

# Raphael F Garcia

## List of Publications by Year in descending order

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Version: 2024-02-01

91  
papers

4,608  
citations

101384

36  
h-index

106150

65  
g-index

95  
all docs

95  
docs citations

95  
times ranked

2432  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Lunar Geophysical Network Landing Sites Science Rationale. Planetary Science Journal, 2022, 3, 40.	1.5	7
2	Seasonal variations of subsurface seismic velocities monitored by the SEIS-InSight seismometer on Mars. Geophysical Journal International, 2022, 229, 776-799.	1.0	10
3	An autonomous lunar geophysical experiment package (ALGEP) for future space missions. Experimental Astronomy, 2022, 54, 617-640.	1.6	2
4	Low-Frequency Marsquakes and Where to Find Them: Back Azimuth Determination Using a Polarization Analysis Approach. Bulletin of the Seismological Society of America, 2022, 112, 1787-1805.	1.1	24
5	Infrasound From Large Earthquakes Recorded on a Network of Balloons in the Stratosphere. Geophysical Research Letters, 2022, 49, .	1.5	9
6	An active source seismo-acoustic experiment using tethered balloons to validate instrument concepts and modelling tools for atmospheric seismology. Geophysical Journal International, 2021, 225, 186-199.	1.0	15
7	Companion guide to the marsquake catalog from InSight, Sols 0â€“478: Data content and non-seismic events. Physics of the Earth and Planetary Interiors, 2021, 310, 106597.	0.7	64
8	The Marsquake catalogue from InSight, sols 0â€“478. Physics of the Earth and Planetary Interiors, 2021, 310, 106595.	0.7	97
9	The Polarization of Ambient Noise on Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006545.	1.5	33
10	Constraining Martian Regolith and Vortex Parameters From Combined Seismic and Meteorological Measurements. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006410.	1.5	16
11	Autocorrelation of the Ground Vibrations Recorded by the SEISâ€“InSight Seismometer on Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006498.	1.5	34
12	A Comodulation Analysis of Atmospheric Energy Injection Into the Ground Motion at InSight, Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006538.	1.5	33
13	Seismic Noise Autocorrelations on Mars. Earth and Space Science, 2021, 8, e2021EA001755.	1.1	31
14	Thickness and structure of the martian crust from InSight seismic data. Science, 2021, 373, 438-443.	6.0	140
15	Forward Modeling of the Phobos Tides and Applications to the First Martian Year of the InSight Mission. Earth and Space Science, 2021, 8, e2021EA001669.	1.1	4
16	Seismic detection of the martian core. Science, 2021, 373, 443-448.	6.0	169
17	SPECFEM2D-DG, an open-source software modelling mechanical waves in coupled solidâ€“fluid systems: the linearized Navierâ€“Stokes approach. Geophysical Journal International, 2021, 228, 664-697.	1.0	13
18	A Reconstruction Algorithm for Temporally Aliased Seismic Signals Recorded by the InSight Mars Lander. Earth and Space Science, 2021, 8, e2020EA001234.	1.1	6

#	ARTICLE	IF	CITATIONS
19	Search for Infrasonic Signals in InSight Data Using Coupled Pressure/Ground Deformation Methods. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 3055-3064.	1.1	8
20	The Site Tilt and Lander Transfer Function from the Short-Period Seismometer of InSight on Mars. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2889-2908.	1.1	7
21	Potential Pitfalls in the Analysis and Structural Interpretation of Seismic Data from the Mars InSight Mission. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 2982-3002.	1.1	42
22	Energy Envelope and Attenuation Characteristics of High-Frequency (HF) and Very-High-Frequency (VF) Martian Events. <i>Bulletin of the Seismological Society of America</i> , 2021, 111, 3016-3034.	1.1	23
23	A New Crater Near InSight: Implications for Seismic Impact Detectability on Mars. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006382.	1.5	24
24	Lunar Seismology: A Data and Instrumentation Review. <i>Space Science Reviews</i> , 2020, 216, 1.	3.7	59
25	Detection, Analysis, and Removal of Glitches From InSight's Seismic Data From Mars. <i>Earth and Space Science</i> , 2020, 7, e2020EA001317.	1.1	75
26	Subsurface Structure at the InSight Landing Site From Compliance Measurements by Seismic and Meteorological Experiments. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006387.	1.5	44
27	Pressure Effects on the SEIS InSight Instrument, Improvement of Seismic Records, and Characterization of Long Period Atmospheric Waves From Ground Displacements. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006278.	1.5	31
28	Martian Infrasonic: Numerical Modeling and Analysis of InSight's Data. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2020JE006376.	1.5	28
29	Infrasonic and Gravity Waves Over the Andes Observed by a Pressure Sensor on Board a Stratospheric Balloon. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031565.	1.2	10
30	The atmosphere of Mars as observed by InSight. <i>Nature Geoscience</i> , 2020, 13, 190-198.	5.4	161
31	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. <i>Nature Geoscience</i> , 2020, 13, 213-220.	5.4	207
32	The seismicity of Mars. <i>Nature Geoscience</i> , 2020, 13, 205-212.	5.4	194
33	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.	1.5	30
34	Initial results from the InSight mission on Mars. <i>Nature Geoscience</i> , 2020, 13, 183-189.	5.4	274
35	Exploring planets and asteroids with 6DoF sensors: Utopia and realism. <i>Earth, Planets and Space</i> , 2020, 72, .	0.9	8
36	Lunar Seismology: An Update on Interior Structure Models. <i>Space Science Reviews</i> , 2019, 215, 1.	3.7	60

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37	Aerial Seismology Using Balloon-Based Barometers. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 10191-10201.	2.7	25
38	Can We Estimate Air Density of the Thermosphere with CubeSats?. Journal of Spacecraft and Rockets, 2019, 56, 1084-1091.	1.3	0
39	SEIS: Insight's Seismic Experiment for Internal Structure of Mars. Space Science Reviews, 2019, 215, 12.	3.7	238
40	Sparse Reconstruction of Aliased Seismic Signals Recorded During the Insight Mars Mission. , 2019, , .		1
41	High Precision SEIS Calibration for the InSight Mission and Its Applications. Space Science Reviews, 2019, 215, 1.	3.7	7
42	Pre-mission InSights on the Interior of Mars. Space Science Reviews, 2019, 215, 1.	3.7	85
43	Fiber optic gyroscope For 6-component planetary seismology. , 2019, , .		1
44	Detection of Artificially Generated Seismic Signals Using Balloon-Borne Infrasound Sensors. Geophysical Research Letters, 2018, 45, 3393-3403.	1.5	26
45	A Numerical Model of the SEIS Leveling System Transfer Matrix and Resonances: Application to SEIS Rotational Seismology and Dynamic Ground Interaction. Space Science Reviews, 2018, 214, 1.	3.7	22
46	The Marsquake Service: Securing Daily Analysis of SEIS Data and Building the Martian Seismicity Catalogue for InSight. Space Science Reviews, 2018, 214, 1.	3.7	41
47	Impact-Seismic Investigations of the InSight Mission. Space Science Reviews, 2018, 214, 1.	3.7	48
48	Atmospheric Science with InSight. Space Science Reviews, 2018, 214, 1.	3.7	88
49	Numerical Simulation of the Atmospheric Signature of Artificial and Natural Seismic Events. Geophysical Research Letters, 2018, 45, 12,085.	1.5	17
50	Geology and Physical Properties Investigations by the InSight Lander. Space Science Reviews, 2018, 214, 1.	3.7	77
51	Hybrid Galerkin numerical modelling of elastodynamics and compressible Navier-Stokes couplings: applications to seismo-gravito acoustic waves. Geophysical Journal International, 2017, 210, 1047-1069.	1.0	24
52	Planned Products of the Mars Structure Service for the InSight Mission to Mars. Space Science Reviews, 2017, 211, 611-650.	3.7	80
53	Probing the internal structure of the asteroid Didymos with a passive seismic investigation. Planetary and Space Science, 2017, 144, 89-105.	0.9	16
54	Finite-Difference Modeling of Acoustic and Gravity Wave Propagation in Mars Atmosphere: Application to Infrasounds Emitted by Meteor Impacts. Space Science Reviews, 2017, 211, 547-570.	3.7	20

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55	Preparing for InSight: An Invitation to Participate in a Blind Test for Martian Seismicity. <i>Seismological Research Letters</i> , 2017, 88, 1290-1302.	0.8	37
56	Evaluating the Wind-Induced Mechanical Noise on the InSight Seismometers. <i>Space Science Reviews</i> , 2017, 211, 429-455.	3.7	65
57	Bolide Airbursts as a Seismic Source for the 2018 Mars InSight Mission. <i>Space Science Reviews</i> , 2017, 211, 525-545.	3.7	20
58	Medium-scale gravity wave activity in the thermosphere inferred from GOCE data. <i>Journal of Geophysical Research: Space Physics</i> , 2016, 121, 8089-8102.	0.8	23
59	Finite-difference numerical modelling of gravitoacoustic wave propagation in a windy and attenuating atmosphere. <i>Geophysical Journal International</i> , 2016, 206, 308-327.	1.0	13
60	First Lunar Flashes Observed from Morocco (ILIAD Network): Implications for Lunar Seismology. <i>Earth, Moon and Planets</i> , 2015, 115, 1-21.	0.3	13
61	Micro-meteoroid seismic uplift and regolith concentration on kilometeric scale asteroids. <i>Icarus</i> , 2015, 253, 159-168.	1.1	18
62	Atmospheric gravity waves due to the Tohoku-Oki tsunami observed in the thermosphere by GOCE. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 4498-4506.	1.2	44
63	Petrological constraints on the density of the Martian crust. <i>Journal of Geophysical Research E: Planets</i> , 2014, 119, 1707-1727.	1.5	91
64	On the possibility of lunar core phase detection using new seismometers for soft-landers in future lunar missions. <i>Planetary and Space Science</i> , 2013, 81, 18-31.	0.9	11
65	GOCE: The first seismometer in orbit around the Earth. <i>Geophysical Research Letters</i> , 2013, 40, 1015-1020.	1.5	40
66	A Nonlinear Method to Estimate Source Parameters, Amplitude, and Travel Times of Teleseismic Body Waves. <i>Bulletin of the Seismological Society of America</i> , 2013, 103, 268-282.	1.1	6
67	Erratum to "Very Preliminary Reference Moon Model", by R.F. Garcia, J. Gagnepain-Beyneix, S. Chevrot, P. Lognonn� [Phys. Earth Planet. Inter. 188 (2011) 96-113]. <i>Physics of the Earth and Planetary Interiors</i> , 2012, 202-203, 89-91.	0.7	34
68	Farside explorer: unique science from a mission to the farside of the moon. <i>Experimental Astronomy</i> , 2012, 33, 529-585.	1.6	52
69	Very preliminary reference Moon model. <i>Physics of the Earth and Planetary Interiors</i> , 2011, 188, 96-113.	0.7	214
70	Optimisation of seismic network design: Application to a geophysical international lunar network. <i>Planetary and Space Science</i> , 2011, 59, 343-354.	0.9	32
71	Response of the ionosphere to the seismic triggered acoustic waves: electron density and electromagnetic fluctuations. <i>Geophysical Journal International</i> , 2009, 176, 1-13.	1.0	38
72	Statistical study of seismic heterogeneities at the base of the mantle from PKP differential traveltimes. <i>Geophysical Journal International</i> , 2009, 179, 1607-1616.	1.0	12

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73	Gravity waves in the upper atmosphere of Venus revealed by CO <sub>2</sub> nonlocal thermodynamic equilibrium emissions. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	29
74	Radio tomography of the ionosphere: Analysis of an underdetermined, ill-posed inverse problem, and regional application. <i>Radio Science</i> , 2008, 43, .	0.8	30
75	Scientific goals for the observation of Venus by VIRTIS on ESA/Venus express mission. <i>Planetary and Space Science</i> , 2007, 55, 1653-1672.	0.9	155
76	A dynamic upper atmosphere of Venus as revealed by VIRTIS on Venus Express. <i>Nature</i> , 2007, 450, 641-645.	13.7	95
77	South-polar features on Venus similar to those near the north pole. <i>Nature</i> , 2007, 450, 637-640.	13.7	110
78	A new global PKP data set to study Earth's core and deep mantle. <i>Physics of the Earth and Planetary Interiors</i> , 2006, 159, 15-31.	0.7	38
79	Seismic waves in the ionosphere. <i>Europhysics News</i> , 2006, 37, 11-15.	0.1	32
80	Ground-based GPS imaging of ionospheric post-seismic signal. <i>Planetary and Space Science</i> , 2006, 54, 528-540.	0.9	115
81	Three-dimensional ionospheric tomography of post-seismic perturbations produced by the Denali earthquake from GPS data. <i>Geophysical Journal International</i> , 2005, 163, 1049-1064.	1.0	61
82	Tsunami detection in the ionosphere. <i>Space Research Today</i> , 2005, 163, 23-27.	1.0	31
83	Detecting atmospheric perturbations produced by Venus quakes. <i>Geophysical Research Letters</i> , 2005, 32, .	1.5	36
84	Nonlinear waveform and delay time analysis of triplicated core phases. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	22
85	The seismological picture of the inner core: structure and rotation. <i>Comptes Rendus - Geoscience</i> , 2003, 335, 51-63.	0.4	30
86	Seismological and mineralogical constraints on the inner core fabric. <i>Geophysical Research Letters</i> , 2002, 29, 19-1-19-4.	1.5	35
87	Constraints on upper inner-core structure from waveform inversion of core phases. <i>Geophysical Journal International</i> , 2002, 150, 651-664.	1.0	58
88	Correction to "Inner core anisotropy and heterogeneity level" by Raphaël Garcia, and Annie Souriau. <i>Geophysical Research Letters</i> , 2001, 28, 85-85.	1.5	8
89	Amplitude of the core-mantle boundary topography estimated by stochastic analysis of core phases. <i>Physics of the Earth and Planetary Interiors</i> , 2000, 117, 345-359.	0.7	51
90	Inner core anisotropy and heterogeneity level. <i>Geophysical Research Letters</i> , 2000, 27, 3121-3124.	1.5	87

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91	Preparing for InSight: Evaluation of the Blind Test for Martian Seismicity. Seismological Research Letters, 0, , .	0.8	5