**EEG analysis**

Step by step: open these files and follow instructions in this order:

**A1\_Stimulation\_Offset.docx**

* Determine the exact offset of stimulation and the electrodes that show strong artefacts

**A2\_Pre\_Processing.m**

* Downsample, label with ‘active’ and ‘sham’ (if relevant), segment, filter (low-pass 100Hz. Notch 50Hz, demean).

**A3\_Interpolation\_ICA.m**

* Remove the ‘contaminated’ channels, interpolate the flat and noisy channels (automatic detection), run the ICA on filtered data.

**A4\_ICA\_Rejection.docx**

* Reject only eye movements (vertical and horizontal). To do this, you have to choose an electrode with which to correlate the signal, open each file, reject components and save.

**A5\_ICA\_Application.m**

* Applies the ICA correction.

**A6\_Artefact\_Rejection.docx**

* Reject manually all periods that have large amounts of speech, muscle artefact, etc...

**A7\_Segment.m**

* Cuts into individual segments.

**A8\_ReRef\_FFT\_Calculation.m**

* Decide if you want to change reference, specify FFT input, run FFT

**A9\_SubSelect\_Reformat.m**

* Define frequency band values, define subjects to exclude, reorganise data. This will not work if you don’t have the same organisation (4 segments with a baseline segment).

**A10\_DataVis.m**

* Plot various things (spectra, group values, individual values, etc…). Not the most flexible/practical at the moment. If you can come up with a better script that works for you, do it!

**A11\_FieldTrip\_Permutation.m**

* Select the data you want to compare, select electrodes, setup an appropriate layout, set the statistical thresholds and values and perform a permutation analysis.