

Special Issue

Nonlinear Dynamics in Cardiovascular Signals

Message from the Guest Editor

The cardiovascular system involves many regulatory mechanisms that preserve the stability of blood pressure by interacting strongly with other vital systems (including the respiratory, endocrine, and autonomous nervous systems). Non-invasive measurements of cardiovascular signals have increased the study of the cardiovascular system, searching for deeper insights into the physiological modulation, the pathophysiology of cardiovascular and other chronic diseases, and new methods to improve diagnosis and prognosis in human health. Heart rate variability (HRV) and other time series derived from cardiovascular systems can be considered as outputs of this system that provide information about the regulatory mechanisms through the change in these time series to a given stimulus. For this Special Issue, we welcome submissions related to analysis of HRV and other time series from the nonlinear dynamics' perspective (entropy, complexity, self-similarity, and others) to assess pathophysiological mechanisms, clinical applications, and the development of new methods. Manuscripts reviewing the state-of-the-art of these topics are also welcome.

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.

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Editor-in-Chief

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