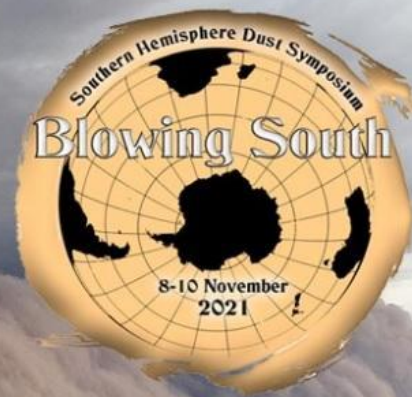


Blowing South: Southern Hemisphere Dust Symposium



November 8 - 10, 2021

FREE On-line Event

photo:PH Alexis Alaya, Estancia Chica, Metileo,
La Pampa, Argentina, December 17, 2020

programme

MONDAY, 8 NOVEMBER 2021

Time UTC+0

6.30 **Opening remarks**

Paleoclimate: Continental Proxies I (Conveners: F. De Vleeschouwer, D. Weiss)

KEYNOTE

6.40 Examining the drivers of Australasian dust emissions: Contrasting the behaviour of the warm-arid and cold-wet Southern Hemisphere dust sources through time – **Speaker: Samuel Marx**

7.10 The age of dust—A new hydrological indicator in arid environments? – **Speaker: Paul Hesse**

7.25 Sulphur as a proxy for Southern Hemisphere westerly wind strength on sub-Antarctic Macquarie Island– **Speaker: Krystyna Saunders**

7.40 Reconstruction of atmospheric mineral dust and volcanic ash deposition in the Falkland Islands from a peat record – **Speaker: Dominik Weiss**

7.55 Holocene dynamics of the Southern Hemisphere westerly winds: A depositional dust record from the Falkland Islands (Islas Malvinas) – **Speaker: James Tamhane**

8.10 Wind-blown dust and salt-spray concentrations reveal long-term correspondence between Southern Hemisphere Westerly wind intensity and temperature over the Southern Ocean – **Speaker: Alex Whittle**

8.25 **Discussion**

8.40 **Break**

Ocean Biogeochemistry I (Conveners: A. Crespi-Abril, F. E. Paparazzo, P. Croot)

9.10 Dissolved titanium as a tracer for dust input in the Southern Hemisphere – **Speaker: Peter Croot**

9.25 Impact of desert and volcanic aerosol deposition on phytoplankton in the Southern Indian Ocean – **Speaker: Carla Geisen**

9.40 Atmospheric trace metal deposition in the oceans south of Southern Africa – **Speaker: Kaukurauce Ismael Kanguuehi**

9.55 Aeolian dust and bioactive trace metals concentrations over the Indian Ocean – **Speaker: Ashwini Kumar**

10.10 Does the deposition of aeolian dust on the sea favor primary productivity? – **Speaker: Flavio Emiliano Paparazzo**

10.25 Influence of dust on the microbial food web in Nuevo Gulf (Patagonia, Argentina) – **Speaker: Joanna Paczkowska**

10.40 **Discussion**

10.55 **Break**

Present-day: Dynamics, Chemistry & Land Use (A. Iturri, D. Buschiazzo)

11.25	Dust emission from the agricultural fields in the semi-arid Free State, South Africa, and the influence of crusts and soil cover – Speaker: Heleen Vos
11.40	Horizontal and vertical fluxes of particulate matter during wind erosion on arable land in the province La Pampa, Argentina – Speaker: Roger Funk
11.55	Highlights of the study on aeolian dust emitted from agricultural soils of Argentina – Speaker: Juan Esteban Panebianco
12.10	PM10 emission from feedlots in soils with different texture: Cattle trampling effect – Speaker: Laura Andrea De Oro
12.25	Carbon enrichment in particulate matter is affected by the interaction between soil type and management – Speaker: Antonela Iturri
12.40	Are sodium-rich dust inputs from shrinking lakes diminishing southern South American soil fertility? – Speakers: Nicolás Cosentino, Antonela Iturri
12.55	Low source-inherited iron solubility limits fertilization potential of South American dust – Speaker: Lucio Simonella
13.10	Discussion
13.25	Break

Paleoclimate: Ice Cores (N. Cosentino, B. Delmonte)

14.25	Dust cycle in Antarctica: insights from Holocene East Antarctic firn/ice core records and atmospheric dust measurements at Concordia Station – Speaker: Bárbara Delmonte
14.40	Mineral dust in the snow pits of the East Antarctic International Ice Sheet Traverse (EAIIST): preliminary results and perspectives – Speaker: Claudio Artoni
14.55	The role of Southern Africa in explaining the East Antarctica dust fingerprint during interglacial times – Speaker: Stefania Gili
15.10	REE-based reconstruction and quantification of dust flux provenances in East Antarctica over the Last Glacial-Interglacial Transition – Speaker: Aubry Vanderstraeten
15.25	Giant dust in a tropical Andean glacier as a proxy of deep convection over the Altiplano – Speaker: Filipe G. L. Lindau
15.40	Discussion
15.55	Closing remarks

TUESDAY, 9 NOVEMBER 2021

Time UTC+0

6.30 **Opening remarks**

Present-day: Chemistry & Clouds (Conveners: N. Cosentino, P. Formenti)

6.35	Towards evaluating the impacts on Namibian mineral dust on the regional ecosystems: new data on composition and long-range transport – Speaker: Paola Formenti
6.50	Is it dust, or what? – Speaker: Jost Heintzenberg
7.05	The importance of high-latitude dust for global climate through its role in ice nucleation in clouds – Speaker: Benjamin Murray
7.20	Constraining dust-driven immersion freezing in climate models using spaceborne retrievals – Speaker: Diego Villanueva
7.35	Discussion
7.50	Break

Volcanic Ash Remobilization (Convener: F. De Vleeschouwer)

8.50	Aeolian remobilisation of volcanic ash: physical processes, particles and deposits in Southern volcanic terrains – Speaker: Lucía Dominguez
9.05	Aeolian remobilisation associated with the recent explosive activity of Sabancaya volcano in southern Peru – Speaker: Lucía Dominguez
9.20	Ensemble modelling of wind-induced resuspension of volcanic ash in Patagonia – Speaker: Eliana Sabrina Vazquez

9.35	Impacts associated with aeolian remobilisation of volcanic ash: are they so different from those related to mineral dust? – Speaker: Pablo Forte
9.50	Discussion
10.05	Break
Paleoclimate: Continental Proxies II (Conveners: A. Iturri, D. Gaiero, D. Buschiazzo)	
11.20	KEYNOTE Contributions to the study of southern hemisphere Late Pleistocene climatic variability through the characterization of South American dust sources and the related sedimentary deposits – Speaker: Diego Gaiero
11.50	KEYNOTE Late Cenozoic record of South American loess: tectonic and paleoclimatic implications – Speaker: Marcelo Zárate
12.20	Composition and origin of the sand fraction of surface sediments of the Pampean region: A review and a conception – Speaker: Héctor Morrás
12.35	Paleoenvironmental changes in southern South American dust sources recorded by clay minerals of the Pampean loess – Speaker: Matías Romero
12.50	Geochemistry of aeolian sediments recorded at Pampean Loess for the last glacial-interglacial transition: implications for provenance and climate variability – Speaker: Gabriela Torre
13.05	Minimum LGM Dust Deposition on the South American Loess and its Possible Relationship with a Coeval Maximum in Antarctica – Speaker: Renata Coppo
13.20	Unraveling mineral dust sources for the Western Amazon Basin during the last 7.5 kyrs B.P. – Speaker: Juliana De Sousa Nogueira
13.35	Southern Hemisphere westerly wind dynamics across the Pleistocene-Holocene transition as seen from the Falkland Islands, South Atlantic – Speaker: Alistair Monteath
13.50	Discussion
14.05	Break
Paleoclimate: General + Modelling (Conveners: N. Cosentino, F. Lambert)	
14.35	Current Challenges and Recent Advances in Understanding the Paleoclimatic Dust Cycle – Speaker: Fabrice Lambert
14.50	ClimAG-Krigger: A new (paleo)Climatology-oriented toolbox for Anisotropic Global Kriging interpolation – Speaker: Nicolás Cosentino
15.05	Effect of iron from dust fluxes in the Glacial Southern Ocean – Speaker: Juan Muglia
15.20	Comparative view of the iron solubility impacts on ocean carbon stored during the Last Glacial Maximum and Holocene – Speaker: Natalia Opazo
15.35	Discussion
15.50	Closing remarks

WEDNESDAY, 10 NOVEMBER 2021

Time UTC+0

6.30 **Opening remarks**

Ocean Biogeochemistry II (Conveners: A. Crespi-Abril, F. E. Paparazzo, C. Guieu)

6.35	KEYNOTE Biogeochemical impacts of dust deposition in the ocean – Speaker: Cecile Guieu
7.05	Simulating Size-resolved Atmospheric Dust Transport to Dronning Maud Land, Antarctica – Speaker: Kevin Henson
7.20	The impact of millennial scale climate change on the subantarctic Pacific during the last glacial – Speaker: Harris Anderson
7.35	Dust and fire, two distinct sources of essential nutrients (N, Fe) to the atmosphere? – Speaker: Morgane Perron
7.50	Lithogenic particle flux to the subantarctic Southern Ocean: a multi-tracer estimate using sediment trap samples – Speaker: Christopher Traill
8.05	Using thorium isotopes to quantify dust deposition to the Southern Ocean

	- Speaker: Andrea Davies
8.20	Phytoplankton community response to the deposition of wildfire aerosols - Speaker: Jacob Weis
8.35	Discussion
8.50	Break
Paleoclimate: Marine Sediment Cores (Conveners: F. De Vleeschouwer, N. Cosentino)	
	KEYNOTE
9.20	Late Quaternary paleoclimate records of southern-hemisphere drylands derived from deep-marine sediment archives – Speaker: Jen-Berend Stuut
9.50	Break
Present-day: Dynamics (Conveners: N. Cosentino, A. Crespi-Abril, S. Gassó)	
	KEYNOTE
10.00	Southern South America dust activity in relation to long range transport to Antarctica and the Southern Ocean – Speaker: Santiago Gassó
10.30	Regional and Local Mineral Dust Activity over South America - Speaker: Damián Oyarzun
10.45	Atmospheric deposition in the Atacama Desert: Mineral contribution and colonization of microorganisms in the hyperarid core – Speaker: Franko Arenas-Díaz
11.00	Dust concentration in San Jorge Gulf and adjacent shelf (Patagonia, Argentina) - Speaker: Augusto Crespi-Abril
11.15	Determination of provenance of aerosols by isotopic analysis and atmospheric modeling in the Atlantic and Southern Ocean – Speaker: Elaine Alves Dos Santos
11.30	Modern dust deposition over the South Atlantic Ocean from seafloor surface sediments - Speaker: Michelle Van Der Does
11.45	High latitude dust sources in Antarctica produce severe air pollution - Speaker: Pavla Dagsson-Waldhauserova
12.00	Transport of Patagonian mineral dust to Antarctica: Modeling of trajectories during the last decade (2010-2019) using HYSPLIT - Speaker: Lissett Celle Guerrero
12.15	Discussion
12.30	Break
Paleoclimate: Marine Sediment Cores (Conveners: F. De Vleeschouwer, N. Cosentino)	
12.45	First glance at 5 Million years of dust input to the South Pacific - Speaker: Gisela Winckler
13.00	Radiometric dating confirms >450,000 years of climate-lithogenic flux connection at the Eastern Weddell Gyre/ACC boundary – Speaker: Walter Geibert
13.15	Systematic changes in South Pacific dust provenance during the last two glacial cycles - Speaker: Torben Struve
13.30	Marine sedimentary insights into a uniquely Pacific early Holocene dust peak at ~10 ka - Speaker: Jennifer Middleton
13.45	Discussion
14.00	Closing remarks