

Special Issue

Coexistence of Complexity Metrics and Machine-Learning Approaches for Understanding Complex Biological Phenomena

Message from the Guest Editors

The dynamics of complex systems and the ways in which they influence a number of biological processes are one of the most interesting physical problems through which current developments in the independent fields of physics and biology/genomics can be brought together and that they can attempt to address more effectively. These dynamics include the hierarchy of complex and self-organized phenomena.

Many scientists have used complexity metrics such as generalized entropies, multifractal analysis, q-triplet of Tsallis statistics, complex networks, fractal dimension etc. to understand the complex behaviour of complex phenomena in biology/genomics. The projection of the dynamics to the statistics in the phase space develops a complete picture that can be integrated to the variations of the complexity metrics.

This Special Issue emphasizes the merging of the complexity metrics and the machine-learning approaches, hoping to attain a deeper understanding of complex biological phenomena.

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