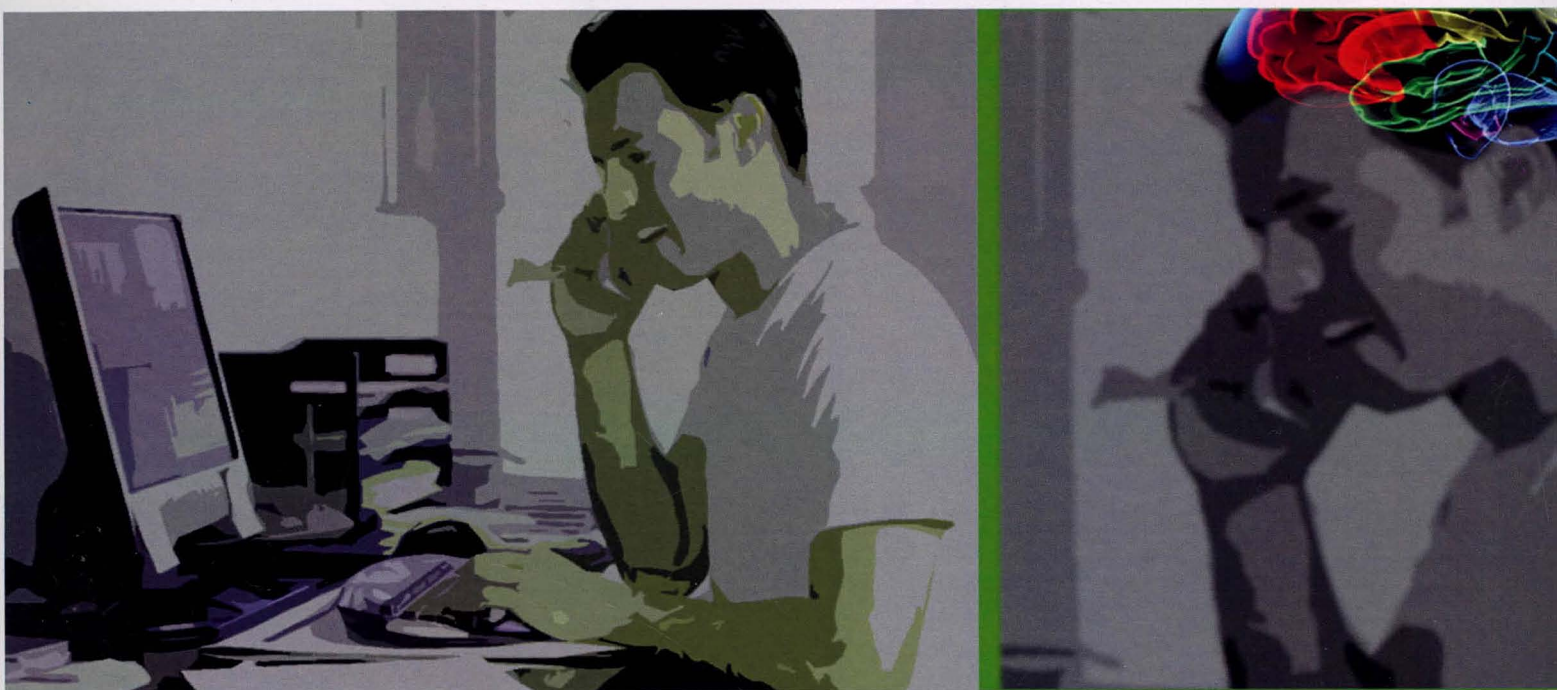


UNDERSTANDING BRAIN DEVELOPMENTAL DISORDER BASED ON EEG IN SOFT COMPUTING APPROACH

Abdul Wahab Abdul Rahman



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INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

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APPROACH**

Editors

Abdul Wahab Abdul Rahman



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Classification Of EEG Signals For Understanding

Affective Face Processing Impairment In Autism

Abdul Wahab Abdul Rahman and Marini Othman

8.0 Abstract

The well established Theory of Mind deficit in autism has indicated the inability of children with Autism Spectrum Disorder (ASD) for understanding others' affective states, due to their incapability for processing emotional faces. This deficit is largely rooted by their lack of social motivation and eye contact during communication, causing insufficient information to the brain for interpreting emotional faces. This paper investigates human brainwaves for understanding affective face processing of ASD children. Pattern classification results are explained based on the 2-dimensional affective space model. The 2-dimensional model explains human emotion in terms of the pleasant/unpleasantness (or valence) and intensity (or arousal). Experimental results show that it is possible to discriminate the emotions of autistic children against control subjects with the accuracy of 76.61%. Analysis also revealed that emotion of the non-autistic group is altered towards matching the affective faces