Raphael F Garcia

List of Publications by Year
in descending order

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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	Initial results from the InSight mission on Mars. Nature Geoscience, 2020, 13, 183-189.	5.4	274
2	SEIS: Insightâ€™s Seismic Experiment for Internal Structure of Mars. Space Science Reviews, 2019, 215, 12.	3.7	238
3	Very preliminary reference Moon model. Physics of the Earth and Planetary Interiors, 2011, 188, 96-113.	0.7	214
4	Constraints on the shallow elastic and anelastic structure of Mars from InSight seismic data. Nature Geoscience, 2020, 13, 213-220.	5.4	207
5	The seismicity of Mars. Nature Geoscience, 2020, 13, 205-212.	5.4	194
6	Seismic detection of the martian core. Science, 2021, 373, 443-448.	6.0	169
7	The atmosphere of Mars as observed by InSight. Nature Geoscience, 2020, 13, 190-198.	5.4	161
8	Scientific goals for the observation of Venus by VIRTIS on ESA/Venus express mission. Planetary and Space Science, 2007, 55, 1653-1672.	0.9	155
9	Thickness and structure of the martian crust from InSight seismic data. Science, 2021, 373, 438-443.	6.0	140
10	Ground-based GPS imaging of ionospheric post-seismic signal. Planetary and Space Science, 2006, 54, 528-540.	0.9	115
11	South-polar features on Venus similar to those near the north pole. Nature, 2007, 450, 637-640.	13.7	110
12	The Marsquake catalogue from InSight, sols 0â€“478. Physics of the Earth and Planetary Interiors, 2021, 310, 106595.	0.7	97
13	A dynamic upper atmosphere of Venus as revealed by VIRTIS on Venus Express. Nature, 2007, 450, 641-645.	13.7	95
14	Petrological constraints on the density of the Martian crust. Journal of Geophysical Research E: Planets, 2014, 119, 1707-1727.	1.5	91
15	Atmospheric Science with InSight. Space Science Reviews, 2018, 214, 1.	3.7	88
16	Inner core anisotropy and heterogeneity level. Geophysical Research Letters, 2000, 27, 3121-3124.	1.5	87
17	Pre-mission InSights on the Interior of Mars. Space Science Reviews, 2019, 215, 1.	3.7	85
18	Planned Products of the Mars Structure Service for the InSight Mission to Mars. Space Science Reviews, 2017, 211, 611-650.	3.7	80

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19	Geology and Physical Properties Investigations by the InSight Lander. Space Science Reviews, 2018, 214, 1.	3.7	77
20	Detection, Analysis, and Removal of Glitches From InSight's Seismic Data From Mars. Earth and Space Science, 2020, 7, e2020EA001317.	1.1	75
21	Evaluating the Wind-Induced Mechanical Noise on the InSight Seismometers. Space Science Reviews, 2017, 211, 429-455.	3.7	65
22	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
23	Three-dimensional ionospheric tomography of post-seismic perturbations produced by the Denali earthquake from GPS data. Geophysical Journal International, 2005, 163, 1049-1064.	1.0	61
24	Lunar Seismology: An Update on Interior Structure Models. Space Science Reviews, 2019, 215, 1.	3.7	60
25	Lunar Seismology: A Data and Instrumentation Review. Space Science Reviews, 2020, 216, 1.	3.7	59
26	Constraints on upper inner-core structure from waveform inversion of core phases. Geophysical Journal International, 2002, 150, 651-664.	1.0	58
27	Farside explorer: unique science from a mission to the farside of the moon. Experimental Astronomy, 2012, 33, 529-585.	1.6	52
28	Amplitude of the coreâ€“mantle boundary topography estimated by stochastic analysis of core phases. Physics of the Earth and Planetary Interiors, 2000, 117, 345-359.	0.7	51
29	Impact-Seismic Investigations of the InSight Mission. Space Science Reviews, 2018, 214, 1.	3.7	48
30	Atmospheric gravity waves due to the Tohokuâ€Oki tsunami observed in the thermosphere by GOCE. Journal of Geophysical Research D: Atmospheres, 2014, 119, 4498-4506.	1.2	44
31	Subsurface Structure at the InSight Landing Site From Compliance Measurements by Seismic and Meteorological Experiments. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006387.	1.5	44
32	Potential Pitfalls in the Analysis and Structural Interpretation of Seismic Data from the Mars InSight Mission. Bulletin of the Seismological Society of America, 2021, 111, 2982-3002.	1.1	42
33	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
34	GOCE: The first seismometer in orbit around the Earth. Geophysical Research Letters, 2013, 40, 1015-1020.	1.5	40
35	A new global PKP data set to study Earth's core and deep mantle. Physics of the Earth and Planetary Interiors, 2006, 159, 15-31.	0.7	38
36	Response of the ionosphere to the seismic trigerred acoustic waves: electron density and electromagnetic fluctuations. Geophysical Journal International, 2009, 176, 1-13.	1.0	38

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37	Preparing for InSight: An Invitation to Participate in a Blind Test for Martian Seismicity. Seismological Research Letters, 2017, 88, 1290-1302.	0.8	37
38	Detecting atmospheric perturbations produced by Venus quakes. Geophysical Research Letters, 2005, 32, .	1.5	36
39	Seismological and mineralogical constraints on the inner core fabric. Geophysical Research Letters, 2002, 29, 19-1-19-4.	1.5	35
40	Erratum to â€œVery Preliminary Reference Moon Modelâ€, by R.F. Garcia, J. Gagnepain-Beyneix, S. Chevrot, P. LognonnÃ© [Phys. Earth Planet. Inter. 188 (2011) 96â€“113]. Physics of the Earth and Planetary Interiors, 2012, 202-203, 89-91.	0.7	34
41	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
42	The Polarization of Ambient Noise on Mars. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006545.	1.5	33
43	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
44	Seismic waves in the ionosphere. Europhysics News, 2006, 37, 11-15.	0.1	32
45	Optimisation of seismic network design: Application to a geophysical international lunar network. Planetary and Space Science, 2011, 59, 343-354.	0.9	32
46	Tsunami detection in the ionosphere. Space Research Today, 2005, 163, 23-27.	1.0	31
47	Pressure Effects on the SEISâ€InSight Instrument, Improvement of Seismic Records, and Characterization of Long Period Atmospheric Waves From Ground Displacements. Journal of Geophysical Research E: Planets, 2020, 125, e2019JE006278.	1.5	31
48	Seismic Noise Autocorrelations on Mars. Earth and Space Science, 2021, 8, e2021EA001755.	1.1	31
49	The seismological picture of the inner core: structure and rotation. Comptes Rendus - Geoscience, 2003, 335, 51-63.	0.4	30
50	Radio tomography of the ionosphere: Analysis of an underdetermined, illâ€posed inverse problem, and regional application. Radio Science, 2008, 43, .	0.8	30
51	Monitoring of Dust Devil Tracks Around the InSight Landing Site, Mars, and Comparison With In Situ Atmospheric Data. Geophysical Research Letters, 2020, 47, e2020GL087234.	1.5	30
52	Gravity waves in the upper atmosphere of Venus revealed by CO₂ nonlocal thermodynamic equilibrium emissions. Journal of Geophysical Research, 2009, 114, .	3.3	29
53	Martian Infrasound: Numerical Modeling and Analysis of InSight's Data. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006376.	1.5	28
54	Detection of Artificially Generated Seismic Signals Using Balloonâ€Borne Infrasound Sensors. Geophysical Research Letters, 2018, 45, 3393-3403.	1.5	26

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55	Aerial Seismology Using Balloon-Based Barometers. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 10191-10201.	2.7	25
56	Hybrid Galerkin numerical modelling of elastodynamics and compressible Navierâ€“Stokes couplings: applications to seismo-gravito acoustic waves. Geophysical Journal International, 2017, 210, 1047-1069.	1.0	24
57	A New Crater Near InSight: Implications for Seismic Impact Detectability on Mars. Journal of Geophysical Research E: Planets, 2020, 125, e2020JE006382.	1.5	24
58	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
59	Mediumâ€scale gravity wave activity in the thermosphere inferred from GOCE data. Journal of Geophysical Research: Space Physics, 2016, 121, 8089-8102.	0.8	23
60	Energy Envelope and Attenuation Characteristics of High-Frequency (HF) and Very-High-Frequency (VF) Martian Events. Bulletin of the Seismological Society of America, 2021, 111, 3016-3034.	1.1	23
61	Nonlinear waveform and delay time analysis of triplicated core phases. Journal of Geophysical Research, 2004, 109, .	3.3	22
62	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
63	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
64	Bolide Airbursts as a Seismic Source for the 2018 Mars InSight Mission. Space Science Reviews, 2017, 211, 525-545.	3.7	20
65	Micro-meteoroid seismic uplift and regolith concentration on kilometric scale asteroids. Icarus, 2015, 253, 159-168.	1.1	18
66	Numerical Simulation of the Atmospheric Signature of Artificial and Natural Seismic Events. Geophysical Research Letters, 2018, 45, 12,085.	1.5	17
67	Probing the internal structure of the asteriod Didymoon with a passive seismic investigation. Planetary and Space Science, 2017, 144, 89-105.	0.9	16
68	Constraining Martian Regolith and Vortex Parameters From Combined Seismic and Meteorological Measurements. Journal of Geophysical Research E: Planets, 2021, 126, e2020JE006410.	1.5	16
69	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
70	First Lunar Flashes Observed from Morocco (ILIAD Network): Implications for Lunar Seismology. Earth, Moon and Planets, 2015, 115, 1-21.	0.3	13
71	Finite-difference numerical modelling of gravitoacoustic wave propagation in a windy and attenuating atmosphere. Geophysical Journal International, 2016, 206, 308-327.	1.0	13
72	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

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73	Statistical study of seismic heterogeneities at the base of the mantle from PKP differential traveltimes. Geophysical Journal International, 2009, 179, 1607-1616.	1.0	12
74	On the possibility of lunar core phase detection using new seismometers for soft-landers in future lunar missions. Planetary and Space Science, 2013, 81, 18-31.	0.9	11
75	Infrasound and Gravity Waves Over the Andes Observed by a Pressure Sensor on Board a Stratospheric Balloon. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031565.	1.2	10
76	Seasonal variations of subsurface seismic velocities monitored by the SEIS-InSight seismometer on Mars. Geophysical Journal International, 2022, 229, 776-799.	1.0	10
77	Infrasound From Large Earthquakes Recorded on a Network of Balloons in the Stratosphere. Geophysical Research Letters, 2022, 49, .	1.5	9
78	Correction to â€œInner core anisotropy and heterogeneity levelâ€•by RaphaÃ«l Garcia, and Annie Souriau. Geophysical Research Letters, 2001, 28, 85-85.	1.5	8
79	Exploring planets and asteroids with 6DoF sensors: Utopia and realism. Earth, Planets and Space, 2020, 72, .	0.9	8
80	Search for Infrasound Signals in InSight Data Using Coupled Pressure/Ground Deformation Methods. Bulletin of the Seismological Society of America, 2021, 111, 3055-3064.	1.1	8
81	High Precision SEIS Calibration for the InSight Mission and Its Applications. Space Science Reviews, 2019, 215, 1.	3.7	7
82	The Site Tilt and Lander Transfer Function from the Short-Period Seismometer of InSight on Mars. Bulletin of the Seismological Society of America, 2021, 111, 2889-2908.	1.1	7
83	The Lunar Geophysical Network Landing Sites Science Rationale. Planetary Science Journal, 2022, 3, 40.	1.5	7
84	A Nonlinear Method to Estimate Source Parameters, Amplitude, and Travel Times of Teleseismic Body Waves. Bulletin of the Seismological Society of America, 2013, 103, 268-282.	1.1	6
85	A Reconstruction Algorithm for Temporally Aliased Seismic Signals Recorded by the InSight Mars Lander. Earth and Space Science, 2021, 8, e2020EA001234.	1.1	6
86	Preparing for InSight: Evaluation of the Blind Test for Martian Seismicity. Seismological Research Letters, 0, , .	0.8	5
87	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
88	An autonomous lunar geophysical experiment package (ALGEP) for future space missions. Experimental Astronomy, 2022, 54, 617-640.	1.6	2
89	Sparse Reconstruction of Aliased Seismic Signals Recorded During the Insight Mars Mission. , 2019, , .		1
90	Fiber optic gyroscope For 6-component planetary seismology. , 2019, , .		1

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91	Can We Estimate Air Density of the Thermosphere with CubeSats?. Journal of Spacecraft and Rockets, 2019, 56, 1084-1091.	1.3	0