

The e-mail should contain either the *.mat (zipped) as an attachment or a URL from which the data can be obtained (the latter is preferred). In addition, the email should include a one paragraph description of the approach used.

4. Performance Metric

The contrast to noise (CNR) performance metric to be used is the following:

$$CNR \triangleq \frac{\left(\arg \max y(200:500, 48) - \frac{1}{50} \sum_{j=1}^{50} y(j, 48) \right)}{\frac{1}{48} \left(\sum_{j=1}^{48} \left(data(a(j):(a(j)+500), 48) - y(50:550) \right)^2 \right)}$$

Where $a(\cdot)$ is the vector of stimulus onset indices, $data(\cdot)$ is the original data matrix and $y(\cdot)$ is the submitted data. There are two goals: 1) to maximize CNR , and 2) to completely automate the process (*i.e.* manual selection of eye movement artifacts using ICA is not permitted unless it can be automated).

1. Jung TP, Makeig S, Humphries C, Lee TW, McKeown MJ, Iragui V, Sejnowski TJ. 2000. Removing Electroencephalographic Artifacts by Blind Source Separation. *Psychophysiology* 37(2):163-78.