

Special Issue

Advances in Rainfall-Induced Hazard Research

Message from the Guest Editors

The current state of research on rainfall-induced hazards is rapidly evolving, with significant advancements in understanding and mitigation strategies. Remote sensing and geospatial technologies have revolutionized our ability to monitor and predict rainfall patterns, while numerical modeling techniques are increasingly sophisticated in assessing the potential impact of excessive rainfall on hillslopes, watersheds, and urban areas. Moreover, the integration of traditional atmospheric and natural hazard knowledge with modern data science and machine learning has led to more accurate predictions, enabling authorities to take timely measures. This Special Issue brings together leading experts to share their insights and research findings, covering topics from rainfall modeling and forecasting to risk assessment and management. It serves as a valuable resource for researchers, policymakers, and practitioners, fostering cross-disciplinary collaboration and further advancements in this crucial field. We hope this issue inspires more research into mitigating the impact of these natural hazards and safeguarding lives and property worldwide.

Guest Editors

Dr. Qiang Dai

Key Laboratory of VGE of Ministry of Education, Nanjing Normal University, Nanjing 210023, China

Dr. Shaonan Zhu

School of Internet of Things, Nanjing University of Posts and Telecommunications, Nanjing 210023, China

Deadline for manuscript submissions

closed (30 April 2025)



Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.3
CiteScore 4.9



mdpi.com/si/202739

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))