

Special Issue

Advanced Studies on Climate Change in Urban Areas: Emerging Technologies and Strategies to Address Heat Waves and Improve Thermal-Igrometric Comfort

Message from the Guest Editors

This Special Issue focuses on improving climate resilience in urban environments through cutting-edge research and innovative solutions characterized by interdisciplinary approaches that integrate climate science, urban planning, engineering, public health and environmental sustainability. We aim to promote advanced technologies; emphasize strategies to mitigate the effects of heat waves; improve thermal comfort. It includes innovative technologies for monitoring and mitigating urban overheating, nature-based solutions, and green infrastructure to enhance urban cooling. It also covers urban design and planning strategies aimed at improving thermal comfort, climate-responsive building designs and materials, and the use of remote sensing and data analytics, including AI and big data analysis, for urban climate resilience. Public health interventions and policies addressing heat-related risks are also welcome, along with case studies and best practices. This Special Issue highlights the socio-economic and environmental impacts of heat waves on urban populations and presents adaptation and mitigation strategies for future urban climate scenarios.

Guest Editors

Dr. Gianluca Pappaccogli

Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali,
University of Salento, Laboratory of Micrometeorology, S.P.6 Lecce-
Monteroni, 73100 Lecce, Italy

Dr. Ferdinando Salata

Department of Astronautics, Electrical and Energetics Engineering,
University of Rome "Sapienza", 00184 Rome, Italy

Deadline for manuscript submissions

21 February 2025



Atmosphere

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 4.6



mdpi.com/si/209731

Atmosphere
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 2.5
CiteScore 4.6



[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))