

# Alain Herique

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8952301/publications.pdf>

Version: 2024-02-01

88  
papers

2,972  
citations

186265

28  
h-index

168389

53  
g-index

98  
all docs

98  
docs citations

98  
times ranked

2141  
citing authors

#	ARTICLE	IF	CITATIONS
1	EI + FWI Method for Reconstructing Interior Structure of Asteroid Using Lander-to-Orbiter Bistatic Radar System. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16.	6.3	0
2	AMBITION "comet nucleus cryogenic sample return. Experimental Astronomy, 2022, 54, 1077-1128.	3.7	4
3	The Basal Detectability of an Ice-Covered Mars by MARSIS. Geophysical Research Letters, 2022, 49, .	4.0	12
4	Performances of the Passive SAR Imaging of Jupiter's Icy Moons. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-13.	6.3	1
5	The ESA Hera Mission: Detailed Characterization of the DART Impact Outcome and of the Binary Asteroid (65803) Didymos. Planetary Science Journal, 2022, 3, 160.	3.6	82
6	Complex-structured 3D-printed wireframes as asteroid analogues for tomographic microwave radar measurements. Materials and Design, 2021, 198, 109364.	7.0	3
7	Time analysis for a bistatic radar for asteroid tomography: simulations and test bench. CEAS Space Journal, 2021, 13, 653-664.	2.3	0
8	3D Time-domain electromagnetic full waveform inversion in Debye dispersive medium accelerated by multi-GPU paralleling. Computer Physics Communications, 2021, 265, 108002.	7.5	4
9	Ultra-Wideband SAR Tomography on Asteroids. Radio Science, 2021, 56, e2020RS007186.	1.6	3
10	Rosetta CONSERT Data as a Testbed for In Situ Navigation of Space Probes and Radiosciences in Orbit/Escort Phases for Small Bodies of the Solar System. Remote Sensing, 2021, 13, 3747.	4.0	2
11	Angular and radial sampling criteria for monostatic and bistatic radar tomography of solar system small bodies. Advances in Space Research, 2021, 68, 3903-3924.	2.6	2
12	Towards Asteroid Tomography: Modellings and Measurements Using an Analogue Model. , 2020, , .		3
13	The Global Search for Liquid Water on Mars from Orbit: Current and Future Perspectives. Life, 2020, 10, 120.	2.4	16
14	The interior of Comet 67P/CG; revisiting CONSERT results with the exact position of the Philae lander. Monthly Notices of the Royal Astronomical Society, 2020, 497, 2616-2622.	4.4	12
15	The WISDOM radar on board the ExoMars 2022 Rover: Characterization and calibration of the flight model. Planetary and Space Science, 2020, 189, 104939.	1.7	11
16	Dust-to-Gas and Refractory-to-Ice Mass Ratios of Comet 67P/Churyumov-Gerasimenko from Rosetta Observations. Space Science Reviews, 2020, 216, 1.	8.1	61
17	SPRATS: a versatile Simulation and Processing RADar Tools for planetary missions. , 2020, , .		2
18	Post-rendezvous radar properties of comet 67P/CG from the Rosetta Mission: understanding future Earth-based radar observations and the dynamical evolution of comets. Monthly Notices of the Royal Astronomical Society, 2019, 489, 1667-1683.	4.4	4

#	ARTICLE	IF	CITATIONS
19	Imaging the interior of small Solar bodies: towards a quantitative approach. , 2019, , .		0
20	Homogeneity of 67P/Churyumov-Gerasimenko as seen by CONSERT: implication on composition and formation. Astronomy and Astrophysics, 2019, 630, A6.	5.1	23
21	The search campaign to identify and image the Philae Lander on the surface of comet 67P/Churyumov-Gerasimenko. Acta Astronautica, 2019, 157, 199-214.	3.2	9
22	The refractory-to-ice mass ratio in comets. Monthly Notices of the Royal Astronomical Society, 2019, 482, 3326-3340.	4.4	59
23	A radar package for asteroid subsurface investigations: Implications of implementing and integration into the MASCOT nanoscale landing platform from science requirements to baseline design. Acta Astronautica, 2019, 156, 317-329.	3.2	12
24	Imaging the interior of a comet from bistatic microwave measurements: Case of a scale comet model. Advances in Space Research, 2018, 62, 1977-1986.	2.6	9
25	European component of the AIDA mission to a binary asteroid: Characterization and interpretation of the impact of the DART mission. Advances in Space Research, 2018, 62, 2261-2272.	2.6	118
26	DePhine " The Deimos and Phobos Interior Explorer. Advances in Space Research, 2018, 62, 2220-2238.	2.6	17
27	Direct observations of asteroid interior and regolith structure: Science measurement requirements. Advances in Space Research, 2018, 62, 2141-2162.	2.6	54
28	The Castalia mission to Main Belt Comet 133P/Elst-Pizarro. Advances in Space Research, 2018, 62, 1947-1976.	2.6	27
29	MASCOT2 " A small body lander to investigate the interior of 65803 Didymos" moon in the frame of the AIDA/AIM mission. Acta Astronautica, 2018, 149, 25-34.	3.2	14
30	Long term simulations for bi-static radar and test bench design. , 2018, , .		1
31	The CONSERT operations planning process for the Rosetta mission. , 2018, , .		0
32	Imaging the inner structure of a comet from few measurements in a bistatic scenario: case of a scale model.. , 2018, , .		0
33	Oversampled Pulse Compression Based on Signal Modeling: Application to CONSERT/Rosetta Radar. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 2225-2238.	6.3	9
34	Reconstruction of the flight and attitude of Rosetta's lander Philae. Acta Astronautica, 2017, 140, 509-516.	3.2	4
35	The WISDOM Radar: Unveiling the Subsurface Beneath the ExoMars Rover and Identifying the Best Locations for Drilling. Astrobiology, 2017, 17, 565-584.	3.0	50
36	CONSERT constrains the internal structure of 67P at a few metres size scale. Monthly Notices of the Royal Astronomical Society, 2017, 469, S805-S817.	4.4	21

#	ARTICLE	IF	CITATIONS
37	Clock stability for low frequency radar tomography of asteroids. , 2017, , .		1
38	The Subsurface Structure and Density of Cometary Nuclei. , 2017, , 85-99.		0
39	A porosity gradient in 67P/C-G nucleus suggested from CONSERT and SESAME-PP results: an interpretation based on new laboratory permittivity measurements of porous icy analogues. Monthly Notices of the Royal Astronomical Society, 2016, 462, S89-S98.	4.4	29
40	Science case for the Asteroid Impact Mission (AIM): A component of the Asteroid Impact & Deflection Assessment (AIDA) mission. Advances in Space Research, 2016, 57, 2529-2547.	2.6	95
41	Rosetta lander Philae: Flight Dynamics analyses for landing site selection and post-landing operations. Acta Astronautica, 2016, 125, 65-79.	3.2	26
42	Cosmochemical implications of CONSERT permittivity characterization of 67P/CG. Monthly Notices of the Royal Astronomical Society, 2016, 462, S516-S532.	4.4	59
43	The CONSERT operations planning process for the Rosetta mission. Acta Astronautica, 2016, 125, 212-233.	3.2	11
44	Observations of the surface of Titan by the Radar Altimeters on the Huygens Probe. Icarus, 2016, 270, 248-259.	2.5	4
45	CONSERT suggests a change in local properties of 67P/Churyumov-Gerasimenko's nucleus at depth. Astronomy and Astrophysics, 2015, 583, A40.	5.1	37
46	Computing low-frequency radar surface echoes for planetary radar using Huygens's Fresnel's principle. Radio Science, 2015, 50, 1097-1109.	1.6	21
47	The landing(s) of Philae and inferences about comet surface mechanical properties. Science, 2015, 349, aaa9816.	12.6	212
48	Properties of the 67P/Churyumov-Gerasimenko interior revealed by CONSERT radar. Science, 2015, 349, aab0639.	12.6	178
49	CONSERT line-of-sight link budget simulator. Planetary and Space Science, 2015, 111, 55-61.	1.7	4
50	Philae localization from CONSERT/Rosetta measurement. Planetary and Space Science, 2015, 117, 475-484.	1.7	18
51	The Subsurface Structure and Density of Cometary Nuclei. Space Science Reviews, 2015, 197, 85-99.	8.1	9
52	Imaging of a scaled comet model from lab experiments. , 2014, , .		1
53	Constraints on the subsurface structure and density of the nucleus of Comet 67P/Churyumov-Gerasimenko from Arecibo radar observations. Astronomy and Astrophysics, 2014, 568, A21.	5.1	19
54	A study on Ganymede's surface topography: Perspectives for radar sounding. Planetary and Space Science, 2013, 77, 40-44.	1.7	14

#	ARTICLE	IF	CITATIONS
55	Operation of CONSERT aboard Rosetta during the descent of Philae. Planetary and Space Science, 2013, 89, 151-158.	1.7	4
56	Radar properties of comets: Parametric dielectric modeling of Comet 67P/Churyumov-Gerasimenko. Icarus, 2012, 221, 925-939.	2.5	50
57	Quantitative analysis of Mars surface radar reflectivity at 20MHz. Icarus, 2012, 220, 84-99.	2.5	52
58	Natural radio emission of Jupiter as interferences for radar investigations of the icy satellites of Jupiter. Planetary and Space Science, 2012, 61, 32-45.	1.7	35
59	Rosetta rendezvous and CONSERT operations in 2014: A chimeric surface model of 67P/Churyumov Gerasimenko. Planetary and Space Science, 2012, 67, 84-91.	1.7	4
60	PSTD-based approach to a large-scale inverse scattering problem. , 2011, , .		1
61	Large asymmetric polar scarps on Planum Australe, Mars: Characterization and evolution. Icarus, 2011, 212, 96-109.	2.5	15
62	The 3-5MHz global reflectivity map of Mars by MARSIS/Mars Express: Implications for the current inventory of subsurface H <sub>2</sub> O. Icarus, 2010, 210, 612-625.	2.5	82
63	Detectability of subsurface interfaces in lunar maria by the LRS/SELENE sounding radar: Influence of mineralogical composition. Geophysical Research Letters, 2010, 37, .	4.0	29
64	Three-dimensional reconstruction of a comet nucleus by optimal control of Maxwell's equations: A contribution to the experiment CONSERT onboard space craft Rosetta. , 2010, , .		9
65	Microwave imaging from experimental data within a Bayesian framework with realistic random noise. Inverse Problems, 2009, 25, 024005.	2.0	34
66	TandEM: Titan and Enceladus mission. Experimental Astronomy, 2009, 23, 893-946.	3.7	77
67	MARSIS surface reflectivity of the south residual cap of Mars. Icarus, 2009, 201, 454-459.	2.5	28
68	Surface echo reduction by clutter simulation, application to the Marsis data. , 2009, , .		1
69	North polar deposits of Mars: Extreme purity of the water ice. Geophysical Research Letters, 2009, 36, .	4.0	129
70	The Comet Nucleus Sounding Experiment by Radio-wave Transmission (CONSERT). , 2009, , 1-17.		1
71	Correction of the ionospheric distortion on the MARSIS surface sounding echoes. Planetary and Space Science, 2008, 56, 917-926.	1.7	68
72	Estimation of the total electron content of the Martian ionosphere using radar sounder surface echoes. Geophysical Research Letters, 2007, 34, .	4.0	115

#	ARTICLE	IF	CITATIONS
73	The Comet Nucleus Sounding Experiment by Radiowave Transmission (CONSERT): A Short Description of the Instrument and of the Commissioning Stages. <i>Space Science Reviews</i> , 2007, 128, 413-432.	8.1	116
74	Top layers characterization of the Martian surface: Permittivity estimation based on geomorphology analysis. <i>Planetary and Space Science</i> , 2006, 54, 337-344.	1.7	8
75	Radar Soundings of the Subsurface of Mars. <i>Science</i> , 2005, 310, 1925-1928.	12.6	327
76	MEP (Mars Environment Package): toward a package for studying environmental conditions at the surface of Mars from future lander/rover missions. <i>Advances in Space Research</i> , 2004, 34, 1702-1709.	2.6	7
77	Radar signal simulation: Surface modeling with the Facet Method. <i>Radio Science</i> , 2004, 39, n/a-n/a.	1.6	75
78	Impact of Mars ionosphere on orbital radar sounder operation and data processing. <i>Planetary and Space Science</i> , 2003, 51, 505-515.	1.7	70
79	Dielectric properties of comet analog refractory materials. <i>Planetary and Space Science</i> , 2002, 50, 857-863.	1.7	41
80	A characterization of a comet nucleus interior. <i>Planetary and Space Science</i> , 1999, 47, 885-904.	1.7	42
81	A two dimensional simulation of the CONSERT experiment (radio tomography of comet Wirtanen). <i>Advances in Space Research</i> , 1999, 24, 1127-1138.	2.6	30
82	Radio wave back-propagating in polar coordinates: A linear filter in the time-frequency angle-frequency domain. <i>Radio Science</i> , 1999, 34, 509-519.	1.6	3
83	Comet nucleus sounding experiment by radiowave transmission. <i>Advances in Space Research</i> , 1998, 21, 1589-1598.	2.6	90
84	Determination of the ice dielectric permittivity using the data of the test in Antarctica of the ground-penetrating radar for Mars'98 mission. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1997, 35, 1338-1349.	6.3	13
85	Optimal windows for step frequency radar. <i>Signal Processing</i> , 1997, 62, 335-349.	3.7	3
86	A spaceborne ground penetrating radar: MIMOSA. , 0, , .		8
87	Marsis radar signal simulation. , 0, , .		1
88	Calibration of the CONSERT/ROSETTA radar. , 0, , .		0