Abstract

In many signal processing applications, the signal of interest is often divided into epochs. In these applications, the segmented signal is preferred to have no change on the statistical characteristics of the epochs. Modified Varri is among the segmentation methods with an acceptable accuracy. There are three parameters affecting on the accuracy of this method.
These parameters are set experimentally. Hence, they may not be optimal for any signal segmentation application. We have used Genetic Algorithm (GA) in this research to choose appropriate values for these parameters in any signal segmentation application. The proposed technique was applied on both synthetic signal and Electroencephalography (EEG) to evaluate its performance. The results indicate superiority of the proposed method in signal segmentation compared to the original approach.

Reference

- M. Mohammadi, H. Alizadeh and B. Minaei-Bidgoli, “Neural Network Ensembles using
An Improved Signal Segmentation Method using Genetic Algorithm


Index Terms

Computer Science

Signal Processing

Key words

Non-stationary Signal

Adaptive Segmentation

Modified Varri

Genetic Algorithm (GA)