



Active Particle Methods toward Modelling Living Systems

Guest Editor:

Prof. Dr. Nicola Bellomo

1. Distinguished Professor at the University of Granada, Granada, Spain

2. Professor Emeritus at the Polytechnic University of Torino, Torino, Italy

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Message from the Guest Editor

This Special Issue aims to present scientific articles devoted to the modelling and simulation of large systems of interacting living entities by active particle methods. We encourage a multiscale vision and interpretation of mathematical models of living systems, from the micro-scale to collective behaviors, and organized networks. Applications can be addressed to the study of systems where human behaviors and heterogeneity have a significant influence on collective dynamics. Specifically, the following scientific fields will be considered: social dynamics, collective learning, biology, epidemiology, virology, human crowds, and artificial intelligence.

The study of new concepts of symmetry and asymmetry is planned, looking ahead to the possible future of the science of living systems by using advanced tools of mathematics, physics, and computer science.





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Editor-in-Chief

Prof. Dr. Sergei D. Odintsov

1. Institució Catalana de Recerca
i Estudis Avançats (ICREA),
Passeig Luis Companys, 23,
08010 Barcelona, Spain
2. Institute of Space Sciences
(ICE-CSIC), C. Can Magrans s/n,
08193 Barcelona, Spain

Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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Symmetry Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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symmetry@mdpi.com
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