Complex Systems Modeling Using Graphs and Symmetry/Asymmetry

Guest Editor:

Prof. Dr. Dmitry Zegzhda
Institute of Cybersecurity, Peter the Great St. Petersburg Polytechnic University, Polytechnicheskaya, 29, room 172, St. Petersburg 195251, Russia

Deadline for manuscript submissions:
closed (10 April 2023)

Message from the Guest Editor

Dear Colleagues,

Graph theory is the most versatile and powerful mechanism for representing a variety of systems for solving problems of modeling properties, their structure and behavior dynamics. This mathematical tool makes it possible to formalize the general laws of the functioning and development of complex and dynamic systems in all advanced fields, including cybernetics, telecommunications, biology, materials science, social sciences, and economics.

In this regard, the proposed Special Issue contains the results of research in a wide variety of areas. However, the general aim lies in modeling the characteristics of complex systems, formalizing their structures and general patterns of their development, optimizing the processes occurring in them, researching algorithms for their control and self-organization based on graph theory and the properties of their symmetry/asymmetry.

Prof. Dr. Dmitry Zegzhda
Guest Editor

Special Issue

Editor-in-Chief

Prof. Dr. Sergei Odintsov
ICREA, 08010 Barcelona and
Institute of Space Sciences (IEEC-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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.
Journal Rank: JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1 (General Mathematics)

Contact Us