Symmetries of Nonlinear PDEs on Metric Graphs and Branched Networks

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Message from the Guest Editors

This Special Issue focuses on recent progress in a new area of mathematical physics and applied analysis, namely, on nonlinear partial differential equations on metric graphs and branched networks. This subject has seen many developments in the recent years. Graphs represent a system of edges connected at one or more branching points (vertices). The connection rule determines the graph topology. When the edges can be assigned a length and the wave functions on the edges are defined in metric spaces, the graph is called a metric graph.

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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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