

The Event-Related Potential Data Processing Using ART 2 Network



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The event-related potentials (ERPs) obtained by stimulation are much weaker than the continuous electroencephalographic (EEG) signal. Therefore, the correct signal analysis is vital to detect the stimulation-driven signal components. This paper proposes the combination of matching pursuit for feature extraction and ART 2 neural network for clustering. Then, clusters are filtered and interpreted according to their statistical properties as ERP components or noise. The suggested method can be used to filter the EEG/ERP signal. Furthermore, its results lead to a method that improves averaging when compared to traditional approaches.

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