Special Issue

Multi-Physics and Chemistry of Urban Climate Modelling

Message from the Guest Editors

We invite research articles that advance our understanding of multi-physics and chemistry of urban climate modelling. Topics of interest include, but are not limited to, the following: 1) Interaction of dynamic force and thermal buoyancy effect on urban airflow and ventilation, urban thermal stress/comfort, and pollutant dispersion/air quality.
2) Integrated effects of building morphologies and other urban parameters on urban airflow, pollutant dispersion, and urban heat island/energy consumptions.
3) Influence of urban tree planting/water bodies, etc., on urban thermal/humidity environment as well as outdoor thermal comfort, urban evaporation, latent heat fluxes, etc.
4) Modelling of urban energy balance and urban canopy parameterization.
5) Integrated impacts of turbulent pollutant dispersion and photo-chemical reactions.
6) Interaction of building physics (indoor) and urban physics (outdoor).
7) Interaction of micro-scale urban physics and meso-scale atmospheric physics.
8) Interaction between urban micro-climate and building energy consumption.
9) Interactions of chemical reactions and urban turbulent dispersion.
10) Influence of multi-scale urban climate on human health.

Guest Editors

Prof. Dr. Jian Hang

Prof. Dr. Riccardo Buccolieri

Dr. Liyue Zeng

Dr. Lin Liu

Dr. Dongjin Cui

Dr. Guanwen Chen

Deadline for manuscript submissions

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

mdpi.com/journal/climate

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About the Journal

Message from the Editor-in-Chief

Climate (ISSN 2225-1154) was established in 2013 to provide an open-access outlet for innovative research, review articles, new direction papers, and short communications relevant to all disciplines related to climate at all scales. The journal encourages papers ranging from climate change detection and attribution and Earth system modeling to ecosystem, hydrologic, and socioeconomic impacts and climate mitigation and adaptation measures. The influence of *Climate* is strong and growing (IF 3.2 in 2024, CiteScore 5.7 in 2024).

Editor-in-Chief

Dr. Timothy G. F. Kittel
Institute of Arctic and Alpine Research, University of Colorado Boulder, Boulder, CO 80309-0450, USA

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 20.8 days after submission; acceptance to publication is undertaken in 3.8 days (median values for papers published in this journal in the second half of 2025).