Symmetry in Combinatorial Structures

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Message from the Guest Editors

Dear Colleagues,

The Special Issue 'Symmetry in Combinatorial Structures' should be related to geometric objects, for which their abstract properties are given with combinatorial automorphisms, and their existence (perhaps with geometric symmetries) has to be decided. Here are some examples of possible topics.

Regular maps (a source of symmetry groups and a natural generalization of Platonic solids) and their questionable topological or polyhedral embeddings in 3-space.

Symmetric abstract point-line configurations in the sense of Branco Grünbaum and their embeddings.

Possible additional candidates of regular maps for regular Leonardo polyhedra.

Non-convex 2-spheres with properties like Archimedean bodies similar to the union of the 15 truncated cubes depicted above (refer to the graphical abstract).

Please click on the following video link for more details: https://youtu.be/AailDBdIPVY.

We invite contributions (original research and review articles) covering a broad range of topics around combinatorial and geometric symmetries.

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Special Issue

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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