

Special Issue

Symmetry in Robot Design and Application

Message from the Guest Editors

It is our pleasure to announce a new Special Issue, “Symmetry in Robot Design and Application”. This Special Issue welcomes contributions that investigate various aspects of symmetry in robot design, ranging from theoretical frameworks to practical applications. In the field of robotics, symmetry involves properties such as geometric symmetry, task execution symmetry, and control symmetry. Considering symmetry when designing robots can bring several advantages, such as simplifying control algorithms, improving stability, and reducing system design complexity. Through this Special Issue, we aspire to highlight how the exploration of symmetry can deepen our comprehension of scientific challenges while propelling advancements in robotics technology. We welcome submissions that elucidate novel insights into symmetry-driven design principles, innovative methodologies in robotic systems, and case studies demonstrating the practical benefits of symmetry in diverse application domains.

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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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