

# Special Issue

## Applications Based on Symmetry in Applied Cryptography

### Message from the Guest Editors

- In applied cryptography, symmetry often serves as a foundation, supporting many algorithms and protocols that secure the digital world. From classical symmetric key encryption to modern cryptographic constructs leveraging symmetry principles, this field has continually evolved to meet the escalating demands for security and efficiency. As we are now on the brink of new technological advancements, the field of applied cryptography is expanding rapidly, encompassing diverse areas such as blockchain, secure communications, digital payments, and beyond. Within this expansive landscape, symmetry plays a pivotal role in ensuring the integrity, confidentiality, and authenticity of data. However, as cyber threats become more advanced and digital systems become increasingly complicated, it will become vital to develop symmetry-based solutions that can effectively counter these threats while maintaining performance and usability. This Special Issue of *Symmetry*, titled "Applications Based on Symmetry in Applied Cryptography", will bring together researchers and practitioners from across the globe to share cutting-edge works on the application of symmetry in cryptography.

### Guest Editors

Prof. Dr. Yining Liu

Prof. Dr. Yilei Wang

Prof. Dr. Yong Xie

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### Deadline for manuscript submissions

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# Symmetry

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## About the Journal

### 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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### Editor-in-Chief

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