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Entropy Applications in Electroencephalography

Guest Editor:

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Message from the Guest Editor

Synchronous activities, namely, excitation and inhibition of cortical neurons, are recorded by electroencephalograms (EEGs). Since some of the superficial cortical neurons are responsible for corticocortical connections, synchronization largely represents the flow of information between synchronized cortical circuits. Furthermore, during an interaction of the brain with the environment, there is the activation of cortical neurons due to sensory stimulation and movements, manipulating the environment.

In this Special Issue, we invite contributions that will shed light on how the changes in the measurements of entropy in EEG recordings can be related to cognitive functions of the brain, such as perception and voluntary motor control. We hope to learn how EEG can be analyzed to understand changes in the levels of cognitive functioning during various stages of anesthesia and disease states, such as Parkinson's and Alzheimer's diseases and schizophrenia.



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Special Issue



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Editor-in-Chief

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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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