



## Australia's national climate model (ACCESS): Development and application

**Tuesday 18 September 2018, 2.30–3.30 pm (AEST)**

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Knowing how the weather and climate will change in the future is important for our day-to-day living as well as future planning for industries such as agriculture, natural resource management and infrastructure. Unfortunately there is no crystal ball to help us see into the future and determine what the climate will be like in 2030, 2050 or 2090. This is where climate models come in. Climate models represent the best available tools for short-term prediction and long-term projection of future weather and climate. They encapsulate our latest understanding of weather and climate science gained from studying observations and applying physical principles.

The Australian Community Climate and Earth System Simulator (ACCESS) is a global climate model with particular skill in representing features of the climate system important to the Australian region. Sustained efforts from a large number of experts are needed to build and improve the hugely complex climate models. Thanks to many years of development, supported more recently through the Earth Systems and Climate Change Hub, ACCESS can now simulate many important features of global climate and its variability with impressive realism. However, continuing efforts are needed to continue to improve model performance through research and development.

The latest version of the ACCESS coupled model (ACCESS-CM2) is also being prepared for Australian participation in the World Climate Research Programme's Coupled Model Intercomparison Project version 6 (CMIP6). CMIP makes simulations from climate models around the world publicly available for use by international researchers. When completed, the ACCESS-CM2 climate simulations will be submitted to the global CMIP6 database where they will be used by researchers around the world and in the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (a coordinated assessment report on the global climate system).

In this webinar, Dr Harun Rashid will talk about building the ACCESS climate model, Hub research to improve the atmospheric model component of ACCESS, and preparation of ACCESS for submission to CMIP6. Research results from previous versions of ACCESS will also be briefly outlined, to indicate the expected outcomes from the latest version of ACCESS.



**Dr Harun Rashid** is a research scientist at the CSIRO Climate Science Centre in Aspendale, Melbourne. His research interests cover the broad area of modelling climate variability and change, with a particular focus on improving the realism of climate model simulations through understanding the causes of the models' systematic errors. Harun is the leader of the Earth Systems and Climate Change Hub *Project 2.5: Improving Australia's climate model (ACCESS)*.

*The Earth Systems and Climate Change Hub science webinars are open to the research community and anyone interested in finding out more about the Hub's research (noting that the content may assume some understanding of climate change science and the fields being discussed).*