



Application of Information Theory and Entropy in Cardiology

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

The human heart is a complex system composed of 5 billion autonomous cardiomyocytes that interact with each other with simple rules of operation and minimal central control. This interaction leads to system behaviors at multiple scales. At the microscopic scale, the system behavior is characterized by transitions of cardiomyocyte states between excitation and relaxation. This creates a series of traveling waves and a multitude of arrhythmia at the macroscopic scale that controls the life and death of millions of human beings worldwide.

This Special Issue will focus on the application of information theory in Cardiology to understand 1) the relationship between micro- and macro-scale behaviors of the heart, 2) phase transitions in the cardiac system, and 3) the mechanism of heart disease.

Papers exploring topics from molecular to population scales will be considered.





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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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