Special Issue

Application of Entropy Analysis to Electroencephalographic Data

Message from the Guest Editor

Human brain is an extremely complex network of interconnected neurons, and its functioning is essentially based on nonlinearities. Electroencephalography (EEG) has become a widely used technique to understand the chaotic behavior underlying brain dynamical properties. EEG complexity has been evaluated by means of several computational approaches throughout the years; one such approach is the entropy. Entropy is a concept addressing randomness and predictability, with greater entropy often associated with more randomness. Brain complexity can change during both physiological and pathological ageing, but also during cognitive or motor tasks. Entropy can be used to monitor the brain complexity in several conditions thanks to simple EEG recordings. Contributions addressing any of these issues are welcome. This Special Issue aims to be a forum for the presentation of new and improved techniques of information theory for complex systems. In particular, the analysis and interpretation of brain complex systems with the help of statistical tools based on information theory and complexity fall within the scope of this Special Issue.

Guest Editor

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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.

Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

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