Ari-Matti Harri

List of Publications by Year
in descending order

86 papers	8,569 citations	81839 39 h-index	60583 81 g-index
101 all docs	101 docs citations	101 times ranked	5323 citing authors

#	Article	IF	Citations
1	A Habitable Fluvio-Lacustrine Environment at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1242777.	6.0	687
2	In situ measurements of the physical characteristics of Titan's environment. Nature, 2005, 438, 785-791.	13.7	620
3	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1243480.	6.0	508
4	Marsâ€™ Surface Radiation Environment Measured with the Mars Science Laboratoryâ€™s Curiosity Rover. Science, 2014, 343, 1244797.	6.0	475
5	Mars methane detection and variability at Gale crater. Science, 2015, 347, 415-417.	6.0	373
6	Volatile, Isotope, and Organic Analysis of Martian Fines with the Mars Curiosity Rover. Science, 2013, 341, 1238937.	6.0	367
7	X-ray Diffraction Results from Mars Science Laboratory: Mineralogy of Rocknest at Gale Crater. Science, 2013, 341, 1238932.	6.0	327
8	Abundance and Isotopic Composition of Gases in the Martian Atmosphere from the Curiosity Rover. Science, 2013, 341, 263-266.	6.0	327
9	Martian Fluvial Conglomerates at Gale Crater. Science, 2013, 340, 1068-1072.	6.0	326
10	Volatile and Organic Compositions of Sedimentary Rocks in Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1245267.	6.0	323
11	Curiosity at Gale Crater, Mars: Characterization and Analysis of the Rocknest Sand Shadow. Science, 2013, 341, 1239505.	6.0	280
12	Transient liquid water and water activity at Gale crater on Mars. Nature Geoscience, 2015, 8, 357-361.	5.4	277
13	REMS: The Environmental Sensor Suite for the Mars Science Laboratory Rover. Space Science Reviews, 2012, 170, 583-640.	3.7	247
14	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. Science, 2014, 343, 1244734.	6.0	246
15	Isotope Ratios of H, C, and O in CO ₂ and H ₂ O of the Martian Atmosphere. Science, 2013, 341, 260-263.	6.0	241
16	In Situ Radiometric and Exposure Age Dating of the Martian Surface. Science, 2014, 343, 1247166.	6.0	224
17	Background levels of methane in Marsâ€™ atmosphere show strong seasonal variations. Science, 2018, 360, 1093-1096.	6.0	224
18	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. Science, 2013, 341, 1238670.	6.0	215

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19	Evidence for indigenous nitrogen in sedimentary and aeolian deposits from the <i>Curiosity</i> rover investigations at Gale crater, Mars. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4245-4250.	3.3	172
20	The Petrochemistry of Jake_M: A Martian Mugearite. Science, 2013, 341, 1239463.	6.0	134
21	Convective vortices and dust devils at the Phoenix Mars mission landing site. Journal of Geophysical Research, 2010, 115, .	3.3	118
22	The imprint of atmospheric evolution in the D/H of Hesperian clay minerals on Mars. Science, 2015, 347, 412-414.	6.0	113
23	Curiosity's rover environmental monitoring station: Overview of the first 100 sols. Journal of Geophysical Research E: Planets, 2014, 119, 1680-1688.	1.5	112
24	Low Upper Limit to Methane Abundance on Mars. Science, 2013, 342, 355-357.	6.0	103
25	Pressure observations by the Curiosity rover: Initial results. Journal of Geophysical Research E: Planets, 2014, 119, 82-92.	1.5	84
26	Preliminary interpretation of the REMS pressure data from the first 100 sols of the MSL mission. Journal of Geophysical Research E: Planets, 2014, 119, 440-453.	1.5	80
27	Mars Science Laboratory relative humidity observations: Initial results. Journal of Geophysical Research E: Planets, 2014, 119, 2132-2147.	1.5	75
28	Observational evidence of a suppressed planetary boundary layer in northern Gale Crater, Mars as seen by the Navcam instrument onboard the Mars Science Laboratory rover. Icarus, 2015, 249, 129-142.	1.1	66
29	Title is missing!. Space Science Reviews, 2002, 104, 395-431.	3.7	64
30	Microphysical Properties of Snow and Their Link to Zeâ€“S Relations during BAECC 2014. Journal of Applied Meteorology and Climatology, 2017, 56, 1561-1582.	0.6	62
31	Meteorological Predictions for Mars 2020 Perseverance Rover Landing Site at Jezero Crater. Space Science Reviews, 2020, 216, 1.	3.7	62
32	Temperature, pressure, and wind instrumentation in the Phoenix meteorological package. Journal of Geophysical Research, 2008, 113, .	3.3	58
33	The dynamic atmospheric and aeolian environment of Jezero crater, Mars. Science Advances, 2022, 8, .	4.7	47
34	Network science landers for Mars. Advances in Space Research, 1999, 23, 1915-1924.	1.2	46
35	Atmospheric tides in Gale Crater, Mars. Icarus, 2016, 268, 37-49.	1.1	45
36	On pressure measurement and seasonal pressure variations during the Phoenix mission. Journal of Geophysical Research, 2010, 115, .	3.3	44

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37	Diurnal variations of energetic particle radiation at the surface of Mars as observed by the Mars Science Laboratory Radiation Assessment Detector. Journal of Geophysical Research E: Planets, 2014, 119, 1345-1358.	1.5	44
38	Effects of CO₂ and dust on present-day solar radiation and climate on Mars. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 2907-2922.	1.0	42
39	Kinetic simulations of finite gyroradius effects in the lunar plasma environment on global, meso, and microscales. Planetary and Space Science, 2012, 74, 146-155.	0.9	42
40	Comparison of Martian surface ionizing radiation measurements from MSLâ€RAD with Badhwarâ€O'Neill 2011/HZETRN model calculations. Journal of Geophysical Research E: Planets, 2014, 119, 1311-1321.	1.5	42
41	Mars Pathfinder: New data and new model simulations. Quarterly Journal of the Royal Meteorological Society, 2004, 130, 669-683.	1.0	40
42	Retrieval of water vapor column abundance and aerosol properties from ChemCam passive sky spectroscopy. Icarus, 2018, 307, 294-326.	1.1	39
43	The diurnal water cycle at Curiosity: Role of exchange with the regolith. Icarus, 2016, 265, 63-69.	1.1	34
44	A sophisticated lander for scientific exploration of Mars: scientific objectives and implementation of the Mars-96 Small Station. Planetary and Space Science, 1998, 46, 717-737.	0.9	32
45	Atmospheric movies acquired at the Mars Science Laboratory landing site: Cloud morphology, frequency and significance to the Gale Crater water cycle and Phoenix mission results. Advances in Space Research, 2015, 55, 2217-2238.	1.2	28
46	Detection of Northern Hemisphere transient eddies at Gale Crater Mars. Icarus, 2018, 307, 150-160.	1.1	27
47	Meteorological observations on Martian surface: met-packages of Mars-96 Small Stations and Penetrators. Planetary and Space Science, 1998, 46, 779-793.	0.9	25
48	Mars Science Laboratory diurnal moisture observations and column simulations. Journal of Geophysical Research E: Planets, 2015, 120, 1011-1021.	1.5	25
49	Validation of GMI Snowfall Observations by Using a Combination of Weather Radar and Surface Measurements. Journal of Applied Meteorology and Climatology, 2018, 57, 797-820.	0.6	22
50	Space Weather Services for Civil Aviationâ€"Challenges and Solutions. Remote Sensing, 2021, 13, 3685.	1.8	22
51	Vertical pressure profile of Titanâ€"observations of the PPI/HASI instrument. Planetary and Space Science, 2006, 54, 1117-1123.	0.9	21
52	Nowcasting of Convective Rainfall Using Volumetric Radar Observations. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 7845-7859.	2.7	21
53	Annual and diurnal water vapor cycles at Curiosity from observations and column modeling. Icarus, 2019, 319, 485-490.	1.1	20
54	A stratospheric balloon experiment to test the Huygens atmospheric structure instrument (HASI). Planetary and Space Science, 2004, 52, 867-880.	0.9	18

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55	Light scattering by the Martian dust analog, palagonite, modeled with ellipsoids. Optics Express, 2013, 21, 17972.	1.7	17
56	The Beagle 2 environmental sensors: science goals and instrument description. Planetary and Space Science, 2004, 52, 1141-1156.	0.9	16
57	Analysis of wind-induced dynamic pressure fluctuations during one and a half Martian years at Gale Crater. Icarus, 2017, 288, 78-87.	1.1	15
58	Water vapor mixing ratios and air temperatures for three martian years from Curiosity. Icarus, 2019, 326, 170-175.	1.1	15
59	Curiosity observations and column model integrations for a martian global dust event. Icarus, 2020, 337, 113515.	1.1	14
60	The NetLander geophysical network on the surface of Mars: General mission description and technical design status. Acta Astronautica, 2002, 51, 379-386.	1.7	13
61	Vertical atmospheric flow on Titan as measured by the HASI instrument on board the Huygens probe. Geophysical Research Letters, 2006, 33, .	1.5	13
62	Scientific objectives and implementation of the Pressure Profile Instrument (PPIâ§¹HASI) for the Huygens spacecraft. Planetary and Space Science, 1998, 46, 1383-1392.	0.9	12
63	Fully Spectral Method for Radar-Based Precipitation Nowcasting. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 1369-1382.	2.3	12
64	Reconstruction of the trajectory of the Huygens probe using the Huygens Atmospheric Structure Instrument (HASI). Planetary and Space Science, 2008, 56, 586-600.	0.9	11
65	Nowcasting of Precipitation in the High-Resolution Dallasâ€"Fort Worth (DFW) Urban Radar Remote Sensing Network. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 2773-2787.	2.3	11
66	The NetLander atmospheric instrument system (ATMIS): description and performance assessment. Planetary and Space Science, 2000, 48, 1407-1420.	0.9	9
67	Thermal and microstructural properties of fine-grained material at the Viking Lander 1 site. Icarus, 2016, 271, 360-374.	1.1	9
68	New column simulations for the Viking landers: Winds, fog, frost, adsorption?. Icarus, 2018, 310, 48-53.	1.1	9
69	Ppi results from the balloon drop experiment of the hasi pressure profile instrument. Planetary and Space Science, 1998, 46, 1237-1243.	0.9	8
70	Probabilistic radar-gauge merging by multivariate spatiotemporal techniques. Journal of Hydrology, 2016, 542, 662-678.	2.3	8
71	Aspects of atmospheric science and instrumentation for martian missions. Advances in Space Research, 1995, 16, 15-22.	1.2	6
72	The Lavoisier mission : A system of descent probe and balloon flotilla for geochemical investigation of the deep atmosphere and surface of Venus. Advances in Space Research, 2002, 29, 255-264.	1.2	6

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73	Investigating thermal properties of gas-filled planetary regoliths using a thermal probe. Geoscientific Instrumentation, Methods and Data Systems, 2012, 1, 7-21.	0.6	6
74	The MetNet vehicle: a lander to deploy environmental stations for local and global investigations of Mars. Geoscientific Instrumentation, Methods and Data Systems, 2017, 6, 103-124.	0.6	6
75	High-fidelity subsurface thermal model as part of a Martian atmospheric column model. Geoscientific Instrumentation, Methods and Data Systems, 2013, 2, 17-27.	0.6	6
76	Using the inertia of spacecraft during landing to penetrate regoliths of the Solar System. Advances in Space Research, 2015, 56, 1242-1263.	1.2	5
77	Stochastic Spectral Method for Radar-Based Probabilistic Precipitation Nowcasting. Journal of Atmospheric and Oceanic Technology, 2019, 36, 971-985.	0.5	5
78	Electron/positron measurements obtained with the Mars Science Laboratory Radiation Assessment Detector on the surface of Mars. Annales Geophysicae, 2016, 34, 133-141.	0.6	4
79	Dust environment of an airless object: A phase space study with kinetic models. Planetary and Space Science, 2016, 120, 56-69.	0.9	4
80	New analysis software for Viking Lander meteorological data. Geoscientific Instrumentation, Methods and Data Systems, 2013, 2, 61-69.	0.6	4
81	Transient liquid water and water activity at Gale crater on Mars. , 0, .		2
82	Wind reconstruction algorithm for Viking Lander 1. Geoscientific Instrumentation, Methods and Data Systems, 2017, 6, 217-229.	0.6	1
83	A method to determine the atmospheric temperature profile from in situ pressure data: Application to Titan. Planetary and Space Science, 2007, 55, 2071-2076.	0.9	0
84	The Plasma Environment of Venus, Mars, and Titan, an Introduction. Space Science Reviews, 2011, 162, 1-4.	3.7	0
85	A user-orientated column modelling framework for efficient analyses of the Martian atmosphere. Geoscientific Instrumentation, Methods and Data Systems, 2019, 8, 251-263.	0.6	0
86	CITYZER observation network and data delivery system. Geoscientific Instrumentation, Methods and Data Systems, 2020, 9, 397-406.	0.6	0