

## Special Issue

# Latest Advances and Prospects on Weather and Climate Extremes

### Message from the Guest Editor

As temperatures rise, extreme weather events such as heatwaves, severe flooding, prolonged droughts, and wildfires have become increasingly intense and frequent. Each decade is warmer than the previous one, and each year surpasses the last in global average temperature. Understanding the physical mechanisms behind changes in average climate conditions, as well as their variability and trends, is crucial for effectively implementing early warning weather systems, defining adaptation policies, and developing mitigation strategies. Consequently, the scientific community in atmospheric and climate sciences prioritises advancing knowledge of extreme phenomena, including their frequency, intensity, spatial distribution, and underlying processes. We are pleased to invite you to contribute to this Special Issue, which aims to bring together recent advances in the study of weather and climate extremes with a focus on novel methodologies, high-resolution datasets, and model-based assessments. In particular, we welcome contributions that explore emerging challenges and future directions in this rapidly evolving field.

### Guest Editor

Dr. Susana Cardoso Pereira

Centre for Environmental and Marine Studies (CESAM), Department of Physics, University of Aveiro, 3810-193 Aveiro, Portugal

### Deadline for manuscript submissions

20 November 2025



## Applied Sciences

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*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[appls@mdpi.com](mailto:appls@mdpi.com)

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### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, Italy

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