

Operator and User Regulations

§1 Preamble

These Operator and User Regulations form the basis for the performance of functional and structural imaging studies with the support of the Brain Imaging Facility (BIF) at the Interdisciplinary Centre for Clinical Research (IZKF Aachen). The Regulations specify the scope of services offered and the relevant rules and requirements governing the use of the services offered.

§2 Services offered

The range of services offered by the Brain Imaging Facility is continually updated and adapted to the current needs of users. The Facility's core range of services includes:

a) Consulting services

Facility staff provide individual consultations on the following MRI imaging-related topics:

- Study design (planning and optimisation)
- Paradigm programming
- Measurement report optimisation
- MATLAB programming
- Stimulation hardware
- Evaluation software (SPM, BrainVoyager, FSL, AFNI etc.)
- Standard programs (SPSS, Microsoft Word, Microsoft Excel, Linux etc.)
- Funding applications (DFG, START etc.)
- Research data management
- Machine learning

A current list of staff can be found on the Facility's website at <https://www.izkf.rwth-aachen.de/> or at <https://www.medizin.rwth-aachen.de/cms/Medizin/Die-Fakultaet/Einrichtungen/IZKF-Aachen/Core-Facilities/Brain-Imaging-Facility/~qeza/Team/>. The service e-mail address is: **bif@izkf.rwth-aachen.de**

b) Performance of MRI measurements

The Facility provides the necessary personnel and expertise for the performance of MRI measurements within the scope of neuroscientific studies during its core working hours.

c) Provision and maintenance of evaluation workstations

For the evaluation of functional imaging data, the Facility provides special workstations optimised for the requirements of imaging data analysis with the necessary software and a back-up system to back up the evaluation data and perform the necessary maintenance work for operation.

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d) Development, construction, maintenance and procurement of stimulation equipment

The Facility is the central provider of the stimulation equipment required for performing functional imaging studies and carries out the necessary related maintenance work. The Facility organises instruction on the use of stimulation equipment at regular intervals.

Where there is no suitable commercial solution for a specific required stimulation, the Facility will develop its own solutions, which will be realised in collaboration with the Scientific Workshop team.

Facility staff will provide advice on the procurement of new equipment, to assure that all new equipment is compatible with existing systems. The procurement of new equipment by the Facility will be subject to the approval of the relevant research group leaders at the monthly meeting of the Principal Investigators (PI meeting).

e) Training, courses, further training

The Facility regularly offers the following courses:

- Introduction to statistical data analysis
- Introduction to imaging data analysis, incl. the basic principles of MR physics
- Introduction to investigation paradigm programming
- Introduction to the basic principles of Linux and MATLAB
- How to use MRI equipment
- MR safety
- MRI measurement licence
- MRI measurement assistant's license

Additional courses may be offered if there is sufficient demand.

During lecture periods, the "Neuroimaging Colloquium", featuring talks by internal and external speakers on functional imaging-related topics, takes place regularly, every other Thursday.

New projects must be presented at the Neuroimaging Colloquium before they can be supported or carried out by the Facility. The presentation of preliminary results, where required, and final results is explicitly desired.

§3 User group

The services provided by the Facility are designed to support the neuroscience projects of internal users (RWTH and faculty members). In the case of interdisciplinary RWTH projects, the user group may also be extended to include external users (other universities, academic partners or industrial partners).

Services are subject to charge within the scope of refinancing (see "Refinancing"). Co-authorship for the service provider is only provided in cases where major scientific input has been contributed.

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§4 Service hours

The Facility is open weekdays from 8:30 a.m. to 5 p.m. During these hours, services and evaluation computers are available for use without restriction. Outside of these hours and at weekends, access for non-Facility staff members is possible only with code authorisation for the relevant staff ID card for the access control system. This code authorisation will be approved by the Head of Facility or their substitute where it can be duly demonstrated that evaluations need to be carried out outside normal service hours. The validity of this code authorisation is limited to the period required for carrying out the relevant evaluation task.

§5 Regulations governing the performance of imaging studies

a) Presentation of the research project

Research projects to be carried out with the support of the Facility must be presented at the Neuroimaging Colloquium. Conditions may be imposed by the BIF.

b) Application for measuring time

The relevant measuring time required for the research project in question must be applied for in writing prior to the start of the functional measurements ("BIF Project Application Form", including "fMRI Registration Form", available from the BIF). Proof of approval of the research project by an ethics committee must be submitted at the same time.

c) Allocation of measuring time

The available measuring time will be allocated by the MRI operators.

d) Performance of MRI measurements

MRI measurements may be performed only by trained employees who hold a special permit (MRI measurement licence, MRI measurement assistant's licence for the respective MRI scanner). Measurement personnel support can be requested by e-mail: bif@izkf.rwth-aachen.de.

e) Measurement data management

Raw data obtained during the MRI measurement process is sent to the BIF, where it is automatically stored on the Facility's back-up system, in compliance with the relevant legal requirements and pursuant to the requirements of the respective funder, for a minimum period of 10 years. Siemens measurement data is saved in DICOM format. Raw measurement data is automatically deleted at the end of the 10-year period.

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f) Refinancing

Brain Imaging Facility users are obliged to reimburse all costs for administrative services incurred within the scope of MRI measurements on a pro-rata basis. Currently, a fee of €75 is charged for each measurement, payable to the Brain Imaging Facility's cost centre. An additional €75 is payable to the MRI scanner operator, which equates to a total cost of €150 per measurement. Pilot measurements and quality control measures are exempt from fees. Where an amount of less than €150 per measurement has been approved by the relevant funding body, the MRI costs may be reduced on request ("Request for Reduction of MRI Fees" form, available from the BIF). For external users, a full cost calculation will be carried out in co-operation with the IZKF office and Aachen University Hospital's finance department. Scientists who bring equipment/investments to the Core Facilities through external sources may receive discounted services for a maximum of three years. What these discounts may be exactly will be decided on by the Steering Committee.

§6 Regulations governing the use of evaluation workstations

a) Conditions of access

Evaluation workstations are available for use without restriction to persons specified in §3. The prerequisite for the use of these workstations is acceptance of these Operator and User Regulations and of the computer operation guidelines ("BIF PC Pool User Guidelines", available from the BIF). These regulations and guidelines will be deemed accepted upon signature of the request for the creation of a user account ("BIF User Account Request Form", available from the BIF). Evaluation computers cannot be used without acceptance of these guidelines. Other services remain unaffected.

b) Data protection regulations

All Facility users are obliged to comply with data secrecy in accordance with the regulations set out in §41 of the Data Protection Act of North Rhine-Westphalia (DSG NRW) and are subject to the duty of confidentiality pursuant to §203 of the German Criminal Code (StGB). Persons who are not employed by Aachen University Hospital (e.g. students) will be obliged to maintain data secrecy and the duty of confidentiality by the relevant department responsible for them. If this is not possible, contact the data protection officer (email: datenschutzbeauftragter@ukaachen.de). These persons shall only be granted access authorisation with a written confirmation of their obligation to maintain secrecy.

Personal data collected in connection with research projects may be used for the intended purpose only.

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c) Application for a project directory for the evaluation of functional imaging data

For each functional imaging project, the Head of Facility or their substitute will provide a project directory with 500 GB of storage space (can be expanded if required) for the evaluation of the study data. Only data directly associated with the evaluation may be stored in this project directory. Following completion of the project, the study data must be independently backed up and deleted from the project directory. Facility staff will provide support with backing up data to external media. Any data that remains unprocessed for more than one year may be deleted. This does not apply to raw data, which is stored separately for a period of 10 years. If, however, the evaluation data in the project directory is to continue to be available in the BIF, a cost contribution of €80/TB per year will be payable to the BIF's cost centre.

Requests for storage space for the evaluation of research data must be made on a separate form ("BIF Project Application Form", available from the BIF).

d) Evaluation data management

Evaluation data will be backed up once a week, normally at the weekend, on the Facility's back-up system. The Storage Attached Network (SAN) provided is equipped with RAID systems, which allow for additional data security in the event of a hard drive malfunction.

e) System fault messages

System fault messages are sent to the e-mail addresses registered by users. Workstation users are obliged to check this e-mail account regularly for new messages and to communicate any change of e-mail address to the Facility promptly.

f) Blocking computer access

Where any of the provisions in the Operator and User Regulations or computer operation guidelines are violated, computer access and access to the Facility's premises may be prohibited, depending on the gravity of the violation. The Head of Facility or their substitute will decide on the appropriate action to be taken.

g) Refinancing

No additional costs will be incurred for data from studies approved by the Brain Imaging Facility. For MRI data evaluated in the Brain Imaging Facility, but not collected on its MRI scanners, a fee of €50 will be charged per MRI data set (measurement of one subject/patient), payable to the Brain Imaging Facility's cost centre. A request for a reduction of the MRI fees (form available from the BIF) may be submitted.

§7 Conflict resolution

In the event of conflicts, the IZKF spokesperson or IZKF Steering Committee will be asked to mediate.

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Please note:

IZKF Facility users are obliged to mention the support provided by the Facility in the Acknowledgements in their publications. Please use the following wording:

This work was supported by the Brain Imaging Facility of the Interdisciplinary Centre for Clinical Research (IZKF) Aachen within the Faculty of Medicine at RWTH Aachen University.

OR

Diese Arbeit wurde unterstützt durch die Brain Imaging Facility des Interdisziplinären Zentrums für Klinische Forschung (IZKF) Aachen der Medizinischen Fakultät der RWTH.