Statistical Methods for Complex Systems

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Message from the Guest Editors

A complex system is a large scale framework which consists of many interacting components. Complex systems are intrinsically difficult to analyze and model, due to the involved nature of interactions among their parts. The use of statistical methods to study the behavior of such systems, and to explain their dynamics, has gained a significant amount of attention, both from a theoretical and an empirical viewpoint. In addition, there have been many advances in applying Shannon theory to complex systems, including correlation analysis for spatial and temporal data, the study of entropy and its derivatives, and clustering techniques for complex networks. In this Special Issue we invite contributions that focus on statistical methods for complex systems, with an emphasis on information-theoretic principles.

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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