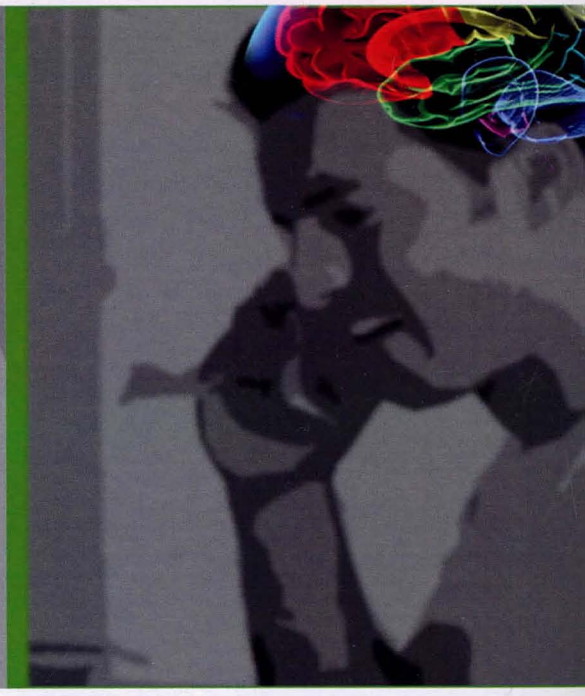
UNDERSTANDING BRAIN DEVELOPMENTAL DISORDER BASED ON EEG IN SOFT COMPUTING APPROACH

Abdul Wahab Abdul Rahman



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Editors

Abdul Wahab Abdul Rahman

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EEG EMOTION RECOGNITION USING FEATURES OF MEL FREQUENCY CEPSTRAL COEFFICIENTS

MARINI OTHMAN, ABDUL WAHAB ABDUL RAHMAN AND REZA KHOSROWABADI

4.0 Abstract

Electroencephalography (EEG) measurements are known to be noninvasive, simple, fast, and inexpensive. Although traditionally used for the investigation of seizure and sleep disorders, the past decades have seen a growing number of researches using EEG for studying human emotions. A major problem in these studies, however, is the low percentage of accuracy for discriminating the affective states. Our work proposed the use of features from the Mel Frequency Cepstral Coefficients, which is a popular technique for speech processing to be adapted in brain signal processing. Specific MFCC features utilized for our analysis were mel cepstrum, the energy features, the cepstral distance and the second cepstral distance. Features extracted were then classified using MLP for identifying emotions. Experimental results indicated the potential of