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## Advances in Complex Systems Modelling via Hypergraphs

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### Message from the Guest Editors

In the last few decades, network science has emerged as a breakthrough field in order to study and investigate complex systems. Hypergraphs overcome these limitations by allowing hyperedges to connect simultaneously more than two nodes. The greater modelling capabilities of multi-way relationships have been demonstrated in fields such as biology (e.g., protein-protein interaction networks) and social networks (e.g., collaboration networks). Yet the power of hypergraphs is not limited to a mere representation of the data. Hypergraphs and simplicial complexes also play a key role in the emergent field of topological data analysis, whose aim is to analyze a set of data (or point clouds) using techniques derived from topology and mathematics. In fact, rather than analyzing the data itself (which can be difficult due to noise, high-dimensionality, and so on), one can build a filtered set of simplicial complexes and study their properties.



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# 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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