





an Open Access Journal by MDPI

# **Cell Motility and Collective Cell Migration Modelling**

Guest Editor:

#### Prof. Dr. Arkady Voloshin

Department of Mechanical Engineering and Mechanics and Department of Bioengineering, Lehigh University, Bethlehem, PA 18015, USA

Deadline for manuscript submissions:

closed (10 June 2022)

## Message from the Guest Editor

Dear Colleagues

The complexity of biological systems creates challenges for understanding their behavior. This is particularly true for cell migration, which requires the coordinated activity of many individual components within cells. Cell migration is crucial for many physiological and pathological processes. During embryogenesis, neural crest cells undergo coordinated epithelial to mesenchymal transformations and migrate towards various forming organs. Collective cell migration plays a central role in tissue development, morphogenesis, wound repair, and cancer progression. With the growing realization that physical forces mediate cell motility in development and physiology, a key biological question is how cells integrate molecular activities for force generation on multicellular scales. Movement of mesenchymal cells is more independent, making their emergent collective behavior less intuitive and therefore lending importance to computational modeling.

This Special Issue will present the state of art of cell motility and collective cell migration modeling approaches.











an Open Access Journal by MDPI

## **Editor-in-Chief**

# **Prof. Dr. Giulio Nicola Cerullo**Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

## **Message from the Editor-in-Chief**

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## **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, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (*Engineering, Multidisciplinary*) / CiteScore - Q1 (*General Engineering*)

### **Contact Us**