



International Climate Computer Summit



NCSA

September 29 – October 2, 2024

University of Illinois at Urbana-Champaign

Accurate projections of climate change are vitally important to virtually every area of society and location on Earth. Although important advances continue to be made, the detailed depiction in Earth system models (ESMs) of clouds, storms, precipitation, land-atmosphere interactions, terrain, land-water boundaries, ocean currents and other features critical to producing credible model solutions for local and regional decision-making is not expected to be attainable globally on commodity computing systems until the middle part of this century.

A transformative capability now is within reach to provide detailed projections of the Earth system globally at the scale of local weather, as well as unprecedented insight regarding sources of ESM biases and uncertainties.

The summit will convene an international group of experts from academia, government, industry and non-profit organizations to examine the practicability of co-designing a specialized computational system and modeling framework that supports frontier Earth system science research and climate projection using kilometer-scale global resolution.

We will also address how output from global high-resolution climate projections can be used – especially locally and regionally – in making decisions in areas such as economics, urban and regional planning, risk, insurance, health, agriculture, energy and transportation.

*Join the free summit live stream
by registering at:
[climatecomputer.ncsa.illinois.edu/
attend-virtually/](https://climatecomputer.ncsa.illinois.edu/attend-virtually/)*



Hosted at the University of Illinois Urbana-Champaign and facilitated by the National Center for Supercomputing Applications (NCSA), the summit will be live-streamed and recorded videos of all sessions will be available afterward. A final report will also be available on the summit website once the summit has concluded.

Several pre-summit intensive meetings were held during the past several months on key topics relevant to the summit in order to set the stage for discussions at the summit. Topics included practitioners and stakeholders, Earth system models, computational system architecture, and artificial intelligence and machine learning. You will find the summit more valuable if you read the brief summaries of these meetings at climatecomputer.ncsa.illinois.edu prior to the summit.

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