

EEG and MEG Data Preprocessing

Oral presentation

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Robust detrending

Usual detrending methods are sensible to artefacts.

⇒ Robust detrending: estimate the trend ignoring outliers, and flag high errors as outliers for the next iteration

Inpainting

Inpainting is the process of reconstructing the signal at timesteps affected by glitches. Here, we assume that glitches locations are known.

This algorithm first estimates the linear relationship between channels and use it to reconstruct the signal.

Outlier detection

To flag outliers, we use the previous algorithm and flag poorly reconstructed values as outliers for the next iteration.

Robust rereferencing

Step removal

Ring removal

Ring artefacts are caused by the antialiasing filter. First, we estimate the parameters of this filter to model its impulse response and cancel it, which removes ringing artefacts.

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