Integrated Information Theory and Consciousness II

Guest Editor:

Prof. Kyumin Moon
Humanities Research Institutes,
Chung-Ang University, 06974
Seoul, Korea

Deadline for manuscript submissions:
15 May 2024

Message from the Guest Editor

IIT is unique in its methodology, mathematical model, theoretical framework, and philosophical perspective. For instance, methodologically, IIT starts from 'axioms' of consciousness and draws 'postulates' about physical substrates of consciousness. From these postulates, it suggests that a maximally integrated conceptual structure (MICS) generated by a system is a conscious experience. The Φ value of MICS, which measures the irreducible causal power of a system as a whole, captures the levels of consciousness, and the 'shape' of MICS represented in multidimensional space specifies the qualities of consciousness. Since IIT directly identifies MICS with consciousness, everything that generates MICS is conscious. All these features raise some questions: Is such 'phenomenology first' well grounded? Is there any precise and efficient way to get around the computational burden in applying IIT to real biological systems? Further, is Φ well defined enough to be generally applied to all physical systems? Is MICS-experience identification justifiable? Is there any problematic consequence of such an identification?

Special Issue

Editor-in-Chief

Prof. Dr. Kevin H. Knuth
Department of Physics, University at Albany, 1400 Washington Avenue, Albany, NY 12222, USA

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec, PubMed, PMC, Astrophysics Data System, and other databases.
Journal Rank: JCR - Q2 (*Physics, Multidisciplinary*) / CiteScore - Q1 (*Mathematical Physics*)

Contact Us