Symmetry in Nonlinear Studies

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Message from the Guest Editor

The properties of symmetry are very relevant in certain problems of theoretical physics and mathematics, as well as in many applications, for instance, related to Noether-type theorems, Lie symmetry, conservation laws, or studies of biological and medical problems modelled based on patchy environments. These problems are important for the theoretical development of "ad-hoc" models of differential-difference equations or those based on graph theory. However, there are also real problems where the symmetry is either lost or not taken formally into account to derive the expected relevant properties—for instance, those related to asymmetric patchy environments in epidemic models or the formal use of frameworks of quasimetrics rather than metrics in fixed-point theory and some of its applications. This Special Issue of the journal _Symmetry_ invites contributions illustrating the bridges between mathematical and real-life scientific or applied problems and the relevance to them of symmetry- and/or asymmetry-related physical or modelling constraints. A tentative list of topics of interest for the Issue follows below, but it is also open for other related topics.

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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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