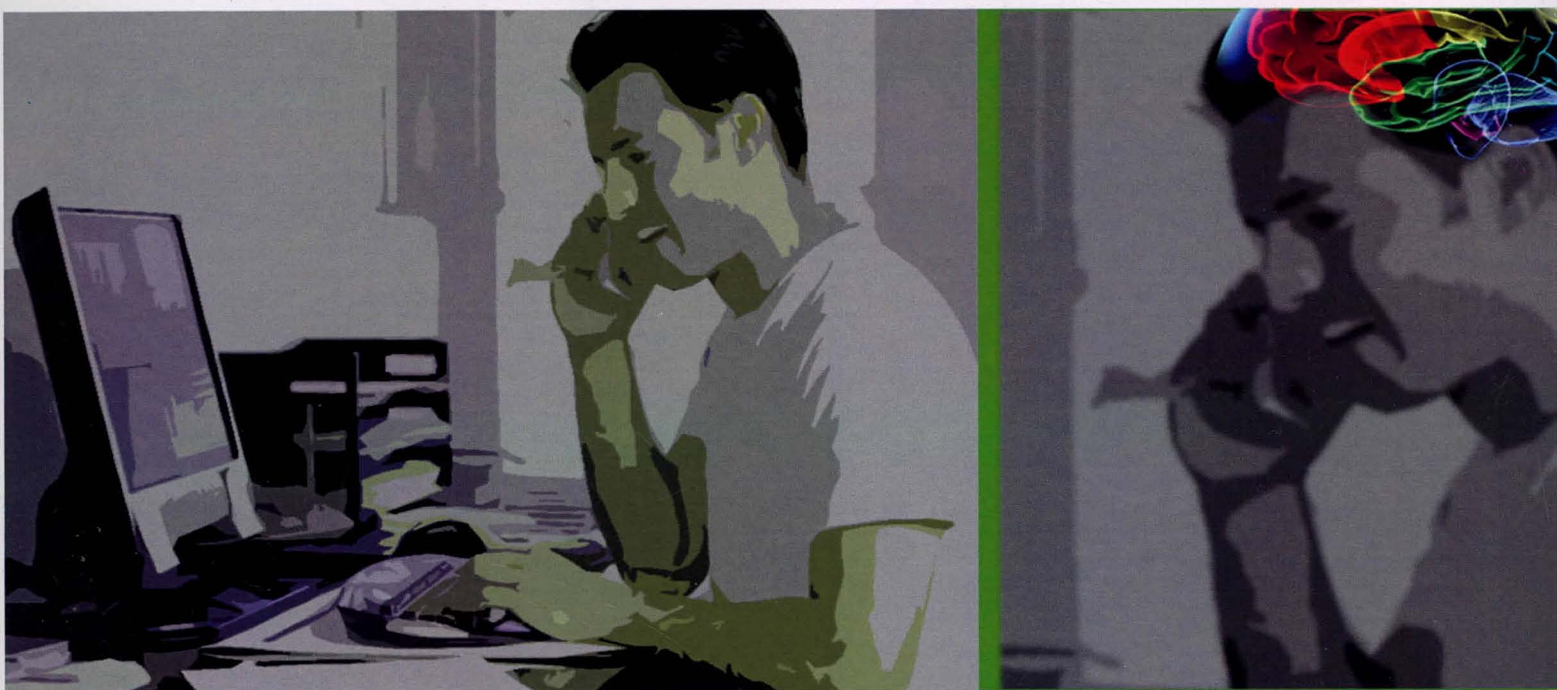


UNDERSTANDING BRAIN DEVELOPMENTAL DISORDER BASED ON EEG IN SOFT COMPUTING APPROACH

Abdul Wahab Abdul Rahman



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Editors

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EMOTION RECOGNITION USING EEG SIGNALS

NORMAZIAH ABDUL AZIZ, ABDUL WAHAB

ABDUL RAHMAN AND NAJWANI RAZALI

3.0 Abstract

Electroencephalogram (EEG) is a well-known device in neurology and physiology fields in order to identify or detect brain disorder. The portability and affordability of the EEG equipment makes it a better choice in comparison with the functional magnetic resonance imaging (fMRI) system for analyzing brain signals. Signals captured using EEG can be analyzed using specific methods. In this study, kernel density estimation (KDE) was use as a method to extract features in time and frequency domain. The EEG signals from the brain were first captured using eight channels probes. Selected stimuli presented to the subjects for listening and viewing images pre-indicative of four basic emotions namely: fear, happy, sad, and calm. Then, multilayer perceptron (MLP) play a role as classifier in order to classify the extracted features. Finally, results shows potential of using the KDE as feature extraction method for recognizing emotion using the brain waves signal with only 8 channels.