

Special Issue

Variability and Predictability of Space Weather and the Ionosphere: Recent Advances

Message from the Guest Editor

Studying complex systems such as Space Weather and the Ionosphere is relevant to understanding the physical processes involved (Knowledge) and society's use of such systems (Applications). New approaches, including the chaotic description of such systems and the development of advanced machine learning algorithms, make it possible to advance in the ability to model and predict the time evolution of their variables. It is of particular importance to have an updated view of these new approaches and their current or potential use to study and model Space Weather and Ionosphere variability and predictability. This Special Issue aims to provide a comprehensive view of the advancements in this field. Particular emphasis, though not exclusive, should be given to approaches that combine chaos theoretical descriptions and advanced machine learning algorithms when applied to Ionosphere and Space Weather basic modelling and society-oriented research. For this reason, we encourage colleagues to submit papers with this perspective to provide, in this Special Issue, an updated view on the subject.

Guest Editor

Prof. Dr. Sandro Radicella

Institute for Scientific Research, Boston College, Chestnut Hill, MA 02467, USA

Deadline for manuscript submissions

closed (15 May 2024)



Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



mdpi.com/si/174571

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

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





Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



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



About the Journal

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!

Editor-in-Chief

Dr. Daniele Contini

Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

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))