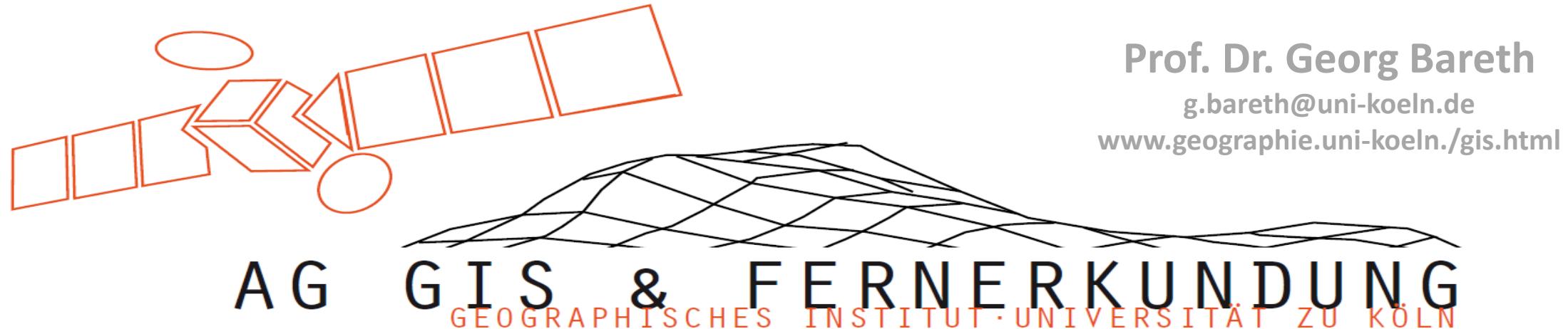


11. Sitzung des GeoIT Round Table NRW

Arbeitsgruppe GIS & Fernerkundung
Geographisches Institut
Depart. Geowissensch. & Geographie
Mathematisch-Naturw. Fakultät
Universität zu Köln



Fakultäten: 6

Exzellenzcluster: 4

Graduierteneinrichtungen: 47 (2020)

Sonderforschungsbereiche / Transregios: 16 (2020)

ERC-Grants: 19 (2019)

Leibniz-PreisträgerInnen: 11 (2019)

Alexander von Humboldt Professuren: 5 (2019)

UzK Zentren: 16 (2019)

Drittmitteleinnahmen: 208,5 Mio. € (davon Med.
Fakultät 92,7 Mio. €) (2019)

Gesamtfinanzierung: 853,4 Mio. € (davon Med.
Fakultät 280,6 Mio. €) (2019)

Wissenschaftliches Personal: 4.529 (inkl.
ProfessorInnen / inkl. Klinikum) (2019)

Personal Technik und Verwaltung: 3.342 (inkl. Med.
Fakultät + Klinikum ohne Pflegepersonal) (2019)

ProfessorInnen: 657 (2019)

Studiengänge: 337 (2019)

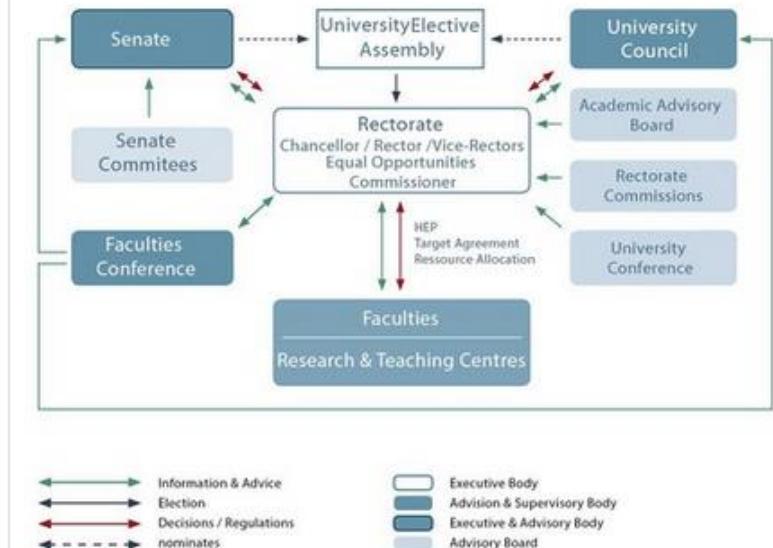
StudienanfängerInnen im 1. HS: 7.390 (2019)

Studierende: 51.256 (2019)

AbsolventInnen: 7.659 (2019)

Promotionen: 697 (2019)

Decision-Making Structure



Decision-Making Structure

Contact

University of Cologne
The Rector

UoC at a Glance ⓘ

Since its establishment in 1388, the University of Cologne has been a center of science and scholarship in Europe. Today, it is one of the leading German research universities. We offer our students an exceptionally broad and diverse subject base and encourage them to follow their own academic interests. This allows them to develop both intellectually and personally. We are firmly committed to the advancement of human knowledge through basic research, but with an eye to transfer and application in the real world.





Faculty of Mathematics and Natural Sciences

Faculty Prospective Students Studying Doctoral Candidates Young Researchers Research Faculty of Mathematics and Natural Sciences

Overview Faculty

Faculty at a Glance

Organisation

Dean's Office

Engere Fakultät

Committees (of the Faculty)

Departments

Department of Biology
Department of Chemistry
Department of Mathematics and Statistics
Education
Department of Geosciences
Department of Mathematics and Computer Science
Department of Physics

6 Departments
approx. 180 Profs
approx. 9,500 students
approx. 1,200 PhDs

Aktuelle Ausschreibungen (Preise, Fördermöglichkeiten)

Examinations Offices (Faculty)

KLIPS2.0

Department of Geosciences

50° 55' 39" N
6° 56' 10" E

Geographisches Institut
Universität zu Köln

Institute of Geography



Institute of Geology and Mineralogy



Institute of Geophysics and Meteorology



Overview of all working groups in the Department

Physical Geography:

- [Soil Geography / Soil Science](#)
- [Geoarchaeology, Coastal Geomorphology and Geochronology](#)
- [GIS & Remote Sensing](#)
- [Hydrogeography and Climatology](#)
- [Quaternary Research and Applied Geomorphology](#)

Human Geography:

- [Human Geography - City and Regional Development](#)
- [Urban and Social Geography](#)
- [Economic Geography](#)
- [Economic Geography and Global South](#)
- [International Faculty](#)

Geology und Mineralogy:

- [Earthquake Geology and Archaeoseismology](#)
- [Earth Surface Processes and Cosmogenic Nuclides](#)
- [Geo- / Cosmochemistry](#)
- [Mineralogy / Crystallography](#)
- [Organic Geochemistry & Radiocarbon](#)
- [Paleontology and Historical Geology](#)
- [Quaternary Geology](#)
- [Environmental Isotope Geochemistry](#)
- [Petrology & Structural Geology](#)

Geophysics:

- [Applied Geophysics](#)
- [Space and Planetary Science](#)

Meteorology:

- [Atmospheric Modelling](#)
- [Integrated Remote Sensing](#)
- [Integrated Scale-Adaptive Parametrization and Noether Group](#)

3 Institutes
24 Profs
approx. 1800 students
approx. 150 PhDs

| Arbeitsgruppe | Leitung |
|--|---|
| GIS & Fernerkundung | Prof. Dr. G. Bareth |
| Ökosystemforschung | Prof. Dr. C. Bogner |
| Wirtschaftsgeographie | Prof. Dr. B. Braun |
| Geoarchäologie, Küstenmorphologie und Geochronologie | Prof. Dr. H. Brückner |
| Anthropogeographie - Stadt und Regionalentwicklung | Prof. Dr. P. Dannenberg |
| Stadt- und Sozialgeographie | Prof. Dr. F. Kraas |
| Bodengeographie / Bodenkunde | Prof. Dr. T. Mansfeldt |
| Geomorphologie und Geochronologie | Prof. Dr. T. Reimann |
| Wirtschaftsgeographie und Globaler Süden | Prof. Dr. J. Revilla Diez |
| Hydrogeographie und Klimatologie | Prof. Dr. K. Schneider |

search item



Deutsch | English | Contact | Legal notice | Data protection



ABOUT US

NEWS, EVENTS & JOBS

RESEARCH

EXPERTS & INFRASTRUCTURE

FOR STUDENTS

Start Page

About us

ABOUT US

Network

ABC/J Support Programmes

Cooperation

Governance

Geoverbund ABC/J

an Alliance for Global Challenges

The Geoverbund ABC/J is the geoscientific network of the Aachen-Bonn-Cologne/Jülich research area. Under this umbrella, the geoscientific institutes of the universities Bonn and Cologne, the RWTH Aachen and the Forschungszentrum Jülich established a cooperation. This enables the four partners to gather their knowledge, forge bonds and networks.

The research focus of Geoverbund ABC/J is on the investigation of the dynamic earth-human system. Together, the researchers of the ABC/J-region aim at trying to identify and solve current global challenges in the fields of evolution of life and earth, environmental dynamics, georesource management and georisk assessment.

The Geoverbund ABC/J is committed to the continuous progress of the ABC/J region by providing attracting conditions for outstanding research and promotion of young academics. As a mediator between science, politics and society, the Geoverbund ABC/J aims at raising the visibility of the region as of national and international reputation in the field of geoscience.



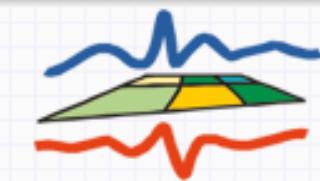
Geoverbund ABC/J details

Copyright: erosion: Thomas Wiatr/Silke Mechernich; clouds: morphonfoto/fotolia.com; field: Martina Chmialowski/fotolia.com

Arbeitsgruppe GIS & Fernerkundung, UzK



Forschungsprojekte



Transregional Collaborative Research Centre 32

Search ...

Patterns in Soil-Vegetation-Atmosphere-Systems
Monitoring, Modelling and Data Assimilation

01/2007 –
12/2018



Collaborative Research Centre 806 Our Way to Europe

Culture-Environment Interaction and Human Mobility
in the Late Quaternary

Main About Projects News Media Events Equality Publications IRTG Database

07/2009 –
06/2020



CRC 1211

Earth - Evolution
at the dry limit

MAIN ▾ NEWS PROJECTS ▾ DATABASE ▾

07/2016 –
06/2027



Conceptual Framework
International Partners
Study Sites
Projects

"Future Rural Africa: Future-making and social-ecological transformation" Collaborative Research Center 228

01/2018 –
12/2029



GreenGrass



Georg Bareth

01/2019 –
12/2023

Forschungsschwerpunkte

- Hyperspectral (Hyperion) / Radar (Envisat/TerraSAR-X) (Koppe)
- MDA: LULCC / Land Use Patterns / Crop Rotations (Multispectral) (Waldhoff)
- MDA: Multispectral / Radar (TerraSARX/Sentinel) (Hütt)
- NRI/GnyLi (Koppe/Gnyp)
- RGBVI (Bendig)
- CSMs (Hütt, Hoffmeister, Bendig, Brocks, Tilly)
- CSMs/VIs (Aasen, Bendig, Tilly, Lussem)
- Grassland Index / Multi-temporal GrassI (Lüdemann)
- Polygon grids (Hütt)
- Research Data Management (Curdt/Willmes)
- Paleo Mapping (Willmes)



The screenshot shows the homepage of the Collaborative Research Centre / Transregio 32 Database. The header includes the CRC logo, the text "Collaborative Research Centre / Transregio 32", and "Database". Below the header is a navigation bar with links to Home, CRC/TR32 Home, About, Statistics, FAQ, and Contact/Imprint. To the left is a sidebar with various search and browse options: Login, Advanced Search, Map Search, Browse by DOI, Browse by Topic (Soil, Vegetation, Atmosphere, Land Use, Remote Sensing, Topography, Other Data), Browse by Type (Data, Basic Geodata, Reports, Presentations, Publications, Pictures), and three more sections: Browse by Region, Browse by Phase, and Browse by Cluster. The main content area features a "Welcome to the TR32DB" section, which describes the database as the project-database of the DFG-funded Transregional Collaborative Research Centre 32. It mentions that the database archives research data, including measured modeled data, reports, presentations, publications, and pictures. It also notes that purchased geodata is available for project participants. A "Workshops organized by CRC/TR 32 (section Z1/INF)" section lists several workshops: Workshop on Laser Scanning Applications 2015 (Mar 16th, 2015), 2nd Data Management Workshop 2014 (Nov 28th - 29th, 2014), UAV-based Remote Sensing Methods for Monitoring Vegetation (Sep 9th - 10th, 2013), Remote Sensing Methods for Change Detection and Process Modelling (Nov 18th - 19th, 2010), and Data Management Workshop (Oct 29th - 30th, 2009). There is also a "News" section with a December 23rd, 2019, entry about the AGU Fall Meeting presentation. On the right side, there are sections for "Search for Data" (with a search input field) and "Recently Uploaded Data" (listing datasets 1889 through 1886).



Bachelor:

- **2. Sem: Einführung GIS (VL 2 SWS und Übung 4 SWS)**
- **3. Sem: Räumliche Analysen I (Sem 2 SWS und Übung 4 SWS)**
- **4. Sem: Einführung Fernerkundung (Sem 2 SWS und Übung 4 SWS)**
- **Bachelorarbeit**

Master:

- **1. Sem: Lektüre-/Oberseminar (Sem 2 SWS)**
- **2. Sem: Räumliche Analysen II (Übung 4 SWS)**
- **3. Sem: Radar-Fernerkundung (Sem 2 SWS und Übung 4 SWS)**
- **Masterarbeit**

Aktive Mitgliedschaften



Vegetation Monitoring

- Plant communities
- Species
- Vitality (abiotic/biotic stresses, nutrients)
- Biomass, yield
- Spatio-temporal change (e.g. LULCC)

Precision Farming

- Management (fertilizer, pests, draught etc.)

Objectives: Non-destructive Methods

- 3D-Data:

plant height, plant
emergence, hedging, biomass
species/comm., chlorophyll,
nitrogen, stress, biomass

- Multi-/Hyperspectral:

plant height, plant
emergence, hedging, biomass
species/comm., chlorophyll,
nitrogen, stress, biomass

- 3D+Multi./Hyperspec.:

vitality, abiotic stress, biotic stress,
nitrogen, biomass

- Change: multi-temporal