

Symmetry in Random Number Generator and Probability Theory

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Deadline for manuscript
submissions:

closed (30 September 2023)

Message from the Guest Editors

True random number generators are used in many scientific and technological fields. Modern information security and messaging authentication use cryptographic systems that require random numbers.

In this call, we are welcoming blue-sky and applied research covering novel ideas and applications in both probability theory and true random number generators. Papers should cover all aspects of symmetry arguments in likelihood and statistical inference that can be used in cryptography and quality assessment of true random number generators, such as, but not limited to constructive principles of probability and inference derived from symmetry arguments, relative probabilities, symmetric measures of probability, symmetry in probability distributions, arguments related to symmetry in entropy laws, and symmetry in quantum cryptography. Evaluation of the statistical properties of random sequences and proposals for new randomness tests will also be welcomed.

All papers are expected to discuss the role of symmetry in their field of research.





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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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