

# ARTIFACTS EXTRACTION FROM EEG DATA USING THE INFOMAX APPROACH

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## **Abstract**

The aim of the research is to detect and remove undesired components from EEG data by means of ICA approach. Besides classical signal analysis tools such as adaptive supervised filtering, parametric or non-parametric spectral estimation, time-frequency analysis, the proposed ICA technique can be used for detection of a wide group of artifacts from EEG data. In this paper a new form of nonlinearity implemented in the infomax approach is presented. As it has been proven experimentally, the proposed new sigmoidal function can effectively detect the selected group of artifacts from EEGs and is an useful approach to speed up computations.

**Keywords:** Independent Component Analysis, infomax algorithm, sigmoidal function, EEG data, artifacts