

# Programme of the annual MetSociety conference 25.11.-27.11.2020

Wednesday		Climate & Climate Change	Thursday		Meteorology & Extreme Weather	Friday	Atmosphere & Air Quality	
Registration	07:30-08:30							
Opening	08:30-08:45	Professor Jamie Shulmeister Head of School, University of Canterbury  Michael Martens President MetSociety	<b>Keynote</b> Ciaran Doolin MetService	08:30-09:15	Norway comes to New Zealand: Edward Kidson, Jørgen Holmboe and the Modernisation of Australasian Meteorology	<b>Keynote</b> Dr Sarah Brand Marlborough District Council	08:30-09:15	The Meaning of Air Quality!?
Special	08:45-09:30	<b>James Renwick</b> Keynote & Tribute from the floor	Presentation	09:15-09:35	<b>Fulong Lu</b> Comparison of two spill-over heavy rain events in Canterbury, Novemer 2018 and December 2019	Presentation	09:15-09:35	<b>Jocelyn Turnbull</b> Urban greenhouse gas emission response to COVID-19 shutdowns in New Zealand and North America
Brett Mullan	09:30-09:50	<b>Abha Sood</b> Changing characteristics of New Zealand droughts in the 21st century	Presentation	09:35-09:55	<b>Trevor Carey-Smith</b> Modelling the spatial variability of high intensity rainfall	Presentation	09:35-09:55	<b>Hamesh Patel</b> Implications for air quality management of changes in air quality during lockdown in Auckland (New Zealand) in response to the 2020 SARS-CoV-2 epidemic
Session	09:50-10:10	<b>Jim Salinger</b> Surface temperature trends in New Zealand and surrounding oceans: 1870 - 2019	Presentation	09:55-10:15	<b>Jiawei Zhang</b> The need for accurate turbulence inflow conditions for ultra-fine LES simulations	Presentation	09:55-10:15	<b>Jamie Halla</b> Monitoring Auckland Emissions and Air Pollution in 2020
Morning tea	10:10-10:40		Morning tea	10:15-10:45		Morning tea	10:15-10:45	
Presentation	10:40-11:00	<b>Kevin Trenberth</b> An update on Earth's energy imbalance	Poster	10:45	Poster	Pecha	10:45	
Presentation	11:00-11:20	<b>Olaf Morgenstern</b> Reappraisal of the climate impacts of ozone-depleting substances	Session	11:30	Session	Kucha	-	10 presentations 6 min each
Presentation	11:20-11:40	<b>Tony Bromley</b> Pre-industrial 14CH4 indicates that anthropogenic fossil CH4 emissions are underestimated	Presentation	11:30-11:50	<b>Jordis Tradowsky</b> A progress update of the Extreme Weather Event Real-time Attribution Machine (EWEAM) project	Session	11:45	
Presentation	11:40-12:00	<b>Roger Davies</b> Changes to the tropopause transition layer in a warmer climate	Presentation	11:50-12:10	<b>Sara Harrison</b> Identifying the Data Needs for Severe Weather Impact-based Forecasting and Warning Systems in New Zealand	Lunch	11:50-12:45	
Lunch	12:00-13:00		Presentation	12:10-12:30	<b>Dáithí Stone</b> A stocktake of resources and understanding for extreme event attribution	Presentation	12:45-13:05	<b>Ethan Dale</b> Mapping Air Pollution eMissions (MAPM): The winter 2019 air pollution (PM2.5) measurement campaign in Christchurch
Presentation	13:00-13:20	<b>Nicolas Fachereau</b> Machine Learning approaches to seasonal climate forecasting	Lunch	12:30-13:30		Presentation	13:05-13:25	<b>Dongqi Lin</b> WRF4PALM: A Mesoscale Dynamic Driver for the Urban-Scale PALM Model System 6.0
Presentation	13:20-13:40	<b>Jono Conway</b> Simulations of seasonal snow accumulation and melt across New Zealand	Presentation	13:40-14:00	<b>Suzanne Rosier</b> Human influence on New Zealand's extreme weather: case studies of hot, cold and wet extreme weather events	Presentation	13:25-13:45	<b>Richard Querel</b> Long-lived smoke clouds from the Australian megafires measured over Lauder, New Zealand
Presentation	13:40-14:00	<b>Richard Turner</b> Digitization and analysis of historic dew-point temperature records in Lower North Island	Presentation	14:00-14:20	<b>Thomas Adams</b> Extracting interpretative value from ensembles through clustering	Presentation	13:45-14:05	<b>Laura Revell</b> Could airborne microplastics play a role in climate change?
Presentation	14:00-14:20	<b>Hervé Quénoel</b> Climate and viticulture in the Waipara region: current and future potential	Presentation	14:20-14:40	<b>Ian Boutle</b> A novel approach to tropical cyclone impact modelling	Presentation	14:05-14:25	<b>Mike Harvey</b> Marine biological influence on cloud properties - Overview of the Sea2Cloud voyage 2020
Presentation	14:20-14:40	<b>Jessie Gray</b> Track characteristics of east coast lows in eastern Australia (1950-2019)	Presentation	14:40-15:00	<b>Yang Yang</b> Superposition of the sub-tropical jet and the polar front jet in the southwest Pacific	Presentation	14:25-14:45	<b>Maija Peltola</b> Using Air-Sea Interaction Tanks to Study the Effect of Marine Biology to Aerosol Formation
Afternoon tea	14:40-15:10		Afternoon tea	15:00-15:30		Awards	14:45-15:15	
Presentation	15:10-15:30	<b>Kyle Clem</b> Atmospheric rivers drive warming and ice loss on the Antarctic Peninsula	Presentation	15:30-15:50	<b>Nariefa Abraham</b> Radiation and clouds relationship: Brewster Glacier in the Southern Alps of New Zealand			
Presentation	15:30-15:50	<b>Rajasweta Datta</b> Spatial distribution of wintertime Foehn intrusions in the McMurdo Dry Valleys of Antarctica	Presentation	15:50-16:10	<b>Lydia Watson</b> Investigation into real-time correction of radar data to account for enhancement at the bright band			
Presentation	15:50-16:10	<b>Sam Edwards</b> Evaluation of the Lambrecht Rain[e] weighing precipitation instrument for high resolution precipitation measurements	Presentation	16:10-16:30	<b>John Nicol</b> Doppler radar spectral retrieval of drop size distributions and vertical air motion			
Presentation	16:10-16:30	<b>Marwan Katurji</b> Wildfire flaming zone dynamics at the immediate fire and atmospheric turbulence interface	Presentation	16:30-16:50	<b>Beatriz Reboredo Viso</b> A new rainfall dataset for the Auckland Region			
AGM	16:40-17:40		Presentation	16:50-17:10	<b>Tim Kerr</b> Offshore Rainfall Climatology from Space-borne Rain Radar			
			<b>Conference Dinner</b>	from 19:00	Curator's House Botanic Gardens			

## Pecha Kucha rapid fire 6 min presentations

Friday

No	Presenter	Title
1	Nick Edkins	Climate sensitivity and radiator fins
2	Tamara Pletzer	The effect of atmospheric forcing on glacial mass balance in the Ross Sea Region of Antarctica
3	Jonny Williams	Revisiting the 'Kidson' synoptic types over Aotearoa New Zealand
4	Neelesh Rampal	Development of an objective once-daily and two-tiered synoptic type classification for New Zealand
5	Raghav Srinivasan	Analysis of trends in Extremes from NIWA's climate rankings
6	Hamish Prince	Life-cycle and societal impacts of atmospheric rivers in New Zealand and the West Coast of the USA
7	Vidya Varma	A prognostic dust approach to test the role of ice nucleating particles in a climate model
8	Alex Geddes	Night-time cloud properties over Lauder from ceilometers and all-sky cameras
9	Luke Sutherland-Stacey	Improved Real-Time Quantitative Precipitation Estimation for Bangkok
10	Greg Bodeker	MAPM: An overview of the Mapping Air Pollution eMissions project

## Poster Presentations

No	Presenter	Title
1	Yusuf Bhatti	Global climate model simulations of natural aerosols over the Southern Ocean
2	Leroy Bird	Mapping Air Pollution eMissions (MAPM): FLEXPART-PALM, a Lagrangian dispersion particle model driven by meteorological fields obtained from PALM
3	Lucas Domingues	Development of A Full Carbon Budget for Auckland, New Zealand
4	Nick Edkins	Climate sensitivity and radiator fins
5	Alexander Geddes	Evaluating Regional Methane Emission in New Zealand Using Inverse Modelling
6	Alexander Geddes	New* UV Irradiance Measurements at Lauder
7	Alexandra Gossart	Discovering the climate of Antarctica and Southern Ocean
8	Sally Gray	The Long and Winding Path from a Sketch to Rainfall Data
9	Jamie Halla	Measuring Shipping Emissions via MAX-DOAS in Auckland
10	David Johnston	HIWeather Citizen Science Project: a 2020 update
11	Jessica Kerr	The good, the bad and the fast – comparing three agricultural pile burning techniques
12	Stefanie Kremser	Mapping Air Pollution eMissions (MAPM): The MAPM inversion System to infer PM2.5 emissions maps on city scale
13	Ben Liley	High concentration of nonspherical particles and depleted ozone at 24-31 km over New Zealand
14	Cameron McErlach	Comparing satellite and ground-based observations of cloud occurrence over high southern latitudes
15	Hamesh Patel	Harnessing the Potential of Low Cost Particle Sensors for Use in Hierarchical Air Quality Networks
16	David Pollard	Greenhouse gas columns over Antarctica in summer
17	Hamish Prince	Life-cycle and societal impacts of atmospheric rivers in New Zealand and the West Coast of the USA
18	Neelesh Rampal	Development of an objective once-daily and two-tiered synoptic type classification for New Zealand
19	Laura Revell	Climate change emergence in CMIP6 models
20	Benjamin Schumacher	Instantaneous spatio-temporal rate of spread of fast spreading wildfires - a new approach from visible and thermal image processing
21	Daisuke Seto	Mapping Air Pollution eMissions (MAPM): Investigating the effects of instrument uncertainties on Bayesian inverse estimation of urban PM2.5 emissions - an Observing System Simulation Experiment approach
22	Matt Shepherd	An assessment of the topographic and atmospheric controls on terrestrial meltwater occurrence in the Ross Sea Region identified in the Geological Mapping Update of Antarctica (GeoMAP)
23	Sagar Soni	Convolution Neural Networks (CNN) for understanding mesoscale warming anomalies in Antarctica
24	Abha Sood	Are CMIP6 models able to better represent New Zealand climate than the earlier CMIP models?
25	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.
26	Dáithí Stone	Progress in the detection and attribution of regional anthropogenic climate change relevant for assessing impacts
27	Tegan Stone	Atmospheric Carbon Dioxide uptake in New Zealand's North Island: Analysis of five years of atmospheric data from Maunga Kakaramea
28	Stephen Stuart	A convection-permitting regional climate model for New Zealand
29	Anjali Thomas	Identifying extreme temperature events over New Zealand using self-organizing map
30	Li Yen Thor	Soil CO2 and Nocturnal N2O Fluxes in Lauder, Central Otago, NZ
31	Jonny Williams	Revisiting the 'Kidson' synoptic types over Aotearoa New Zealand
32	Christian Zammit	Enhancing VCSN rainfall estimates for hydrological modelling