



*symmetry*



an Open Access Journal by MDPI

## Geophysical Fluid Dynamics and *Symmetry*

Guest Editors:

**Dr. Mikhail A. Sokolovskiy**

Institute of Water Problems,  
Russian Academy of Science, 3  
Gubkina Street, 119333 Moscow,  
Russia

**Prof. Dr. Xavier Carton**

Laboratoire d'Océanographie  
Physique et Spatiale, Institut  
Universitaire Européen de la Mer,  
Université de Bretagne  
Occidentale, 29280 Plouzané,  
France

Deadline for manuscript  
submissions:

**closed (31 December 2023)**

### Message from the Guest Editors

Dear Colleagues,

This Special Issue, “Geophysical Fluid Dynamics and Symmetry”, is dedicated to the publication of novel results on the symmetry in three/two-dimensional vortex and/or wave structures and their dynamics in rotating stratified/barotropic flows. Papers on layer-wise models of vortex and wave dynamics are also invited. Papers focusing on their generation mechanism, stability, evolution, and interactions; on their relationship with smaller-scale flows; and on their effects on tracer transport are solicited. Papers should preferably provide elements of mathematical theories in these contexts, but can also rely on extensive numerical modelling or data analysis.

The aim of this Issue is to provide readers with an overview of recent progress in this field, with application to the dynamics of planetary oceans and atmospheres.



[mdpi.com/si/95744](https://mdpi.com/si/95744)

# Special Issue



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Sergei Odintsov

1. Institució Catalana de Recerca  
i Estudis Avançats (ICREA),  
Passeig Luis Companys, 23,  
08010 Barcelona, Spain  
2. Institute of Space Sciences  
(ICE-CSIC), C. Can Magrans s/n,  
08193 Barcelona, Spain

## 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.

## 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)

## Contact Us

---

Symmetry Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
www.mdpi.com

mdpi.com/journal/symmetry  
symmetry@mdpi.com  
X@Symmetry\_MDPI