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# Kinetic Theory and Swarming Tools to Modeling Complex Systems—Symmetry problems in the Science of Living Systems

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Deadline for manuscript submissions:
**closed (29 February 2020)**

## Message from the Guest Editor

Dear Colleagues,

This Special Issue aims at presenting scientific articles devoted to research perspectives focusing on modeling, qualitative analysis, and simulations of large systems of interacting living entities by kinetic theory and swarming approaches.

The key concept pushed forward in the issue is a multiscale vision and interpretation by mathematical models of living systems from the micro-scale to organized networks. The overall content is multidisciplinary, as it aims at focusing on vehicular traffic and crowd dynamics, where human behaviors are taken into account, as well as behavioral economy, biology, and animal swarms. More in general, this issue looks at the interactions between the so-called hard sciences and the new science of living systems.

New concepts of symmetry and asymmetry are planned to be presented, looking ahead to *a possible future of the science of living systems* by advanced tools of mathematics, physics, and computer science.

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## 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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