

Special Issue

Advances in Gait Symmetry and Knee Kinematics in Rehabilitation and Sports

Message from the Guest Editors

- Symmetry in human gait is a vital indicator of functional integrity, with the knee joint central to ensuring stable and efficient movement. Subtle alterations in knee kinematics can cause asymmetries, compromising gait quality, increasing injury risk, and elevating energy expenditure. These asymmetries, common after surgery, sports injuries, or neurological disorders, serve as both impairment biomarkers and rehabilitation targets.
- Technological advances—like 3D motion capture, wearable sensors, and AI analytics—enable precise, ecological assessment of gait and knee function. This Special Issue invites multidisciplinary contributions (original research, reviews, clinical reports) on topics including gait symmetry analysis, knee biomechanics in health and disease, rehabilitation strategies, sports performance optimization, and innovative measurement techniques. We aim to advance understanding and application for improved clinical outcomes and athletic performance.

Guest Editors

Dr. Serena Cerfoglio

Dr. Jorge Lopes Storniolo

Dr. Veronica Cimolin

Deadline for manuscript submissions

31 May 2026



Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.3



mdpi.com/si/254703

Symmetry
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
symmetry@mdpi.com

[mdpi.com/journal/
symmetry](https://mdpi.com/journal/symmetry)





Symmetry

an Open Access Journal
by MDPI

Impact Factor 2.2
CiteScore 5.3



[mdpi.com/journal/
symmetry](https://mdpi.com/journal/symmetry)



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

Prof. Dr. Sergei Odintsov

1. ICREA, 08010 Barcelona, Spain

2. Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within SCIE (Web of Science), Scopus, CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Multidisciplinary Sciences) / CiteScore - Q1 (General Mathematics)