Special Issue

Spatiotemporal Complexity Analysis of Brain Function

Message from the Guest Editors

The world we live in is a complex dynamical system that goes through numerous stable and unstable behaviors. One of the most obvious realizations of dynamical complexity can be found in the brain function as spontaneous changes in pattern irregularity in time and across multiple spatial scales. This Special Issue is dedicated to new advances in (i) spatiotemporal analysis of brain complexity using neuroimaging data, (ii) realistic modelling of brain complexity, and (iii) the development of quantitative tools for the differentiation of brain complexity between health and disease. We invite original contributions and comprehensive reviews from complex dynamics, neuroscience, network science, signal processing, and information theory on these topics:

- Biological and anatomical bases of complexity in brain function.
- Analysis of brain complexity in time and space using neuroimaging modalities such as EEG, MEG, functional/anatomical/diffusion MRI, and PET.
- Clinical applications of brain complexity analysis in brain abnormalities using machine learning techniques.
- Replication studies of previous findings using independent and large populations are also encouraged.

Guest Editors

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Deadline for manuscript submissions

closed (31 December 2022)

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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.

Editor-in-Chief

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