World Academy of Science, Engineering and Technology
International Journal of Electrical and Computer Engineering
Vol:8, No:11, 2014

EEG Diagnosis Based on Phase Space with Wavelet Transforms for Epilepsy Detection

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Abstract : The recognition of an abnormal activity of the brain functionality is a vital issue. To determine the type of the abnormal activity either a brain image or brain signal are usually considered. Imaging localizes the defect within the brain area and relates this area with somebody functionalities. However, some functions may be disturbed without affecting the brain as in epilepsy. In this case, imaging may not provide the symptoms of the problem. A cheaper yet efficient approach that can be utilized to detect abnormal activity is the measurement and analysis of the electroencephalogram (EEG) signals. The main goal of this work is to come up with a new method to facilitate the classification of the abnormal and disorder activities within the brain directly using EEG signal processing, which makes it possible to be applied in an on-line monitoring system.

Keywords : EEG, wavelet, epilepsy, detection
Conference Title : ICECEME 2014 : International Conference on Electrical, Computer, Electronics and Mechatronics Engineering
Conference Location : Istanbul, Türkiye
Conference Dates : November 28-29, 2014

Open Science Index, Electrical and Computer Engineering Vol:8, No:11, 2014 publications.waset.org/abstracts/17206/pdf