

Special Issue

Nonlinear Dynamical Systems Interacting in Complex Networks

Message from the Guest Editor

We are at a pivotal moment in the study of complex systems, where abundant data is refining our understanding of network topology and making network science a key tool for analyzing complex dynamics. Since the discovery of scale-free networks, it is clear that these patterns reflect underlying dynamic processes and evolutionary histories. Networks go beyond shifting topology and describe systems like social interactions and gene regulatory networks, based on preferential connectivity rather than simple physical links. They offer a unique way to study how physical interactions lead to information processing. This is particularly clear in gene regulatory networks, where molecular interactions form complex control systems. Similar shifts are happening in ecology, sociology, and economics, where data is enabling a unified understanding of their dynamics. By embracing network science, these fields can integrate their concepts and study physical, biological, and social interactions within a single framework.

Guest Editor

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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