

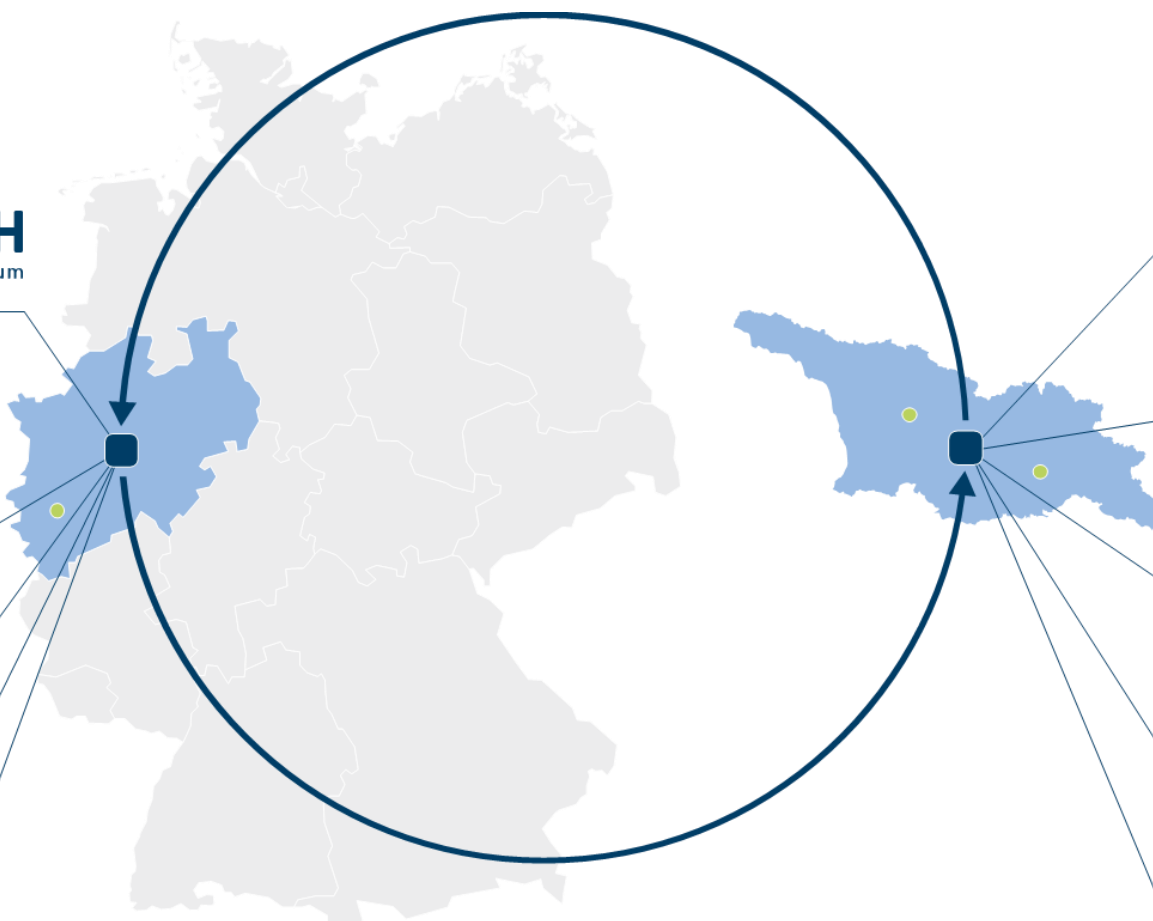
GGSB SCIENCE LECTURES

POSSIBILITIES AT FORSCHUNGSZENTRUM JÜLICH

JUNE 26, 2023 | EVA PORTIUS

GEORGIAN-GERMAN SCIENCE BRIDGE

Steadily growing



FORSCHUNGSZENTRUM JUELICH | LOCATION



HELMHOLTZ ASSOCIATION

18 Helmholtz Centers in Germany –
Forschungszentrum Jülich is one of them

HELMHOLTZ

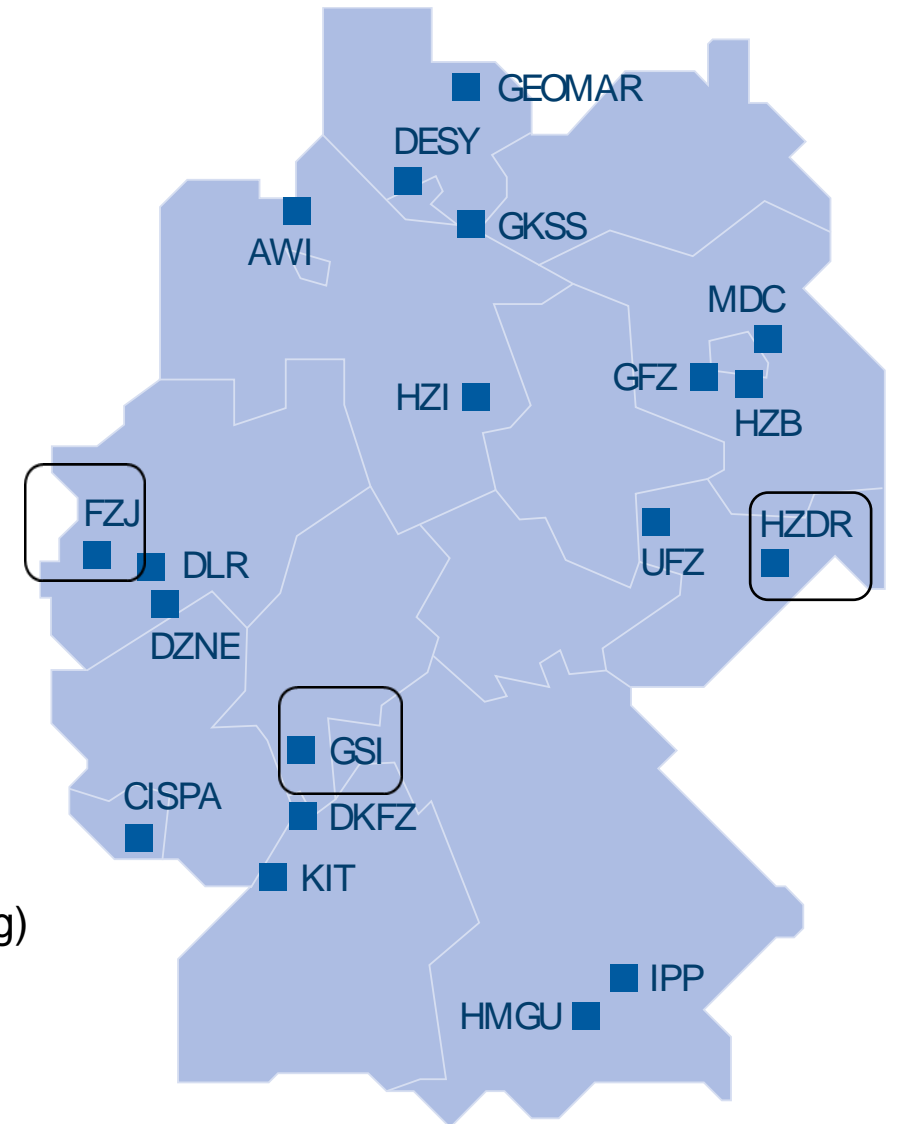
RESEARCH FOR GRAND CHALLENGES



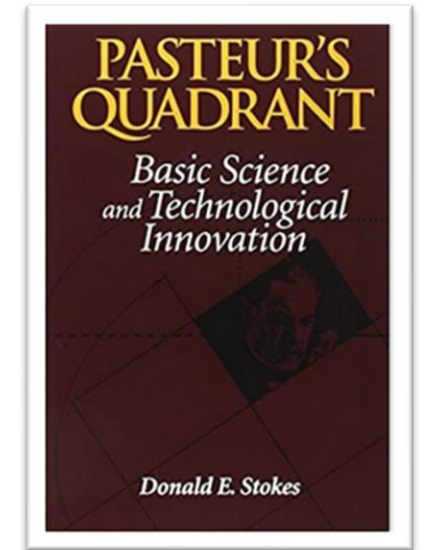
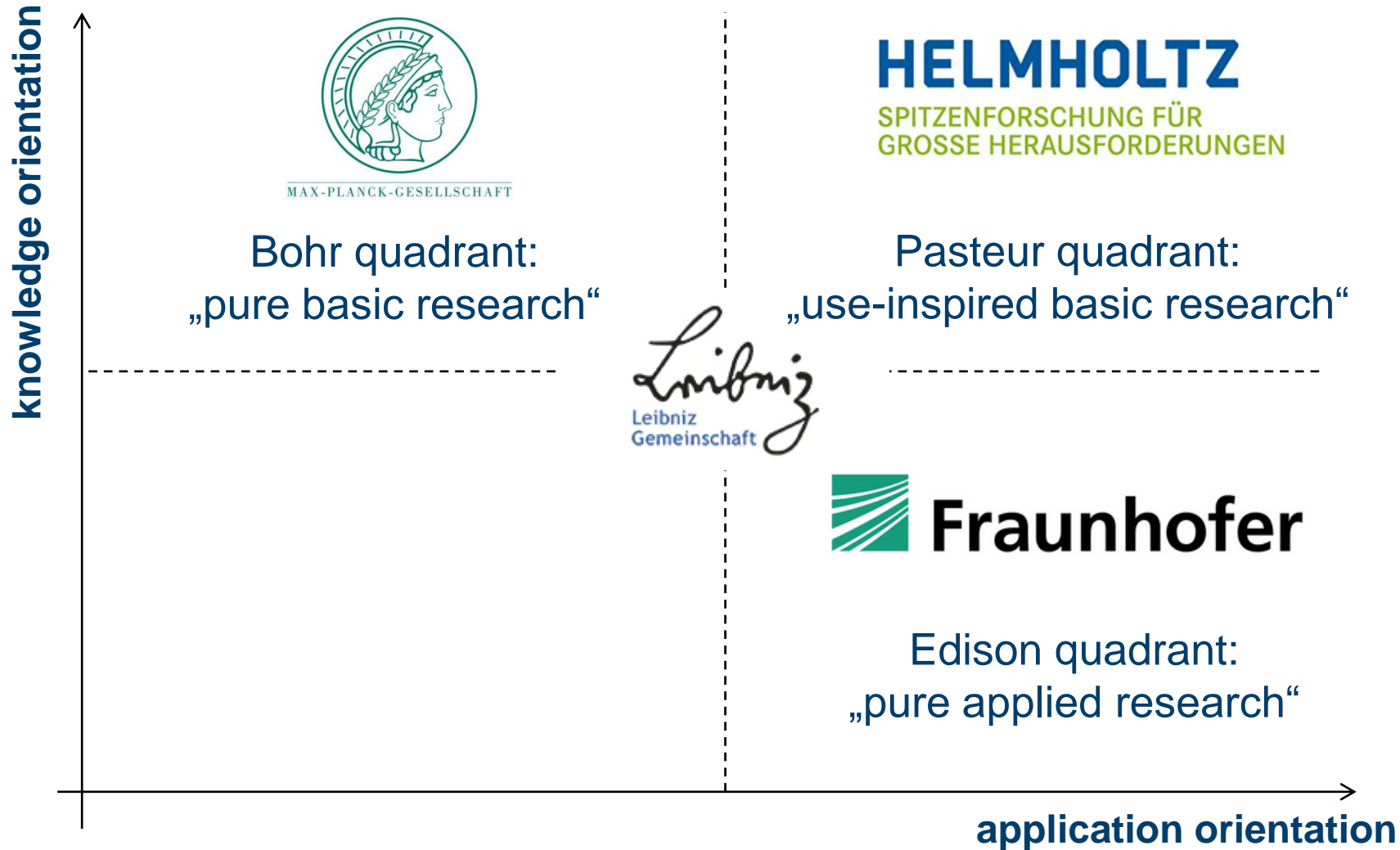
Employees
more than 43,000 (in 19 centers)



Budget
~ € 5 billion Euro (of which more than 30 % external funding)



MISSIONS OF GERMAN SCIENCE ORGANIZATIONS



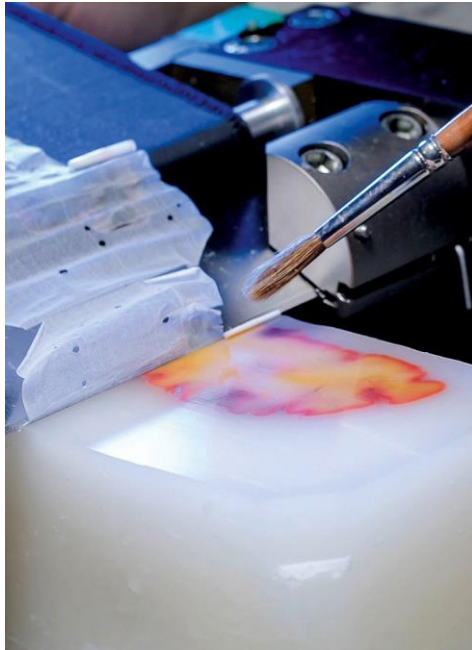
FORSCHUNGSZENTRUM JÜLICH AT FIRST GLANCE

Information

Energy

Bioeconomy

Research priorities



OUR FIELDS OF RESEARCH

Information

Beyond digital:
We develop information technologies of the future, such as quantum computing and neuromorphic computing.



We study the structure, organization, functions, and cognitive processes in healthy and diseased brains.

We develop, build, and operate supercomputers, which we use to analyse large amounts of data in order to model and simulate complex systems.



We research the processing of information in natural and artificial systems.

OUR FIELDS OF RESEARCH



... by developing new materials,

... by integrating new components into innovative process chains,



... and by achieving a holistic view of the system,

... and also take into account air quality and climate.

OUR FIELDS OF RESEARCH

Bioeconomy

Sustainable production based on plant and microbial processes.

We conduct research for a resource-efficient economic system

Sustainable use of the natural resources of soil and water.



We analyse and optimize material cycles and energy use.

... to meet the growing demand for food, raw materials, and energy in a sustainable way.

WE WORK HAND IN HAND

**Integrated in a network:
157 joint appointments with 18 universities
in Germany and Europe**

**Diversity is a requirement
for success in our work.**

Interdisciplinary:

**physics,
computer science,
biology,
medicine,
chemistry,
engineering,
neuroscience,
mathematics,
geology,
social sciences
(...)**



INFRASTRUCTURE

Unique scientific infrastructure for the benefit of an international user community.



- i.e.: the Ernst Ruska-Centre for Microscopy and Spectroscopy with Electrons (ERC)
- the Jülich Supercomputing Centre (JSC)
- the Jülich Centre for Neutron Science (JCNS)
- the Helmholtz Nano Facility (HNF)
- the SAPHIR atmospheric simulation chamber

GEORGIAN-GERMAN SCIENCE BRIDGE

THREE PILLARS



Joint Research

- Collaboration with joint research projects in Hadron Physics, Climate and Sciences, Medical Imaging
- Expand collaborations (HZDR, GSI)



Educational Training

- Joint Master- & PhD program (18 & 19)
- Scientific Workshops (9)
 - Lecture courses (5)
 - Training Courses (3)
- Internships (65)



Knowledge Transfer

- Cotutelle de thèse program (1)
- SMART|Labs to return Alumni in Georgian Universities (2)

WE PROMOTE YOUNG TALENT : JOINT FUNDING



We wish to inspire young talents and give them the best possible support

30 Georgian students visited the campus in 2019, 21 in 2017

Hands-on training & lectures in 8 institutes

FUNDING AVENUES FOR STUDENTS

Scholarships and FZ Jülich support

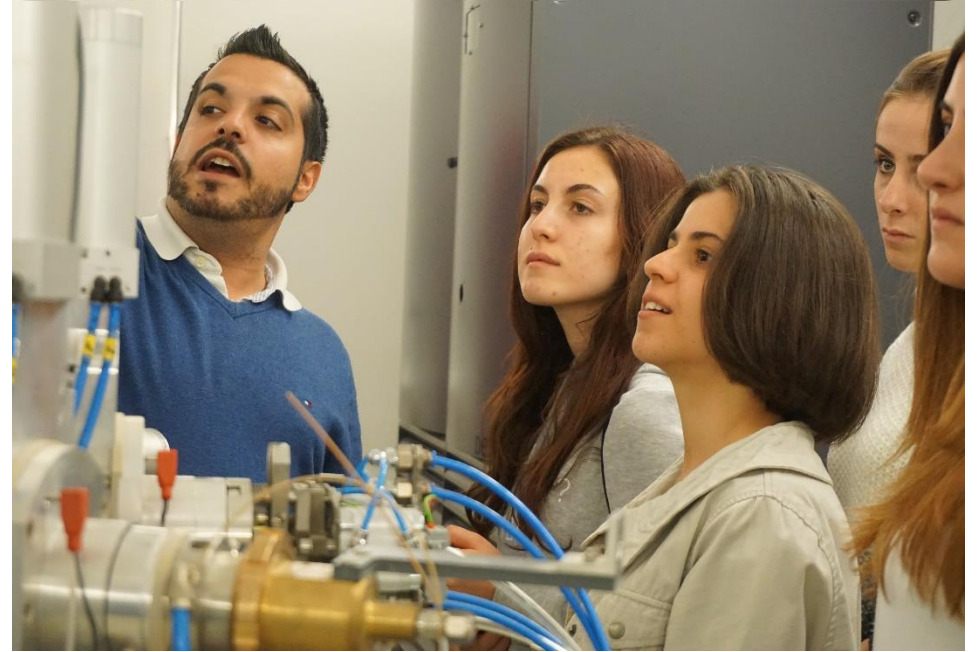
- DAAD Regional Office Georgia <https://www.daad-georgia.org/ka/>; Foundations: KAS, FES
- Erasmus+ and within EU-projects, VolkswagenStiftung Projects
- LEPL Shota Rustaveli National Science Foundation of Georgia

GGSB STATISTICS

- PIs currently involved in GGSB from Georgia and Germany: **35**, overall in the past ~**50** PIs
- Senior Scientists from Georgia and Germany: **135**
- Graduate Researchers from Georgia: **19** PhD | **18** Master-Studies
- Schools: **5** | Workshops: **8** | Lecture Courses **5**
- **Internships from Georgia: so far 60+ students** | Funding by the participating FZ Juelich institutes

→ **Students are encouraged to apply and to take part in the interviews this week in Tbilisi!**

IMPRESSIONS OF PAST STUDENT LECTURES



ENJOY THE LECTURES AND DISCUSSIONS!



Thank you!

გმადლობთ

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**THANK YOU VERY MUCH
FOR YOUR ATTENTION!**