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Applications of Graph Theory in Network Security and Reliability

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Message from the Guest Editor

Dear Colleagues,

In the digital era, enhancing network security and ensuring data reliability are crucial. The concept of symmetry, fundamental in both mathematics and the natural sciences, plays a pivotal role in understanding and designing resilient network systems. In this Special Issue, we explore how the principles of symmetry and graph theory converge to fortify network security and reliability. This Special Issue invites original research that harnesses symmetric properties in graphs to develop robust security architectures and reliable data transmission frameworks. This Special Issue will focus on submissions that demonstrate clear applications of graph theory to real-world problems, providing novel insights in network security and reliability.

Prof. Dr. Yin Zhang
Guest Editor



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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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