Special Issue

Synergy and Redundancy Measures: Theory and Applications to Characterize Complex Systems and Shape Neural Network Representations

Message from the Guest Editor

This Special Issue welcomes contributions on advances in both the theoretical formulation and applications of information-theoretic measures of synergy and redundancy. Encompassed topics include:

- Advances in a multivariate formulation of redundancy measures or in the comparison of alternative proposals, addressing their distinctive power to capture relevant structures in both synthetic and experimental data sets;
- Applications to understand interactions in real complex systems;
- Advances in the estimation of information-theoretic quantities from high-dimensional data sets;
- Applications for feature selection and sensitivity analysis;
- Analysis of the distribution and nature of information across layers in neural networks;
- Design of deep learning models to obtain robust or disentangled data representations.

Guest Editor

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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.

Editor-in-Chief

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