Special Issue

Applications Based on Symmetry in Nuclear Energy and Engineering

Message from the Guest Editors

- The concepts of symmetry and asymmetry are fundamental in the design, operation, and stability of nuclear reactors for current and new concept designs. This Special Issue provides a platform for in-depth exploration of the relationship between symmetry and nuclear reactors, aiming to enhance our understanding of the impact of symmetry on system performance, reliability, and efficiency. It will delve into different aspects of symmetry in nuclear systems, including its application in fuel assembly performance, transient stability analysis, fault diagnosis, and system planning and design, with reference to both thermal and fast fission reactors. It will also highlight the role of symmetry in improving operational efficiency, enhancing system stability, and ensuring the reliable delivery of electricity. By exploring the intricate connections between symmetry and nuclear systems, it aims to foster a deeper understanding of the complexities involved and to provide valuable insights to improve nuclear system design and operations. Researchers are invited to contribute original research articles and reviews exploring various aspects of symmetry and asymmetry in modern nuclear systems.

Guest Editors

Dr. Gustavo Alonso

Dr. Kevin T. Clarno

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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.

Editor-in-Chief

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