

Special Issue Reprint

Symmetry in Modeling and Analysis of Dynamic Systems

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Real-world systems exhibit complex behavior, therefore novel mathematical approaches or modifications of classical ones have to be employed to precisely predict, monitor, and control complicated chaotic and stochastic processes. One of the most basic concepts that has to be taken into account while conducting research in all natural sciences is symmetry, and it is usually used to refer to an object that is invariant under some transformations including translation, reflection, rotation or scaling.

The following Special Issue is dedicated to investigations of the concept of dynamical symmetry in the modelling and analysis of dynamic features occurring in various branches of science like physics, chemistry, biology, and engineering, with special emphasis on research based on the mathematical models of nonlinear partial and ordinary differential equations. Addressed topics cover theories developed and employed under the concept of invariance of the global/local behavior of the points of spacetime, including temporal/spatiotemporal symmetries.



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