Special Issue

Application of Information Theory to Physical Modeling and State Awareness in Complex Systems

Message from the Guest Editors

This Special Issue focuses on the application of information theory in the physical modeling and state perception of complex systems. It focuses on the interdisciplinary research of information theory with other disciplines, such as information physical systems, network science, power systems, and other fields of modeling and state perception research. The aim is to provide effective methods and tools for solving practical problems. The topics include, but are not limited to: multi-physics field modeling methods in complex systems, data-driven state perception methods, state measurement and fault analysis methods. Modeling applications such as new energy systems, smart grids, and equipment digital twins are also welcome.

Keywords: entropy; information theory; signal processing; state perception; electromagnetic parameter measurement; deep learning and machine learning; fault modeling and evolution analysis; fault diagnosis; digital twins; big data analysis

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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.

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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