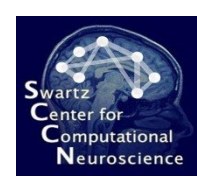




Exercise 5: Scripting Offline Analyses in BCILAB

Introduction to Modern Brain-Computer Interface
Design

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About

- This is an exercise using the batch scripting features in BCILAB
- You will be applying the approaches that you created in Ex. 4 to the data sets from the BCI competitions 3 and 4



Preparation

- Start MATLAB
- To start the toolbox GUI, type:
`cd /your/path/to/exercise_package/bcilab-course; bcilab`



Details

- The data for this task is in `/your/path/to/exercise_package/ex5/`
- This data contains imagined movements; the sets come from multiple labs, tasks differ somewhat, markers too, and some sets are particularly difficult to handle
- Your starting point is the `batch_script.m` file in this folder, which should run as-is.

Exercise

- You can start the script as-is to get the first three approaches processed in the background while you are editing (intermediate results will be reused)
- Add the approaches that you defined in the previous exercise to the list of approaches that shall be applied by the batch analysis (see instructions)
- The window length during which the mental imagery is performed is different in most of these tasks – this affects the EpochExtraction step in your approaches, use [0.5 2.5] instead (or better use the timewnd variable)
- When you are done editing, cancel the ongoing computation and re-launch the script with your approaches added.



Note

- To read the results that you have computed so far into a MATLAB variable, run the last command of the script



Bonus

- Try to implement a CSP-based approach that uses in addition a *stationary subspace analysis* to remove non-stationary components from the data (see filter docs)