Special Issue

Entropy Analysis of Electrophysiological Signals

Message from the Guest Editor

In recent decades, entropy-based analyses have emerged as powerful tool for quantifying the complexity, regularity, and information content of complex biological signals, such as electroencephalography (EEG), electrocardiography (ECG), and electromyography (EMG). This Special Issue aims to bring together cutting-edge research and methodological developments focused on the entropy analysis of electrophysiological signals, including theoretical advances, algorithmic improvements, and applied studies utilizing entropy-based tools to better understand the structure and function of neural, muscular, or cardiac systems. Topics of interest include, but are not limited to, the following:

- Novel entropy measures and complexity metrics for biomedical signal analysis;
- Multiscale and multivariate entropy approaches;
- Applications in cognitive neuroscience, cardiology, neurology, and sleep research;
- Entropy-based methods in brain–computer interfaces and wearable health monitoring;
- Challenges in signal preprocessing, parameter selection, and real-time implementation;
- Comparative studies using traditional or machine learning-based approaches.

Guest Editor

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About the Journal

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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