Symmetry and Duality

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Message from the Guest Editor

Symmetry and duality has a long history starting with the platonic solids where duality interchanges faces and vertices. Maxwell's reciprocal figures point out a duality between kinematics and statics. Polarity is another well-studied form of duality of geometric objects. For graphs embedded on the sphere, we have the Petrie dual, as well as the antipodal dual. Self-dual planar graphs and tilings have been classified by their symmetry group. On the sphere, there are no non-trivial regular graphs that are both self-dual and self-Petrie, but on the surfaces of higher genus, they do exist...

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Special Issue

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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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