

# Special Issue

## Brain Theory from Artificial Life

### Message from the Guest Editors

The main theme of this Special Issue is brain theory from artificial life research. For the past three decades, brain theory in the field of artificial life has been discussed in terms of genetic algorithms, neural networks, chaos theory, and sensorimotor association.

In this Special Issue, we invite research that sheds light on new principles, techniques, and applications of brain theory, or, in other words, perception and corporeality from artificial life. In particular, we welcome research from new information-theoretic perspectives, such as Friston's free-energy principle, Tononi's integrated information theory, and empowerment theory.

- sensory-motor contingency
- evolutionary theory
- genetic algorithm
- deep neural networks
- chaos theory
- free-energy principle
- active inference
- integrated information theory
- empowerment

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### Guest Editors

Prof. Dr. Takashi Ikegami  
Dr. Hiroyuki Iizuka  
Dr. Keisuke Suzuki

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### Deadline for manuscript submissions

closed (20 February 2023)



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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.

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### Editor-in-Chief

Prof. Dr. Kevin H. Knuth

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