Entropy in Data Analysis

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Message from the Guest Editors

Entropy is a powerful nonlinear metric widely used to assess the dynamical characteristics of data. A number of methods, such as sample entropy, fuzzy entropy, permutation entropy, distribution entropy, and dispersion entropy, have been introduced to quantify the irregularity or uncertainty of signals and images. Their multiscale extensions have been developed to quantify the complexity of data to deal with the multiple time scales inherent in such signals and images. For a better understanding of the underlying signal-generating system, multivariate multiscale entropy methods have also been proposed to take into account both the time and spatial domains at the same time.

The main goal of this Special Issue is to disseminate new and original research based on entropy analyses in order to assist in a better understanding of the physiology and data-generating mechanism, early diagnosing disorders or diseases, treatment monitoring, and planning healthcare strategies, required to prevent the occurrences of certain pathologies.

Special Issue

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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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