Special Issue

Multiscale Mathematical Modeling for Cell Decision-Making in Multicellular Systems

Message from the Guest Editors

Cell decision-making is the process of cells responding to their microenvironmental cues. Cell decision-making phenomena have been well-studied in the context of single cells. However, how cells make decisions in their multi-cellular environment still remains elusive. Statistical physics and information theory offer a unique toolbox to study cell decisions in their multicellular environments since it allows for (1) low-dimensional description of relevant dynamics and (2) coupling between single cell decisions and the corresponding collective behavior at the multicellular level. Eukaryotic or prokaryotic (bacterial) phenotypic plasticity and cell fate determination are prime paradigms of such cell decision-making impacting all aspects of multicellular behavior, such collective migration, tissue development, and tumor growth. In this Special Issue, we intend to shed light on the latest developments on these aspects.

Guest Editors

Dr. Haralampos Hatzikirou

1. Centre for Information Services and High Performance Computing, Technische Universität Dresden, Nöthnitzer Straße 46, 01062 Dresden, Germany
2. Mathematics Department, Khalifa University, Abu Dhabi P.O. Box 127788, United Arab Emirates

Mr. Arnab Barua

Helmholtz Centre for Infection Research, Inhoffenstraße 7, 38124 Braunschweig, Germany

Deadline for manuscript submissions

closed (16 August 2021)

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/si/45344

Entropy
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
entropy@mdpi.com

mdpi.com/journal/entropy

Entropy

an Open Access Journal by MDPI

Impact Factor 2.0
CiteScore 5.2
Indexed in PubMed

mdpi.com/journal/entropy

About the Journal

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

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

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)

MDPI