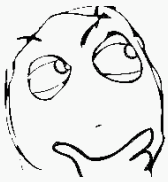
Brain State Decoding Lab

BrainLinks-BrainTools
Computer Science Dept.

UNI FREIBURG

BCI Project - Aphasia



Just what is BCI, anyway?

A Brain-Computer Interface (BCI) makes use of machine learning methods, to decode ongoing brain signals.
Via BCIs, users can type text, control a computer or wheelchair - even if they are severely motor impaired.

Who are we looking for?

CS master student seeking a master (group) project, or a thesis project -- ideally with a strong background in:

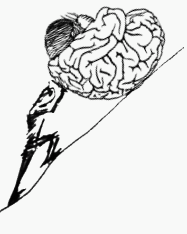
- machine learning
- Matlab / data analysis

The idea in brief:

We are convinced: decoding an acting brain is valuable beyond communication and control. Thus we take BCI methods into the field of stroke rehabilitation and create closed-loop applications for rehab training.

This project addresses a defect which has a severe impact on the quality of life of patients: **speech production problems** (aphasia).

Then what is **your** task?



You support our lab by

- preparing auditory word stimuli
- adapting a Matlab-based BCI experiment
- recording EEG from healthy and patients
- analyzing their EEG data (Matlab-based)

More information:
Dr. Michael Tangermann
www.bsdlab.uni-freiburg.de
michael.tangermann@blbt.uni-freiburg.de