Title: A New Approach for Automatic Sleep Scoring: Combining Taguchi Based Complex-Valued Neural Network and Complex Wavelet Transform

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PII: S0169-2607(16)00002-X
DOI: http://dx.doi.org/doi:10.1016/j.cmpb.2016.01.001
Reference: COMM 4054

To appear in: *Computer Methods and Programs in Biomedicine*

Received date: 15-5-2015
Revised date: 4-12-2015
Accepted date: 6-1-2016

Please cite this article as: M. Peker, A New Approach for Automatic Sleep Scoring: Combining Taguchi Based Complex-Valued Neural Network and Complex Wavelet Transform, *Computer Methods and Programs in Biomedicine* (2016), http://dx.doi.org/10.1016/j.cmpb.2016.01.001

Highlights

In this study, a new complex classifier-based approach is presented for automatic sleep scoring using EEG signals.

The effect of complex-valued classifiers shown to have a positive impact on classification accuracy of EEG signal data.

One of the interesting parts of the study is the parameter optimization that significantly affects system performance.

Proposed method can be used to design a computer support system for rapid and accurate sleep stage scoring.