

**Delegation from Iran  
Visit at TU Darmstadt on October, 16th 2018  
in cooperation with  
German Rectors' Conference (HRK) Bonn**



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

## Greeting

Prof. Dr.-Ing. Ralph Bruder

Vice President

Academic Affairs

TU Darmstadt

---



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT

We are one of Germany's leading  
universities of technology

# History

- 1836 Established as a higher vocational school and polytechnic institute
- 1877 Becomes an institute of technology
- 2005 Germany's first autonomous university



# People



25,840 students

312 professors

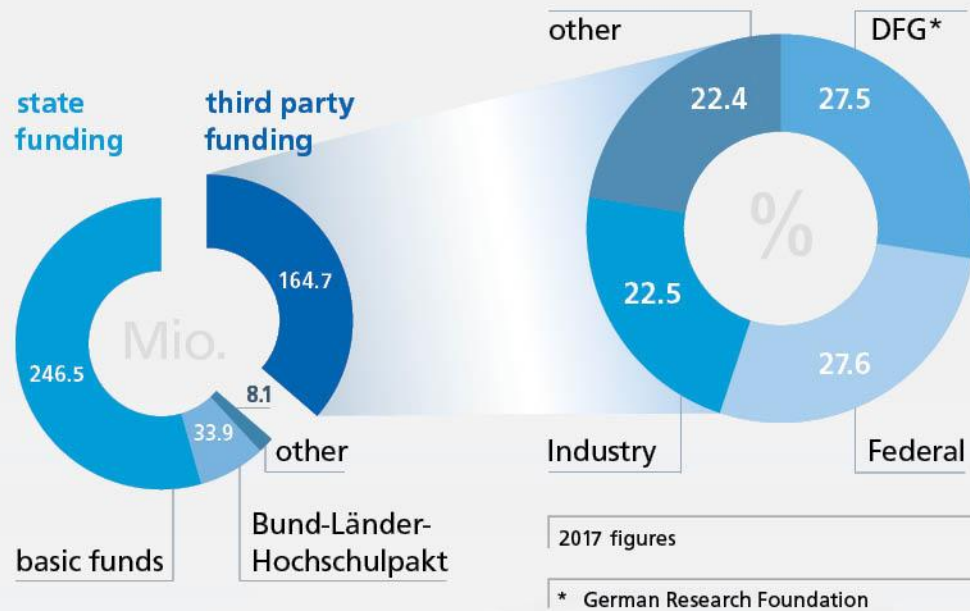
2,560 academic employees

1,870 non-academic employees

2017/18 figures

# Budget

## Funds



**In 2017 TU Darmstadt received a total of 453.2 million euros.**

Basic funding from the State of Hesse covers approx. 54.4% of the total budget.



# Departments

## Engineering

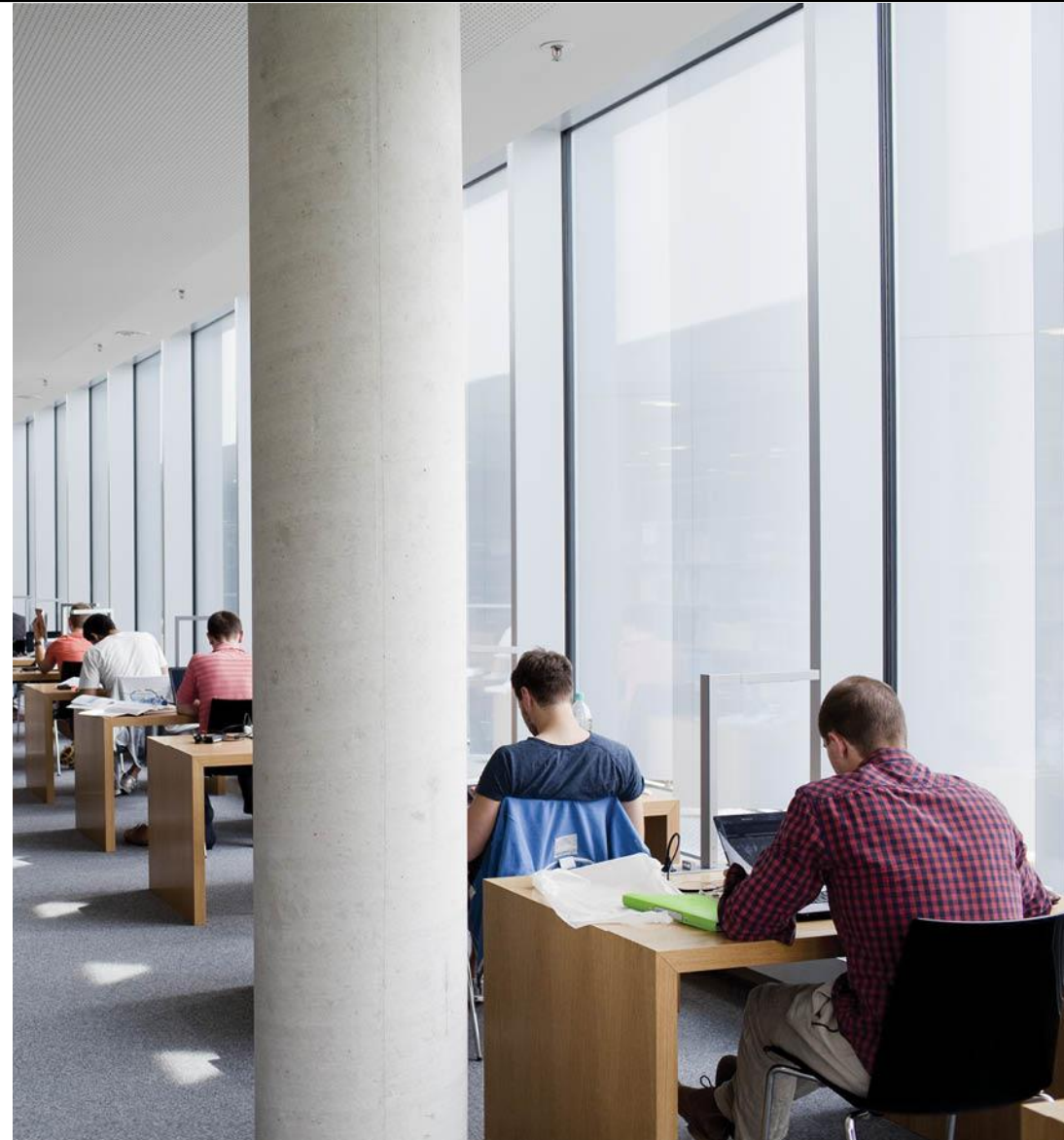
Civil and Environmental Engineering  
Architecture  
Mechanical Engineering  
Electrical Engineering and Information Technology  
Computer Science

## Natural Sciences

Mathematics  
Physics  
Chemistry  
Biology  
Materials and Earth Sciences

## Humanities

Law and Economics  
History and Social Sciences  
Human Sciences



# Locations

City centre (*Stadtmitte*)

*Lichtwiese*

Botanical Gardens

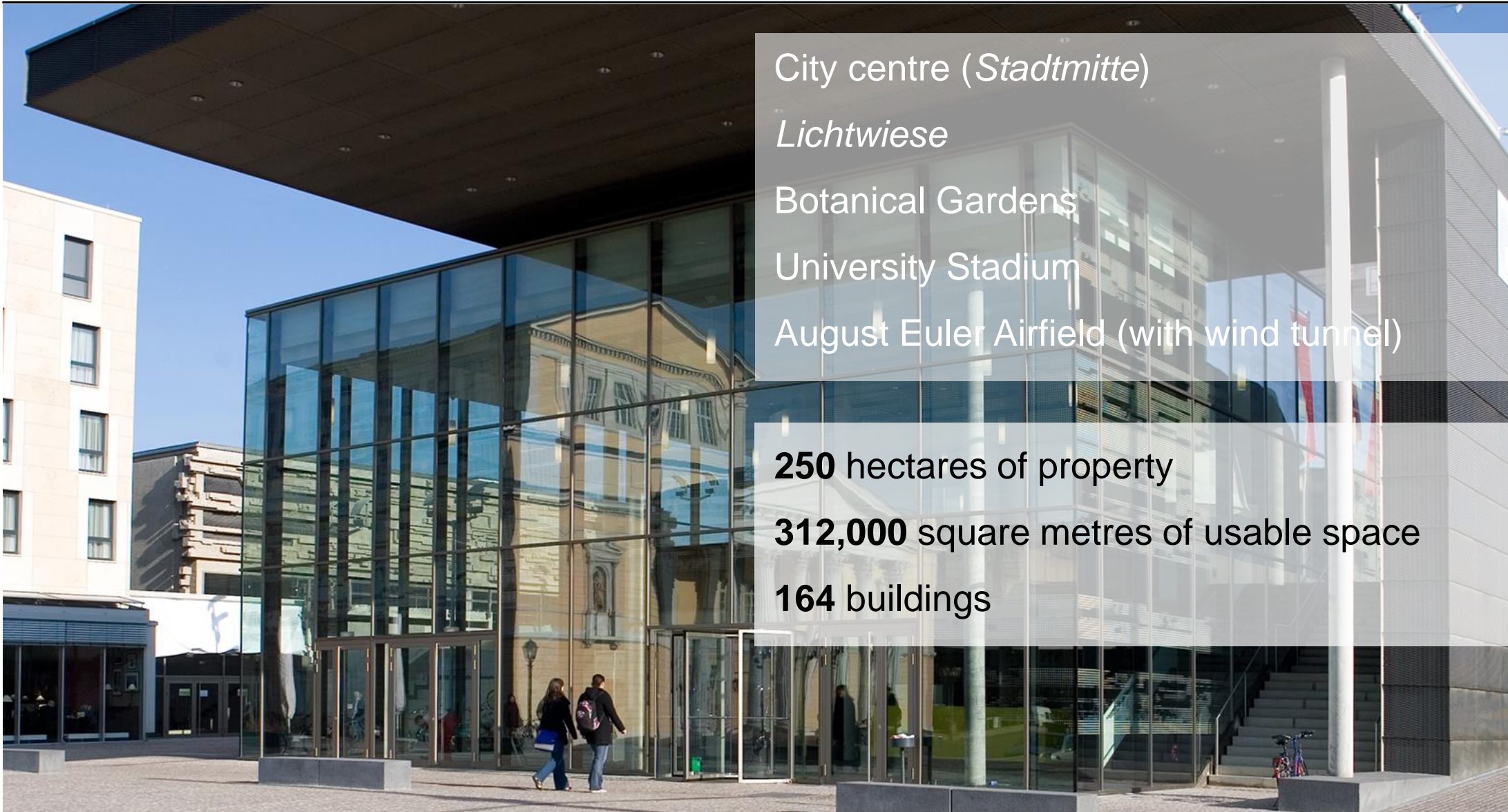
University Stadium

August Euler Airfield (with wind tunnel)

**250** hectares of property

**312,000** square metres of usable space

**164** buildings



# Research Profile

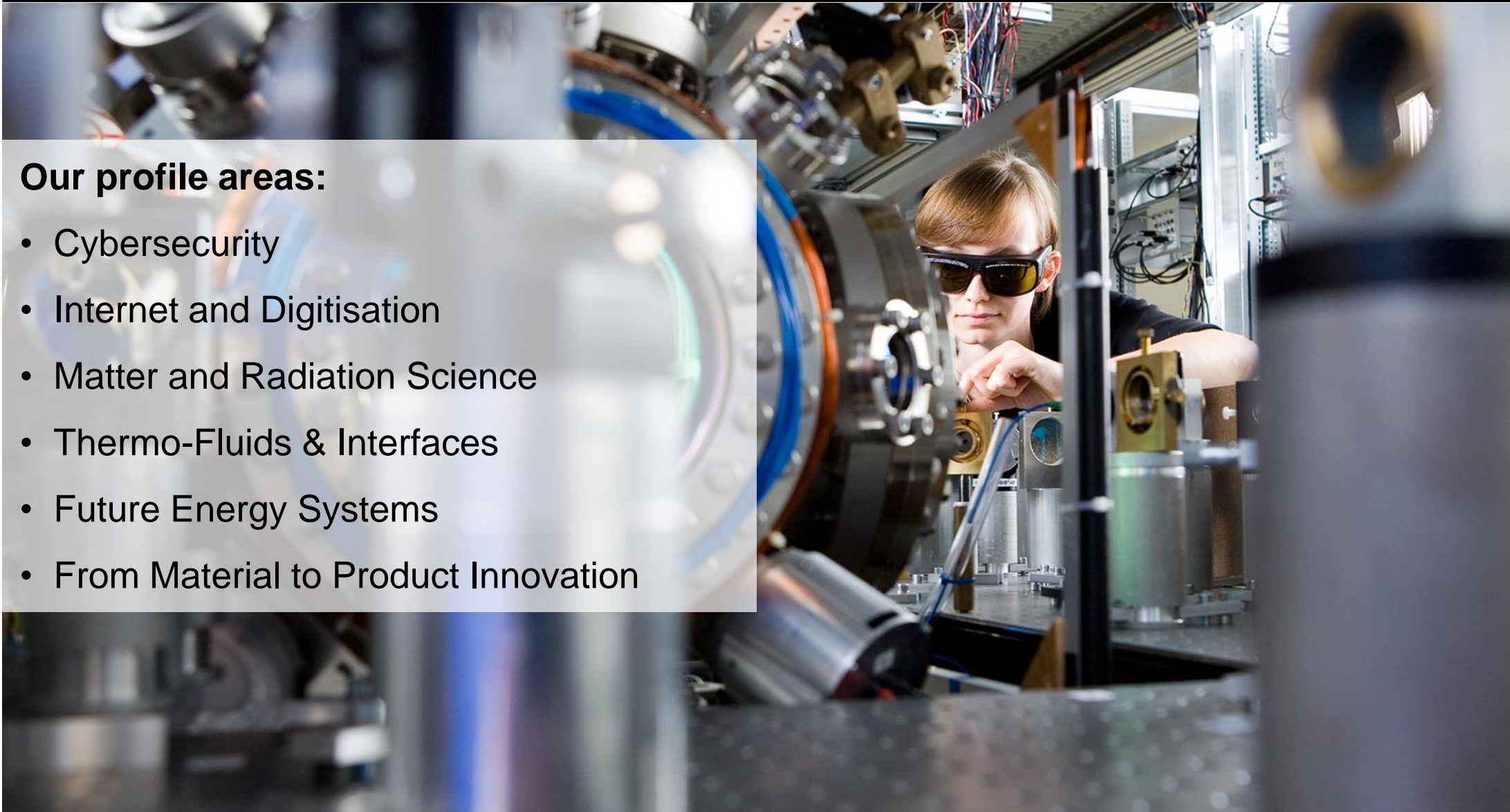




# Highly interdisciplinary

## Our profile areas:

- Cybersecurity
- Internet and Digitisation
- Matter and Radiation Science
- Thermo-Fluids & Interfaces
- Future Energy Systems
- From Material to Product Innovation



# Global reputation

**TU Darmstadt is the most attractive German university for foreign visiting scholars and researchers in the field of engineering science.**

"A top spot in the Humboldt Ranking is an important indicator of international contacts and reputation."

(Alexander von Humboldt Foundation)

## Engineering ranking

<b>Ranked 1<sup>st</sup></b>	TU Darmstadt
<b>Ranked 1<sup>st</sup></b>	TU Munich
<b>Ranked 3<sup>rd</sup></b>	TU Berlin
<b>Ranked 4<sup>th</sup></b>	RWTH Aachen
<b>Ranked 4<sup>th</sup></b>	University Erlangen-Nuremberg

(Humboldt Ranking 2017, absolute ranking: no. of funded guest researchers at universities in Germany 2012–2016)



# Top location for junior academics



Ingenium – Young Researchers at TU Darmstadt: umbrella organization for promoting early career researchers

- 6 DFG Research Training Groups
- 2 Graduate schools within the Excellence Initiative
  - Graduate School of Energy Science and Engineering
  - Graduate School of Computational Engineering
- 5 Heinz Maier-Leibnitz prizes awarded by the German Research Foundation since 2008

# Strategy at TU Darmstadt

- University-wide strategy for the promotion of early career researchers
- Holistic, consistent approach to promoting early career researchers in all qualification phases:
  - Doctoral phase (R1)
  - Postdoctoral phase (R2)
  - Qualification phase for a professorship (R3)
- Needs- and career-appropriate support in all qualification phases



# Study Profile



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT



# Curious about the future

**13** departments

**5** fields of study

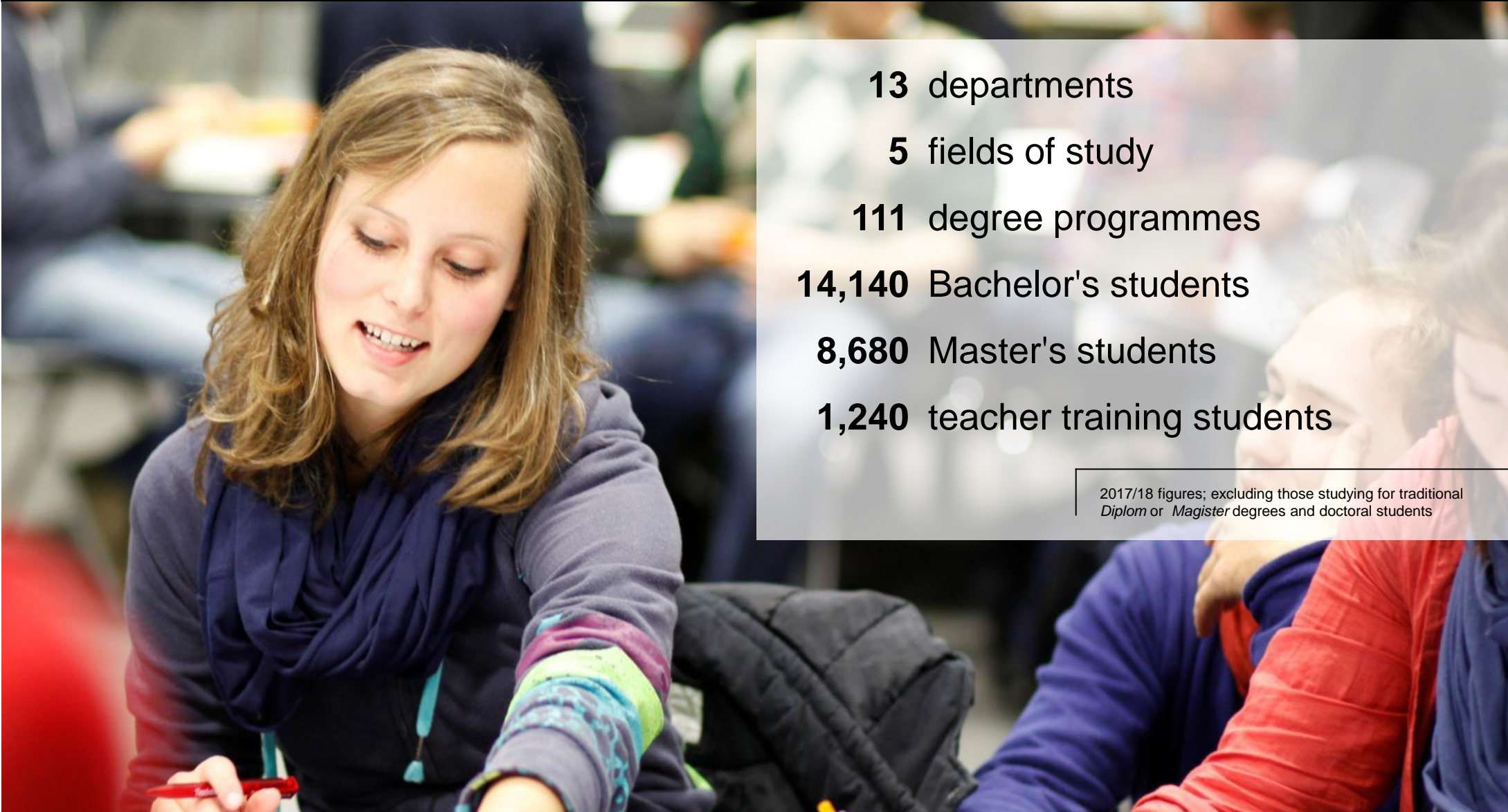
**111** degree programmes

**14,140** Bachelor's students

**8,680** Master's students

**1,240** teacher training students

2017/18 figures; excluding those studying for traditional  
*Diplom* or *Magister* degrees and doctoral students



# Cosmopolitan



**We have been an internationally oriented university ever since our founding.**

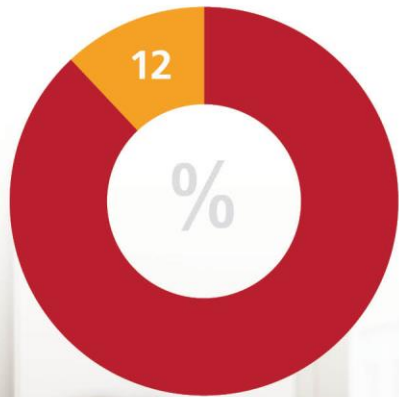
In the year 1900, one fifth of our students came from abroad. The situation is just the same today.

We are now one of the German universities with the highest proportion of international students.

# International

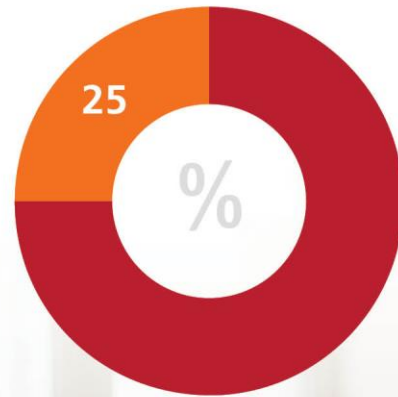
## Bachelor's studies

Proportion of international\*  
students



## Master's studies

Proportion of international\*  
students



## Diversity

Our students come from 118 countries including

**China** (830)

**India** (340)

**Pakistan** (190)

**Iran** (150)

**Tunisia** (140)

**Turkey** (120)

**Syria** (90)

**Cameroon** (80)

**Russia** (80)

**Brazil** (70)

**Bulgaria** (70)

\* All persons with foreign  
citizenship

2017/18 figures  
Students who obtained their  
university entrance qualifications  
outside of Germany



# Reputation and visibility

## International presence of TU Darmstadt



- Strategic partnerships  
(Tongji, Virginia Tech, TU Graz)



- High level partnerships with universities and research institutes (new partnerships with e.g. KAIST, Technion, UTSydney, WashingtonStateU, UTexas, UToronto, TRIUMF...)

- Participation in associations and networks  
(esp. Cluster)



# Learning with a practical focus



**Europe's first Process Learning Factory** on campus: students experience the whole value chain from processing raw materials through to assembly.

**ETA model factory** on campus: researching and demonstrating ways of maximizing energy efficiency in industrial production processes. The project is funded by the federal government, the state and 30 companies.

# Knowledge and Technology Transfer



# Cooperating to find solutions



**Our innovative power has earned the support of business, science, government and society.**

Strategic partnerships and cooperation with companies:

- **Bosch** (mobility, industrial engineering)
- **Continental** (automotive)
- **Deutsche Bahn** (rail, logistics)
- **Merck** (healthcare, life science, performance materials)
- **Siemens** (energy systems, mobility, healthcare)

# Encouraging start-ups

## Current successful start-ups

Alcan	satellite antennae for reliable vehicle-based Wi-Fi
Wingcopter	transport drones with aircraft-like capabilities
Tracktics	Intelligent management of performance data in the field of professional sport
IT-Seal	cyber-crime awareness in the corporate environment
Compredict	vehicle component operational status sensor technology
Wer-denkt-was	Internet platforms for digital citizen participation
Meshcloud	multi-cloud service provider integration in strict and exclusive accordance with German security standards

**85 Knowledge and technology-based companies were founded in and around TU Darmstadt since 2013.**

HIGHEST, our centre for innovation and start-ups, inspires up-and-coming entrepreneurs and encourages product and business ideas.





**Words of recommendation**

"In my opinion, you definitely ought to go to Darmstadt.  
They have a good polytechnic school there."

Albert Einstein, 1919