

Characterization of 3D-MRP for Analyzing of Brain Balancing Index (BBI) Pattern

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Abstract : This paper discusses on power spectral density (PSD) characteristics which are extracted from three-dimensional (3D) electroencephalogram (EEG) models. The EEG signal recording was conducted on 150 healthy subjects. Development of 3D EEG models involves pre-processing of raw EEG signals and construction of spectrogram images. Then, the values of maximum PSD were extracted as features from the model. These features are analysed using mean relative power (MRP) and different mean relative power (DMRP) technique to observe the pattern among different brain balancing indexes. The results showed that by implementing these techniques, the pattern of brain balancing indexes can be clearly observed. Some patterns are indicates between index 1 to index 5 for left frontal (LF) and right frontal (RF).

Keywords : power spectral density, 3D EEG model, brain balancing, mean relative power, different mean relative power

Conference Title : ICEECST 2014 : International Conference on Electrical Engineering, Computer Science and Technology

Conference Location : Istanbul, Türkiye

Conference Dates : April 22-23, 2014