Comparison of Various Approaches for P3 Component Detection using Basic Methods for Signal Processing

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The paper deals with ERP (Event related potentials) components detection using wavelet transform (both continuous and discrete form), matching pursuit algorithm and Hilbert-Huang transform. The EEG/ERP domain is shortly introduced and essential information about EEG and ERP signals is given. The wavelet transform, matching pursuit algorithm, and Hilbert-Huang transform are introduced and their suitability for ERP components detection is described. Experimental results obtained by using these algorithms for P3 component detection are summarized.

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