

Wednesday 29 November 2023

SESSION	SPEAKER(s)	TITLE	Principial Investigator FORMAT	
RESEARCH THEME : Ecosystems, biodiversity and biodiscovery				
8:00	Biodiversity	CHAIR: Prof Bettine van Vuuren		
	Dr Peter Convey (BAS)	Terrestrial biological invasions and their potential impacts in the maritime Antarctic	Invited Guest	Plenary Talk
8:30	Prof Bettine van Vuuren	Foregrounding geodiversity in landscape ecology studies: insights from the sub-Antarctic	Prof Bettine van Vuurer Oral	
		Detecting signals of adaptive selection of an invasive springtail on sub-Antarctic Marion Island	Prof Bettine van Vuurer Oral	
	Carol Jacobs	SANAP Biosecurity	DFFE	Oral
	Morgan Raath-Krüger	Long-term spatially-replicated data show no physical cost to a benefactor species in a facilitative plant–plant interaction	Dr Peter Le Roux	Oral
	Morgan Raath-Krüger	Do anisotropic processes influence fine-scale spatial genetic structure of a keystone sub-Antarctic plant species?	Dr Peter Le Roux	Poster
	Elsa van Ginkel	Examining the potential for entomophilous pollination on sub-Antarctic Marion Island	Dr Peter Le Roux	Poster
9:00	Mammals	CHAIR: Dr Mia Wege		
	Dr Christian Murray	Understanding the drivers of Marion Island's elephant seal population	Prof Nico de Bruyn	Oral
	Leandri de Kock	Considering individual variation when investigating marine predator behaviours during life- history events	Prof Nico de Bruyn	Oral
	Dr Liezl Pretorius & Dr Greg Hofmeyr	Canine morphometrics as a tool for distinguishing species, sex and age in Southern Ocean fur seals	Dr Greg Hofmeyr	Oral
	Dr Mia Wege	The conveyor belt of Ross seals in the Lazarev Sea and their behaviour	Prof Trevor McIntyre	Oral
	Matthew Germishuizen	Sea ice declines coincide with a period of reduced reproductive success in Southern Ocean top predator	Dr Els Vermeulen	Oral
	Oluwaseyi Paul Babalola	Entropy-based Detection and Classification of Bryde's Whale Vocalizations: An Approach for Understanding and Conserving an Endangered Species	Prof Jaco Versfeld	Oral
10:00	BREAK			
RESEARCH THEME : Earth systems observations				
10:30	Antarctic and sub-Antarctic earth science	CHAIR: Prof Werner Nel		
	10:30 to 10:45	Dr Geoff Grantham	Geological and Geophysical Research in Western Dronning Maud Land, Antarctica. Fieldwork, Laboratory Methods, History and Progress over ~40 years. Oral	
	10:45 to 11:30	Prof Werner Nel	Landscape and climate interactions in the sub-Antarctic: Past, present and future Prof W Nel Oral	
		Dr Elizabeth Rudolph	The deglaciation of sub-Antarctic Marion Island Prof W Nel Oral	
		Mr Sibusiso Sinuka	Towards determining the formation ages of the lithologies on sub-Antarctic Marion Island Prof W Nel Oral	
		Mr Abuyiselwe Nguna	Preliminary results of fallout 137Caesium techniques on Aeolian land features on sub-Antarctic Marion Island Prof W Nel Oral	
CROSS DISCIPLINES				
11:30	Data Management within SANAP	CHAIR: Dr Anne Treasure		
		Leigh McGaughey	An ecosystem study of the Prince Edward Archipelago Invited Guest	
		Dr JP Barnard	Management of Recorded Voyage Data for the SA Agulhas II Prof A Bekker	
		Bjorn Boyes	Using Unreal Engine 5 to construct a digital Marion Island towards improved science engagement Prof W Nel	
		Mikko Lensu	Sea ice research of Finnish Meteorological Institute Invited Guest	
		Anne Treasure	Ms M Olivier	

12:30

LUNCH

RESEARCH THEME : Ecosystems, biodiversity and biodiscovery

13:30

Ecosystems, biodiversity and biodiscovery

CHAIR: Prof Donald Cowan

Don Cowan	Microbial ecology of Antarctic desert soils	Prof D Cowan	Oral
Pedro Lebre	Biogeographic survey of soil microbial communities across Antarctica	Prof D Cowan	Oral
Silindile Maphosa	Exploring the functional potential of microbial metagenome-assembled genomes (MAGs) from sub-Antarctic islands	Prof D Cowan	Oral
Lefentse Mashamaite	Microbial diversity in Antarctic Dry Valley soils across an altitudinal gradient	Prof D Cowan	Oral
Runesu Bakasa	Elucidating the role of biosynthetic genes in the adaptation of bacterial mixotrophs in the South Atlantic	Prof T Mkhallyane	Oral
Marike Hillocks	Phage satellites of the deep Southern Ocean	Prof T Mkhallyane	Oral
Riaan Pierneef	Polar opposites; bacterioplankton susceptibility and mycoplankton resistance to ocean acidification	Prof T Mkhallyane	Oral
Mancha Mabaso	Marine microbiome responses to Fe supplementation	Prof T Mkhallyane	Oral
Choaro Dithigoe	Bacteria and archaea regulate particulate organic matter export in suspended and sinking marine particle fractions	Prof T Mkhallyane	Oral
Nosipho Hlalukana	Disentangling the biosynthetic potential of the South Atlantic Ocean microbiome	Prof T Mkhallyane	Oral
Nyasha Mafumo	Disentangling the effects of the Agulhas Current on marine viruses	Prof T Mkhallyane	Oral
Phillip Mawire	Genomic analysis of Acidobacteria from polar region soils: Delineating the mechanisms leading to diversity and successful adaptation to the polar regions.	Prof T Mkhallyane	Oral
Mayinbogwe Buthelezi	Investigation of microbial genomics to understand the cycling of organosulfur compounds in the marine environments	Prof T Mkhallyane	Oral
Sade Magabotha	A reproducible microbiome pipeline for the identification of horizontally acquired mobile genetic elements	Prof T Mkhallyane	Poster
Christophe Lefebvre	Using computational tools to shed light on microbes with capacity to degrade microplastics in the oceans	Prof D Cowan	Poster
Elizabe Malan	Understanding the dynamics of microbial communities in the Congo River plume	Prof T Mkhallyane	Poster
Benjamin Abraham	Nutrient Co Limitation of Bacterial Communities within the Southern Ocean	Prof T Mkhallyane	Poster
Nelisiwe Hedebe	Charting the diversity of Giant viruses of Antarctic dry valley permafrost	Prof T Mkhallyane	Poster
Michelle Bekker	Phage diversity in the Southern Ocean	Prof T Mkhallyane	Poster

15:10

BREAK

15:30

The Southern Ocean's sensitivity to a changing climate: insights from a seasonal cycle approach

CHAIR: Dr Sarah Nicholson & Dr Sandy Thomalla

Sarah Nicholson	The impact of storms on CO2 and heat exchange across the Southern Ocean	DR S Nicholson	Oral
Tesha Toolsee	The complex role of storms in modulating intra-seasonal air-sea CO2 fluxes in the sub-Antarctic Southern Ocean	DR S Nicholson	Oral
Sandy Thomalla	Trends in Southern Ocean Phytoplankton bloom phenology	DR S Thomalla	Oral
Sifiso Mpapane	Understanding photoacclimation effects on Chl:C ratio in the Southern Ocean: modelling considerations and insights into seasonal assemblage composition	DR S Nicholson	ePoster
Tommy Ryan-Keogh	Multi-decadal trend of increasing iron stress in the Southern Ocean phytoplankton	DR S Nicholson	Oral
Thapelo Ramalepe	Exploring the seasonal processes governing manganese supply in the Southern Ocean	DR S Nicholson	Oral
Thato Mtshali	Winter-time distributions and dissolved iron mixed layer budget in the south Atlantic sector of the Southern Ocean	Dr T Mtshali	Oral
Miranda Sitofile	Investigating seasonal variability of dissolved iron in the South Atlantic sector of the Southern Ocean: Insights from the winter and spring SCALE 2019 cruises	DR S Thomalla	ePoster
Lillina Ruiters	Variability of phytoplankton photophysiology in the Southern Ocean: an analysis of assumptions and uncertainties	DR S Thomalla	ePoster

16:30 NETWORK - Building our SANAP Research Community

18:30 DINNER

RESEARCH THEME: Innovation and engineering

19:30 Innovation and Engineering

CHAIR: Prof Annie Bekker

Prof Annie Bekker	SA Agulhas II – Flagship for vessel 4.0	Prof A Bekker
Gerhard Durandt	The Development of a Structural Digital Twin for the SA Agulhas II	Prof A Bekker
Chante Van der Spuy	The Classification of Multi-Impact Events by the Application of Inverse Methods and Machine Learning	Prof A Bekker
Nico de Koker	Inversion and Extreme Value Analysis of Ice Loading on Propulsion Shaft of the SA Agulhas II	Prof A Bekker
Micaelwa Melim	Expanding the Capabilities of Mariner 4.0: A human-centred monitoring and research tool	Prof A Bekker
Ben Steyn	A Longitudinal Study of the Open-Water Performance of an Ice-Class Vessel	Prof A Bekker
Brendon Nickerson	Inverse calculations of ice impacts on propulsion machinery	Prof A Bekker
Nicole Taylor	The berth of Mariner 4.0: A human-centred monitoring and research tool	Prof A Bekker
Jukka Tuhkuri	Ice Load measurement and ice condition monitoring onboard S.A. Agulhas II	Invited Guest

21:00 NETWORK - Building our SANAP Research Community