

Antoine Lucas

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

3,192
citations

159585

30
h-index

149698

56
g-index

76
all docs

76
docs citations

76
times ranked

2945
citing authors

#	ARTICLE	IF	CITATIONS
1	Frictional velocity-weakening in landslides on Earth and on other planetary bodies. <i>Nature Communications</i> , 2014, 5, 3417.	12.8	224
2	Earth-like sand fluxes on Mars. <i>Nature</i> , 2012, 485, 339-342.	27.8	219
3	Erosion and mobility in granular collapse over sloping beds. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	200
4	The seismicity of Mars. <i>Nature Geoscience</i> , 2020, 13, 205-212.	12.9	194
5	The atmosphere of Mars as observed by InSight. <i>Nature Geoscience</i> , 2020, 13, 190-198.	12.9	161
6	Stratigraphy, mineralogy, and origin of layered deposits inside Terby crater, Mars. <i>Icarus</i> , 2011, 211, 273-304.	2.5	131
7	OZCAR: The French Network of Critical Zone Observatories. <i>Vadose Zone Journal</i> , 2018, 17, 1-24.	2.2	126
8	Sinuuous gullies on Mars: Frequency, distribution, and implications for flow properties. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	118
9	Numerical modeling of landquakes. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	110
10	Low palaeopressure of the martian atmosphere estimated from the size distribution of ancient craters. <i>Nature Geoscience</i> , 2014, 7, 335-339.	12.9	88
11	Atmospheric Science with InSight. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	88
12	Threshold for sand mobility on Mars calibrated from seasonal variations of sand flux. <i>Nature Communications</i> , 2014, 5, 5096.	12.8	86
13	Geology and Physical Properties Investigations by the InSight Lander. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	77
14	Morphological and mechanical characterization of gullies in a periglacial environment: The case of the Russell crater dune (Mars). <i>Planetary and Space Science</i> , 2012, 71, 38-54.	1.7	76
15	Mobility and topographic effects for large Valles Marineris landslides on Mars. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	75
16	A global topographic map of Titan. <i>Icarus</i> , 2013, 225, 367-377.	2.5	70
17	Global mapping and characterization of Titan's dune fields with Cassini: Correlation between RADAR and VIMS observations. <i>Icarus</i> , 2014, 230, 168-179.	2.5	68
18	On the run-out distance of geophysical gravitational flows: Insight from fluidized granular collapse experiments. <i>Earth and Planetary Science Letters</i> , 2011, 311, 375-385.	4.4	65

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19	Sand dune patterns on Titan controlled by long-term climate cycles. <i>Nature Geoscience</i> , 2015, 8, 15-19.	12.9	56
20	Growth mechanisms and dune orientation on Titan. <i>Geophysical Research Letters</i> , 2014, 41, 6093-6100.	4.0	52
21	Methane storms as a driver of Titan's dune orientation. <i>Nature Geoscience</i> , 2015, 8, 362-366.	12.9	52
22	Sediment flux from the morphodynamics of elongating linear dunes. <i>Geology</i> , 2015, 43, 1027-1030.	4.4	52
23	Pacing early Mars river activity: Embedded craters in the Aeolis Dorsa region imply river activity spanned $\sim 10^3$ (1-20) Myr. <i>Icarus</i> , 2013, 225, 850-855.	2.5	49
24	Persistence of intense, climate-driven runoff late in Mars history. <i>Science Advances</i> , 2019, 5, eaav7710.	10.3	49
25	Impact-Seismic Investigations of the InSight Mission. <i>Space Science Reviews</i> , 2018, 214, 1.	8.1	48
26	Influence of the scar geometry on landslide dynamics and deposits: Application to Martian landslides. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	46
27	Thermally anomalous features in the subsurface of Enceladus's south polar terrain. <i>Nature Astronomy</i> , 2017, 1, .	10.1	41
28	Crust stratigraphy and heterogeneities of the first kilometers at the dichotomy boundary in western Elysium Planitia and implications for InSight lander. <i>Icarus</i> , 2020, 338, 113511.	2.5	40
29	Stratigraphy of Aeolis Dorsa, Mars: Stratigraphic context of the great river deposits. <i>Icarus</i> , 2015, 253, 223-242.	2.5	38
30	Titan as Revealed by the Cassini Radar. <i>Space Science Reviews</i> , 2019, 215, 1.	8.1	34
31	A radar map of Titan Seas: Tidal dissipation and ocean mixing through the throat of Kraken. <i>Icarus</i> , 2014, 237, 9-15.	2.5	33
32	Monitoring of Dust Devil Tracks Around the InSight Landing Site, Mars, and Comparison With In Situ Atmospheric Data. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087234.	4.0	30
33	Geological Evolution of Titan's Equatorial Regions: Possible Nature and Origin of the Dune Material. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1089-1112.	3.6	28
34	Low thermal inertias of icy planetary surfaces. <i>Astronomy and Astrophysics</i> , 2016, 588, A133.	5.1	27
35	Compositional and spatial variations in Titan dune and interdune regions from Cassini VIMS and RADAR. <i>Icarus</i> , 2016, 270, 222-237.	2.5	27
36	Resolving the era of river-forming climates on Mars using stratigraphic logs of river-deposit dimensions. <i>Earth and Planetary Science Letters</i> , 2015, 420, 55-65.	4.4	25

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37	A New Crater Near InSight: Implications for Seismic Impact Detectability on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006382.	3.6	24
38	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 1: Multiâ€Instrument Observations, Analysis, and Implications. <i>Journal of Geophysical Research E: Planets</i> , 2021, 126, e2020JE006757.	3.6	23
39	Empirical investigation of friction weakening of terrestrial and Martian landslides using discrete element models. <i>Landslides</i> , 2019, 16, 1121-1140.	5.4	21
40	Geometry and Segmentation of Cerberus Fossae, Mars: Implications for Marsquake Properties. <i>Journal of Geophysical Research E: Planets</i> , 2022, 127, .	3.6	20
41	The case for seasonal surface changes at Titanâ€s lake district. <i>Nature Astronomy</i> , 2019, 3, 506-510.	10.1	19
42	Insights into Titan's geology and hydrology based on enhanced image processing of Cassini RADAR data. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 2149-2166.	3.6	18
43	Observational evidence for active dust storms on Titan at equinox. <i>Nature Geoscience</i> , 2018, 11, 727-732.	12.9	18
44	Seismic sources of InSight marsquakes and seismotectonic context of Elysium Planitia, Mars. <i>Tectonophysics</i> , 2022, 837, 229434.	2.2	18
45	Variations in Titanâ€s dune orientations as a result of orbital forcing. <i>Icarus</i> , 2016, 270, 197-210.	2.5	16
46	First quantification of relationship between dune orientation and sediment availability, Olympia Undae, Mars. <i>Earth and Planetary Science Letters</i> , 2018, 489, 241-250.	4.4	14
47	Topography Curvature Effects in Thinâ€Layer Models for Gravityâ€Driven Flows Without Bed Erosion. <i>Journal of Geophysical Research F: Earth Surface</i> , 2021, 126, e2020JF005657.	2.8	13
48	Seasonal seismic activity on Mars. <i>Earth and Planetary Science Letters</i> , 2021, 576, 117171.	4.4	13
49	Operational Estimation of Landslide Runout: Comparison of Empirical and Numerical Methods. <i>Geosciences (Switzerland)</i> , 2020, 10, 424.	2.2	11
50	Dynamics of recent landslides (<20 My) on Mars: Insights from high-resolution topography on Earth and Mars and numerical modelling. <i>Planetary and Space Science</i> , 2021, 206, 105303.	1.7	10
51	Titan's surface geology. , 2014, , 63-101.		8
52	Deep-seated gravitational slope deformation scaling on Mars and Earth: same fate for different initial conditions and structural evolutions. <i>Earth Surface Dynamics</i> , 2019, 7, 361-376.	2.4	8
53	A New Digital Terrain Model of the Huygens Landing Site on Saturn's Largest Moon, Titan. <i>Earth and Space Science</i> , 2020, 7, e2020EA001127.	2.6	7
54	Science goals and new mission concepts for future exploration of Titanâ€s atmosphere, geology and habitability: titan POLar scout/orbitEr and in situ lake lander and DrONE explorer (POSEIDON). <i>Experimental Astronomy</i> , 2022, 54, 911-973.	3.7	5

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55	Texture and Composition of Titan's Equatorial Sand Seas Inferred From Cassini SAR Data: Implications for Aeolian Transport and Dune Morphodynamics. <i>Journal of Geophysical Research E: Planets</i> , 2019, 124, 3140-3163.	3.6	3
56	Decennial Geomorphic Transport From Archived Time Series Digital Elevation Models: A cookbook for tropical and alpine environments. <i>IEEE Geoscience and Remote Sensing Magazine</i> , 2022, 10, 120-134.	9.6	3
57	The thermal emission of Saturn's icy moons. <i>Astronomy and Astrophysics</i> , 2021, 655, A8.	5.1	2
58	Slippery sliding on icy Iapetus. <i>Nature Geoscience</i> , 2012, 5, 524-525.	12.9	1
59	Preoperative Planning of Femoro-iliac Lesions Treated by Endovascular Techniques Improves the Rate of Restenosis. <i>Annals of Vascular Surgery</i> , 2014, 28, 1356-1357.	0.9	0
60	Aorto-iliac Anatomy Is Not a Predictive Factor of Limb Thrombosis after EVAR. <i>Annals of Vascular Surgery</i> , 2014, 28, 1360.	0.9	0