

Special Issue

Symmetries and Symmetry-Breaking in Data Security

Message from the Guest Editors

Data security is fundamental to protecting the integrity and reliability of information in our increasingly digital world, ensuring trust and safety for individuals, businesses, and governments alike. Symmetries and symmetry-breaking play significant roles in data security. Recently, many researchers have concentrated on watermarking techniques for data protection, encryption methods to ensure data integrity and confidentiality, secure data transactions, and privacy-preserving computation strategies to enhance data security. The study of symmetries and symmetry-breaking provides valuable insights and tools for developing more secure and resilient data protection methods. This Special Issue invites contributions exploring the role of symmetries and their disruption in the realm of data security. This issue seeks to address both theoretical and practical aspects of how symmetry principles can enhance or compromise security mechanisms across various domains.

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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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