

EDITORIAL

**LEGACY AND INNOVATION ACROSS
SYMMETRY'S DIMENSIONS**

Simone Brasili and Johan Gielis

Dear readers, authors, and esteemed colleagues,

Welcome to the first issue of Volume 35 for 2024 of *Symmetry: Culture and Science*. As we begin the second year of our editorial work, Johan and I are happy to continue offering insights into the world of symmetry. To endure the journal's legacy and tradition, we investigate the different symmetry dimensions, from cultural models to mathematical concepts and their intersection within different fields.

The issue opens with an annotated bibliography by D. K. Washburn, exploring the symmetries of geometric patterns within cultural contexts. Through detailed discussions and full bibliographic citations, Washburn sheds light on recent studies of symmetric designs found in tiling, textiles, basketry, ceramics, sculpture, architecture, and other materials. She points out that beyond the seven and seventeen classes of Euclidean geometry, there are many patterns created by pre-literate pattern makers with no knowledge of Western mathematics that cannot adequately be described by these symmetries.

Moving forward, Ivan V. Stepanyan delves into symmetry in mathematics and biology, examining genetic visual technologies and cellular automata. The study of Stepanyan explores the links and the unresolved issues between these two domains, offering the new insights into the dynamics of self-organization in complex systems.

Architecture enthusiasts will find interest in the typology of courtyards based on physical characteristics in the historical bazaar of Tabriz, presented by A. B. Oskui, P. Afsharian, and M. H. Torkamani. The typology highlights the intricate relationship between symmetry and architectural design.

Exploring the economic implications of symmetry, T. Kantarcı, S. Yıldırım, and S. Erdoğan examine the asymmetric effect of oil prices on food prices and gold prices, enlightening on the complex dynamics at play in economic systems.

Turning our attention to neuroscience, S.H. Bostanci promotes the study of visual symmetry in neuroaesthetics. This field hopes to unravel the cognitive foundations of aesthetic experience and their implications for our understanding of the human brain.

Finally, we include a plate section of graphic illustrations of symmetries by E. Jost to accompany readers on a visual expedition of this broad spectrum of artful and aesthetic expressions of the Pythagorean Theorem

As we undertake this intellectual voyage through the multifaceted symmetry domain, we invite you to explore, ponder, and engage with the rich tapestry of ideas presented in this issue. We are also excited to announce the upcoming Symmetry Festival 2024, held in July in Pisa, where academics, scholars, researchers, and enthusiasts will converge to celebrate and explore the myriad facets of symmetry.

We sincerely thank the authors, reviewers, and editorial team whose dedication and contributions have made this issue possible. We hope reading this issue will inspire you to walk in new ways into the territory never imagined of symmetry in all its forms.

Enjoy the journey!

Simone & Johan