



## Symmetry in Complex Networks II

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### Message from the Guest Editor

As we know, symmetry in a system means the invariance of its elements under conditions of transformation. When we take network structures, their symmetry means an invariance of the adjacency of nodes under the permutations of the node set. Graph isomorphism is an equivalence relation on the set of graphs. Therefore, we have partitioned the class of all graphs into equivalence classes. The underlying idea of isomorphism is that some objects have the same structures, if we omit the individual characteristics of their components. A set of graphs isomorphic to each other is usually known as an isomorphism class of graphs. The automorphism of a graph will be an isomorphism from  $G$  onto itself. The family of all automorphisms of a graph  $G$  is a permutation group. The inner operation of such a group will be the composition of permutations. It is called the Automorphism Group of  $G$ , and is denoted by  $\text{Aut}(G)$ . Conversely, all groups may be represented as the automorphism group of a connected graph. The automorphism group is an algebraic invariant of a graph. [...]





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## Editor-in-Chief

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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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