



Provided to our partner Siemens 3T Prisma scanner:

- Presentation PC
- Eye-Tracker PC
- MRI compatible headphones
- Two ergonomic Keypads
- Phosphor coil
- Sodium coil



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Core Facilities – Technologies, equipment and expertise for ambitious research goals

The IZKF provides valuable resources for a cost effective and high-quality research environment by operating:



Brain Imaging Facility



Genomics Facility



Immunohistochemistry Facility and
Confocal Microscopy Facility



Proteomics Facility



Transgenic Service



Two-Photon Imaging Facility



Flow Cytometry Facility

Multiple technologies and state-of-the-art equipment are available for all researchers of the Faculty of Medicine. Experienced technology experts provide services at any stage of the research process, including experimental design, method development, sample work-up and data interpretation on a partly cost recovery basis.

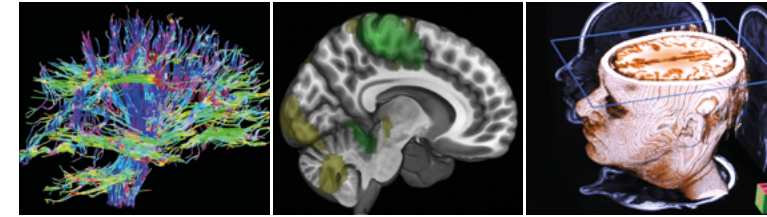
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**Brain Imaging
Facility**

Brain Magnetic Resonance Imaging (MRI)

Diffusion Tensor Imaging (DTI), Resting
State Functional MRI

Real-Time fMRI and Neurofeedback

Multisensory Stimulation in MRI

MRI Data Storage and Analysis

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Brain Imaging Facility

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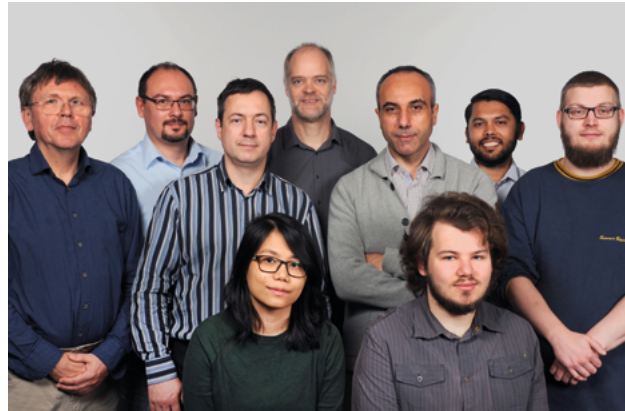
Why use the Brain Imaging Facility and how to use it to your advantage?

The BIF is the home for neuroimaging research in the Faculty of Medicine of the RWTH Aachen. The centerpieces of the facility are two state-of-art Siemens 3T Prisma scanners, equipped with several head coils such as single, 20, 32 and 64 channels, plus Phosphor and Sodium head coils permitting to optimize a large spectrum of MRI measurements. The 3T MR suites are equipped with state-of-the-art MR-compatible visual (projector, LCD display, goggle system) and auditory (standard and with active noise cancellation) stimulation equipment, eye-tracking, response devices, and physiological measurement hardware. Data storage and analysis are permitted by our computer network; the BIF is responsible for at least 10 years' data storage, comprehensive quality assurance for all acquired data and consecutive deletion according to good scientific practice and data protection regulations. We offer core services to all users for data storage and for accessing distributed computing resources, using Windows and Linux computers provided with constantly updated software in the field.

Data analysis with most advanced by methods and software in the field are supported by expert members of the BIF also by means of theoretical courses. Conference and office space, facilities for research participants and patients, and flexible research space for satellite experiments before and after imaging are provided in the lab and library of the BIF.

All projects running in the BIF are fortnightly presented during the “neuroimaging colloquium”, a seminar that intends to promote multicenter collaboration and an exchange of competences and ideas.

The BIF is open to researchers from the Faculty of Medicine of the RWTH Aachen and other institutions who want to pursue inquiries into brain structure and function in human subjects and patients.



The Team of the Brain Imaging Facility

What services do we offer?

- Paradigm preparation
- MRI set up
- Project presentation: Neuroimaging colloquium
- MRI measurements
- Data conversion and pseudonymization
- MRI data assessment
- Physiological data-fMRI simultaneous acquisition
- Real-time fMRI and Neurofeedback support
- Database of raw data
- Long term data storage (10 years)
- Computer accounts and automatic back up
- Preparation and presentation of results
- Theoretical courses of the main analysis methods
- Hyperscanning research by using three 3T Prisma Siemens scanners
- Supervision, maintenance and development of MRI related hardware

Equipment

In our lab:

- 14 x Intel® Xeon® Linux Workstations
- 4 x Intel® Xeon® Microsoft Windows7 Workstations
- 1 x Presentation Workstation (lab)
- 1 x Presentation Workstation (in a visual/auditory attenuated environment)
- Redundant File Storage for Projects Data
- Tape Backup System
- 3 x Presentation License-Dongles
- 2 x AcqKnowledge V4.x and 3 V5
- 6 x BrainVoyager License-Dongles
- MRI-Glasses MediGlasses™
- MRI compatible walking machine
- 6 phantoms for MRI calibration (from our partners)
- Copious amount of dedicated software

Provided to our partner Siemens 3T Prisma fit scanner:

- Workstation with Presentation v. 14.0 & 17.0 preinstalled
- Eye-Tracker PC
- VisualStim Goggle-System incl. Eye-Tracker
- Lumitouch Keypad (from our partner)
- New Eye-Tracker System (from our partner)
- Real time fMRI-PC (from our partner)
- Headphone and microphone with active noise cancellation

