

Annual Winter School

Observations in the Climate System

PLEASE NOTE: Our venues have changed for the week.

[Access the most up to date venues information at the Winter School website.](#)

Thank you for participating in the ARC Centre of Excellence for Climate Extremes [Annual Winter School](#). The theme of the 2023 Winter School is Observations in the Climate System.

The 2023 Winter School is a week-long high-level education program for graduate students and consists of a series of lectures and lab sessions delivered by Nerilie Abram (ANU), Gab Abramowitz (UNSW), Julie Arblaster (Monash), Craig Bishop (UMelb), Jason Evans (UNSW), Ailie Gallant (Monash) Sanaa Hobeichi (UNSW) and Pete Strutton (UTAS)

As the theme for 2023 is ‘Observations in the Climate System’, participants will have an opportunity to visit the RV Investigator, Australia’s marine research vessel which will be docked on Hobart that week, and the Ice Core Lab at our host institution, the Institute for Marine and Antarctic Studies (IMAS) at UTAS.

Melissa Hart
Graduate Director

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Introduction

The [ARC Centre of Excellence for Climate Extremes \(CLEX\)](#) is a research consortium of five Australian universities and a suite of outstanding national and international partner organisations. An important strategic objective of the centre is to transform graduate education in climate science at the national scale. This is where our graduate program, led by graduate director, [Melissa Hart](#), comes in. The graduate program reaches beyond a single university and aims to develop the technical and intellectual capacity of Australian graduate students engaged in climate science.

An integral component of our Graduate Program is [our annual winter school](#). The winter schools are highly competitive, week-long, graduate-level courses. This year we are happy to welcome you to our 12th Annual Winter School, *Observations in the Climate System*, hosted by [Institute of Marine and Antarctic Studies \(IMAS\)](#), UTAS, Hobart.

Our Commitment to Diversity

Gender, ethnicity, sexuality, age, disability, and other personal characteristics should not be impediments to your full engagement and enjoyment of the Winter School. Nor should such personal traits be grounds for language or actions from any Winter School participants that are discriminatory or intimidating. By attending the Winter School, you agree to abide by standards that are ethical, respectful, and considerate of all other attendees and venue staff at all times.

We also acknowledge and celebrate the traditional custodians of the land we are meeting on – the Palawa people and pay our respects to elders past and present.

Covid safety

While we are very excited to be able to meet in person again, we have had to adopt several procedures to safeguard the health and well-being of all winter school participants and staff.

Please ensure you read through and adhere to the following points; if you have any questions or need further information, please contact Melissa Hart.

1. While no longer compulsory, please do bring your own face mask if you wish to use one.
2. If you experience **any** cold or flu symptoms prior to travelling to the winter school, please contact Melissa immediately as you will not be able to travel.
3. If you experience **any** cold or flu symptoms during the winter school, please inform Melissa immediately.

Transport

Upon arrival in Hobart, please make your own way to your accommodation either at **Travelodge** 167 Macquarie Street, Hobart or **Vibe Hotel** 36 Argyle Street, Hobart.

What is the best way to get from Hobart Airport to my accommodation?

[SkyBus Hobart City Express](#) is the most convenient and affordable way to get from the airport to Hobart and back. Tickets can be bought online, at eKiosks available in Hobart and at the airport, or directly from the driver aboard the bus.

If taking a taxi or uber please share your ride with other students where possible.

Local transportation in Hobart

If you wish to catch a bus locally during your stay in Hobart, please visit the Metro Tasmania website:

www.metrotas.com.au

Accommodation

Travelodge and Vibe Hotels Hobart

This year students will be staying at either Travelodge Hobart or Vibe Hotel Hobart. Both hotels are perfectly located in the heart of historic Hobart, close to Franklin Wharf, Battery Point, and many of the city's top attractions.

A short walk will take you to some of the most charming dining locations in the city. Great shopping spots such as Battery Point, Salamanca Place, Constitution Dock and the beauty of the waterfront are also within walking distance. Treasures such as the Royal Tasmanian Botanical Gardens, the Tasmanian Museum and Art Gallery, the Museum of Old and New Art, and many more destinations are a short distance away.

Please note: You will be required to provide a personal credit card per room at check in for any incidental charges. Free Wifi is available for use at your hotel. Please ask for login details at reception.

Breakfast

Breakfast will be provided daily for students staying at Travelodge or Vibe Hotel.

Important information

Check in from 2.00pm on Sunday June the 18th and check out by 10.00am on Friday the 23rd. Please bring your luggage to the winter school on Friday morning.

Travelodge

167 Maquarie Street
Hobart Tas 7000
Ph: 03 6220 7100

<https://www.travelodge.com.au/book-accommodation/hobart/>

Vibe Hotel

36 Argyle Street
Hobart TAS 7000
Ph: 03 6240 5600

<https://vibehotels.com/book-accommodation/hobart/hotel-hobart/>

Winter School Venue

Our venues have changed for the week – [for the most up to date information go to the Winter School website.](#)

Social Event

Tuesday 20th June

On Tuesday 20th June we will all meet at 6:30pm at the Hobart Brewing Company (16 Evans Street, Hobart) for dinner and a trivia night. There will be a couple of food vans for you to choose your dinner (paid by CLEX). Drinks can be purchased at the site.

Bonorong Wildlife Sanctuary

After the final lecture on Friday the 23rd all Winter School participants will visit [Bonorong Wildlife Sanctuary](#) together. Bonorong a sanctuary specialising in the care and rehabilitation of orphaned and injured Tasmanian wildlife, while giving you an up-close and personal experience. The sanctuary is home to Tasmanian devils, wombats, echidnas, birds, quolls, kangaroos and many more. A bus will take us to the venue and drive straight to the airport for those needing it or back to Hobart for those staying.

Supplementary Material

Supporting material including the schedule, recommended readings, presentation slides, and instructions for the labs will be made available on the [Winter School website.](#)

Please note that this site will be continuously updated up to and during the Winter School week so be sure to keep checking it for new material.

IT and Wi-Fi details

Please note that all students are required to bring their own laptops. You will also need to have Python, or some other means to read NetCDF data.

You should be able to access wifi via eduroam.

Food

Morning tea and lunch will be provided throughout the week for Winter School attendees. This will be served at the IMAS site.

Students and staff staying at Vibe Hotel and Travelodge will also receive a complimentary breakfast Monday - Friday.

During the 'free' nights in Hobart, students are expected to make their own dinner arrangements. There is an array of food options in the CBD and around Salamanca/IMAS.

Campus security

For UTAS and IMAS campus safety and security information, please visit <https://www.utas.edu.au/campus-services/security-and-access>

Winter School 2023 Staff and Speakers

Who can help



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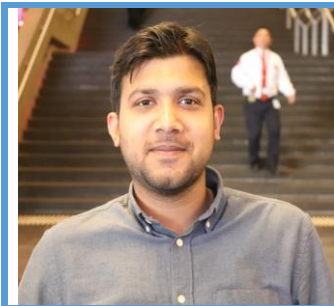





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Winter School 2023 Schedule

Winter School 2023-Observations in the Climate System

	Monday June 19	Tuesday June 20	Wednesday June 21	Thursday June 22	Friday June 23
8.30 - 9:00	Registration				
9:00 - 9:15	Introduction and Welcome (Melissa Hart)	Remote sensing (Jason Evans/Abhirup Dikshit)	Atmosphere observations (Ailie Gallant/Kim Reid)	Ocean observations (Pete Strutton)	Data assimilation (Craig Bishop)
9:15 - 10:00	Paleoclimate (Nerilie Abram/Georgy Falster)				
10:00 - 10:30	Morning tea				
10:30 - 11:30	Paleoclimate (Nerilie Abram/Georgy Falster)	Remote sensing (Jason Evans/Abhirup Dikshit)	Land observations (Gab Abramowitz)	Ocean observations (Pete Strutton)	Data assimilation (Craig Bishop)
11:30 - 11:40		Stretch break			
11:40 - 12:40	Ice core lab/ RV Investigator/ Lunch (rotating groups)	Remote sensing (Jason Evans/Abhirup Dikshit)	Land observations (Gab Abramowitz)	Ocean observations (Pete Strutton)	Data assimilation (Craig Bishop)
12:40 - 13:30		Lunch			
13:30 - 15:00	Paleoclimate (Nerilie Abram/Georgy Falster)	Atmosphere Observations (Ailie Gallant/Kim Reid)	Machine learning (Sanaa Hobeichi/Sam Green)	Oceans observations (Pete Strutton)	Bonorong wildlife park
15:00 - 15:30	Afternoon tea				
15:30 - 17:00	Paleoclimate (Nerilie Abram/Georgy Falster)	Atmosphere Observations (Ailie Gallant/Kim Reid)	Machine learning (Sanaa Hobeichi/Sam Green)	Climate forcing data (Julie Arblaster)	
Evening	Ice Breaker- IMAS	Social Event- Hobart Brewing Company for dinner and trivia	Free evening	Free evening	Home time

