# Special Issue

# Foundations of Biological Computation

## Message from the Guest Editors

We welcome articles that investigate these fundamental issues, taking the broadest view of both computational theory and biological systems, in order to identify new research paths within and across computer science, biology and non-equilibrium statistical physics. Our goal is to lay the groundwork for the development of formal language(s) for biological computation that are mechanistically principled, taking seriously the universal, collective property of biological systems and constraints imposed by thermodynamics. We specifically welcome contributions that focus on one or more of the four following themes: 1) Identification of the basic elements and mechanics of computation in biological systems to include thus far understudied collective properties of computation;
2) The role of energy, thermodynamics, and information transformation in structuring biological computation;
3) Identification of principles shared with electronic computing systems;
4) Promising directions for future research, including how mechanistic insights might guide development of a formal language for biological computation.

## Guest Editors

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## Deadline for manuscript submissions

closed (1 December 2021)

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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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## Editor-in-Chief

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