











CALL FOR ABSTRACTS

TOPIC OF THE SYMPOSIUM

Is AI the Future of Weather and Climate Modeling?

KEY OBJECTIVES

Analyze and discuss the latest advancements in numerical and AI-based weather and climate modeling. Identify key trends, challenges, and opportunities shaping the field. Leverage the synergies between numerical methods and AI-based approaches to advance weather and climate modeling, with a strong commitment to ethical, responsible, and reproducible AI practices.

DATE

June 2-4, 2025

LOCATION

ETH Zurich, Rämistrasse 101, 8006 Zürich, Switzerland

TARGET AUDIENCE

Scientific communities working on both numerical and AI-based modeling approaches Representatives from companies working on HPC and machine learning methods Early career researchers

FORMAT

The symposium will be held in-person.

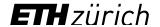
The sessions will be live-streamed, however, online presentations are not possible.

All presenting authors are required to participate on-site.

KEYNOTE SPEAKERS (confirmed as of Dec 20, 2024)

- Dr. Peter M. Caldwell, DOE LLNL Leader of the Simple Cloud-Resolving E3SM Atmosphere Model
- Dr. Peter Düben, ECMWF Head of the Earth System Modelling Section
- Dr. Cathy Hohenegger, MPI-M Leader of the Climate Surface Interaction Group
- Dr. Stephan Hoyer, Google Team lead at Google Research building AI weather and climate models
- Dr. Maria J. Molina, University of Maryland Assistant Professor of Atmospheric and Oceanic Science
- Dr. Inna Polichtchouk, ECMWF Senior Scientist Numerial Methods

More keynote speakers to be announced on the symposium website soon.











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ABSTRACT SUBMISSION

Please submit your abstract through our online portal at https://exclaim-symposium.ethz.ch/. Ensure that your submission aligns with one of the symposium sessions and adheres to the word limit of 350 words.

EXTENDED ABSTRACT SUBMISSION DEADLINE January 26, 2025

SESSION TOPICS

Session A - Creating the foundations of AI-based modeling of weather and climate

Session B - Harnessing the power of AI in modeling weather and climate

Session C - Harnessing the power of physics-based modeling of weather and climate

Session D - Merging AI and physics-based modeling of weather and climate

PRESENTATION FORMAT

Oral presentations (12 min presentation + 3 min Q&A) and Posters

REVIEW PROCESS

All submitted abstracts will be peer-reviewed.

Authors will be notified of acceptance by the end of February 2025.

LANGUAGE

The official language of the symposium is English.

CONTACT

www: https://exclaim-symposium.ethz.ch/ e-mail: exclaim-symposium@c2sm.ethz.ch

SCIENTIFIC ORGANIZING COMMITTEE

Dr. Oliver Fuhrer, MeteoSwiss Prof. Nicolas Gruber, ETH Zurich Prof. Torsten Hoefler, ETH Zurich Prof. Siddhartha Mishra. ETH Zurich Prof. Andreas Prein, ETH Zurich Prof. Thomas Schulthess. CSCS Prof. Heini Wernli, ETH Zurich











PRELIMINARY PROGRAM

	Monday	Tuesday	Wednesday
	June 2, 2025	June 3, 2025	June 4, 2025
8h-9h			
	Registration		
9h-10h			
	Welcome coffee	Session B	Session C
10h-11h		Coffee break	Coffee break
	Tutorial	соттее ргеак	соттее огеак
11h-12h	титогіаі	Session B	Session D
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12h-13h			
13h-14h	Lunch break	Lunch break	Lunch break
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14h-15h	Session A	Session C	Session D
15h-16h			
	Coffee break		
16h-17h		Poster session	
	Session A	&	
17h-18h		Coffee break	
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18h-19h	Poster session		
	&		
19h-20h	Icebreaker		
20h-21h		Conference dinner	
21h-22h			

Tutorial - How to use modern ML tools for weather and climate modeling (TBC)

Session A - Creating the foundations of AI-based modeling of weather and climate

Session B - Harnessing the power of AI in modeling weather and climate

Session C - Harnessing the power of physics-based modeling of weather and climate

Session D - Merging AI and physics-based modeling of weather and climate









