



ICSHMO 2022 Conference Programme (v.13 Dec)

All times are in New Zealand time zone (UTC +13)

Hybrid Week 8-12 February 2022, University of Canterbury, Christchurch, NZ

Tuesday 8 February						
Virtual Workshops				In-Person Workshops		
10:00am				Virtual Workshop 5 Python for Atmosphere and Ocean Science Led by: Dr Damien Irving (CSIRO)	In Person Workshop 6 Understanding the South Pacific Convergence Zone: Modern and Past Variability and Teleconnections to the Extra-tropical Southern Hemisphere Led by: Kyle Clem (Victoria University of Wellington)	In Person Workshop 8 Python for Atmosphere and Ocean Science Led by: Dr Alexander Pletzer (NIWA)
10:30am	Virtual Workshop 1 How to use weather radar data Led by: Valentin Louf, Dr Joshua Soderholm (Bureau of Meteorology)	Virtual Workshop 2 Climate in the Cloud: Web-enabled cloud-computing educational resources for climate, atmosphere, and ocean science Led by: Shane Keating (UNSW Sydney)	Virtual Workshop 3 Effective climate communication: from stakeholders to stadiums Led by: Tahnee Burgess, Ana Ross (Monash Climate Change Communication Research Hub)			
12:00pm	Lunch Break					
1:00pm	Virtual Workshop 1 Continued	Virtual Workshop 2 Continued	Virtual Workshop 3 Continued	Virtual Workshop 5 Continued	In Person Workshop 7 Tips and tricks on writing and submitting papers Led by: Dr Laura Revell, Jonny Williams (NIWA)	Virtual Workshop 8 Continued
2:30pm	Tea Break					
3:00pm - 5:00pm	Virtual Workshop 4 Assessing the Climate Science Training needs of the Global South Led by: World Climate Research Program (WCRP) Academy					
5:45pm	Informal Meet & Greet @ University of Canterbury					

Wednesday 9 February

8:30am	Mihi Whakatau & Opening Ceremony with Minister & UC representative			
9:00am	Keynote: Dr Helen Cleugh (World Climate Research Programme/CSIRO) - The World Climate Research Programme – Our Climate Future Invited Speaker: Pat Langhorne (University of Otago) - Antarctic Sea ice – a fragile interface at the mercy of the ocean and atmosphere			
10:00am	Morning tea			
Session	Antarctic sea ice and its climate interactions 1	Weather radar applications 1	Atmospheric greenhouse gas measurements and modelling to support emission reductions at urban, national, and global scale 1	Physical and Biological Connectivity in Southern Hemisphere Oceans and Seas 1
10:30am	Ryan Fogt - A regime shift in seasonal total Antarctic Sea ice extent in the 20th century	Valentin Louf - OceanPOL: a shipborne C-Band dual-polarisation research radar navigating the Southern Hemisphere	Kevin Trenberth - Deciphering carbon emissions and climate change	Erik Behrens - The impact of sea-ice drift and ocean circulation on dispersal of toothfish eggs and juveniles in the Ross Gyre and Amundsen Sea
		Joshua Soderholm - Australian Unified Radar Archive (AURA)	David Noone - Co-transport and complementary sources of water vapor, methane and isotopologues in the Southern Hemisphere	Alice Della Penna - The impact of a Southern Ocean cyclonic eddy on mesopelagic micronekton
	Marilyn Raphael - The Annual Cycle of Antarctic Sea ice extent: the influence of the Semi-Annual Oscillation on phase	Jordan Brook - A comparison of new and existing weather radar gridding techniques	Yuanyuan Huang - Increasing sensitivity of terrestrial nitrous oxide emissions to precipitation variations	Erik Johnson - Episodic Summer Chlorophyll-a Blooms Driven by Synoptic Winds at Aotearoa's Southeast Shelf Break Front
	Maren Elisabeth Richter - All in balance? Interannual variability of the fast ice in McMurdo Sound over 25 years and its connections to ocean, iceshelf and atmosphere	Rob Warren - Verification of storm attribute neighbourhood probabilities from a convection-permitting ensemble using single-polarization radar data	Alexander Geddes - Inverse Modelling of Aotearoa New Zealand's Agricultural Methane Emissions	Aimee Van Der Reis - Go with the flow: Population connectivity of the New Zealand deep sea lobster, <i>Metanephrops challengeri</i>
	Stephy Libera - Role of ocean processes on month-to-month predictability of Antarctic Sea Ice	Alain Protat - 3D wind retrieval error analysis using a 50m resolution supercell thunderstorm simulation	Elizabeth Keller - Modelling carbon fluxes from New Zealand's pastoral agriculture	Devi Veytia - Sea ice habitat drivers of Antarctic krill recruitment
	Inga J. Smith - Impacts on Antarctic Sea ice area of increased ice shelf meltwater over centennial timescales in CCSM4	Ulrike Romatschke - 3D convectivity and convective/stratiform classification from radar reflectivity	Xinyi (Lexie) Lu - Isotopic characterisation of methane emission sources from Melbourne, Australia	Robert Smith - The Nature of Shelf-Open Ocean Exchange Around Southern New Zealand
	Q&A	Q&A	Q&A	Q&A
11:45am	Lunch			

Session	Antarctic sea ice and its climate interactions 2	Weather radar applications 2	Atmospheric greenhouse gas measurements and modelling to support emission reductions at urban, national, and global scale 2	Physical and Biological Connectivity in Southern Hemisphere Oceans and Seas 2
12:45pm	Dongxia Yang - Impact of tropical Indian SST on the sea ice trend over the western Ross Sea	John Nicol - Absolute calibration of weather radar using ground clutter and vertically profiling radar	Lucas Domingues - Preliminary Results from the Urban CarbonWatch Network	Adele Morrison - Remote control of West Antarctic Ocean temperature by Weddell Sea dense water formation
	Yuhang Pan - Trends and variability of clouds and radiation over the Southern Ocean and the link to Antarctic Sea ice	Beatriz Reboredo - Comparison of Tipping Bucket rain gauge, radar and satellite derived rainfall estimates in the Auckland region	Timothy Hilton - Hestia-AKL: An Inventory of Fossil Fuel Carbon Dioxide Emissions for Auckland, New Zealand	Andrew Hurley - Internal Tidal Bores as a Driver of Slope-Shelf Transport in the Otago Submarine Canyon System
	Pat Wongpan - Sub-Ice Platelet Layer Physics: Insights from a Mushy-Layer Sea Ice Model	Brook Keats - Nowcasting as a flood forecasting system: A catchment focused case study from Auckland, New Zealand	Hayden Young - Investigating the variability in the CO:CO2ff emission ratio at different site types and times of day in Auckland, New Zealand	Hannah Dawson - Pathways and timescales of connectivity along the Antarctic continental shelf
	Alexander Fraser - Altimetric observation of wave attenuation through the Antarctic marginal ice zone using ICESat-2	John Crouch - South Island West Coast orographic rainfall – a polarimetric radar view	Beata Bukosa - CarbonWatchNZ: Regional to National Scale Inverse Modelling of New Zealand's Carbon Balance	TBC
	Marcello Vichi - A statistical definition of the Antarctic marginal ice zone	Sopia Lestari - Characteristics of Jakarta Rain Rate Associated with The Madden-Julian Oscillation and Topography	Peter Sperlich - Where is the missing CO2? A regional multi-species approach to trace the fate of atmospheric CO2 in Fiordland National Park, New Zealand	TBC
	Yushi Morioka - Summertime sea ice prediction in the Weddell Sea improved by sea ice thickness initialization	TBC	TBC	TBC
	Q&A	Q&A	Q&A	Q&A
2:00pm	Mini break			
Session	Modelling and prediction - general session 1	Modelling, prediction and projections of Southern Hemisphere climate variability and change 1	Weather and extreme events - general session 1	Extending our view of the past: historical climatology and data rescue in the Southern Hemisphere
2:15pm	Richard Gorman - Forecasting wave interactions within the Marginal Ice Zone	Peter Dobrohotoff - Future Australian climate from the ACCESS-ESM1.5 large ensemble of CMIP6 scenario simulations	Morgan Bennet - Development of an Extreme Hydrometeorological Event Index	Zak Baillie - Pre-industrial changes in southern Australian weather and climate variability
	Hamish Lewis - Remote Influences of Large-Scale Meteorological Variables on Low Clouds	Margot Bador - Future seasonal changes in extreme precipitation scale with changes in the mean	Rasool Porhemmat - Hydrometeorology of large snowfall and snowmelt events in the Southern Alps of New Zealand	Julie Jones - An evaluation of the Southern Annular Mode in the Twentieth Century Reanalysis

	Rafael Santana - Data assimilation sensitivity experiments in the East Auckland Current region	Ulrike Bende-michl - National Hydrological projections for Australia: understanding risks to future water availability	Jingxiang Shu - Impact of Atmospheric Rivers on water resources and extreme rain - Dependence on ENSO and IOD Condition	Bojana Rimbovska - Seeing through the fog: surveying Aotearoa's weather in the nineteenth century
	Sebastien Delaux - Machine learning for coastal storm surge predictions in New Zealand	Ghyslaine Boschat - Can interannual to decadal variability help increase the accuracy of climate sensitivity estimates?	Hamish Prince - Following the breadcrumbs: tracking New Zealand atmospheric rivers back to their source	Andrew Lorrey - Southern Weather Discovery - recent lessons and future directions of citizen science for meteorological data rescue
	Gerald Meehl - The role of interannual ENSO events in decadal timescale transitions of the Interdecadal Pacific Oscillation (IPO)	Zaved Khan - Flood risk in Australia under future climate	Fulong Lu - Extreme heavy rain in the southwest of the South Island, 2-4 Feb 2020	Howard Bridgman - Extending our knowledge of past historical weather and climate in eastern NSW, Australia: The Wollong and Maryland data sets
	TBC	Kimberley Reid - Extreme Water Vapor Transport during the March 2021 Sydney Floods in the Context of Climate Projections	Greg Bodeker - Projecting changes in insured losses resulting from climate-driven changes in extreme precipitation events	Rob Allan - Point King and Breaksea Island: The Albany, Western Australian lighthouses
	Q&A	Q&A	Q&A	Q&A
3:30pm	Afternoon tea			
Session	From ice shelves to the Antarctic Circumpolar Current – Processes, climate variability and climate change in the Ross Sea sector	Modelling, prediction and projections of Southern Hemisphere climate variability and change 2	Antarctic climate and cryosphere - general session 1	Oceanographic processes and observations - general session 1
4:00pm	Craig Stevens - A Synthesis of Ocean Mixing Processes in the Ross Ice Shelf Cavity	Roseanna McKay - Tropical Indian Ocean's Influence on Southern Hemisphere Spring Atmospheric Circulation in a Seasonal Prediction Model	Zhiang Xie - Climate feedbacks controlling global ice sheet dynamics	Denise Fernandez - South Pacific Ocean dynamics redistribute ocean heat content and influence heat exchange with the atmosphere
	Melissa Bowen - Tides regulate Antarctic bottom water flow from the western Ross Sea	Francois Engelbrecht - Southern Hemisphere inter-annual predictability	Tristan Rendfrey - Connecting Antarctic Sea ice variability and mid-latitude precipitation	Nicolas Bodnariuk - On the modulation of shelf water exportation in the Southwestern Atlantic Ocean on interannual timescales: the role of oceanic Rossby waves and teleconnections
	Wilma Huneke - On the role of Dense Shelf Water overflows in the dynamics of the Antarctic Slope Current	Alexandra Gossart - A simplified version of a numerical atmospheric model to represent extreme wind events over the Ross Sea sector	Jonathan Wille - The atmospheric river impact on Antarctic Peninsula ice-shelf stability	Yasha Hetzel - Surface current observations from the IMOS HF radar offshore Ningaloo, Western Australia

	Alena Malyarenko - Balancing fluxes through WRF - MITgcm interface in the Scripps-KAUST model for the Ross Sea Region	Jonny Williams - Atmospheric impacts of local ocean grid refinement in a coupled earth system model}	Deniz Bozkurt - Temperature and precipitation projections for the Antarctic Peninsula over the next two decades: Contrasting global and regional climate model simulations	Xiangrong Fang - Characterization of submesoscale ocean dynamics on the Australian Northwest Shelf
	Graham Rickard - Physical and Biogeochemical Assessments of CMIP5 and CMIP6 Models for the New Zealand EEZ and the Ross Sea Region	Martin Jucker - Stratosphere-Troposphere Coupling During Antarctic Sudden Stratospheric Warmings	Tom Bracegirdle - Antarctic climate projections in CMIP6, new insights and progress since CMIP5	Helen Macdonald - The effect of riverine inputs to the Hauraki Gulf, New Zealand
	Angela Bahamondes Dominguez - Development of a 1-D model to understand the biogeochemistry of the Ross Sea	Harun Rashid - Quantifying the uncertainty of historical climate using the ACCESS-ESM1-5 large ensemble	Olivia Truax - Evidence of SAM and ENSO influence on last millennium Antarctic climate from paleoclimate data assimilation	Mireya Montaña - Combined influence of the oceanic mesoscale and local winds on the coastal circulation of the Bay of Plenty, New Zealand
	Rodrigo Gomez Fell - Dynamics and mechanical integrity of a land-fast sea ice stabilized ice tongue in Western Ross Sea prior to break-off	Yusuf Bhatti - Influences of Antarctic ozone depletion on Southern Ocean aerosols	Alex Aves - Microplastics in Antarctic snow	Charine Collins - The influence of large-scale and coastal circulation on freshwater plumes in Hawke Bay, New Zealand
	TBC	Q&A	TBC	Francois Thorat - More or Less Light for Kelp Forests? Satellite-Derived National Trends of Benthic Light and Macroalgal Implications
	Q&A		Q&A	Q&A
5:45pm	Poster & Networking Reception			

Thursday 10 February

8:30am	Keynote: Lyn Carter (University of Otago) - Mātauranga Māori and climate change
9:00am	Invited speaker: James Renwick (Victoria University of Wellington) - The Past and Future of Antarctic Sea Ice Invited Speaker: Jamie Schulmeister (University of Canterbury) - Paleoclimate data for climate reconstruction and modelling: the good, the bad and the bizarre
10:00am	Morning tea

Session	Year of Polar Prediction in the Southern Hemisphere (YOPP-SH) 1	Climate and impacts attribution in the Southern Hemisphere 1	Southern Ocean Cloud Processes and Climate 1	Physical and biogeochemical dynamics of the Southern Ocean and Antarctic margins 1
10:30am	David Bromwich - An Overview of the Year of Polar Prediction in the Southern Hemisphere (YOPP-SH)	Pandora Hope - Attribution in the IPCC sixth assessment report	Greg Mcfarquhar - Lessons learned from Southern Ocean Cloud-Aerosol-Precipitation-Radiation Field Campaigns in 2017-2018: Needs for Future Observations	Craig Stevens - Polynya Preconditioning: Ocean Processes South of the Drygalski Ice Tongue, Western Ross Sea
	Victoria Heinrich - Who, How and Why? Exploring People's Weather Decision-Making and Information Use Needs in the Coldest, Windiest, and Most Isolated Places on Earth	Dáithí Stone - Progress in the detection and attribution of regional climate change	Neel Desai - Mixed Phase Cloud Microphysics Observations and Climate Model Simulations during MARCUS Campaign	Christina Schmidt - Interannual variability of Antarctic Bottom Water formation in a high-resolution ocean-sea-ice model
	Daniela Liggett - Lessons learnt about the use of environmental information and decision-making needs of Polar operators	Suzanne Rosier - Extreme weather event attribution in New Zealand: a step towards building a 'catalogue' of events for use in climate and impacts studies	Estefania Montoya Duque - Cloud microphysics and precipitation processes over the Southern Ocean under different synoptic conditions during CAPRICORN 2016 and 2018	Laura Herraiz Borreguero - Poleward shift of Circumpolar Deep Water threatens East Antarctic Ice Sheet
	Marie Laure Roussel - Observing and modeling snowfall at Dumont d'Urville station, Antarctica, during YOPP special observing campaign: a 3D approach	Peter Gibson - High-resolution CCAM model simulations over New Zealand for the detection and attribution of climate extremes	Ruhi Humphries - Southern Ocean latitudinal gradients of Cloud Condensation Nuclei	Natalia Ribeiro - Sixty years of warming on the continental shelf adjacent to the Shackleton Ice Shelf in East Antarctica
	Vito Vitale - Water Budget and precipitation in Antarctica: a possible contribution to YOPP-SH winter Special Observing Period (SOP)	Andrew Lorrey - Southern Alps glacier-climate responses and ice volume changes from 1978-2020	Marc Mallet - Reducing Southern Ocean shortwave radiation errors in the ERA5 reanalysis with machine learning and 25 years of surface observations	Qing Yee Ellie Ong - Investigation into Antarctic Slope Front Regimes Using an Idealised Isopycnal Model
	David Mikolajczyk - The Antarctic Meteorological Research and Data Center	Jordis Tradowsky - A progress update of the Extreme Weather Event Real-time Attribution Machine (EWERAM) project	Son Truong - A comparison of observed and simulated multi-layer mixed-phase clouds over the Southern Ocean	Annie Foppert - Deep Argo reveals bottom water properties and pathways in the Australian-Antarctic Basin
	Q&A	Q&A	Q&A	Q&A
11:45am	Lunch			
Session	Year of Polar Prediction in the Southern Hemisphere (YOPP-SH) 2	Climate and impacts attribution in the Southern Hemisphere 2	Southern Ocean Cloud Processes and Climate 2	Physical and biogeochemical dynamics of the Southern Ocean and Antarctic margins 2
12:45pm	Marcello Vichi - An observational network for synoptic observations in the Antarctic marginal ice zone	Surendra Rauniyar - Role of external forcing on observed and future changes in rainfall over sub-regions of Victoria, Australia	Adrian McDonald - The Deep South National Science Challenge: Cloud and Aerosol Measurements for Improved Climate Model Projections	Julia Neme - Variability of the Weddell Gyre in a global high-resolution numerical model

	Penny Rowe - Characterization of Atmospheric River and Foehn Events over the Antarctic Peninsula	Leandro Baltasar Diaz - Attribution of observed precipitation trends in Southern South America	Alex Schuddeboom - The Southern Ocean Radiative Bias, Cloud Compensating Errors and Equilibrium Climate Sensitivity in CMIP6 Models	Andy Hogg - Sensitivity of Antarctic shelf waters and sea ice to wind amplitude
	Simon Alexander - The seasonal cycle of precipitation and the link to atmospheric river events at Davis, Antarctica	Luke Harrington - Visualizing the 'hard-to-see' changes in local climate risks associated with a warmer future	Sonya L. Fiddes - Can we use machine learning to better understand model cloud radiative biases in the Southern Ocean?	Amelie Meyer - Standing meanders in the Southern Ocean: Characteristics and trends over the past 25 years
	Adrian McDonald - Measuring Antarctic Snowfall and it's Relationship to Synoptic Conditions: A cause of climate model bias?	Sarah Perkins-Kirkpatrick - attribution of the impacts of extreme weather events to anthropogenic climate change	Andrew Gettelman - The Impact of Cloud Microphysics and Ice Nucleation on S. Ocean Clouds	Claire Yung - Topographic hotspots of Southern Ocean eddy upwelling
	Tyler Barone - Ice and Mixed-Phase Cloud Microphysical and Macrophysical Properties in McMurdo, Antarctica: Linking in Situ, Remote Sensing Observations and Climate Simulations	TBC	Matthew Woodhouse - Improving the representation of the marine atmosphere sulfur cycle – 'new' oxidation pathways and their impact on aerosol	Ryan Holmes - Sensitivity of the meridional overturning circulation to spatially variable neutral diffusion in a coarse-resolution ocean model
	Stewart Allen - The OceanMAPS v4 sea-ice forecast demonstration project	TBC	Vidya Varma - Addressing the short-wave cloud radiation biases in a Global Atmosphere Model	Arnaud Valcarcel - Overturn-based estimation of mixing in the Southern Ocean
	Q&A	Q&A	Q&A	Q&A
2:00pm	Mini break			
Session	Year of Polar Prediction in the Southern Hemisphere (YOPP-SH) 3	Atmospheric processes driving aperiodic warming and impacts on melt in Antarctica	Southern Ocean Cloud Processes and Climate 3	Physical and biogeochemical dynamics of the Southern Ocean and Antarctic margins 3
2:15pm	Ivana Cerovecki - The effects of cloud biases on the predictability of Antarctic Sea ice edge on subseasonal time scales	Kyle Clem - Tropical forcing of extreme high temperature and surface melt on the Antarctic Peninsula	Patric Seifert - Aerosol-Cloud-Dynamics interactions over Punta Arenas, Chile (53°S, 71°W): A summary of three years of remote sensing and in-situ observations in the frame of DACAPO-PESO	Jan Jaap Meijer - Dynamics of a standing meander of the Subantarctic Front diagnosed from satellite altimetry and along-stream anomalies of temperature and salinity
	Ehlke Hepworth - Contrasting roles of Southern Ocean polar cyclones and Atmospheric Rivers in engendering extreme atmospheric anomalies over Antarctic sea-ice	Yaowen Zheng - Understanding surface melt in Antarctica and implication for future ice sheet evolution	Martin Radenz - Observations of heterogeneous ice formation at Punta Arenas and contrasts to the northern hemisphere mid-latitudes	Thierry Penduff - Interannual to multidecadal chaotic ocean variability: large-scale impacts in the Southern Ocean
	Greg Leonard - Assessing the impact of winter storms on the stability of a fast-ice cover through the application of a Modified Storm Index	Tamara Pletzer - Characterizing glacial meltwater runoff variability in the Ross Sea Region of Antarctica	David Fuchs - Midlatitude jet position and shift linked to atmospheric convective types	Jakob Weis - Phytoplankton community response to the deposition of wildfire aerosols

	TBC	Marte Gé Hofsteenge - The surface energy balance during warming events at Joyce glacier, McMurdo Dry Valleys, Antarctica	Francisco Lang - A New Climatology of Open and Closed Mesoscale Cellular Convection over the Southern Ocean derived from Himawari-8 Observations	Tyler Rohr - Grazing controls on carbon cycling in the Southern Ocean
	TBC	Eva Bendix Nielsen - Data driven approach for assessment of extreme foehn warming in McMurdo Dry Valleys, Antarctica	Q&A	Guillaume Liniger - Surface marine productivity variability in West Antarctic polynyas is not driven by melting ice shelves
	TBC	TBC		Karin Kvale - Southern Ocean circulation metrics predict global biogeochemical change with warming
	Q&A	Q&A		Q&A
3:30pm	Afternoon tea			
Session	Science supporting the Paris agreement: Southern Hemisphere perspectives	Climate as a complex system - rapid change, regime shifts and irreversibility	Informing modern risk assessment and decision making with long climate reconstructions	Atmospheric processes and observations - general session 1
4:00pm	Steven Sherwood - Probabilities of committed warming and the Paris targets	Roger Jones - Global climate as a complex system: heat engines, nonequilibrium steady states and regime change	Tessa Vance - What do palaeoclimate records tell us that the observed records don't? Implications for hydroclimatic risk assessment and decision making	Tahlia Crabtree - Mountain waves extending large horizontal distances from mountain ranges
	Andrew King - Transient and quasi-equilibrium climate states at different global warming levels	James Ricketts - "The Blob", Not Just Another Transient Phenomenon	Danielle Verdon-Kidd - Which regions of eastern Australia are experiencing more climate extremes? Looking for answers in the Australia and New Zealand Drought Atlas	Yang Yang - Non-orographic inertia-gravity waves over New Zealand's Southern Alps: a case study
	Dave Frame - Emissions metrics and Articles 2 & 4 of the Paris Agreement.	Ivan Sudakov - Climate-biosphere tipping points and the loss of biodiversity	Salman Sharifazari - 600-year drought reconstruction for Christmas Island from remote tree-rings	Luis Ackermann - Orographic Mechanisms and Microphysical Processes during Wintertime Precipitation over West Tasmania, Australia
	Jocelyn Turnbull - IG3IS: An Integrated Global Greenhouse Gas Information System	Surendra Rauniyar - Detecting step changes in Victoria's climate	Jonathan Palmer - Reconstruction of the Indian Ocean Dipole (IOD) back to 800 CE from tree rings	Cameron McErlich - A Combined Examination of Precipitation Occurrence and Cumulative Distribution Functions in Reanalysis, Observations and CMIP6 models
	Ying-ping Wang - Earth system models overestimate carbon-climate feedback	Gen Tolhurst - Regime shifts of observed precipitation intensity distributions from 1900 to 2020 in Victoria, Australia	Micheline Campbell - Reconstructing Australia's fire history from cave stalagmites	Raghav Srinivasan - Climate time series anomaly detection using convolutional neural networks

	Tilo Ziehn - Exploring Australia's future carbon sinks	Neelesh Rampal - Mapping weather anomalies and extremes to circulation regimes in Aotearoa New Zealand	Benjamin Henley - Coral reconstructions of regional sea surface temperatures place recent Coral Sea and Great Barrier Reef temperatures into a multi-century context	Victoire Laurent - The South Pacific Tropical Upper Tropospheric Trough: variability and impact on the French Polynesian climate
	Andrew Lenton - Asymmetry in the Response of the Carbon Cycle to Atmospheric Carbon Dioxide Removal	Charlotte McBride - Trends in Probabilities of Temperature Records in the Non-Stationary Climate of South Africa	Pauline Treble - Uptick in speleothem oxygen isotopes indicate decreased rainfall recharge to groundwater, southwest Western Australia	Annika Seppala - Does the coupling of the semiannual oscillation with the quasi-biennial oscillation provide predictability of Antarctic sudden stratospheric warmings?
	Blair Trewin - How do we know when global temperatures are crossing 1.5 °C?	Roger Jones - Defining fire climate (pyroclimate) regimes and detecting regime shifts	TBC	Nariefa Abraham - Fully distributed surface energy and mass balance modelling of Brewster Glacier in the Southern Alps of New Zealand
	Q&A	Q&A	Q&A	Q&A
6:30pm	Gala Dinner			

Friday 11 February

8:30am	Keynote: Florence Rabier (ECMWF) - ECMWF: strategy, use of observations and current developments			
9:00am	Invited Speaker: Jennifer Salmond (The University of Auckland) - Air quality data for decision making: Are we measuring what counts? Invited Speaker: Susan Solomon (Massachusetts Institute of Technology) - Linking wildfires to stratospheric chemistry and dynamics			
10:00am	Morning tea			
Session	Downscaling and regional modelling – CMIP6 model selection, CORDEX and regional applications 1	Meteorology and Climatology of Wildfires 1	New frontiers in Marine Heatwave Research 1	Urban Climate 1
10:30am	Jozef Syktus - Dynamical downscaling of CMIP6 global models with variable resolution climate model in Australian region	Marwan Katurji - Sweep and ejection structures during shrub fires and implications for atmospheric turbulence interactions with the flaming zone	Junde Li - Variability and drivers of ocean temperature extremes in a warming Western Boundary Current	Negin Nazarian - Towards a living lab for enhanced air quality and thermal comfort: analyses of standard occupancy, weather extremes, and COVID-19 pandemic
	Acacia Pepler - Regionally downscaled projections of cyclones for southern Australia	Jiawei Zhang - Turbulent ember transport across the rural-urban interface for fire risk management	Jules Kajtar - Dynamics of the 2017/18 Tasman Sea marine heatwave	Siena Brody-Heine - Regional and Local Scale SO2 Dispersion Modeling of an Eruption Scenario in the Auckland Volcanic Field

	Jason Evans - Considering model independence in Regional Climate Model selection	Ivan Kennedy - Vortical entropic energy in anticyclones as a heat source for severe wildfire conditions from surface friction and evapotranspiration	Colette Kerry - Advection driving the onset of Marine Heatwaves in coastal waters revealed by Adjoint Sensitivity Analysis	Dongqi Lin - Fog dynamics and predictability using a coupled urban-atmosphere numerical model for Christchurch, New Zealand
	Giovanni Di Virgilio - Selecting CMIP6 GCMs for CORDEX dynamical downscaling: model performance, independence, and climate change signals	Siena Brody-Heine - Observed regional and local wind vector change across New Zealand's national network of fire-weather stations	Afonso Gonçalves Neto - Monitoring Marine Heatwaves in the South and Tropical Atlantic	Jiachen Lu - Implications of employing realistic geometry in large-eddy simulation for urban canopy parameterization
	Suzanne Rosier - Changing rainfall extremes in New Zealand: diagnosis using large regional model ensembles and non-stationary GEV model constructs	Dejun Cai - Location, frequency and intensity of cold fronts over southeast Australia and their role in Australia's 2019/2020 Black Summer fire disaster	Neil Malan - Non-uniform coastal warming trends in the East Australian Current System	Charlotte Waudby - Thunderstorms, hospital asthma presentations and emergency callouts during the grass pollen season in Victoria 2017-2019
	Limbert Fernando Torrez Rodriguez - Assessment of climate change impacts on precipitation and temperature over Subtropical Chile based on South America CORDEX-CORE regional simulations	Malcolm King - Extreme summertime dry cold fronts and associated weather in southern Australia	Joao Marcos Azevedo Correia de Souza - 2021 warm winter in New Zealand's oceans	Lan Yao - The Impacts of Urban High-rises under Different Wind Directions on the Airflow over Dense Built City
	Q&A	Q&A	Q&A	Q&A
11:45am	Lunch			
Session	Downscaling and regional modelling – CMIP6 model selection, CORDEX and regional applications 2	Meteorology and Climatology of Wildfires 2	New frontiers in Marine Heatwave Research 2	Urban Climate 2
12:45pm	Justin Peter - The impact of bias correction on the climate change signal	Tim Kerr - Tuning Fire Weather Information	Alice Pietri - Characterization and Evolution of Marine Heat Waves in the Humboldt System	Dyah Lukita Sari - Evaluation of Surface Energy Balance Changes from the WRF Urban Model in Jakarta Metropolitan Area
	Sam Dean - Will uncertainty see the extinction of the probabilistic climate projection?	Andrew Marshall - Subseasonal drivers of extreme fire weather in Australia during spring and summer	Daneeja Mawren - Marine heat waves and tropical cyclones - two devastating types of coastal hazard in South-eastern Africa	Negin Nazarian - Combining high-resolution land use data with crowdsourced air temperature to investigate intra-urban microclimate
	Chloe Mackallah - The Australian Climate Service (ACS) strategy for regional modelling and climate projections	Grant Pearce - Trends in New Zealand fire dangers from 1960-2020	Alex Sen Gupta - Exploring extreme Marine Heatwaves	Sijie Liu - From thermal neutrality to thermal pleasure: A better direction for urban climate engineering
	Marcus Thatcher - Experiment design when using a variable resolution global model for CORDEX simulations	Nathanael Melia - Aotearoa New Zealand's 21st Century Wildfire Climate	Maxime Marin - Local drivers of extreme upper ocean marine heatwaves assessed using a global ocean circulation model	Marzie Naserikia - Global Analyses of Urban Land Cover Impact on Surface Urban Heat across Different Climate Classes

	Phuong Loan Nguyen - Evaluation and future projection of daily precipitation in CORDEX-SEA regional climate models over Southeast Asia	Ralph Trancoso - Converting tropical forests to agriculture increases fire risk by fourfold	Michael Eabry - Understanding Marine Heatwave Depth Structures and Their Drivers	Claudio Carrasco - Urban climate model for Valparaiso, Chile. Adaptation of the urban climate model of the example area of Barcelona city
	Neelesh Rampal - High-resolution downscaling with interpretable deep learning: resolving precipitation extremes over New Zealand	TBC	Shijian Hu Observed - Strong subsurface marine heatwaves in the tropical western Pacific Ocean	TBC
	Q&A	Q&A	Q&A	Q&A
2:00pm	Mini break			
Session	Downscaling and regional modelling – CMIP6 model selection, CORDEX and regional applications 3	Air quality and pollution	New frontiers in Marine Heatwave Research 3	Climate and climate change - general session 1
2:15pm	Nidhi Nishant - Added Value of dynamical downscaling of ERA5 driven regional climate simulations over CORDEX Australia	Jamie Halla - Monitoring Air Quality in Auckland, New Zealand	Nicole Jones - Sub-surface observations of ocean heat content off Northwest Australia during 2020-2021	Olaf Morgenstern - The Southern Annular Mode in 6th Coupled Model Intercomparison Project models
	Tony Rafter - Precipitation extremes across temporal scales from an ensemble of near convection-permitting simulations – evaluation and projected change	Hannah Marley - A Quantitative Analysis of the Impact of Land-Sea Breezes and Boundary Layer Structure on the Formation of Brown Haze in Auckland, New Zealand	Amandine Schaeffer - Oceanic Circulation Drives the Deepest and Longest Marine Heatwaves in the East Australian Current System	Josephine Brown - Australian monsoon, SPCZ and ENSO variability in PMIP4 simulations of mid-Holocene climate
	Christopher Roach - Future Marine Climate Downscaling for the New Zealand Region	Wendy Fan -Do Sea breezes blow microplastics back onto land? Quantification of atmospheric microplastic pollution in a coastal New Zealand city	Catherine Gregory - Understanding Marine Heatwaves and their Drivers for Improved Prediction on a Sub-seasonal to Seasonal Timescale	David Karoly - Causes of some recent observed declines in Southern Hemisphere mid-latitude rainfall on land
	Stephen Stuart - Evaluation of reanalysis-driven regional climate models over New Zealand	Hamesh Patel - Personal exposure to ultrafine particles (UFP): the potential benefits of future low emission zones (LEZ) on pollution exposure in the commuter microenvironment	Mads Thomsen - Ecological impacts of marine heatwaves	Natalie Burls - The Cape Town “Day Zero” drought and Hadley cell expansion
	Abha Sood - A framework for regional climate impact guided ranking schemes for CMIPx climate model simulations	Fabrice Lambert - Past Atmospheric Particulate Matter Reconstruction based on Dendrochemistry	Christopher Chapman - Forecasting of Tasman Sea Marine Heat Waves Using Analogue Methods	Pilar Barría - Analyses of drought projections for the temperate southern Andean Lake region of Chile
	Rachael Isphording - Application of a Standardized Benchmarking Framework to Evaluate Simulated Precipitation in the CORDEX-Australasia Ensemble	TBC	Claire Spillman - Predicting marine heatwaves for marine management	Michelle Reboita - Main Teleconnection Patterns that Influence the South America Climate and a Tool for Their Monitoring
	Q&A	Q&A	Q&A	Q&A

3:30pm	Afternoon tea			
Session	Modelling and prediction - general session 2	Science Communication, Education & Outreach	New frontiers in Marine Heatwave Research 4	Climate and climate change - general session 2
4:00pm	Christian Zammit - Enhancing rainfall estimation to support hydrological modelling in New Zealand	Elizabeth Viljoen - Tropical cyclone Eloise: A South African case study to evaluate the new paradigm in communication of early warnings using the Impact-Based Severe Weather Warning Service	Stuart Corney - The connection between the toothfish fishery and intense winter warming on the Kerguelen Plateau	Laura Revell - Direct radiative effects of airborne microplastics
	Jono Conway - Deriving optimal multi-model ensemble snow simulations using in-situ meteorological and snowpack observations in the Southern Alps of New Zealand	Olivia Warrick - Enhancing community resilience to drought and prolonged wet periods in the Cook Islands: The Early Action Rainfall Watch	Shinae Montie - Global biogeographical trends and regional ecological legacies of coastal marine heatwaves	Roger Davies - Changes in cloud heights over the last two decades: a comparison between hemispheres
	Sijin Zhang - RainCast: a rapid update rainfall forecasting system for New Zealand	Melissa Hart - Where citizen science meets the built environment: the Schools Weather and Air Quality (SWAQ) network	Felix Cook - Marine heatwaves in shallow water ecosystems of New Zealand	Chayn Sun - Emerging Indigenous communities (EIC) and Social inequities in urban heat and greenspace: a nationwide investigation in Australia
	Matthew Walker - Producing synthetic weather from a generative adversarial network	Efrat Eilam - Taking a Disciplinary Perspective on Climate Change in Schools' Curricula	Yuxin Wang - Understanding the predictability of marine heatwaves off Western Australia using a linear inverse model	Hunter Douglas - Inequitable population-based emergence of unfamiliar climates projected by CMIP6 models and SSPs
	F. Jorge Bornemann Arquero - A data-driven approach to characterise systematic model errors	Jasmine Chambers - Ocean Decade Australia: A science communication and stakeholder engagement case study to take us from the Ocean we Have to the Ocean we Want	TBC	José Veiga - Impacts of deforestation on Amazon climate
	Andrew Sturman - Application of the WRF model to investigate suitability of different wine grape varieties in regions of complex terrain	Ciaran Doolin - Edward Kidson – Pioneer of Southern Hemisphere Meteorology	TBC	Blair Trewin - Sleepless in Seattle – global climate in 2021
	Ilze Pretorius - Invasive pests travel vast distances along atmospheric coherent structures	TBC	TBC	TBC
	Graeme Smart - A rolling log law for velocity profiles	TBC	TBC	TBC
	Q&A	Q&A	Q&A	Q&A

Saturday 12 February

9:00am	Saturday Morning Excursions: International Antarctic Centre Walking Tour
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Virtual Week 15-17 February 2022

Tuesday 15 February

10:15am	Invited Speaker: René Garreaud (Universidad de Chile) - The central Chile Mega Drought: Is the future now?				
Session	Drought combined	The Southern Ocean and Tropical Climate System: Variability, Change, and Linkage 1	Regional climate variability and change over the Southern Hemisphere extratropics 1	Climate and climate change - General Session 3	Oceanographic processes and observations - general session 2
10:45am	Guojian Wang - Two-year consecutive concurrences of positive Indian Ocean Dipole and Central Pacific El Niño preconditioned the 2019/2020 Australian “black summer” bushfires	John Fyfe - Recent developments in the detection and attribution of changes in the Southern Ocean climate system	Fernando Arizmendi - Projections of extreme wind events in Uruguay: a weather regimes approach	Camila Prudente - Land use changes in La Plata Basin and impacts in river level	Pallavi Govekar - New IMOS Himawari-8 and Multi-sensor Sea Surface Temperature products
	Ailie Gallant - Changes in fronts and cyclones during seasonal-scale droughts		Ghyslaine Boschat - Impact of zonal and meridional atmospheric flow on climate extremes in the Southern Hemisphere	Nick Earl - Changes in rainfall runoff and hydro electricity production in Tasmania	Douglas Vieira Da Silva - Interactions of ITCZ Disturbances with Waters of Amazon Shelf: Drivers of Air-Sea Fluxes along a Large Riverine Outflow
	Miguel Lovino - Hotspots for flash drought occurrence in South America	Xichen Li - Antarctic and Southern Ocean Climate Changes and its Interaction with Lower Latitudes	Chiara Holgate - Linking Tasman Sea high-pressure systems and extreme rainfall in southeast Australia	Abdullah al Fahad - The Influence of Direct Radiative Forcing Versus Indirect Sea Surface Temperature Warming on Southern Hemisphere Subtropical Anticyclones Under Global Warming	Madelaine Gamble Rosevear - Mixing at the seabed: characterising the bottom mixing-layer in a stratified, tidal flow using large-eddy simulation
	Precious Mahlalela - Mechanisms associated with severe droughts in the Eastern Cape region, South Africa		Ines Leyba - Relationship between sea surface temperature variability in the South Atlantic and regional climate variability in southern South America	David Ferreira - Direct evidence for a 20th Century decline in Southern Ocean Sea ice	William Edge - Sediment transport by internal waves and estimation of unobserved parameters with uncertainty

	Tess Parker - The role of heavy rainfall in drought development and recovery from drought in Australia	Matthew England - Tropical to high-latitude climate teleconnections via planetary waves in the ocean and atmosphere	Eun-pa Lim - Why was Australia not wet in Spring 2020 despite La Niña?	Peter May - Seasonal, diurnal variability and trends of near surface temperature and humidity in the maritime continent	Chris Whitwell - The contribution of shoaling and breaking non-linear internal waves to ocean mixing on the Australian Northwest Shelf
	Diego Campos - Summertime cut-off lows in subtropical Chile: a look to the water vapor and precipitation		Danielle Udy - How does salty snowfall in Antarctica help us understand Australian rainfall processes?	Cindy Liles - Impacts of climate variability and change on the timing of budburst across Australian wine regions	Peter Baines - Massed strandings of whales and dolphins – effects of wind, waves, and tides
	Amanda Rehbein - Severe drought in central South America and its associated teleconnections: insights from modelling and observations	Ariaan Purich - Projected impacts of Antarctic meltwater anomalies over the 21st Century	Radan Huth - Regional climate variability and change over the Southern Hemisphere extratropics	Phumudzo Charles Tharaga - Climate change impacts on urban heat Islands over Bloemfontein in South Africa	TBC
	Marcia T.Zilli - Real-time tool to monitoring the occurrence of tropical-extratropical cloud band events over the Southern Hemisphere	Didier Monselesan - Tropical to extratropical linkages revealed by archetypal analysis applied to sea surface temperature	Verónica Martin-Gomez - Southern hemisphere circulation anomalies and impacts over subtropical South America due to different El Niño flavours	TBC	TBC
	Q&A	Q&A	Q&A	Q&A	Q&A
12:30pm	Lunch Break				

Session	The Southern Ocean and Tropical Climate System: Variability, Change, and Linkage 2	Regional climate variability and change over the Southern Hemisphere extratropics 2	Climate and climate change - General Session 4	Modelling and prediction - general session 3
1:00pm	Wenju Cai - Changing El Niño–Southern Oscillation in a warming climate	Matt Patterson - Tropical and subtropical forcing of future southern hemisphere stationary wave changes	Michael Grose - The IPCC Interactive Atlas: a useful tool for the Southern Hemisphere climate research and communications	Willem Landman - Attributes of predicted rainfall patterns over Southern Africa and Southeast South America associated with the El Niño–Southern Oscillation
	Shayne McGregor - Distinct off-equatorial zonal wind stress and oceanic responses for EP and CP type ENSO events	James Risbey - The identification of long-lived Southern Hemisphere flow events	Davide Marchegiani - How differences between CO2 and Solar forcing in a geoengineering framework influence the dynamical response in precipitation	Laila Howar - Cape Town Winter Rainfall Predictability
	Beatriz Peña-molino - Revisiting the seasonal cycle of the Timor Throughflow: circulation and transport	Vanesa Pántano - Extreme rainfall frequency driven by different remote forcings over South-eastern South America	Peter Love - A climatology of negatively tilted upper-tropospheric troughs and association with extreme events in southern Australia	Erma Yulihastin - Convective Cold Pool Associated with Offshore Propagation of Convection System over the East Coast of Southern Sumatra, Indonesia
	Michael Eabry - The impact of Indonesian Throughflow constrictions on eastern Pacific upwelling and water-mass transformation	Camila Prudente - Climate variability in the Paraguay Basin	Wenhui - Zhao A climatology of clouds over the Great Barrier Reef and the role of local forcing	Mei Zhao - Evaluation of the response of sub-seasonal to seasonal forecast models to imposed greenhouse gas anomalies, for use in attribution studies

	Ming Feng - Projected future changes of meridional heat transport in the Indian Ocean	Tobias Sauter - Revisiting extreme precipitation amounts over southern South America and implications for the Patagonian Icefields	TBC	Vateanui Sansine - Hybrid model for mean hourly solar irradiance prediction for micro-grid optimization
	Kewei Lyu - Projected Ocean warming constrained by the ocean observational record	TBC	TBC	TBC
	Q&A	Q&A	Q&A	Q&A
2:30pm	Session Concludes			

Wednesday 16 February

10:15am	Invited Speaker: Carolina Vera (CIMA/University of Buenos Aires -CONICET) - Climate Knowledge Co-production for the Agriculture Sector in Argentina			
Session	Weather and extreme events 2	Climate Change in Pacific Island Countries 1	Governance, policy and public engagement, AND Advances in the application of climate forecasts in industry	Tropical climate variability: dynamics, teleconnections, and impacts 1
10:45am	Chris Vagasky - Wildfires, Volcanoes, Cyclones, oh my! Non-traditional uses of Lightning Data	Zhi-Weng Chua - Improved monitoring of climate extremes in the western Pacific using remote sensing data	David Jones - A new national approach to assist Australian's build resilience to climate hazards	Yann Planton - Evaluation of regional El Niño-Southern Oscillation teleconnections in CMIP6 models
	Haleh Nampak - Interacting effects of lightning, vegetation and soil moisture content on wildfire ignition risk in Tasmania	Cyril Dutheil - Fine-scale rainfall over New Caledonia under climate change	Eugene Kavale - Designing an effective dynamic adaptive pathways planning (DAPP) monitoring system for coastal hazard risk in New Zealand	
	Tony Bannister - Are convergence lines associated with high asthma presentation days? A case-control study in Melbourne, Australia	Laxmikant Dhage - Assessment of 21st century changing sea surface temperature, rainfall, and sea surface height patterns in the tropical Pacific Islands using CMIP6 greenhouse warming projections	Bruce Buckley - Climate Change & Extremes – Climate Data needs of New Zealand's Largest Insurer	Ruby Lieber - Investigating the relationship between ENSO and extremes in the 20th Century Reanalysis
	Wade De Kock - Large scale features linked to anomalously wet summers in the Southwestern Cape of South Africa	Savin Chand - Tropical cyclones in the Pacific and global warming: An overview	Andrew Magee - The Long-Range Tropical Cyclone Outlook for the Southwest Pacific (TCO-SP): Insights into the usefulness of a new extreme weather guidance tool	Chiara Holgate - Interacting climate modes impact east Australian rainfall moisture sources
	Vannia Aliaga Nestares - Behavior of ITCZ' second band near the coast during the 2017 coastal El Niño	Michael Grose - Historical warming and projections for global warming levels for Pacific nations	Carly Tozer - Challenges and learnings in the application of multi-year forecasts in hydropower operations	Mandy Freund - Australian rainfall and drought breaking conditions and its representation in ACCESS-S2

	Keitapu Maamaatuaiahutapu & Victoire Laurent - How climate change may impact extreme swell events in French Polynesia in 2050?	Serena Lee - Investigating how sea level rise alters circulation in island coastal waters– Numerical experiments focussed on the Vanuatu and New Caledonia region	Elisabeth Vogel - Applications of seasonal hydrological forecasts in the agricultural sector	Hanna Heidemann - The role of the IPO and ENSO in Australian monsoon variability
	Cinara Ewerling da Rosa -Meteorological observations of the Vento Norte phenomenon associated with heat waves in south Brazil: a case study	Kathleen Mcinnes - The Role of Sea-level Rise in Recent Coastal Hazard Events in the Western Pacific	TBC	Zoe Gillett - The development of the Pacific-South American teleconnection pattern during austral winter
	Savin Chand - Objective reconstruction of long-term tropical cyclone proxy records from reanalysis data set for climate trend analysis	Julian O'Grady - Extreme Water Levels in Mixed Wind Climates in the Pacific	TBC	Agus Santoso - Indonesian Throughflow Variability and Linkage to ENSO and IOD in an Ensemble of CMIP5 Models
	Q&A	Q&A	Q&A	Q&A
12:30pm	Lunch Break			
Session	Atmospheric processes and observations - general session 2	Climate Change in Pacific Island Countries 2	Tropical Cyclones	Tropical climate variability: dynamics, teleconnections, and impacts 2
1:00pm	Donald Nkabinde - A Direct Link Between Rossby Wave Breaking and Heavy Rainfall over South Africa	Hamish Ramsay - Tropical cyclone risk in the Vanuatu region	Ivica Janekovic - Impacts of the Ocean – Atmosphere 2-way interactions in tropical cyclone modelling	Nicola Maher - Modulation of ENSO Teleconnections over North America by Pacific Decadal Variability
	Tsholanang Rammopo - Investigating Rossby wave packets over South Africa	Yuji Masutomi - AP-PLAT: Asia-Pacific Climate Change Adaptation Information Platform	Charitha Pattiaratchi - Ocean impacts of Tropical Cyclone Seroja	
	Thando Ndarana - The dynamics associated with two types of ridging South Atlantic Ocean anticyclones over South Africa	Vanessa Hernaman - VanKIRAP – tailored Vanuatu climate projections for effective and informed decision making	Clair Stark - The change in ocean heat due to tropical cyclones	Andrew Marshall - MJO impacts on Australian climate extremes
	Kevin Ohneiser - Long-term lidar measurements of Australian wildfire smoke layer in the stratosphere over southern South America in 2020-2021: Potential influence on ozone reduction?	Leanne Webb - Pacific Island case studies demonstrate how climate change projections can be applied to assist sectoral adaptation planning	Elizabeth Ritchie - Investigation of the atmospheric environments associated with TC size changes	Fadhli Rizki Muhammad - The Influence of Cross-Equatorial Surge on Extreme Rainfall in Jakarta
	Erin Dunne - Measurements of air-sea fluxes of biogenic and oxygenated organic gases in the South-West Pacific using novel ship-born mesocosm studies	Neil Holbrook - Impacts of marine heatwaves on tropical western and central Pacific Island nations and their communities	Stuart Moore - Moving Earth (not heaven): A novel approach to tropical cyclone impact modelling	Claire Vincent - Feedbacks between clouds, moisture, radiative forcing and diurnal convection: Observations and idealised modelling
	Calum Knight - Cloud microphysical processes above Southern Ocean Sea ice and coastal Antarctica	Hannah Barrowman - Managing the impacts of climate change on root crop production and value chains in the Pacific: Lessons from Fiji	Ian Smith - Quantifying the role of friction in the dissipation of tropical cyclones	Georgina Falster - Multi-method, multi-proxy reconstructions of the Pacific Walker Circulation over the past 800 years

	James Tamhane - Holocene dynamics of the Southern Hemisphere westerly winds: A depositional dust record from the Falkland Islands (Islas Malvinas)	James Butler - Knowledge brokering to mainstream climate risk into decision-making	Ivan Kennedy - Vortical action and entropy: a mechanistic hypothesis for the power of tropical cyclones driven by the latent heat of condensation of water	Nerilie Abram - Tropical Ocean responses to large volcanic eruptions during the last millennium
	TBC	Jessica Lees - Finding alignment between disaster risk reduction and climate change adaptation: community perceptions, practice and policy in the Pacific	Hongyan Zhu - On the dynamics of the December 2020 medicane	Tomoki Tozuka - Contribution of the oceanic teleconnection to amplitude asymmetry of the Ningaloo Niño/Niña
	Q&A	Q&A	Joanna Aldridge - A Comprehensive Tropical Cyclone Hazard and Risk Assessment Verification Framework	Q&A
			Craig Arthur - The TC SST - enabling access to tropical cyclone impact information	
			Ralph Trancoso - Tropical Cyclone Hazard Dashboard (TC-): a new web application informing the current and future wind hazard over Queensland	
			Q&A	
3:00pm	Session Concludes			

Thursday 17 February				
10:15am	Invited Speaker: Julie Arblaster (Monash University) - Tropical to polar interactions in the Southern Hemisphere			
Session	Severe Thunderstorms in the Southern Hemisphere 1	Changes in atmospheric circulation and Southern Hemisphere regional climate 1	Renewable energy nexus with weather and climate	Tropical climate variability: dynamics, teleconnections, and impacts 3
10:45am	Ross Blamey - Mesoscale convective systems in eastern South Africa and their importance in the local hydrological cycle	Roseanna McKay - Review of large-scale drivers influencing Australia's rainfall changes in different season	Abhnii Prasad - Reduction in solar energy due to soiling from dust in Australia	Cyril Dutheil - The western Pacific rainfall response to climate change: Sensitivity to projected Sea Surface Temperature patterns
	Christina Liesker - Characteristics of left-moving supercell thunderstorms over the Highveld of South Africa	Andrew King - Trends and emergence in Australian extreme rainfall across timescales	Marania Hopuare - Investigating wind energy potential in Tahiti, French Polynesia	Cristian Martinez-Villalobos - Two types of Coastal El Niño events
	Liesl Dyson - Hail climatologies from reanalysis data over South Africa; the influence of horizontal resolution	Acacia Pepler - Changing characteristics of frontal rainfall affecting southern Australia	Christopher Lennard - Mesoscale modelling in the development of the Wind Atlas for South Africa	Maryam Al-ansari - Asymmetries in the El Niño Southern Oscillation Phase Space Diagram

	Hooman Ayat - Radar object-based climatology of precipitation systems over Sydney, Australia	Pandora Hope - The impact of natural and anthropogenic forcing on the rainfall decline in south west Australia	Claire Vincent - Nocturnal Boundary Layer effects in SE Australia: Implications for wind energy production	Annette Stellema - Projected changes of Pacific Equatorial Undercurrent sources and pathways
	Joshua Hartigan - Developing a Severe Thunderstorm Climatology for Australia with Machine Learning	Irina Rudeva - Trends in the mean meridional atmospheric circulation in the Southern Hemisphere: connecting short-term variability with long-term trends	Rachael Quill - A robust automated quality-control engine to improve forecasting wind generation	Nandini Ramesh - The Impacts of Eastern Boundary Upwelling on the Tropical Atmosphere
	Kellie Cook - A convective hailstorm climatology and associated environments for Sydney, Australia	Eun-pa Lim - The 2019 Southern Hemisphere Stratospheric Polar Vortex Weakening and Its Impacts	Evgenia Titova - Intra-Hour Forecasting for Energy Applications	Yi Huang - Synoptic and Dynamical Characteristics during the Coral Bleaching Events over the Great Barrier Reef
	Timothy Raupach - Hail proxy reliability across Australia	Gareth Marshall - Can current reanalyses accurately portray changes in Southern Annular Mode structure prior to 1979?	TBC	Zeya Li - ENSO modulation of sea surface temperatures off Australia's west and southeast coasts
	Andrew Brown - Modes of severe thunderstorm wind occurrences in southeast Australia	Ryan Fogt - Extratropical Southern Hemisphere Synchronous Pressure Variability in the Early 20th Century	TBC	Liesl Dyson - Africánes in southern Africa: a significant rain bearing, tropical cyclone like synoptic scale low pressure system
	Q&A	Q&A	Q&A	Q&A
12:30pm	Lunch Break			
Session	Severe Thunderstorms in the Southern Hemisphere 2	Changes in atmospheric circulation and Southern Hemisphere regional climate 2	Understanding compound events and multivariate risk	Tropical climate variability: dynamics, teleconnections, and impacts 4
1:00pm	Daniel Veloso Aguila - Tornadoes in Subtropical South America: Mesoscale to Large Scale Environments	Elio Campitelli - Recent trends in symmetric and asymmetric components of the Southern Annular Mode	Kate Saunders - Statistical post-processing of compound event forecasts	Wenju Cai - Opposite response of strong and moderate positive Indian Ocean Dipole SST variability to global warming
	Annabel Bowden - The association between elevated mixed layers and severe thunderstorm environments in eastern Australia	Rishav Goyal - A new zonal wave 3 index for the Southern Hemisphere	Kathryn Allen - How unusual are recent tree dieback events associated with compound extremes? Can palaeoclimate records help with answers?	
	Joshua Soderholm - Measuring Hailstone Trajectories with the HailSonde	Anderson Augusto Bier - Changes in the South Atlantic Dipole and impacts on South America	Charuni Pathmeswaran - Exploring potential links between co-occurring coastal terrestrial and marine heatwaves in Australia	Scott Power - Climate change and decadal climate variability in the tropical Pacific: A Review
	Stacey Hitchcock - How close are simulated hail swaths to reality?	Julia Mindlin - Combined Effects of Global Warming and Ozone Depletion/Recovery on Southern Hemisphere Atmospheric Circulation and Regional Precipitation	Kimberley Reid - Impacts and Structure of Atmospheric Rivers over Australia	Peter Van Rensch - Atmosphere model deficiencies in simulating decadal-scale strengthening of tropical Pacific winds

	Matthew Mason - Assessing the boundary layer winds within thunderstorm outflows	Fraser Dennison - The regional climate impact of ozone depletion and recovery in the CCM1-2022 model set	Nina Nadine - Ridder High Impact Compound Events in Australia	Chen-Shuo Fan - Conceptual understanding of how large-scale tropical circulation change under global warming
	Salomé Hussein - Modelling Convective Storm Attributes in Australia using Radar, Reanalysis, and Deep Learning	Luciana Prado - Southern Annular Mode characterization in the Brazilian Earth System Model (BESM)	Doug Richardson - Global increase in wildfire potential from compound fire weather and drought	Rajashree Naha - Exploring the symmetry of pan-tropical connections of the Atlantic on the Tropical Pacific
	Harald Richter - New convective guidance at the Australian Bureau of Meteorology	Sarah Jackson - Climatic Controls on Precipitation in East Antarctica and the Impacts on an Ice Core Stable Water Isotopes Record	Cassandra Rogers -Recent increases in exposure to extreme humid-heat events disproportionately affect populated regions	Shreya Dhame - The potential impact of the Indian Ocean warming trend on ENSO and Atlantic Ocean variability
	Natasha Jacobson-Ellie - Severe hail prediction in Victoria using updraft helicity from a convection allowing ensemble forecasting system.	Lingwei Zhang - Identifying atmospheric processes favouring the formation of Bubble free layer in the Law Dome DSS1617 ice cores, East Antarctica	TBC	Daohua (Dave) Bi - Improved tropical Pacific-Atlantic teleconnection in a pacemaker experiment
	David Grant - Tornado forecast communication: an operational decision support meteorologist perspective	Jessica Hargreaves - Tropical Rainfall Belt Trends and Variability Across the Southeast Tropical Indian Ocean over the Instrumental Period	Q&A	Q&A
	Q&A	Q&A		
3:00pm	Session Concludes			

Poster Presentations

All poster presentations will be available virtually.

Posters at the University of Canterbury can also be viewed at the Poster and Networking Reception, Wednesday 10 July 5.45-7pm.

Poster Title	Presenter
Cut-off low over the southeastern Pacific Ocean: a case study	Vannia Aliaga Nestares
Impact of millennial-scale climate change on biological and physical processes of the South West Pacific	Harris Anderson
The Combined Influence of ENSO and IOD on South American climate during Austral Spring	Luciano Andrian
The world's longest known parallel temperature dataset: a comparison between daily Glaisher and Stevenson Screen temperature data at Adelaide, Australia, 1887–1947	Linden Ashcroft
Cirrus cloud characteristics at the southern-hemispheric midlatitude site of Punta Arenas (53°S, 71°W)	Boris Barja
Projections of future marine heatwaves for the oceans around New Zealand and Australia using New Zealand's Earth System Model	Erik Behrens
Seasonal and Interannual Variability of the South Indian Ocean Sea Surface Salinity Maximum	Frederick Bingham

The Interhemispheric Rossby Wave propagation during South Atlantic Convergence Zone episode in January 2009	Hugo Braga
The Teleconnection between South Pacific Convergence Zone and South Atlantic Convergence Zone during La Niña Years	Hugo Braga
Recruiting Volunteers for Historical Weather Records Spreadsheet Entry	Howard Bridgman
Observing System Experiments with AMPS-Polar WRF During the YOPP-SH Summer Special Observing Period	David Bromwich
The potential of Self Organizing Maps as a tool to improve seasonal prediction in Brazil	Paola Bueno
Dynamics of Ross Ice Shelf Polynya during Winter and Spring from Sentinel-1 SAR Data	Girija Kalyani Burada
Comparative studies between acoustic observations of frazil ice and modelling of frazil ice in ice shelf water	Nina Caldarella
The impacts of the Pacific-South American modes in mid-latitudes climate are highly sensitive to the location of tropical SST anomalies	Elio Campitelli
Meteochile Blog: the Chilean Weather Service experience in science communication	Diego Campos
Diurnal, seasonal, inter-annual variations and trends of surface Ozone at the Cape Point Global Atmospheric Watch (GAW) Station, South Africa	Sylvester Chaisamba
A Data Driven Approach to MJO Detection and Forecasting using Dynamic Mode Decomposition	Christopher Chapman
The role of the Tropical Atlantic on modulating Tropical Pacific variability	Christine Chung
Large-scale forcing of regional atmospheric circulation patterns driving extreme Foehn warming in the McMurdo Dry Valleys	Kyle Clem
Evaluation of CMIP6 models in the representation of observed extreme temperature indices trends in South America	Soledad Collazo
Characteristic mesoscale ocean circulation offshore of the Kaikōura submarine canyon, New Zealand, associated with synoptic weather patterns	Phellipe Couto
Examining the Role of Environmental Memory and Predictability in Carbon and Water Fluxes Across Australian Ecosystems	Jon Cranko Page
Microstructural processes governing the behaviour of basal marine shelf ice	Lisa Crow
Extreme winds and waves over the southwestern South Atlantic in a regional downscaling	Natalia Crespo
A palaeoclimate proxy database for water security planning in Queensland Australia	Jacky Croke
Comparing single and multi-layered low-level cloud regimes and evaluation of liquid spatial inhomogeneity over the Southern Ocean using in situ observations from SOCRATES	John D'Alessandro
Multi-scale rainfall extremes in Northeastern Australia	Thi Lan Dao
Which regions in MDV are warming more than the others	Rajasweta Datta
Projected Changes and Time of Emergence in Temperature Extremes over Australian regions	Xu Deng
High-resolution Quantile-Quantile scaled climate scenario projections for Australia	Raktima Dey
Evaluating the performance of 78 regional climate models to guide next-generation climate projections over CORDEX-Australasia	Giovanni Di Virgilio
Induced wave setup in narrow lagoons: Application to Poé beach (New Caledonia)	Maxime Duphil
Does the Vento Norte phenomenon impact soy and maize productivity in southern Brazil? First approach	Cinara Ewerling da Rosa
Influence of the Southamerican Low-Level Jet (SALLJ) on precipitation over the Southern Peruvian Highlands (SPH) during summertime: Part 2	Cristian Febre
Potential heat gateways into the Ross Sea from profiling floats and model simulations	Denise Fernandez

Examining 50 years of ecological relevant Southern Ocean variables using a high-resolution model	Denisse Fierro Arcos
Analysis of an 18 year record of circum-Antarctic fast ice distribution: extent, trends and climate consequences	Alexander Fraser
Investigating tropical vs. extratropical influences on the Southern Hemisphere tropical edge in the Unified Model and CMIP6	Pia Freisen
Evaluation of the wind and wave measurements of the CFOSAT satellite mission in the Southeast Pacific region	Alexandra Fuenzalida-Artigas
Improving ocean forecasts through data assimilation in the northeast shelf of New Zealand	Carine G. R. Costa
Pacific Ocean Pathways in support of sustainable development: an integrated approach	Alexandre Ganachaud
Pacific Ocean Pathways in support of sustainable development: an integrated approach	Alexandre Ganachaud
The impact of the semipermanent anticyclones in the Atlantic and Pacific Oceans over air temperature and precipitation in Argentina	Eugenia Garbarini
Implications of the wave climate of the Southern Hemisphere on ship design	Sally Garrett
MethaneSat Retrieval Algorithm Assessment using Groundbased Spectra	Alexander Geddes
Dynamics of the sudden stratospheric warming of 2019 in the southern hemisphere	Nahuel Gómez
Response of Southern Hemisphere western boundary current regions to future zonally symmetric and asymmetric atmospheric changes	Rishav Goyal
Why is the Southern Hemisphere extratropical atmospheric circulation not zonally symmetric?	Rishav Goyal
Climate scenarios of mean climate change for 2050 in the Pacific using storylines	Michael Grose
Climate extremes recorded in playa lakes across continental Australia over the last Millenia	Sophie Grunau
Deoxygenation of the Australian Antarctic Basin Driven by Freshening in the Ross Sea	Kathryn Gunn
Detection of supercooled liquid water and aircraft icing potential at Davis, Antarctica	Adrien Guyot
Comparing Air Quality in Auckland during COVID lockdown and Level 1 conditions	Jamie Halla
Hyperspectral Imaging as a Tool for Shallow Water Bathymetry	Jamie Halla
Searching for traces of Heard Island volcanism in the Mount Brown South ice core, East Antarctica	Margaret Harlan
Increased early summer drought risk in southern subtropics due to decline in tropical-extratropical cloud bands	Neil Hart
Climate change projections to inform vulnerability of black pearl production in the Cook Islands	Vanessa Hernaman
Ocean heat supply to the Denman Glacier: insights from observations and models	Laura Herraiz Borreguero
Two Quasi-Linear Convective Systems, their mesoscale structure and moisture sources	Stacey Hitchcock
Ocean-ice interaction as a limit to Antarctic Sea ice growth	Will Hobbs
Lidar Observations of SpatioTEmporal Contrasts in Clouds and Aerosols (LOSTECCA) in Lauder, New Zealand	Julian Hofer
An Analysis of Historical Marine Heatwave Events over the Australian region based on satellite observation products	Yuwei Hu
Novel equilibrated ocean-sea ice model simulations improve recent Southern Ocean warming estimates	Maurice Huguenin
Upcoming investigations of aerosol-cloud-radiation-precipitation processes in the Southern Ocean	Ruhi Humphries
The influence of SAM and ENSO on extreme rainfall over South America	Maria Florencia Iacovone

Air Quality Impacts during the 2019-2020 Bushfires on Rooftop Photovoltaic Systems in NSW	Alejandra Isaza
NARClIM2.0: design of a high-resolution regional climate modelling ensemble for Australia	Fei Ji
Combined roles of the Quasi-biennial oscillation and Madden-Julian oscillation on extreme rainfall in Australia	Xiaoxuan Jiang
Variable dependency in bias-corrected regional climate models	Youngil Kim
Do flash droughts occur in Aotearoa New Zealand?	Daniel Kingston
Antarctic sea ice biases and parameter sensitivities in the ACCESS-OM2 ocean-sea ice model suite	Andrew Kiss
Marine ecoregions and their sensitivity to past and future climate change	Mario Krapp
Evaluating the ACCESS model against Southern Ocean aerosol observations	Liam Lamprey
The diurnal cycle of rainfall and cloud properties from Himawari-8 and IMERG during the austral summer (2016-2020)	Clemente Lopez-bravo
Pre-instrumental climate reconstructed from a New Zealand tree-ring network and the Past Interpretation of Climate Tool (PICT)	Andrew Lorrey
Accounting for the latitudinal variability of rainfall in dual-polarization radar rainfall retrievals	Valentin Louf
Impact of the TUTT on lightning in French Polynesia	Keitapu Maamaatuaiahutapu
Relation between chemical characteristics of aerosols and the transport of air masses in Magellan region during 2019	Gonzalo Mansilla
PARASO, a circum-Antarctic fully-coupled ice-sheet - ocean -sea-ice - atmosphere - land model involving f.ETISH1.7, NEMO3.6,LIM3.6, COSMO5.0 and CLM4.5	Sylvain Marchi
Interannual variability of the Upwelling phenomenon in the southwestern coast of Africa	Verónica Martin-Gomez
An updated surface wind field model for thunderstorm outflows	Matthew Mason
Four years of coordinated seasonal sea ice predictions in the Southern Ocean	François Massonnet
Precipitation extremes over the Southern Hemisphere: The Importance of Extra-tropical cyclones	Cameron McErlach
Impact of mean state biases on Indian Ocean variability	Sebastian McKenna
Pacific climate, local knowledge and adaptation strategies (clipssa)	Christophe Menkes
MethaneSAT: Towards detecting agricultural emissions from space	Sara Mikaloff-fletcher
Modelling the full-dimensional structure of marine heatwaves in the Northern Humboldt Current System	Rodrigo Mogollón
Modelling the wave-induced fragmentation of a sea ice cover	Nico Mokus
Analysis of an Extreme precipitation event associated with a sub-Antarctic mesocyclone and Atmospheric River during CAPRICORN 2018	Estefania Montoya Duque
Obtaining improved ToF-ACSM calibrations to better characterise aerosol measurements in pristine, marine atmospheres	Caleb Mynard
Connecting communities to climate science through place-based, collaborative transdisciplinary research & practice: social licence to operate; social science; social art & the ecosystems of everything	Gabby O'Connor
Observing upper ocean variability during storms: connecting event scales to climate responses	Joe O'Callaghan
Sea ice process in CICE5 and LIM3 based models in the CMIP6 models in the Antarctic region	Siobhan O'Farrell

Identifying critical periods with low rainfall that impact wheat yields in Argentina, in order to minimize risks	Vanesa Pántano
Compound high-impact weather in Australia - A dynamical perspective	Tess Parker
Interaction between continental shelf waves and islands in Western Australia	Charitha Pattiaratchi
Predictability of Long-lived of Rossby Wave Packets during Southern Hemisphere Summer	Iago Perez
Synoptic patterns associated with extreme precipitation on the La Plata basin: analysis of Cordex rcm simulations	María Eugenia Pérez De Mendiola
How are the ENSO effect on Cut-off Lows simulated in CMIP6 in AMIP and coupled model simulations?	Henri Pinheiro
Characterization of solar power ramps over multiple timescales	Shukla Poddar
The GGG2020 data version at the Lauder Total Carbon Column Observing Network (TCCON) station	David Pollard
Assessment of the Diurnal Cycle of Convection over the Maritime Continent using Multiple Datasets	Abhnil Prasad
Analysis and modelling of spring frost at vineyard scale in the Waipara Region, Canterbury, New Zealand	Herve Quenol
Convection Features over the Northern Coast of Peru associated to the Coastal El Niño 2017	Nelson Quispe Gutiérrez
Simplified atmospheric climate models as a tool for describing circulation changes linked to variations in stratospheric ozone and greenhouse gases	Gabriela Raggio
How well do CMIP6 models represent the sub-tropical ridge (STR) in the Southern Hemisphere?	Surendra Rauniyar
South American Monsoon Features Projected to the End of 21st Century	Michelle Reboita
Influence of ozone forcing on 21st century Southern Hemisphere surface westerlies in CMIP6 models	Laura Revell
Developing a system to quantitatively sample sub-ice platelet layers and associated biology	Natalie Robinson
Key drivers and characteristics of the 2009-10 marine heatwaves in the Atlantic	Claire Rocuet
The 2020 Unprecedented Marine Heatwave and Coral Bleaching Event in the Tropical Atlantic	Regina Rodrigues
Disentangling the causes of evapotranspiration long-term changes in southeastern South America	Romina Ruscica
Contrasting the response of tropical Pacific climate to multi-decadal variability sourced in the North Atlantic and Southern Ocean	Agus Santoso
Indonesian Throughflow Variability and Linkage to ENSO and IOD in an Ensemble of CMIP5 Models	Agus Santoso
Topographic effects on the atmospheric boundary layer of alpine glaciers	Tobias Sauter
Continuous Observations of Aerosol-cloud interaction in Antarctica (COALA): An upcoming dataset on the vertical distribution of aerosol and clouds over Neumayer III station	Patric Seifert
Antarctic marginal sea ice zone in global ocean reanalyses	Julia Selivanova
Probabilistic Assessment of Coastal Inundation in the Pacific	Bengtson Shannon
Investigation of hydroclimate changes in Antarctica during 1900-2014	Natália Silva
Linked Future Climate Impacts for New Zealand from Heat Waves, Droughts and Fire Potential	Abha Sood
Future Renewable Energy Resource Assessment and Impact of Climate Extremes in Regional Climate Projections	Abha Sood
Trend analysis on frequency of New Zealand climate extremes	Raghav Srinivasan

The effect of experiment conditioning on estimates of human influence on extreme weather	Dáithí Stone
The social psychological attribution of event attribution	Dáithí Stone
BARPA: Development of ACCESS-based high-resolution regional climate projections over Australia	Chun-hsu Su
Spatial variability of annual net community production in the Southern Ocean revealed by BGC-Argo floats	Jiaoyang Su
Energy propagation between the subtropics and the Antarctic Circumpolar Current	Kayo Takahashi
A new system to measure carbonyl sulfide in air samples as tracer for gross primary production	Kararaina Te Puni
Pandora's box: How to constrain regional projections of the carbon cycle	Lina Teckentrup
Estimation of Historical Climate in the Southern Ocean using whaling logbooks	Praveen Teleti
Changes in cloud amount over South America	Nadia Testani
Investigating climate impacts from Antarctic freshwater fluxes using HadGEM3-GC3.1	Max Thomas
Comparing two methods to estimate N2O and CH4 fluxes at Lauder, Central Otago, NZ	Li Yen Thor
Rainfall projections over Uruguay with CMIP6 models by statistical downscaling	Romina Trinchin
Diagnosing changes in Southern Ocean Overturning Circulation from Atmospheric Radiocarbon Observations	Jocelyn Turnbull
Historic changes in Southern Hemisphere wind patterns since the late 1700s from reanalyses and American whaling ship logbooks	Caroline Ummenhofer
Investigation of dynamical dependence between observables based on the rate of information flow	Stephane Vannitsem
Investigating the Long-Term Warming in the Brazil-Malvinas Confluence	Doris Veleda
Investigating the benefits of multi-season flow reconstructions for continuous water balance modelling	Danielle Verdon-Kidd
The observed and modelled spatial and water mass variability along the Polar Front meander west of the Macquarie Fault Zone	Felipe Vilela-Silva
Evaluating dynamical downscaling and bias correction for hydrological impact assessments	Elisabeth Vogel
Improving thunderstorm forecast guidance using a cluster-based calibration method	Rob Warren
University of Wisconsin Automatic Weather Station Network	Lee Welhouse
Communicating sea level conditions for coastal adaptation in the tropical Pacific Islands	Matthew Widlansky
The Southern Ocean Observing System: Supporting the international community with networks and tools	Mike Williams
Estimation of Primary Production in Antarctic Land-fast Sea Ice during 2005-2006	Pat Wongpan
Evaluation of Cloud Characteristics in Three Climate Models using Airborne Observations over the Southern Ocean	Ching An Yang
Vertical resolution requirements in wind profile simulations associated with inertia-gravity waves	Yang Yang
National assessment of change in river flow regimes under 21st century climate conditions for New Zealand	Christian Zammit
Towards an operational nowcasting framework of turbulence using Large Eddy Simulations	Jiawei Zhang
Identifying atmospheric processes favouring the formation of physical features in the Mount Brown South ice core	Lingwei Zhang