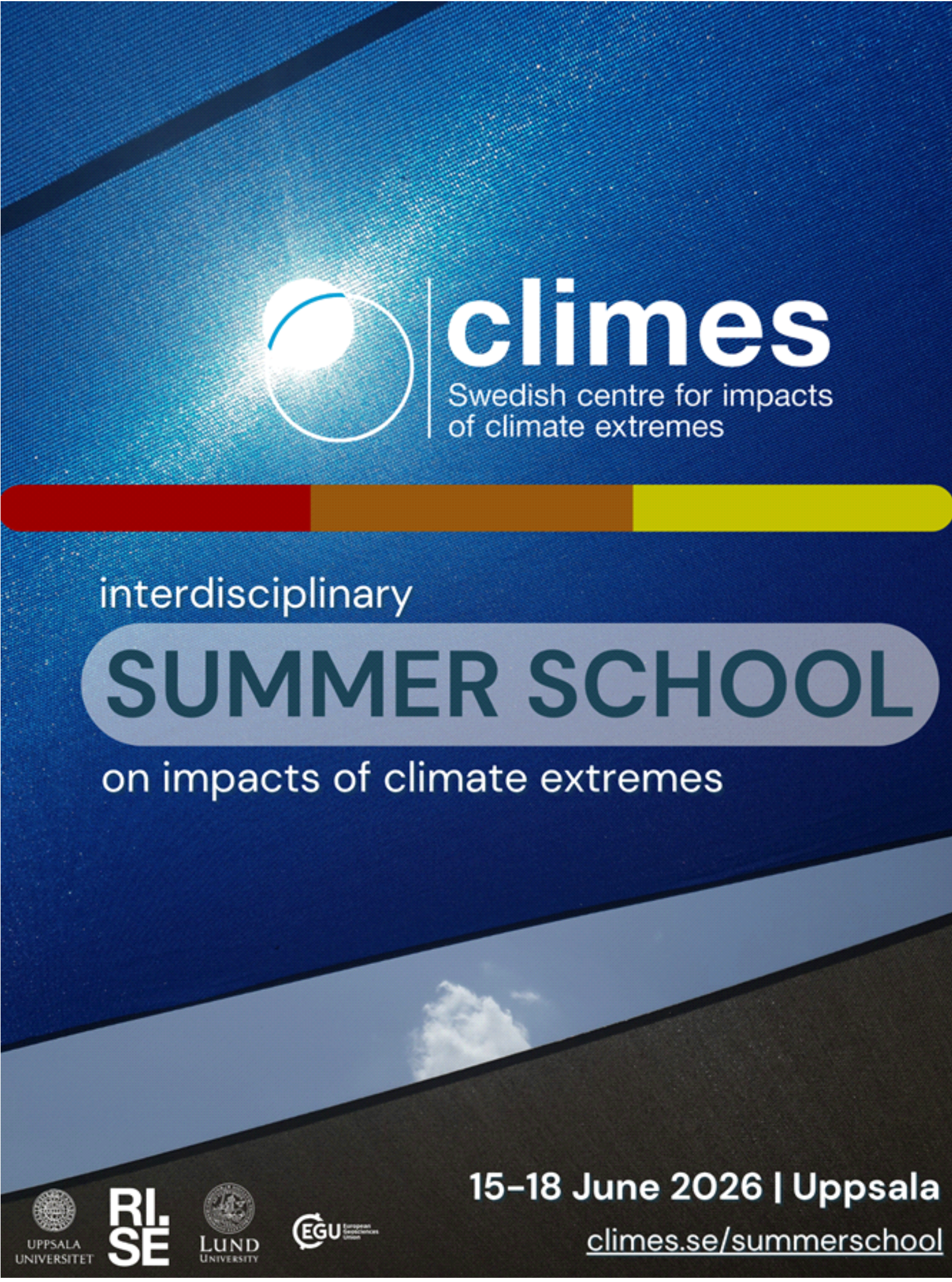
climes
Swedish centre for impacts of climate extremes
interdisciplinary
SUMMER SCHOOL
on impacts of climate extremes
UPPSALA UNIVERSITET
RI. SE
LUND UNIVERSITY
EGU European Geosciences Union
15–18 June 2026 | Uppsala
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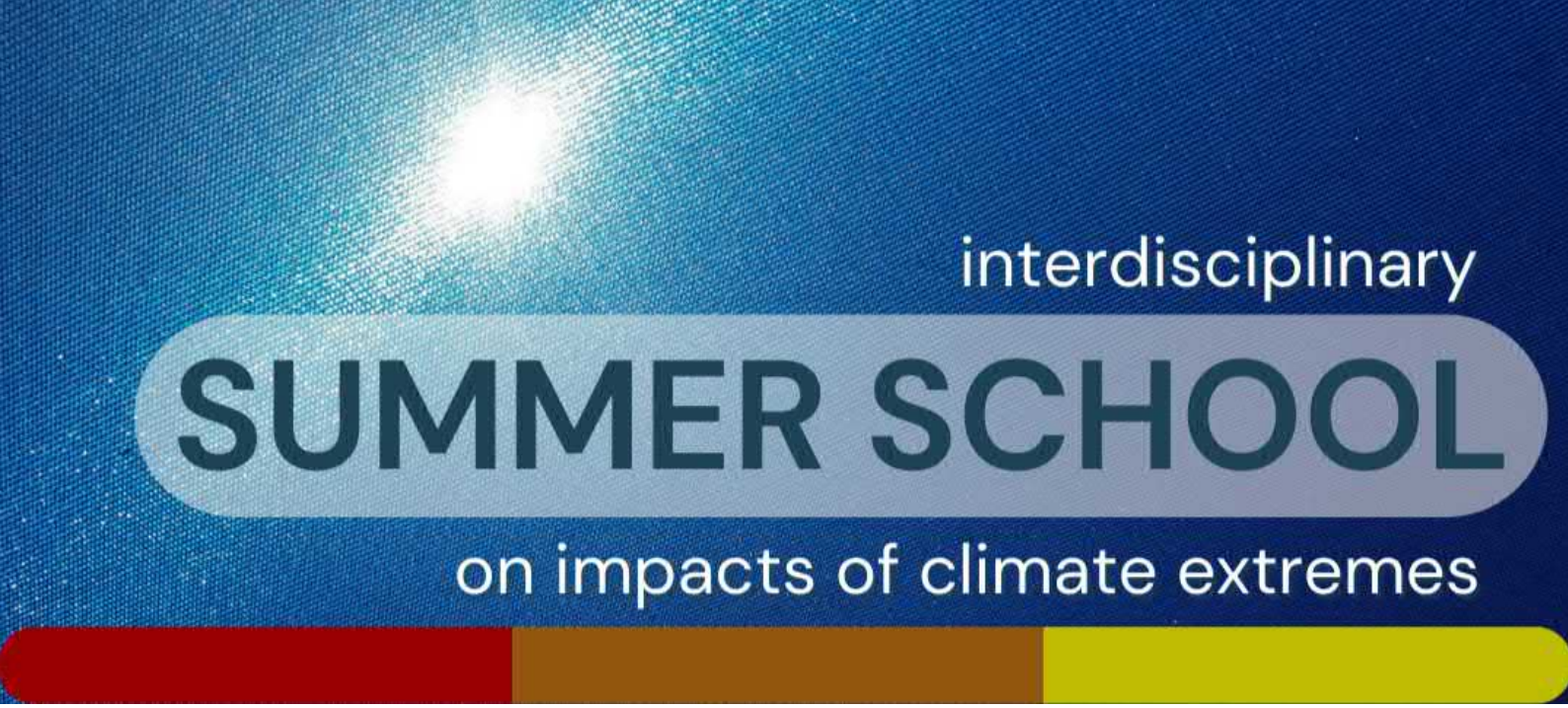


Climes Summer School 2026 Schedule

	Monday 15th	Tuesday 16th	Wednesday 17th	Thursday 18th
09.00–09.15	Introduction (G. Messori)	Lecture Climate impacts (G. Messori)	Lecture Weather and impact forecasting (R. F. Franco)	Lecture Population health (E. Raffetti)
09.15–10.15	Lecture Climate extremes (G. Messori)			
10.15–10.45	Break	Break	Break	Break
10.45–12.00	Lecture Introduction to AI&Climate Change (O.Mogren)| LLMs and climate impacts (M. Kurfalı)	Exercise session (M. Kurfalı / T. Carvalho)	Lecture Disproportionate impacts (E. Boyd)	Exercise session (M. Kurfalı / T. Carvalho)
12.00–13.15	Lunch @Segerstedshuset	Lunch	Lunch	Lunch
13.15–14.30	Exercise Session (M. Kurfalı / T. Carvalho)	How do we bridge the gap between research and implementation? (STUNS)	Exploring Climate impacts in the field (C. Maybom)	Exercise presentation
14.30–15.00	Break	Break	Break	Break
15.00–16.15	Exercise session (M. Kurfalı / T. Carvalho)	How do we bridge the gap between research and implementation? (STUNS)	Exercise session (M. Kurfalı / T. Carvalho)	
17.00		City Tour		
18.00		School Dinner		

Practical Information

Location: GeoCentrum, Villavägen 16, Uppsala (https://maps.app.goo.gl/vms8agXak46DTyZQ9)

Bus: You can take local buses to reach GeoCentrum. The closest bus stop is “Evolutionsmuseet (Uppsala).” You can search for travel routes and schedules at https://www.ul.se/en. We recommend downloading the “UL” app for purchasing tickets. This is the easiest way to navigate the public transport system in Uppsala. More information on the application can be found here: UL App.

Date and Time: The school is held at GeoCentrum, and starts on the morning of the 15th June. We will be receiving participants in the entrance lobby starting from 8:30am.

Meals and Breaks: There are several lunch options available around the department. We will provide more details on the spot.

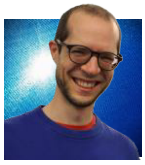
Coffee Breaks: Two coffee breaks each day are complimentary and will include fruit and sweets.

Social Event and Dinner

We will be organizing a guided tour of Uppsala and a dinner on Tuesday 16th afternoon and evening. This is offered by the school at no cost to participants. The dinner will be held at Restaurant Sverre. More information about the restaurant can be found here.

We are looking forward to an engaging and productive summer school experience with all of you. If you have any questions, feel free to reach out.

Lectures



Extreme Events in the Climate System

Gabriele Messori, Uppsala University

This lecture will provide a broad overview of extreme events in the climate system, including definitions of extreme events and historical observations and trends. We will also touch upon so-called compound extremes, whereby different extreme events are interlinked, and the emerging field of extreme event attribution.

Introduction to AI and Machine Learning with Applications Related to Climate Change

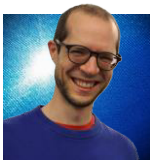
Olof Mogren, RISE Research Institutes of Sweden

This lecture introduces artificial intelligence and machine learning in climate research. It explores how AI can be used to analyze environmental data, improve forecasts of extreme events, and support climate adaptation. Through practical examples, participants will gain insight into both the potential and limitations of AI for addressing climate-related challenges.

Large Language Models and Climate Impacts

Murathan Kurfalı, Research Institutes of Sweden AB

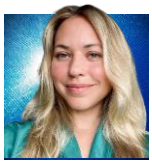
This lecture will introduce large language models and their relevance for studying the impacts of climate extremes. We will discuss how models such as ChatGPT work and where they come from, including the recent advances in deep learning that have shaped their development. The lecture will also present our recent work, Wikimpacts, as a case study in using LLMs to extract and structure information on the impacts of climate extremes from unstructured textual sources.



Challenges and Opportunities for Studying Impacts of Climate Extremes

Gabriele Messori, Uppsala University

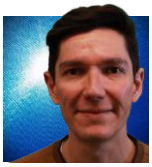
This lecture will highlight the importance of studying the impacts of climate extremes, the practical hindrances to doing this, and promising new approaches that may help advance this field of research.



How do we bridge the gap between research and implementation? Tools for demand-driven and impactful research.

Angelica Rask, STUNS - The foundation for collaboration between the universities in Uppsala, business and society

How can academia, industry and the public sector truly collaborate to create research that makes a real-world difference? This workshop explores how to bridge gaps in language, expectations and needs across sectors to enable demand-driven, impactful research. Starting from a real, ongoing case where Prof. Jacinto Sà (Uppsala University) and municipal real estate company Skolfastigheter co-develop a climate adaptation solution, we will unpack both challenges and success factors in cross-sector collaboration. Participants will engage in interactive exercises to practice translating needs, aligning perspectives and formulating collaborative research questions. By the end of the session, participants will have practical tools and strategies for communicating across sectors, identifying shared goals and designing research that is grounded in real societal needs and creates impact.



Extreme Weather Events: Advances in Warnings And Hazard And Impact Forecasting

Ramón Fuentes Franco, Swedish Meteorological and Hydrological Institute

This lecture will explore how we forecast both the climate hazards associated with the extreme events and their impacts, and how such forecasts help to minimise societal impacts through early warnings. We will show concrete examples from the operational early warnings issued by the Swedish Meteorological and Hydrological Institute. We will also highlight the latest research in enhancing these systems. In particular, we will present recent developments in AI-based algorithms aimed at improving the detection and forecasting of extreme events, offering new possibilities for more timely and accurate early warnings.

Disproportionate Impacts of Climate Extremes

Emily Boyd, Lund University

This lecture covers both theory and methods of studying the disproportionate impacts of climate extremes, highlighting how many climate extremes have unequally distributed impacts across different parts of society. We will also present examples of loss and damage in a range of empirical contexts.

Exploring Climate Impacts in The Field

Charlotte Maybom, Lund University

The lecture introduces how social scientists study climate change and extreme events through qualitative fieldwork. We'll explore vulnerability in context by asking: who is affected, in what ways, what has happened before, and how people cope and adapt. Working with a concrete case, we'll work through what field research looks like in practice - shaping research questions, approaching and engaging communities ethically and practically, and learning from lived experience. The session blends brief conceptual overviews with hands-on exercises connected to the summer school themes.

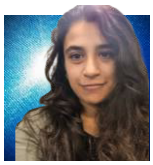
Impacts of Climate Extremes on Population Health: Methods and Insights

Elena Raffetti, Karolinska Institutet

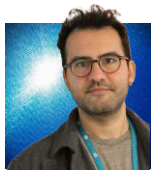
This lecture will explore the methods used to assess the impacts of climate extremes on population health, and provide insights from recent research on the topic.

Activities

Investigating the impacts of climate extremes using text as data



Shorouq Zahra, Research Institutes och Sweden AB



Murathan Kurfalı, Research Institutes of Sweden AB

Investigating the impacts of climate extremes through multiple lenses

Exercise developed by T. M. N. Carvalho, with the support of G. Messori and M. M. de Brito. Additional updates by S. Zahra and M. Kurfalı.

Overview

This exercise aims to use large language models (LLMs) to extract information about impacts of climate extremes from textual sources and then critically evaluate the results from multiple quantitative and qualitative perspectives. In doing this, the exercise combines the different topics covered by the lectures throughout the week.