Sebastien Rodriguez

List of Publications by Year
in descending order

95 papers	4,209 citations	101543 36 h-index	118850 62 g-index
101 all docs	101 docs citations	101 times ranked	1905 citing authors

#	Article	IF	Citations
1	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). Experimental Astronomy, 2022, 54, 911-973.	3.7	5
2	Geometry and Segmentation of Cerberus Fossae, Mars: Implications for Marsquake Properties. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	20
3	An autonomous lunar geophysical experiment package (ALGEP) for future space missions. Experimental Astronomy, 2022, 54, 617-640.	3.7	2
4	Coexistence of Two Dune Growth Mechanisms in a Landscapeâ€Scale Experiment. Geophysical Research Letters, 2022, 49, .	4.0	2
5	Titan Stratospheric Haze Bands Observed in Cassini VIMS as Tracers of Meridional Circulation. Planetary Science Journal, 2022, 3, 114.	3.6	3
6	Near-surface structure of a large linear dune and an associated crossing dune of the northern Namib Sand Sea from Ground Penetrating Radar: Implications for the history of large linear dunes on Earth and Titan. Aeolian Research, 2022, 57, 100813.	2.7	3
7	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 2: Local Meteorology, Transport Dynamics, and Model Analysis. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006514.	3.6	19
8	Constraining Martian Regolith and Vortex Parameters From Combined Seismic and Meteorological Measurements. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006410.	3.6	16
9	Direct validation of dune instability theory. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	15
10	Vortexâ€Dominated Aeolian Activity at InSight's Landing Site, Part 1: Multiâ€Instrument Observations, Analysis, and Implications. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006757.	3.6	23
11	Titan: Earth-like on the Outside, Ocean World on the Inside. Planetary Science Journal, 2021, 2, 112.	3.6	21
12	Distribution and intensity of water ice signature in South Xanadu and Tui Regio. Icarus, 2021, 364, 114464.	2.5	7
13	Tracking Short-term Variations in the Haze Distribution of Titanâ€™s Atmosphere with SINFONI VLT. Planetary Science Journal, 2021, 2, 180.	3.6	3
14	A Study of Daytime Convective Vortices and Turbulence in the Martian Planetary Boundary Layer Based on Halfâ€aâ€Year of InSight Atmospheric Measurements and Largeâ€Eddy Simulations. Journal of Geophysical Research E: Planets, 2021, 126, .	3.6	45
15	Inferring Vortex and Dust Devil Statistics from InSight. Planetary Science Journal, 2021, 2, 206.	3.6	6
16	Spectral and emissivity analysis of the raised ramparts around Titan's northern lakes. Icarus, 2020, 344, 113338.	2.5	13
17	Crust stratigraphy and heterogeneities of the first kilometers at the dichotomy boundary in western Elysium Planitia and implications for InSight lander. Icarus, 2020, 338, 113511.	2.5	40
18	A New Crater Near InSight: Implications for Seismic Impact Detectability on Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006382.	3.6	24

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19	A New Digital Terrain Model of the Huygens Landing Site on Saturn's Largest Moon, Titan. Earth and Space Science, 2020, 7, e2020EA001127.	2.6	7
20	Subsurface Structure at the InSight Landing Site From Compliance Measurements by Seismic and Meteorological Experiments. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006387.	3.6	44
21	Geology of the InSight landing site on Mars. Nature Communications, 2020, 11, 1014.	12.8	107
22	The atmosphere of Mars as observed by InSight. Nature Geoscience, 2020, 13, 190-198.	12.9	161
23	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. Nature Geoscience, 2020, 13, 213-220.	12.9	207
24	Monitoring of Dust Devil Tracks Around the InSight Landing Site, Mars, and Comparison With In Situ Atmospheric Data. Geophysical Research Letters, 2020, 47, e2020GL087234.	4.0	30
25	Photometrically-corrected global infrared mosaics of Enceladus: New implications for its spectral diversity and geological activity. Icarus, 2020, 349, 113848.	2.5	10
26	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	12.9	274
27	Spatio-temporal Variation of Bright Ephemeral Features on Titanâ€™s North Pole. Planetary Science Journal, 2020, 1, 31.	3.6	7
28	Texture and Composition of Titan's Equatorial Sand Seas Inferred From Cassini SAR Data: Implications for Aeolian Transport and Dune Morphodynamics. Journal of Geophysical Research E: Planets, 2019, 124, 3140-3163.	3.6	3
29	Close-range remote sensing of Saturnâ€™s rings during Cassiniâ€™s ring-grazing orbits and Grand Finale. Science, 2019, 364, .	12.6	17
30	Titan as Revealed by the Cassini Radar. Space Science Reviews, 2019, 215, 1.	8.1	34
31	The case for seasonal surface changes at Titanâ€™s lake district. Nature Astronomy, 2019, 3, 506-510.	10.1	19
32	The Cassini VIMS archive of Titan: From browse products to global infrared color maps. Icarus, 2019, 319, 121-132.	2.5	17
33	Observational Evidence for Summer Rainfall at Titan's North Pole. Geophysical Research Letters, 2019, 46, 1205-1212.	4.0	14
34	Geological Evolution of Titan's Equatorial Regions: Possible Nature and Origin of the Dune Material. Journal of Geophysical Research E: Planets, 2018, 123, 1089-1112.	3.6	28
35	The Spectral Nature of Titan's Major Geomorphological Units: Constraints on Surface Composition. Journal of Geophysical Research E: Planets, 2018, 123, 489-507.	3.6	33
36	First quantification of relationship between dune orientation and sediment availability, Olympia Undae, Mars. Earth and Planetary Science Letters, 2018, 489, 241-250.	4.4	14

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37	Impact-Seismic Investigations of the InSight Mission. Space Science Reviews, 2018, 214, 1.	8.1	48
38	Atmospheric Science with InSight. Space Science Reviews, 2018, 214, 1.	8.1	88
39	Observational evidence for active dust storms on Titan at equinox. Nature Geoscience, 2018, 11, 727-732.	12.9	18
40	Mapping polar atmospheric features on Titan with VIMS: From the dissipation of the northern cloud to the onset of a southern polar vortex. Icarus, 2018, 311, 371-383.	2.5	20
41	Geology and Physical Properties Investigations by the InSight Lander. Space Science Reviews, 2018, 214, 1.	8.1	77
42	Titan's Meteorology Over the Cassini Mission: Evidence for Extensive Subsurface Methane Reservoirs. Geophysical Research Letters, 2018, 45, 5320-5328.	4.0	47
43	Spherical Radiative Transfer in C++ (SRTC++): A Parallel Monte Carlo Radiative Transfer Model for Titan. Astronomical Journal, 2018, 155, 264.	4.7	6
44	ACETYLENE ON TITANâ€™S SURFACE. Astrophysical Journal, 2016, 828, 55.	4.5	36
45	Cassini's geological and compositional view of Tethys. Icarus, 2016, 274, 1-22.	2.5	13
46	Titan Science with the James Webb Space Telescope. Publications of the Astronomical Society of the Pacific, 2016, 128, 018007.	3.1	19
47	Temporal variations of Titanâ€™s surface with Cassini/VIMS. Icarus, 2016, 270, 85-99.	2.5	29
48	Possible temperate lakes on Titan. Icarus, 2015, 257, 313-323.	2.5	13
49	Methane storms as a driver of Titanâ€™s duneÂorientation. Nature Geoscience, 2015, 8, 362-366.	12.9	52
50	Sediment flux from the morphodynamics of elongating linear dunes. Geology, 2015, 43, 1027-1030.	4.4	52
51	Titan's surface and atmosphere as seen by the vims hyperspectral imager onboard cassini. , 2014, , .		0
52	Surface albedo spectral properties of geologically interesting areas on Titan. Journal of Geophysical Research E: Planets, 2014, 119, 1729-1747.	3.6	30
53	Science goals and mission concept for the future exploration of Titan and Enceladus. Planetary and Space Science, 2014, 104, 59-77.	1.7	15
54	Global mapping and characterization of Titanâ€™s dune fields with Cassini: Correlation between RADAR and VIMS observations. Icarus, 2014, 230, 168-179.	2.5	68

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55	Sedimentation waves on the Martian North Polar Cap: Analogy with megadunes in Antarctica. Earth and Planetary Science Letters, 2014, 403, 56-66.	4.4	20
56	Cassini/VIMS observes rough surfaces on Titanâ€™s Punga Mare in specular reflection. Planetary Science, 2014, 3, 3.	1.5	31
57	Growth mechanisms and dune orientation on Titan. Geophysical Research Letters, 2014, 41, 6093-6100.	4.0	52
58	Evidence of Titanâ€™s climate history from evaporite distribution. Icarus, 2014, 243, 191-207.	2.5	62
59	Precipitation-induced surface brightenings seen on Titan by Cassini VIMS and ISS. Planetary Science, 2013, 2, .	1.5	45
60	Titanâ€™s surface and atmosphere from Cassini/VIMS data with updated methane opacity. Icarus, 2013, 226, 470-486.	2.5	92
61	A TRANSMISSION SPECTRUM OF TITAN'S NORTH POLAR ATMOSPHERE FROM A SPECULAR REFLECTION OF THE SUN. Astrophysical Journal, 2013, 777, 161.	4.5	23
62	Global mapping of Titanâ€²s surface using an empirical processing method for the atmospheric and photometric correction of Cassini/VIMS images. Planetary and Space Science, 2012, 73, 178-190.	1.7	24
63	Edge detection applied to Cassini images reveals no measurable displacement of Ontario Lacus' margin between 2005 and 2010. Journal of Geophysical Research, 2012, 117, .	3.3	18
64	Observations of Titanâ€™s Northern lakes at 5Î¼m: Implications for the organic cycle and geology. Icarus, 2012, 221, 768-786.	2.5	72
65	Geomorphological significance of Ontario Lacus on Titan: Integrated interpretation of Cassini VIMS, ISS and RADAR data and comparison with the Etosha Pan (Namibia). Icarus, 2012, 218, 788-806.	2.5	55
66	Mapping Titan's surface features within the visible spectrum via Cassini VIMS. Planetary and Space Science, 2012, 60, 52-61.	1.7	25
67	Dissipation of Titan's north polar cloud at northern spring equinox. Planetary and Space Science, 2012, 60, 86-92.	1.7	33
68	AVIATRâ€”Aerial Vehicle for In-situ and Airborne Titan Reconnaissance. Experimental Astronomy, 2012, 33, 55-127.	3.7	45
69	DUAL ORIGIN OF AEROSOLS IN TITAN'S DETACHED HAZE LAYER. Astrophysical Journal Letters, 2011, 741, L32.	8.3	16
70	Titanâ€™s cloud seasonal activity from winter to spring with Cassini/VIMS. Icarus, 2011, 216, 89-110.	2.5	68
71	Organic sedimentary deposits in Titanâ€™s dry lakebeds: Probable evaporite. Icarus, 2011, 216, 136-140.	2.5	96
72	Wave constraints for Titanâ€™s Jingpo Lacus and Kraken Mare from VIMS specular reflection lightcurves. Icarus, 2011, 211, 722-731.	2.5	38

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73	Detection and mapping of hydrocarbon deposits on Titan. Journal of Geophysical Research, 2010, 115, .	3.3	147
74	Titan haze distribution and optical properties retrieved from recent observations. Icarus, 2010, 208, 850-867.	2.5	85
75	Global mapping of Titan in the infrared using a heuristic approach to reduce the atmospheric scattering component. , 2010, , .		2
76	Systematic detection of Titan's clouds in VIMS/Cassini hyperspectral images using a new automated algorithm. , 2010, , .		0
77	CHARACTERIZATION OF CLOUDS IN TITAN'S TROPICAL ATMOSPHERE. Astrophysical Journal, 2009, 702, L105-L109.	4.5	35
78	Fast forward modeling of Titan's infrared spectra to invert VIMS/Cassini hyperspectral images. , 2009, , .		0
79	Analysis of a cryolava flow-like feature on Titan. Planetary and Space Science, 2009, 57, 870-879.	1.7	31
80	VIMS spectral mapping observations of Titan during the Cassini prime mission. Planetary and Space Science, 2009, 57, 1950-1962.	1.7	28
81	TandEM: Titan and Enceladus mission. Experimental Astronomy, 2009, 23, 893-946.	3.7	77
82	A review of Titanâ€™s atmospheric phenomena. Astronomy and Astrophysics Review, 2009, 17, 105-147.	25.5	15
83	Global circulation as the main source of cloud activity on Titan. Nature, 2009, 459, 678-682.	27.8	76
84	The opposition effect in the outer Solar system: A comparative study of the phase function morphology. Planetary and Space Science, 2009, 57, 1282-1301.	1.7	13
85	Titan's surface: Search for spectral diversity and composition using the Cassini VIMS investigation. Icarus, 2008, 194, 212-242.	2.5	83
86	Spectroscopy, morphometry, and photoclinometry of Titan's dunefields from Cassini/VIMS. Icarus, 2008, 195, 400-414.	2.5	125
87	Fluvial erosion and post-erosional processes on Titan. Icarus, 2008, 197, 526-538.	2.5	88
88	Mapping and interpretation of Sinlap crater on Titan using Cassini VIMS and RADAR data. Journal of Geophysical Research, 2008, 113, .	3.3	60
89	Nearâ€infrared spectral mapping of Titan's mountains and channels. Journal of Geophysical Research, 2007, 112, .	3.3	82
90	Global-scale surface spectral variations on Titan seen from Cassini/VIMS. Icarus, 2007, 186, 242-258.	2.5	110

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91	Cassini observations of flow-like features in western Tui Regio, Titan. Geophysical Research Letters, 2006, 33, .	4.0	66
92	Cassini/VIMS hyperspectral observations of the HUYGENS landing site on Titan. Planetary and Space Science, 2006, 54, 1510-1523.	1.7	79
93	Release of volatiles from a possible cryovolcano from near-infrared imaging of Titan. Nature, 2005, 435, 786-789.	27.8	208
94	Impact of aerosols present in Titan's atmosphere on the CASSINI radar experiment. Icarus, 2003, 164, 213-227.	2.5	24
95	Possible identification of local deposits of Cl2SO2 on Io from NIMS/Galileo spectra. Journal of Geophysical Research, 2003, 108, 8-1-8-19.	3.3	32