Chemistry, Electrochemistry &
Electro-Plating

Energy, Power Train & Environ-
mental Systems Technology

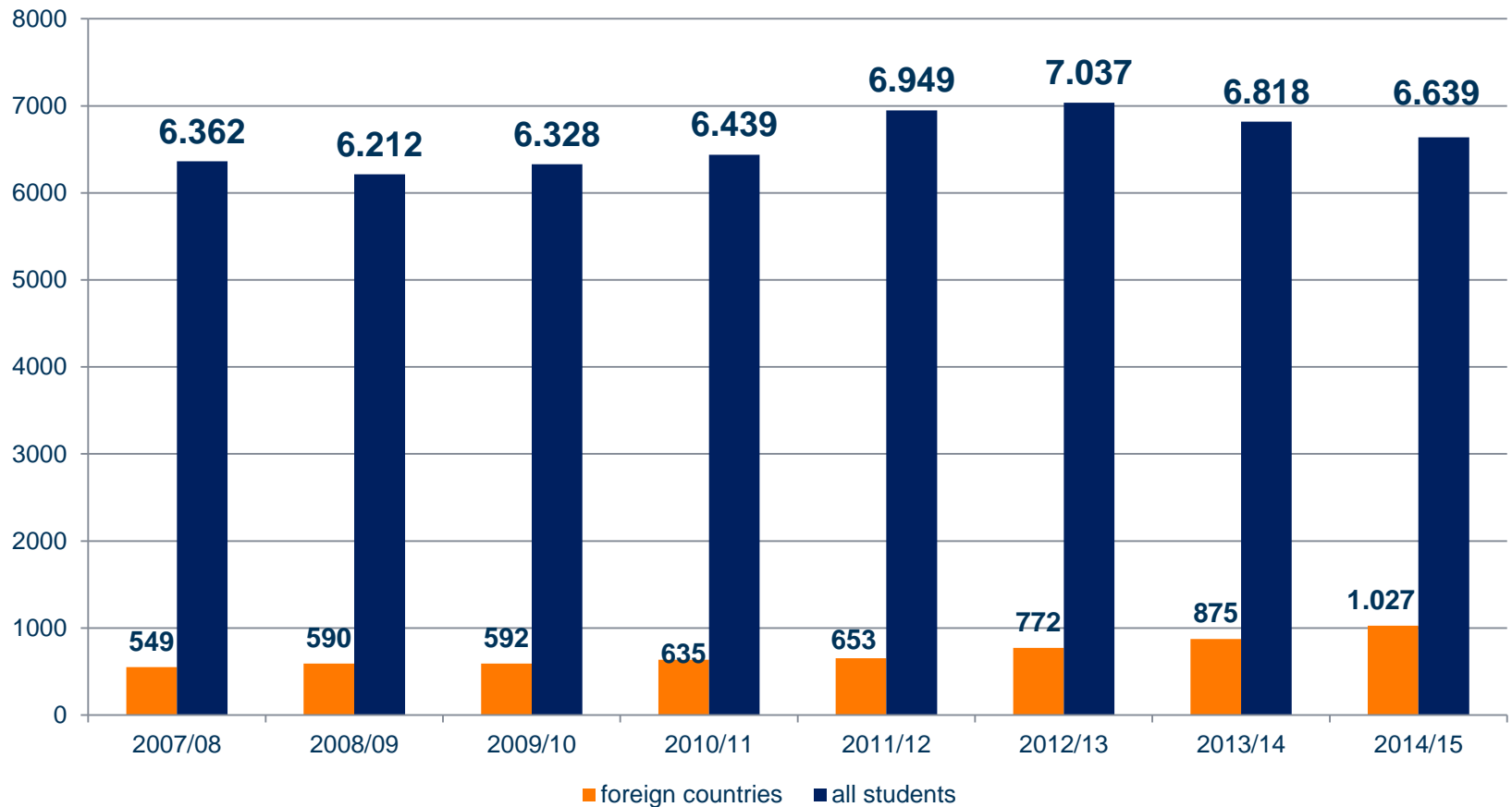
Media and Mobile
Communications

Micro- and Nanotechnologies

Material Engineering

Growth of student numbers

(proportional: foreign students)



* Ohne Beurlaubte; Nebenhörer, Stand: 11/2014

Staff and students

• (University) Professors:	104
- (endowed) Professors:	8
- junior professorship:	6
• academic staff:	500
• Staff funded from outside sources:	300
• Students in	
• WS 2010/11	6.439
• WS 2011/12	6.949
• WS 2012/13	7.037
• WS 2013/14	6.818
• WS 2014/15	6.639
• Freshman	1.354
• proportional international students	ca. 15,5 %

Stand: 11/2014

Technische Universität Ilmenau: Academic Prospectus

Bachelor's and Master's degrees

- Automotive Engineering (BSc/MSc)
- Biomedical Engineering (BSc/MSc)
- Chemical Biotechnology (BSc)
- Communications and Signal Processing (MSc)
- Computer and Systems Engineering (BSc/MSc)
- Electrical Engineering and Information Technology (BSc/MSc)
- Electrical Power and Control Engineering (MSc)
- Electrochemistry and Electroplating (MSc)
- Mechanical Engineering (BSc/MSc)
- Mechatronics (BSc/MSc)
- Media Technology (BSc/MSc)
- Miniaturised Biotechnology
- Optical Systems Engineering/Optronics (BSc/MSc)
- Polyvalent Studies with Teaching Certification for Vocational Schools (BSc)
- Research in Computer and Systems Engineering (MSc)
- Technical Cybernetics and Systems Theory (BSc/MSc)



Bachelor's and Master's degrees

➤ Mathematics and Natural Sciences

- Computer Science (BSc/MSc)
- Materials Science and Engineering (BSc/MSc)
- Mathematics (BSc)
- Mathematics and Business Mathematics (MSc)
- Micro- and Nanotechnologies (MSc)
- Renewable Energy Technology (MSc)
- Technical Physics (BSc/MSc)

Bachelor's and Master's degrees

➤ Business and Social Sciences

- Media and Communication Science (MSc)
- Applied Media and Communication Studies (BSc)
- Industrial Engineering and Management (BSc/MSc)
- Business Information Systems Engineering (BSc/MSc)
- Media Economics (BSc(MSc))

➤ English taught Master courses

- Research in Computer and Systems Engineering
- Communications and Signal Processing
- Media and communication sciences
- Media technology

Technische Universität Ilmenau: Research in Outline:

Research Alliance

- **Nanoengineering**
- **Precision Engineering and Precision Measurement Technology**
- **Technical and biomedical assistance systems**
- **Drive, Energy and Environmental Systems Technology**
- **Digital Media Technology**
- **Mobile Communications**

Research Activities

1. **Competence Center**
 - „Nanopositioning and Nanomeasuring Machines“
2. **DFG-Research-Group**
 - „Magneto-Fluid-Dynamics“
3. **„Thüringer Innovationszentrum Mobilität“ (ThIMo)**
4. **Thuringian Center for Mechanical Engineering (ThZM)**
5. **Centre for Innovation Competence (ZIK)**
 - 3-D-Nanostructuring

Research Activities

5. Research Training Group

- (Federally funded) for Lorentz Force Velocimetry and Lorentz Force Eddy Current Testing

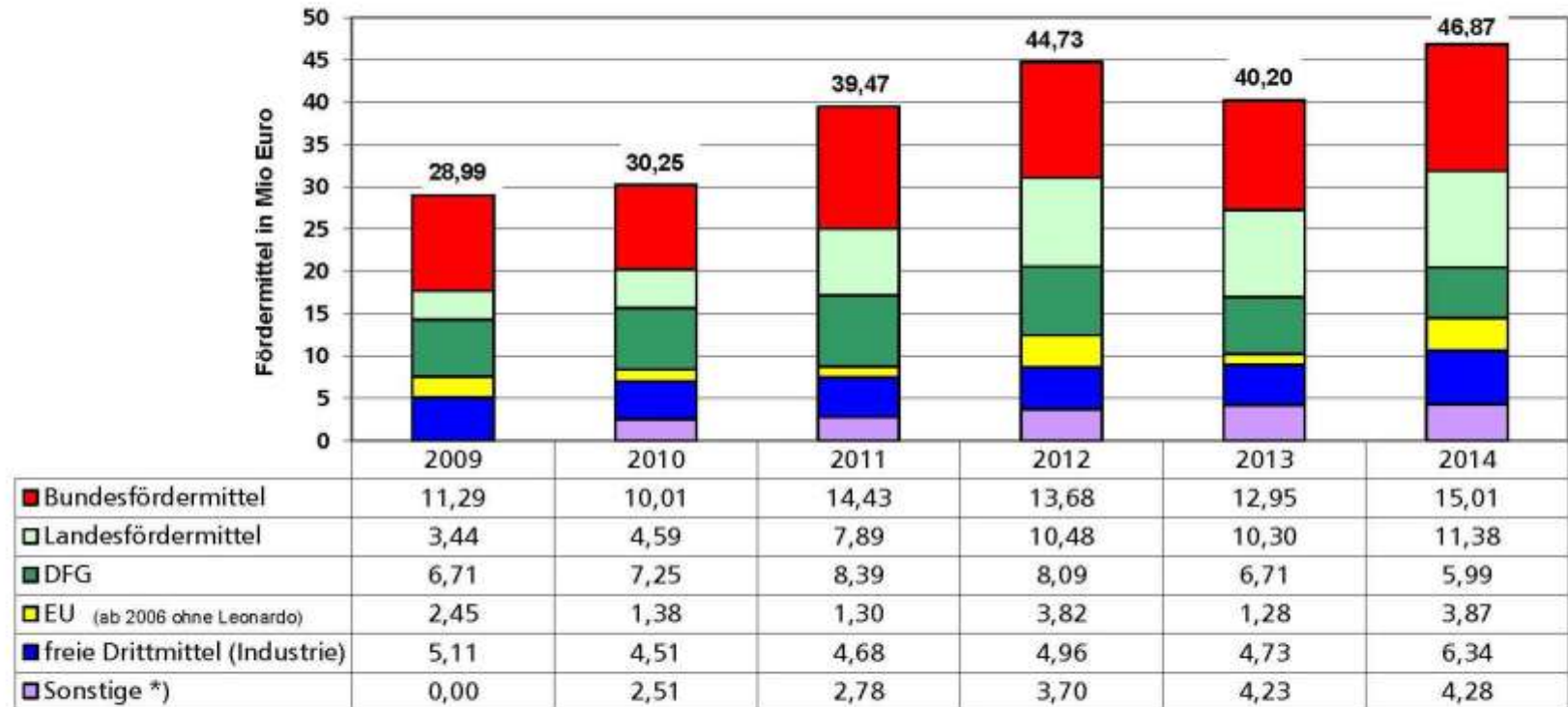
6. Graduate Research School

- (Thuringian) Graduate Research School for Photovoltaics - Photograd

Third-party Funds

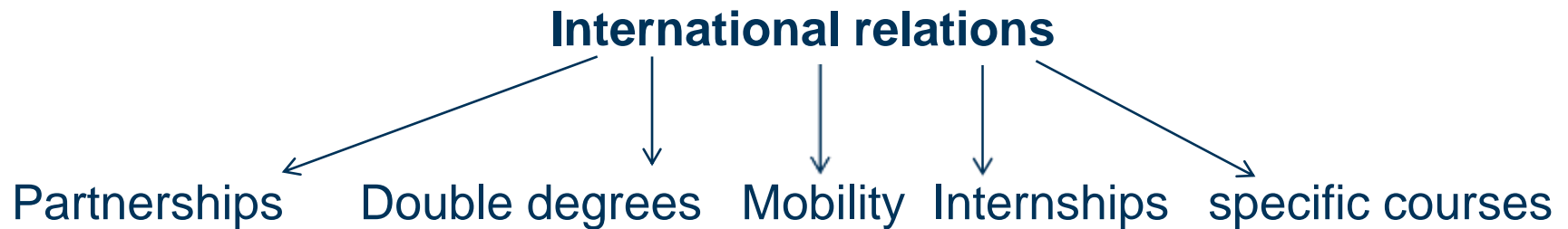
Third-party funding efficiency per professor in 2014: approx. € 460,000 p.a.

clearly no. 1 in Thuringia; remarkable in countrywide comparison



*) z.B. Spenden, bis 2009 in freien Drittmitteln

TU Ilmenau International School



International Office – central advisory office for international affairs

Fundings by: **ERASMUS**, **PROMOS**, go east, LEONARDO Euler grants, Mundus, TU Ilmenau grants, Science without borders

We4you – service => tutoring, consulting, orientation, daily life requests
buddy program, summer & winter courses => German & cultural heritage

LEONARDO-Office Thuringia => student / young raduate placements in Europe
www.leonardopraktika.de

Central service for German and international students

International Office

International Exchange Program



ERASMUS+ – Partnerships with 74 universities in 22 different countries

More than 130 **University partnership contracts** worldwide:

Peru, Russia, Indonesia, Thailand, Georgia, USA, Australia, Brazil Egypt, Vietnam, Japan, China, Colombia, Argentina, Mexico, Canada etc.

Various **scholarship** programs ; more than 80 nations on the campus

Information about international double degree master programs

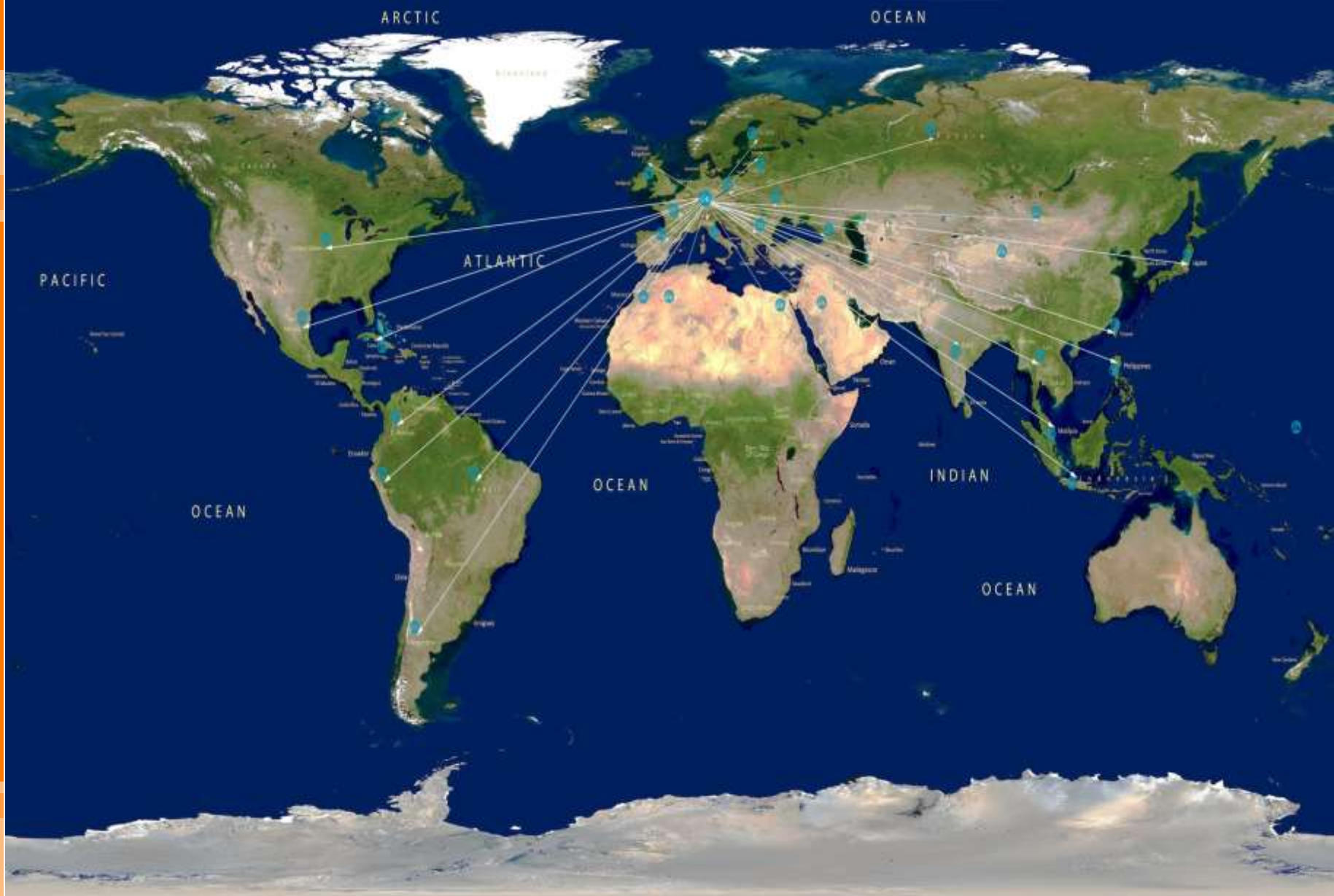
Branches in Russia, Brazil, China and at Balkan – „ambassadors“

Coordinators for **target regions** – Russian Federation, South America, Asia

www.tu-ilmenau.de/international

Contact persons for students

- Tutors and mentors – we4you -> International Office
- ASC - Academic Service Center, Max-Planck-Ring 1 (Mensa), Tel. 69 5555
- Central student advisory office at ASC, Max-Planck-Ring 1 (Mensa), Tel. 69 2021/2022
- Deans & vice deans of faculties, training representatives
- Vice rector education, Ehrenbergstraße 29, (Ernst-Abbe-Zentrum), Zi. 3321, Tel. 69 5011, e-mail: prorektor-b@tu-ilmenau.de
- Student organisation, Max-Planck-Ring 7, Zi. 013, Tel. 69 1914 (Haus A)
- Campus family international (advisory centre)



Internationalization

„It is important for the higher education institutions to „think“ internationalisation in all areas of university life, e.g. in research, teaching and continuing education, management, administration and services. Internationalisation must always be regarded as an instrument for quality development with a view to becoming attractive and able to compete globally through excellent programmes in research and teaching combined with hospitality and service orientation.“

Strategy of the Federal and *Länder* Ministers of Science for the Internationalisation of the Higher Education Institutions in Germany –
12 April 2013

Strategic internationalization

- TU Ilmenau International School
 - includes International Office + LEONARDO Office Thuringia
 - directly reporting to the President
- Research Service and Technology Transfer incl. EU office
- Internationalization Strategy (2013)
- Coordinators for target regions
- „Branch office“ management
- 4 English taught Master programs

Legal framework for internationalization

→ German education is part of the *Länder* policy

Thuringian Higher Education Law:

- supports the international co-operation, esp. on European level
- allows to establish international study programs
- requests to respect the needs of foreign students

General examination regulations Bachelor and Master

- § 7: recognition of study results gained at a foreign institution (Learning Agreement)
- possibility for each subject to offer double degrees

Culture of welcome

We4you network (<http://www.tu-ilmenau.de/we4you/>)

- orientation week

- welcome desk for international students

- various tutoring programs (welcome tutors, Buddy program, language tutors, student hostel tutors, departmental tutors, event tutors)

- events during the semester, incl. excursions

International Summer and Winter courses

Academic Preparation Course

Welcome Center (virtual)

Academic Service Center (ASC)

International mobility - students

- to complete parts of their studies, internships and/or research stays abroad through ERASMUS, partnerships or international programs
- Close relation to National Agency and German Academic Exchange Service (DAAD) by promoting all programs
- Recognition of study results at home university

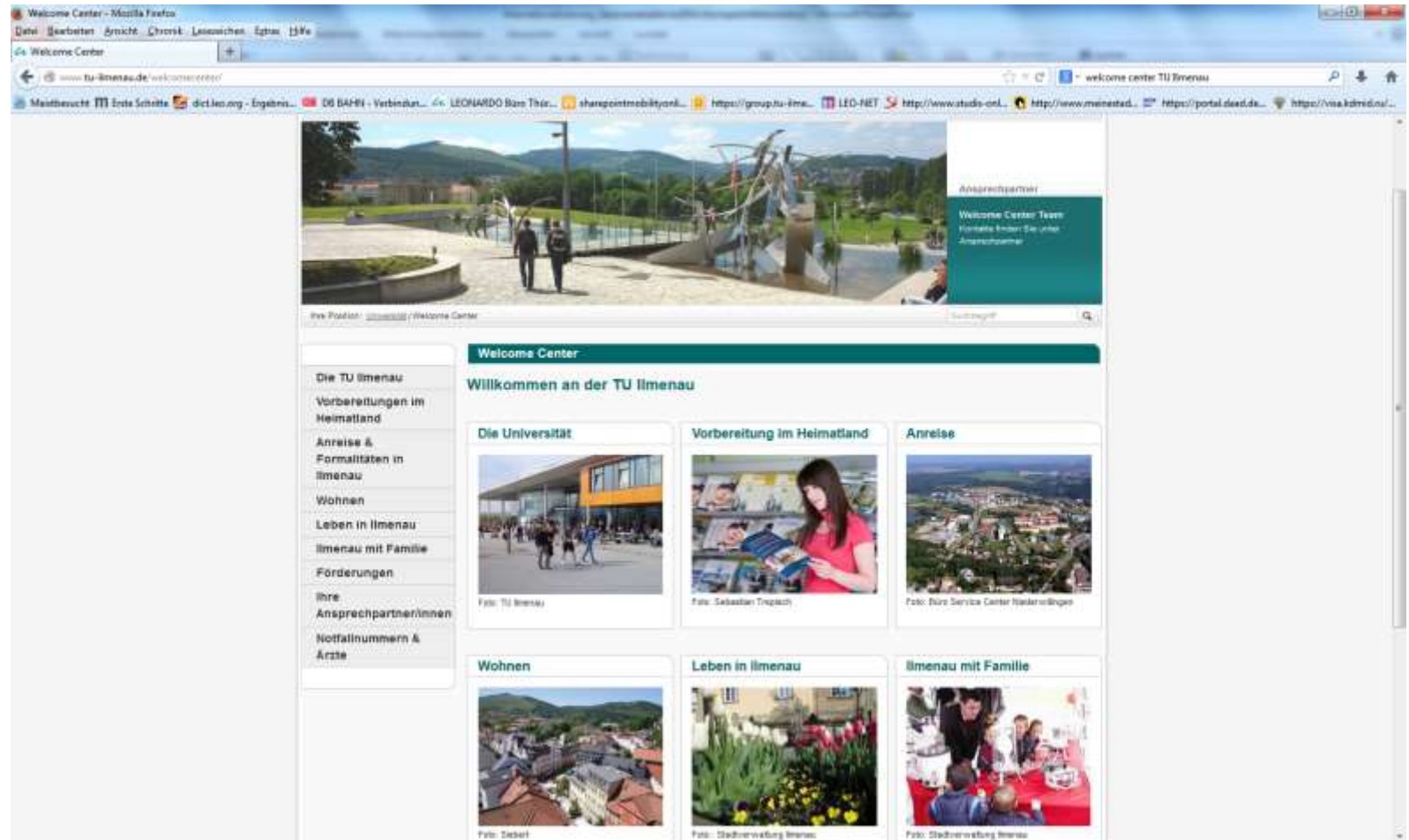
International mobility - teachers

- to teach abroad (ERASMUS, partnerships and integrated international programs)
- to attend conferences worldwide
- to expand their international research cooperations → 8 EU projects
- International programs

Double Degree Programms

- **Russia: Moscow Power Engineering Institute & Elektrotechnical State University St. Petersburg:**
Computer Science / Computer Engineering / Electrical Engineering and Information Technology / Mechatronics / Mechanical Engineering / Technical Physics (Master program)
- **France: École Nationale Supérieure de Mécanique et des Microtechniques de Besançon (ENSMM):**
Micro-Mechatronics (Master program)
- **Malaysia: University Teknologi Malaysia (UTM)**
Biomedical Engineering (Master program)
- **Peru: Pontificia Universidad Católica del Perú (PUCP)**
Material Sciences / Mechatronics / Mechanical Engineering / Technical Kybernetics (Master program)
- **China: Tongji University, Shanghai / Tongji Zhejiang College / Qingdao**
Biomedical Engineering / Industrial Engineering (Bachelor program) / Mechanical Enginnering and Informatics
- **Romania: Universitatea Transilvania din Braşov**
Computer Science (Master program)

Virtual welcome center



International large scale projects

German-Russian Institute of Advanced Technologies
GRIAT – Kazan / Russian Federation

International University Liaison Indonesia – IULI
Jakarta / Indonesia

Strategic Partnership of engineering faculties of TU
Ilmenau, State University St. Petersburg ETU and
National Research University Moscow MEI SPiTSE



INTERNATIONAL
UNIVERSITY
LIAISON
INDONESIA



GRIAT – German Russian Institute of Advanced Technologies



Study courses 2014/15

TU Ilmenau

- Master of Science in Research in Computer and Systems Engineering
(Prof. K.-U. Sattler)
- Master of Science in Communications and Signal Processing
(Prof. M. Haardt)

Otto-von-Guericke-Universität Magdeburg

- Master of Science in Electrical Engineering and Information Technology
(Prof. A. Lindemann)
- Master of Science in Chemical and Energy Engineering
(Prof. H. Weiß)



Strategic partnership of engineering departments
TU Ilmenau TU IL, State University St. Petersburg ETU and
National Research University Moscow Power Engineering
Institute MEI

Aims:

- Fostering and development of a trilateral relationship by common exchange of students and scientists,
- Establishment of research cooperations in sensorics, microwave engineering and realization of conferences
- integration of PhD programs, double degrees, summer schools, research trips to TU Ilmenau for Russian students,

INTERNATIONAL UNIVERSITY LIAISON INDONESIA



The Spirit of Science

The Spirit of Science



IULI

- was initiated, developed and founded by TU Ilmenau
- is a university due to Indonesian law
- Indonesian licence from October 3rd 2014
- imports study courses from TU Ilmenau and partner universities of the European University Consortium
- TU Ilmenau is central co-ordinator
- Offers scientists and students of the consortium unique opportunities to gain international experience
- Indonesian students come to Germany and Europe for a study period – development of double degrees as a vision

Cultural activities at the campus

- student clubs
- chamber orchestra e. V.
- chamber choir e.V.
- Ilmenau student broadcast (ISTUFF)
- hsf-student radio
- university film club
- Jazzclub Ilmenau e. V.
- more than 20 sport clubs
- religious student networks



Student's life



City of Ilmenau



Culture and leisure time

Goethe memorial
in city centre

Wandrer's Nachtlied
Über allen Gipfeln ist
Ruh,
in allen Wipfeln spürest
Du
kaum einen Hauch; Die
Vögelein schweigen im
Walde.
Warte nur, balde ruhest
Du auch.

Johann Wolfgang von Goethe
1780 Kickelhahn



Sparetime in Thuringian Forest



Technische Universität Ilmenau



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Photo: Nürnberg Luftbild, Hajo Dietz