

Program

Monday 25th June 2018

8h00 - 9h00: **Registration**

9h00 - 9h15: **Welcome**

Session "Paleoenvironments"

9h15 - 9h20: **Introduction by conveners:** J. Roskin and A. Stone

9h20 - 9h50: **Garzanti E.**, P. Vermeesch, K.A. Al-Ramadan, P. Dinis, S. Andò, M. Limonta, A. Resentini and G.Vezzoli The modern-sand lesson: provenance and ultralong sediment dispersal as documented in Arabian and southafrican sand seas. *Solicited talk*.

9h50 - 10h10: **Gorczyńska A.**, P. Stéphan, Y. Pailler, and B. Le Gall, Holocene coastal dune evolution in western France: reconstruction from archaeological data.

10h10 - 10-30: Phillips J., **R.C. Ewing**, R. Bowling, B.A. Weymer, P. Barrineu, J.A. Nittrouer and M.E. Everett, The formation of low-angle eolian stratification through the migration of protodunes.

10h30 - 11h00: **Coffee break – Group Photo**

11h00- 11h20: **Yu L.**, Aeolian-fluvial interactions stabilize desert in the Qaidam basin, Qinghai-Tibetan plateau.

11h20 - 11h40: **Roettig C.-B.** and D. Faust, Dust deposits ruling palaeosurfaces separating dune generations on northern Fuerteventura.

11h40-12h00: **Thomas D.S.G.** and R.M. Bailey, Modelling quaternary desert dune system accumulation using luminescence age data.

Session "Aerodynamics and sediment transport"

12h00 - 12h05: **Introduction by conveners:** C. McKenna-Neuman and H. Yizhaq

12h05 - 12h30: Martin R.L. and **J.F. Kok**, Equal susceptibility and size-selective mobility in aeolian saltation. *Solicited talk*.

12h30 - 13h30: **Lunch**

13h30 - 15h00: **Poster session:** "Paleoenvironments", "Aerodynamics and sediment transport", "Anthropogenic interactions", "Dust dynamics and processes: emission, dispersal, and deposition", "Interaction with vegetation".

15h00 - 15h20: **Dupont S.**, J.-L. Rajot, M. Labiadh, G. Bergametti, E. Lamaud, M.R. Irvine, S.C. Alfaro, C. Bouet, R. Fernandes, B. Khalfallah, B. Marticorena, J.-M. Bonnefond, S. Chevaillier, D. Garrigou, T. Henry-des-Tureaux, S. Sekrafi, and P. Zapf, Dissimilarity between dust, heat, and momentum turbulent transports during aeolian soil erosion.

15h20 - 15h40: **Valance A.** and J.T. Jenkins, A two-phase continuum model for windblown sand.

15h40 - 16h00: **Louge M.Y.**, A. Valance, J. Fang, S. Harnett and F. Porte-Agel, Anomalous shear velocity at the brink of a barchan dune.

16h00 - 16h20: **Gunn A.**, M. Wanker, D.A. Edmonds, R.C. Ewing and D.J. Jerolmack, From geostrophic to grain: momentum transfer in aeolian systems.

16h20 - 16h40: **Baas A.C.W.**, I. Delgado-Fernandez and D.W.T. Jackson, Measuring and testing aeolian sand transport models across a spatial grid network.

16h40 - 17h00: **Coffee Break**

17h00 - 17h20: **Dupont P.**, A. Ould El Moctar, A. Valance and T. D. Ho, Experimental study of saltated sand cloud over erodible and rigid bed conditions.

17h20 - 17h40: **Gillies J.A.**, V. Etyemezian and G. Nikolich, Trapping of sand-sized particles exterior and interior to large porous roughness forms in the atmospheric surface layer.

Session “Anthropogenic interactions”

17h40 - 17h45: **Introduction by conveners:** J. Leys and G. Sterk

17h45 - 18h15: **Sharratt B.**, Best management practices to mitigate wind erosion and particulate emissions from agricultural soils. *Solicited talk.*

18h15 - 18h35: **Klose M.**, C. Pérez García-Pando, A. Deroubaix, P. Ginoux and R. Miller, Constraining soil dust emissions from natural and anthropogenic sources.

18h35 - 18h55: Webb N.P., **A. Chappell**, J.W. Van Zee, B. Edwards and D. James, How to detect change in aeolian sediment transport.

19h00: **Ice breaker**

Tuesday 26th June 2018

9h00 - 9h45: **P. Ginoux**, Modeling mineral dust interactions with the earth system: progress, challenges and prospects. *Invited talk.*

Session “Dust dynamics and processes: emission, dispersal, and deposition”

9h45 - 9h50: **Introduction by conveners:** M. Klose and J.-B. Stuut

9h50 - 10h20: **van Hateren H.**, Eolian dust dispersal patterns reflected by the particle size characteristics of Chinese loess. *Solicited talk.*

10h20 - 10h40: **Bristow C.S.** and T.H. Moller, Do Sahara dune sands make dust?

10h40 - 11h00: **Coffee break**

11h00 - 11h20: **Etyemezian V.**, J. Gillies and G. Nikolich, Resuspension potential of volcanic ash.

11h20 - 11h40: **Ito A.**, J.-B.W. Stuut, A. Yamamoto, M. Watanabe, M.N. Aita, L. Chuxian, S. Arcusa, N. Sagoo, Z. Hoseini, C. Gonzales and F. De Vleeschouwer, Atmospheric deposition of iron from mineral aerosols to ocean ecosystem model.

11h40 - 12h00: **Rashki A.** and D. Kaskaoutis, Identification of high-resolution dust sources and dynamics over Hamoun ephemeral lakes using satellite image processing.

12h00 - 12h20: **Richards-Thomas T.** and C. McKenna-Neuman, Factors affecting the settling rate of Icelandic dust.

12h20 - 12h40: **Schepanski K.** and A. Kubin, Atmospheric controls on the interannual variability of dust concentration and dust transport pathways.

12h40 - 13h30: **Lunch**

13h30 - 15h00: **Poster session:** "Paleoenvironments", "Aerodynamics and sediment transport", "Anthropogenic interactions", "Dust dynamics and processes: emission, dispersal, and deposition", "Interaction with vegetation".

15h00 - 15h30: **ISAR Distinguished Career Award; Prospero J.**, A random walk to the Bodélé Depression: How I became a global dust collector.

15h30 - 15h50: **van der Does M.**, P. Knippertz, P. Zschenderlei, G. Harriso and J.-B. Stuut, Possible mechanisms behind the long-range transport of giant mineral dust particles.

15h50 - 16h10: **Wiggs G.F.S.**, M.C. Baddock, R.G. Bryant, D.S.G. Thomas, F. Eckardt, R. Washington, S. Engelstaedter, J. Nield, M. Seely and S. Kötting, Combining field-based observations and remote sensing data to resolve aeolian dust dynamics at a globally significant source: Etosha Pan, Namibia.

16h10 - 16h30: **Waza A.**, K. Schneiders, J. May, and K. Kandler, Methodological aspects of dust deposition sampling and dust composition study in a dust transport region (Tenerife): results from single-particle characterization.

16h30 - 16h45: **Coffee break**

Session "Interaction with vegetation"

16h45 - 16h50: **Introduction by conveners:** J. Gillies

16h50 -17h20: **Pierre C.**, L. Kergoat, P. Hiernaux, C. Baron, G. Bergametti, J.L. Rajot, A. Abdourhamane Touré, G.S. Okin, and B. Marticorena, How does agropastoral management affect wind erosion in Sahelian croplands? *Solicited talk*.

17h20 - 17h40: **Edwards B.L.**, N.P. Webb, J.W. Van Zee, and A. Chappell, Vegetation effects on spatiotemporal variability in aeolian mass flux over a range of ecological conditions.

17h40 - 18h00: **Dukes D.**, H. Gonzales, S. Ravi, D. Grandstaff, R.S. Van Pelt, J. Li, G. Wang and J. Sankey, Quantifying post-fire aeolian sediment transport in a shrub-grass ecotone using rare earth element tracers.

18h00 - 18h20: **Kergoat L.**, F. Guichard, C. Pierre, B. Marticorena, G. Bergametti, and C. Vassal, Influence of dry-season vegetation variability on Sahelian dust during 2002–2015.

18h20 - 19h20: **ISAR General Assembly**

19h20 - 21h00: **ISAR Board Meeting (Diner)**

Wednesday 27th June 2018

8h30 - 14h30: Field trip to the **Dune du Pilat** with picnic

15h00 - 18h00: Visit and wine testing at the **Chateau Pape Clément**

18h00 - 20h00: **Aeolian Research - Editorial meeting**

Thursday 28th June 2018

9h00 - 9h45: **Andreotti B.**, A physical perspective on aeolian (and non-aeolian) dunes, *Invited talk*.

Session “Dunes and bedforms”

9h45 - 9h50: **Introduction by conveners:** M. Baddock, R. Ewing, L. Ping.

9h50 - 10h20: **Rubin D.** and S. Courrech du Pont, Why longitudinal dunes are rarely recognized in the geologic record—update after 3 decades. *Solicited talk*.

10h20 - 10h40: **Rozier O.**, S. Courrech du Pont, C. Gadal, P. Claudin and C. Narteau, Morphogenesis and stability of elongating dunes. *Solicited talk*.

10h40 - 11h00: **Coffee break**

11h00 - 11h20: **Gadal C.**, P. Claudin, S. Courrech du Pont, O. Rozier and C. Narteau, Dune growth under multidirectional wind regimes.

11h20 - 11h40: **Lapotre M.G.A.**, R.C. Ewing, C.M. Weitz, K.W. Lewis, M.P. Lamb, B.L. Ehlmann, D.M. Rubin and N.T. Bridges, Morphologic diversity of Martian ripples: implications for low-intensity transport as a mechanism for large-ripple formation.

11h40 - 12h00: **Wang P.**, N. Huang and J. Zhang, Aeolian sand ripples instability and grain sorting.

12h00 - 12h20: **Liu Y.**, G. Wiggs, and R. Bailey, Numerical simulation of the internal structure of sand dunes using a cellular automaton (ca).

12h20 - 13h30: **Lunch**

13h30 - 15h00: **Poster session:** “Dunes and bedforms”, “Planetary aeolian research”, “Coastal environments”, “Modelling and numerical simulations”, “Experiments and instrumentation”.

15h00 - 15h30: **ISAR Distinguished Career Award; Lancaster N.**, Quaternary dune systems – ergs and sand seas revisited.

15h30 - 15h50: **Baird T.** and P. Vermeesch, Towards a dune celerity map of the Sahara.

15h50 - 16h10: Hay A., M. Powell, A.S. Carr and **I. Livingstone**, Accommodation space types as a control over aeolian landform development in a topographically complex environment.

Session “Planetary Aeolian research”

16h10 - 16h15: **Introduction by conveners:** J. Radebaugh and S. Silvestro

16h15 - 16h45: **Sullivan R.**, J.F. Kok, H. Yizhaq, A. Siminovich, T. Elperin and I. Katra, Low dynamic wind pressures on Mars allow a broad continuum of aeolian ripple sizes. *Solicited talk.*

16h45 - 17h00: **Coffee break**

17h00 - 17h20: **Chojnacki M.**, Planetary boundary condition control on Martian bedform mobility.

17h20 - 17h40: **Roback K.**, J.-P. Avouac, K. Runyon and F. Ayoub, Measurement of dune and ripple sand fluxes at active dunes at Nili Patera, Mars.

17h40 - 18h00: **Bordiec M.**, S. Carpy, O. Bourgeois, M. Massé, L. Perret and P. Claudin, Generation of periodic bedforms on Earth and Mars by sublimation of ice under turbulent winds.

18h00 - 18h20: **Jia P.**, B. Andreotti and P. Claudin, Giant ripples on comet 67P/Churyumov-Gerasimenko sculpted by sunset thermal wind.

18h20 - 18h40: Telfer M., E.J.R. Parteli, **J. Radebaugh**, R. Beyer, T. Bertrand, F. Forget, F. Nimmo, W. Grundy, J. Moore, A. Stern and The New Horizons Team, Transverse dunes in Sputnik Planitia, Pluto: implications for wind regime and particle size.

20h00: **Conference Dinner at the Café Maritime**

Friday 29th June 2018

Session “Coastal Environments”

9h00 - 9h05: **Introduction by conveners:** P. Hesp and D. Jackson

9h05 - 9h35: **Delgado-Fernandez I.** and T.A.G. Smyth, Linking short-term dynamics with the long-term evolution of a parabolic dune. *Solicited talk.*

9h35 - 9h55: Rotnicka J. and **M. Dluzewski**, Decadal dynamics of incipient foredunes in a tideless beach setting.

9h55 - 10h15: **Hesp P.**, L. Hernández-Calvento, A.I. Hernández-Cordero, J.B. Gallego Fernández, G. Miot da Silva and M.-H. Ruz, Nebkha or not: the role of rainfall and sediment supply in controlling nebkha vs foredune ridge formation.

10h15 - 10h35: **Galiforni Silva F.**, K.M. Wijnberg, A.V. de Groot and S.J.M.H. Hulscher, Analyzing the effect of beach width changes on coastal dune development using a cellular automata model.

10h35 - 11h00: **Coffee break**

11h00 - 11h30: **Hernández-Calvento L.**, Arid aeolian sedimentary systems on hot-spot volcanic islands: from the singularity to the paradox. The case of the Canary Islands. *Solicited talk.*

11h30 - 11h50: **Konlechner T.M.**, Post-disturbance evolution of a prograded foredune barrier: the role of wind speed, wind direction and vegetation.

11h50 - 12h10: **Rotnicka J.**, Aeolian sand transport rate on a beach in relation to the available fetch distance.

12h10 -13h05: **Lunch**

13h05 - 14h55: **Poster session:** “Dunes and bedforms”, “Planetary Aeolian research”, “Coastal environments”, “Modelling and numerical simulations”, “Experiments and instrumentation”.

Session “Modelling and numerical simulations”

14h55 - 15h00: **Introduction by conveners:** J. Nield and A. Valance

15h00 - 15h20: **Fernandes R.**, S. Dupont and E. Lamaud, Investigating the dissimilarity between dust and momentum turbulent transports using large eddy simulation.

15h20 - 15h40: **Huo X.** and N. Huang, Numerical simulations on the emergence of aeolian sand ripples.

15h40 - 16h00: **He P.**, Y. Xu, and N. Huang, Numerical simulations of three-dimensional sand transport under unsteady wind.

Session “Experiments and instrumentation”

16h00 - 16h05: **Introduction by conveners:** M. Louge and G. Wiggs

16h05 - 16h35: **Avouac J.-P.**, F. Ayoub, S. Michel and K. Roback, Measurement of Aeolian bedforms dynamics from time series of optical images. *Solicited talk.*

16h35 - 17h00: **Coffee break**

17h00 - 17h20: **Selmani H.**, A. Valance, A. Ould El Moctar and P. Dupont, Experimental measurements of the relaxation length in aeolian sand transport.

17h20 - 17h40: **Ning Q.** and B. Li, A new laser sheet sensor (LASS) for wind-blown sand flux measurement.

17h40 - 18h00: **Nield J.M.**, M.C. Baddock and G.F.S. Wiggs, Interacting protodunes.

18h00 - 18h20: **Von Holdt J.**, F. Eckardt, G. Wiggs, M. Baddock, and M. Hpondoka, Influence of sampling approaches on physical and geochemical analysis of aeolian dust in source regions.

18h20 - 18h40: **Khalfallah B.**, C. Bouet, M.T. Labiadh, S.C. Alfaro, J.L. Rajot, G. Bergametti, B. Marticorena, S. Dupont, S. Lafon, J.M. Bonnefond, S. Chevaillier, A. Féron, D. Garrigou, P. Hease, T. Henry des Tureaux, S. Sekrafi, and P. Zapf, Size resolved dust emission fluxes measured by the gradient method during 6 dust storms of the WIND-O-V's 2017 experiment in southern Tunisia.

18h40 - 19h00: **Student Presentation Award and closure of the meeting**