Special Issue

An Information-Theoretical Perspective on Complex Dynamical Systems

Message from the Guest Editors

This Special Issue aims at introducing new insights and approaches for advancing the study of general complex systems. Topics of interest for this Special Issue include, but are not limited to, the following themes:

- Building suitable unambiguous mathematical models for statistical/stochastic prediction, parameter estimation, and uncertainty quantification;
- Improved understanding of model-based ensemble forecast using information theory and judicious comprehensive mathematical tools;
- New data-driven and machine learning strategies to characterize the dynamical and statistical features of high-dimensional complex systems;
- Emerging development of multiscale algorithms for filtering/data assimilation and state estimation for complex systems and real-world applications;
- Information barriers and improving the skill with model errors for state estimation and prediction.

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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.

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