atmosphere

an Open Access Journal by MDPI

IMPACT FACTOR 2.9

CITESCORE 4.1

Turbulence, Waves and Transport in Stratified, Rotating Fluid and Plasma Flows

Guest Editor:

Dr. Raffaele Marino
Laboratoire de Mécanique des Fluides et d'Acoustique, CNRS, École Centrale de Lyon, Université de Lyon, 69134 Écully, France

Deadline for manuscript submissions:
closed (15 August 2020)

Message from the Guest Editor

Dear Colleagues,

The aim of this Special Issue is to gather recent studies on turbulent dynamics and transport properties in fluid and plasma frameworks in the presence of stratification and/or rotation, as well as under the influence of external and self-generated magnetic fields. In these systems, density profiles, rotation axes, and magnetic fields establish preferential directions that break isotropy at some scales, allow for the propagation of waves, and may lead to the creation of helicity and the onset of dynamos. Turbulence thus has to compete with waves, and the interplay between these two energy transfer mechanisms plays a crucial role in determining the transport of momentum, particles, active/passive scalars within the flows, dissipation properties, and in promoting the exchange between kinetic and potential or magnetic energy. Stratified, rotating fluid and plasma flows are the reference physical frameworks of planetary atmospheres and interiors, of the Earth's oceans, of the solar wind, the Sun, and also of those regions where the solar–terrestrial coupling is achieved (magnetosphere and ionosphere).

Dr. Raffaele Marino
Guest Editor

atmosphere

an Open Access Journal by MDPI

IMPACT FACTOR 2.9

CITESCORE 4.1

Editor-in-Chief

Prof. Dr. Ilias Kavouras
Environmental, Occupational, and Geospatial Health Sciences, CUNY School of Public Health, New York, NY 10027, USA

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, Inspec, CAPlus / SciFinder, Astrophysics Data System, and other databases.
Journal Rank: CiteScore - Q2 (*Environmental Science (miscellaneous)*)

Contact Us

Atmosphere Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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

mdpi.com/journal/atmosphere
atmosphere@mdpi.com
𝕏@Atmosphere_MDPI