Details

Freiburg Optical NeuroImaging (FrONI)

Freiburg Optical NeuroImaging (FrONI) is a shared facility for near-infrared spectroscopy (NIRS) at the Medical Faculty of the University of Freiburg. The modularly scalable NIRS infrastructure available at FrONI allows spatially resolved topographic and tomographic NIRS measurements with up to several hundred channels. Methodologically established for this purpose are approaches to contrast agent-based measurements of cerebral blood flow, functional measurements of directional connectivity between brain areas, and functional measurements of task-associated brain activation. The mobile configuration of the NIRS unit allows it to be used in a wide variety of contexts, e.g. intra- and perioperative measurements in humans and animal models, monitoring on wards, functional experiments in the laboratory and even field studies in everyday settings, and also multi-modal measurements (e.g. with EEG, CT, or PET). FrONI is open to users of the University Medical Center and the University of Freiburg, as well as to external research groups and industrial users, and can support the design, implementation and analysis of NIRS studies.

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To website

Host Institution

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Scientific Domain

Primary Subjects:
- Biology
- Medicine

Secondary Subjects:
- Social and Behavioural Sciences
- Agriculture, Forestry, Horticulture and Veterinary Medicine

Category

Biomedical Imaging Facilities

Scientific Services

FrONI provides: (i) support and advice in the design of NIRS studies; (ii) project-specific development of adequate measurement protocols and analytical tools; (iii) support in implementation and analyses (iv) infrastructure for intra-

and perioperative measurements, for animal experiments, for multi-modal measurements; (v) support in regulatory matters; (vi) training and education of users.

Scientific Equipment

- Multi-Channel NIRS (NIRSport2 48x48, NIRx Medizintechnik GmbH)
- Contrast agent injection system (MEDRAD Mark 7 Arterion, Bayer AG)
- Physiological Monitoring (Infinity Delta, Dräger AG)

Keywords

- near-infrared spectroscopy
- NIRS

Networks

BrainLinks-BrainTools Cluster of Excellence
https://www.brainlinks-braintools.uni-freiburg.de/

Users per annum

Internal Users: 15
External Users in total: 0
External Users: 0
External Users in the EU: 0
External Users outside of EU: 0

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