Special Issue

Network- and Information-Theoretic Approaches in the Study of Action and Perception

Message from the Guest Editors

Human and animal adaptive behaviour is underpinned by the processing of information to translate sensory inputs from the external world into effective actions. From a computational perspective, the study of the neural mechanisms underlying this complex operation can be facilitated using mathematical tools that quantify information processing in biological systems and characterise the dynamic relations between system elements. Information and network theories provide useful measures and analytical approaches to tackle such a research problem. Recent advances in these fields and their joint application to model neurobiological signals and systems hold promise for a better understanding of the perception–action cycle and the neurobiological processes involved from both theoretical and experimental viewpoints. This Special Issue aims to be a forum for the presentation of information and/or network theory-based approaches to study perception and action across biological systems. We welcome the submission of novel techniques, algorithms, or models as well as the application of existing approaches to experimental neurobiological and behavioural data.

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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.

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