Thomas PÃ¤htz

List of Publications by Year
in descending order

29 papers	918 citations	471509 17 h-index	477307 29 g-index
36 all docs	36 docs citations	36 times ranked	757 citing authors

#	Article	IF	Citations
1	Why do particle clouds generate electric charges?. Nature Physics, 2010, 6, 364-368.	16.7	142
2	The Physics of Sediment Transport Initiation, Cessation, and Entrainment Across Aeolian and Fluvial Environments. Reviews of Geophysics, 2020, 58, e2019RG000679.	23.0	97
3	The apparent roughness of a sand surface blown by wind from an analytical model of saltation. New Journal of Physics, 2012, 14, 043035.	2.9	62
4	Flux Saturation Length of Sediment Transport. Physical Review Letters, 2013, 111, 218002.	7.8	62
5	Jump at the Onset of Saltation. Physical Review Letters, 2011, 107, 098001.	7.8	53
6	Midair Collisions Enhance Saltation. Physical Review Letters, 2013, 111, 058001.	7.8	53
7	The Cessation Threshold of Nonsuspended Sediment Transport Across Aeolian and Fluvial Environments. Journal of Geophysical Research F: Earth Surface, 2018, 123, 1638-1666.	2.8	42
8	Unification of Aeolian and Fluvial Sediment Transport Rate from Granular Physics. Physical Review Letters, 2020, 124, 168001.	7.8	42
9	Analytical model for flux saturation in sediment transport. Physical Review E, 2014, 89, 052213.	2.1	35
10	Local Rheology Relation with Variable Yield Stress Ratio across Dry, Wet, Dense, and Dilute Granular Flows. Physical Review Letters, 2019, 123, 048001.	7.8	34
11	Electric Field and Humidity Trigger Contact Electrification. Physical Review X, 2015, 5, .	8.9	30
12	Fluid forces or impacts: What governs the entrainment of soil particles in sediment transport mediated by a Newtonian fluid?. Physical Review Fluids, 2017, 2, .	2.5	30
13	Discrete Element Method simulations of the saturation of aeolian sand transport. Geophysical Research Letters, 2015, 42, 2063-2070.	4.0	27
14	The Critical Role of the Boundary Layer Thickness for the Initiation of Aeolian Sediment Transport. Geosciences (Switzerland), 2018, 8, 314.	2.2	27
15	Universal friction law at granular solid-gas transition explains scaling of sediment transport load with excess fluid shear stress. Physical Review Fluids, 2018, 3, .	2.5	22
16	The Effect of Turbulence on Drifting Snow Sublimation. Geophysical Research Letters, 2019, 46, 11568-11575.	4.0	20
17	Well-balanced and flexible morphological modeling of swash hydrodynamics and sediment transport. Coastal Engineering, 2015, 96, 27-37.	4.0	19
18	Is it appropriate to model turbidity currents with the threeâ€equation model?. Journal of Geophysical Research F: Earth Surface, 2015, 120, 1153-1170.	2.8	15

#	Article	IF	Citations
19	Unified Model of Sediment Transport Threshold and Rate Across Weak and Intense Subaqueous Bedload, Windblown Sand, and Windblown Snow. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2020JF005859.	2.8	15
20	The fluctuation energy balance in non-suspended fluid-mediated particle transport. Physics of Fluids, 2015, 27, 013303.	4.0	13
21	Megaripple mechanics: bimodal transport ingrained in bimodal sands. Nature Communications, 2022, 13, 162.	12.8	13
22	Front Velocity and Front Location of Lock-Exchange Gravity Currents Descending a Slope in a Linearly Stratified Environment. Journal of Hydraulic Engineering, 2018, 144, .	1.5	12
23	An optimized dispersionâ€"relation-preserving combined compact difference scheme to solve advection equations. Journal of Computational Physics, 2015, 300, 92-115.	3.8	11
24	Modeling of Breaching Due to Overtopping Flow and Waves Based on Coupled Flow and Sediment Transport. Water (Switzerland), 2015, 7, 4283-4304.	2.7	10
25	Fluid-particle interaction regimes during the evolution of turbidity currents from a coupled LES/DEM model. Advances in Water Resources, 2022, 163, 104171.	3.8	9
26	Large Effects of Particle Size Heterogeneity on Dynamic Saltation Threshold. Journal of Geophysical Research F: Earth Surface, 2019, 124, 2311-2321.	2.8	8
27	Limitations of empirical sediment transport formulas for shallow water and their consequences for swash zone modelling. Journal of Hydraulic Research/De Recherches Hydrauliques, 2017, 55, 114-120.	1.7	6
28	Aeolian sand transport: Scaling of mean saltation length and height and implications for mass flux scaling. Aeolian Research, 2021, 52, 100730.	2.7	6
29	Comment on â€œDistinct Thresholds for the Initiation and Cessation of Aeolian Saltation From Field Measurementsâ€•by Raleigh L. Martin and Jasper F. Kok: Alternative Interpretation of Measured Thresholds as Two Distinct Cessation Thresholds. Journal of Geophysical Research F: Earth Surface, 2018, 123, 3388-3391.	2.8	3