



## Highly Symmetrical Graphs

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### Message from the Guest Editor

Dear Colleagues,

In graph theory, “symmetric graphs” have been well-defined and studied quite thoroughly. However, in the field of mathematical chemistry there remains an immense uncultivated area where many “highly symmetrical graphs” are discussed arising from molecular skeletons, crystal structures, reaction networks, etc. both in geometrical and topological senses.

Characteristic polynomials and several counting polynomials reflect the symmetry of a given graph. Here, the term symmetry refers to not only the geometry of the mathematical object concerned, but also the different features that can be deduced from the distribution of the zeroes, or the solutions, of the characteristic polynomial...





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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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