Special Issue

Entropy Methods for Cardiorespiratory Coupling Analysis

Message from the Guest Editors

Entropy is a nonlinear measure employed to quantify the dynamical properties of biomedical signals. Various methods based on Shannon entropy have been applied to estimate the complexity or irregularity of multivariate signals over multiple scales; these have also been utilized in the analysis of cardiac and respiratory time series to examine the features of bidirectional cardiorespiratory interactions. In the last few decades, in addition to the neural control of the heart rhythm, many basic and clinical studies have revealed the properties of the neural control of breathing. However, we remain unable to recognize the whole spectrum of the variability in cardiorespiratory coupling during wakefulness, sleep, exercise or changes in the cardiovascular and respiratory system induced by pathological conditions. This Special Issue aims to disseminate the results obtained via the development of novel entropy metrics and/or the implementation of standard entropy measures under the different physiological and pathological conditions applicable in the examination of cardiorespiratory interactions.

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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.

Editor-in-Chief

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