Catherine Constable

List of Publications by Year
in descending order

111 papers	8,632 citations	47004 47 h-index	43886 91 g-index
117 all docs	117 docs citations	117 times ranked	4053 citing authors

#	Article	IF	Citations
1	A new power spectrum and stochastic representation for the geomagnetic axial dipole. Geophysical Journal International, 2022, 231, 15-26.	2.4	5
2	Consistent and Contrasting Aspects of the Geomagnetic Field Across Epochs With Distinct Reversal Frequencies Revealed by Modeling the Kiaman Superchron. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009866.	2.5	2
3	Giant Gaussian process models of geomagnetic palaeosecular variation: a directional outlook. Geophysical Journal International, 2020, 222, 1526-1541.	2.4	13
4	Rapid geomagnetic changes inferred from Earth observations and numerical simulations. Nature Communications, 2020, 11, 3371.	12.8	17
5	The Global Geomagnetic Field of the Past Hundred Thousand Years. Eos, 2020, 101, .	0.1	0
6	New Late Pennsylvanian Paleomagnetic Results From ParanÃ¡ Basin (Southern Brazil): Is the Recent Giant Gaussian Process Model Valid for the Kiaman Superchron?. Journal of Geophysical Research: Solid Earth, 2019, 124, 6223-6242.	3.4	7
7	One Hundred Thousand Years of Geomagnetic Field Evolution. Reviews of Geophysics, 2019, 57, 1289-1337.	23.0	59
8	Refining Holocene geochronologies using palaeomagnetic records. Quaternary Geochronology, 2019, 50, 47-74.	1.4	29
9	Spectral methods for analyzing energy balances in geodynamo simulations. Physics of the Earth and Planetary Interiors, 2019, 286, 127-137.	1.9	3
10	Global and Regional Assessments of Paleosecular Variation Activity Over the Past 100 ka. Geochemistry, Geophysics, Geosystems, 2018, 19, 1559-1580.	2.5	26
11	The inverse problem of unpolarized infrared spectroscopy of geological materials: Estimation from noisy random sampling of a quadratic form. American Mineralogist, 2018, 103, 1176-1184.	1.9	4
12	Extending Global Continuous Geomagnetic Field Reconstructions on Timescales Beyond Human Civilization. Geochemistry, Geophysics, Geosystems, 2018, 19, 4757-4772.	2.5	58
13	Searching for geomagnetic spikes in numerical dynamo simulations. Earth and Planetary Science Letters, 2018, 504, 72-83.	4.4	9
14	PSV10: A Global Data Set for 0â€“10 Ma Timeâ€Averaged Field and Paleosecular Variation Studies. Geochemistry, Geophysics, Geosystems, 2018, 19, 1533-1558.	2.5	70
15	Archeomagnetic Intensity Spikes: Global or Regional Geomagnetic Field Features?. Frontiers in Earth Science, 2018, 6, .	1.8	30
16	Geomagnetic spikes on the core-mantle boundary. Nature Communications, 2017, 8, 15593.	12.8	39
17	An activity index for geomagnetic paleosecular variation, excursions, and reversals. Geochemistry, Geophysics, Geosystems, 2017, 18, 1366-1375.	2.5	21
18	Asymmetry in growth and decay of the geomagnetic dipole revealed in seafloor magnetization. Earth and Planetary Science Letters, 2017, 467, 79-88.	4.4	8

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19	PmagPy: Software package for paleomagnetic data analysis and a bridge to the Magnetics Information Consortium (MagIC) Database. Geochemistry, Geophysics, Geosystems, 2016, 17, 2450-2463.	2.5	213
20	Visualization of Geodynamo Simulations. , 2016, , .		0
21	Persistent high paleosecular variation activity in southern hemisphere for at least 10â€‰000 years. Earth and Planetary Science Letters, 2016, 453, 78-86.	4.4	208
22	Earthâ€™s Electromagnetic Environment. Surveys in Geophysics, 2016, 37, 27-45.	4.6	25
23	Testing the geocentric axial dipole hypothesis using regional paleomagnetic intensity records from 0 to 300 ka. Earth and Planetary Science Letters, 2015, 423, 48-56.	4.4	12
24	Limitations in paleomagnetic data and modelling techniques and their impact on Holocene geomagnetic field models. Geophysical Journal International, 2015, 202, 402-418.	2.4	54
25	GEOMAGIA50.v3: 1. general structure and modifications to the archeological and volcanic database. Earth, Planets and Space, 2015, 67, .	2.5	149
26	GEOMAGIA50.v3: 2. A new paleomagnetic database for lake and marine sediments. Earth, Planets and Space, 2015, 67, .	2.5	55
27	Insights from geodynamo simulations into long-term geomagnetic field behaviour. Earth and Planetary Science Letters, 2014, 404, 238-249.	4.4	32
28	Constable Receives 2013 William Gilbert Award: Response. Eos, 2014, 95, 257-257.	0.1	0
29	Revised and updated paleomagnetic results from Costa Rica. Geochemistry, Geophysics, Geosystems, 2013, 14, 3379-3388.	2.5	15
30	A stochastic model for palaeomagnetic field variations. Geophysical Journal International, 2013, 195, 86-97.	2.4	24
31	In search of longâ€term hemispheric asymmetry in the geomagnetic field: Results from high northern latitudes. Geochemistry, Geophysics, Geosystems, 2013, 14, 3234-3249.	2.5	39
32	Spectral estimation for geophysical time-series with inconvenient gaps. Geophysical Journal International, 2012, 190, 1404-1422.	2.4	10
33	Scripted finite element tools for global electromagnetic induction studies. Geophysical Journal International, 2012, 188, 435-446.	2.4	8
34	The time-dependence of intense archeomagnetic flux patches. Journal of Geophysical Research, 2011, 116, .	3.3	39
35	Asymmetry in growth and decay of the geomagnetic dipole. Earth and Planetary Science Letters, 2011, 312, 300-304.	4.4	22
36	Reconstructing the Holocene geomagnetic field. Earth and Planetary Science Letters, 2011, 312, 497-505.	4.4	264

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37	Modelling the geomagnetic field from syntheses of paleomagnetic data. Physics of the Earth and Planetary Interiors, 2011, 187, 109-117.	1.9	9
38	Improving geomagnetic field reconstructions for 0â€“3ka. Physics of the Earth and Planetary Interiors, 2011, 188, 247-259.	1.9	203
39	Changing spectrum of geomagnetic intensity variations in a fragmented 12My sediment record from the Oligocene. Physics of the Earth and Planetary Interiors, 2011, 188, 260-269.	1.9	8
40	PADM2M: a penalized maximum likelihood model of the 0-2 Ma palaeomagnetic axial dipole moment. Geophysical Journal International, 2011, 184, 1069-1089.	2.4	158
41	The Magnetic Field of Planet Earth. Space Science Reviews, 2010, 152, 159-222.	8.1	120
42	Millennial Variations of the Geomagnetic Field: fromÂData Recovery to Field Reconstruction. Space Science Reviews, 2010, 155, 219-246.	8.1	29
43	The Earthâ€™s Magnetic Field in the Space Age: AnÂIntroduction to Terrestrial Magnetism. Space Science Reviews, 2010, 155, 1-7.	8.1	11
44	The Magnetic Field of Planet Earth. Space Sciences Series of ISSI, 2010, , 159-222.	0.0	6
45	The Earthâ€™s Magnetic Field in the Space Age: AnÂIntroduction to Terrestrial Magnetism. Space Sciences Series of ISSI, 2010, , 1-7.	0.0	1
46	Paleomagnetic field properties at high southern latitude. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	63
47	Geomagnetic field for 0â€“3 ka: 1. New data sets for global modeling. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	154
48	Geomagnetic field for 0â€“3 ka: 2. A new series of timeâ€varying global models. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	270
49	Spatial and temporal resolution of millennial scale geomagnetic field models. Advances in Space Research, 2008, 41, 57-69.	2.6	51
50	Recent investigations of the 0â€“5 Ma geomagnetic field recorded by lava flows. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	215
51	ArcheoInt: An upgraded compilation of geomagnetic field intensity data for the past ten millennia and its application to the recovery of the past dipole moment. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	174
52	AMSSpin: A LabVIEW program for measuring the anisotropy of magnetic susceptibility with the Kappabridge KLYâ€4S. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	19
53	Testing the robustness and limitations of 0â€“1Ma absolute paleointensity data. Physics of the Earth and Planetary Interiors, 2008, 170, 34-45.	1.9	17
54	Dipole Moment Variation. , 2007, , 159-161.		4

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55	Models of Earth's main magnetic field incorporating flux and radial vorticity constraints. Geophysical Journal International, 2007, 171, 133-144.	2.4	31
56	Paleosecular variation and the average geomagnetic field at Â±20Â° latitude. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	28
57	Limitations in correlation of regional relative geomagnetic paleointensity. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	9
58	On the use of calibrated relative paleointensity records to improve millennial-scale geomagnetic field models. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	22
59	Is Earth's magnetic field reversing?. Earth and Planetary Science Letters, 2006, 246, 1-16.	4.4	64
60	Centennial to millennial geomagnetic secular variation. Geophysical Journal International, 2006, 167, 43-52.	2.4	42
61	The geomagnetic dipole moment over the last 7000 yearsâ€"new results from a global model. Earth and Planetary Science Letters, 2005, 236, 348-358.	4.4	167
62	A paleomagnetic power spectrum. Physics of the Earth and Planetary Interiors, 2005, 153, 61-73.	1.9	77
63	Continuous geomagnetic field models for the past 7 millennia: 1. A new global data compilation. Geochemistry, Geophysics, Geosystems, 2005, 6, .	2.5	95
64	Continuous geomagnetic field models for the past 7 millennia: 2. CALS7K. Geochemistry, Geophysics, Geosystems, 2005, 6, .	2.5	149
65	Hydrothermal venting at Vailulu'u Seamount: The smoking end of the Samoan chain. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	2.5	28
66	Observing geomagnetic induction in magnetic satellite measurements and associated implications for mantle conductivity. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	2.5	75
67	Assessing the dipolar signal in stacked paleointensity records using a statistical error model and geodynamo simulations. Physics of the Earth and Planetary Interiors, 2004, 145, 37-54.	1.9	22
68	Satellite magnetic field measurements: Applications in studying the deep Earth. Geophysical Monograph Series, 2004, , 147-159.	0.1	19
69	Gaussian statistics for palaeomagnetic vectors. Geophysical Journal International, 2003, 152, 515-565.	2.4	46
70	Effects of near-surface conductance on global satellite induction responses. Geophysical Journal International, 2003, 153, 277-286.	2.4	86
71	Paleomagnetism of the southwestern U.S.A. recorded by 0-5 Ma igneous rocks. Geochemistry, Geophysics, Geosystems, 2003, 4, .	2.5	51
72	Continuous global geomagnetic field models for the past 3000 years. Physics of the Earth and Planetary Interiors, 2003, 140, 73-89.	1.9	103

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73	GEOPHYSICS: Mapping Long-Term Changes in Earth's Magnetic Field. Science, 2003, 300, 2044-2045.	12.6	19
74	Research-oriented data base for rock and paleomagnetism to be developed. Eos, 2002, 83, 560.	0.1	1
75	Revised magnetic power spectrum of the oceanic crust. Journal of Geophysical Research, 2002, 107, EPM 6-1-EPM 6-8.	3.3	5
76	Limitations on stratigraphic analyses due to incomplete age control and their relevance to sedimentary paleomagnetism. Earth and Planetary Science Letters, 2002, 201, 509-523.	4.4	32
77	A statistical analysis of magnetic fields from some geodynamo simulations. Geochemistry, Geophysics, Geosystems, 2001, 2, n/a-n/a.	2.5	19
78	Estimating the crustal power spectrum from vector Magsat data. Journal of Geophysical Research, 2001, 106, 8589-8598.	3.3	6
79	Noise in the quiet zone. Earth and Planetary Science Letters, 2001, 190, 13-30.	4.4	60
80	Global geomagnetic field models for the past 3000 years: transient or permanent flux lobes?. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2000, 358, 991-1008.	3.4	95
81	On rates of occurrence of geomagnetic reversals. Physics of the Earth and Planetary Interiors, 2000, 118, 181-193.	1.9	52
82	Ã˜rsted Initial Field Model. Geophysical Research Letters, 2000, 27, 3607-3610.	4.0	120
83	Anisotropic paleosecular variation models: implications for geomagnetic field observables. Physics of the Earth and Planetary Interiors, 1999, 115, 35-51.	1.9	76
84	Magnetic power spectrum of the ocean crust on large scales. Journal of Geophysical Research, 1999, 104, 29189-29201.	3.3	9
85	40Ar/39Ar ages and paleomagnetism of SÃ£o Miguel lavas, Azores. Earth and Planetary Science Letters, 1998, 160, 637-649.	4.4	100
86	Persistently anomalous Pacific geomagnetic fields. Geophysical Research Letters, 1998, 25, 1011-1014.	4.0	55
87	Analysis of 11 Myr of geomagnetic intensity variation. Journal of Geophysical Research, 1998, 103, 17735-17748.	3.3	50
88	Frozen-flux modelling for epochs 1915 and 1980. Geophysical Journal International, 1997, 128, 434-450.	2.4	26
89	The influence of correlated crustal signals in modelling the main geomagnetic field. Geophysical Journal International, 1997, 130, 717-726.	2.4	16
90	The time-averaged geomagnetic field: global and regional biases for 0-5 Ma. Geophysical Journal International, 1997, 131, 643-666.	2.4	151

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91	Towards absolute calibration of sedimentary paleointensity records. Earth and Planetary Science Letters, 1996, 143, 269-274.	4.4	17
92	Palaeosecular variation recorded by lava flows over the past five million years. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1996, 354, 89-141.	3.4	80
93	The time-averaged geomagnetic field as recorded by lava flows over the past 5 Myr. Geophysical Journal International, 1995, 122, 489-519.	2.4	146
94	About turn for reversals. Nature, 1993, 361, 305-306.	27.8	2
95	Geomagnetic field models incorporating frozen-flux constraints. Geophysical Journal International, 1993, 113, 419-433.	2.4	85
96	Early Oligocene geomagnetic field behavior from Deep Sea Drilling Project site 522. Journal of Geophysical Research, 1993, 98, 19649-19665.	3.3	26
97	Reply [to â€œComment on â€˜The bootstrap for magnetic susceptibility tensorsâ€™ by C. Constable and L. Tauxeâ€]. Journal of Geophysical Research, 1992, 97, 13997-13998.	3.3	1
98	Link between geomagnetic reversal paths and secular variation of the field over the past 5 Myr. Nature, 1992, 358, 230-233.	27.8	65
99	Bootstrap statistics for paleomagnetic data. Journal of Geophysical Research, 1991, 96, 11723-11740.	3.3	118
100	Deconvolution of long-core palaeomagnetic measurements?spline therapy for the linear problem. Geophysical Journal International, 1991, 104, 453-468.	2.4	51
101	Use of anisotropy to determine the origin of characteristic remanence in the Siwalik red beds of northern Pakistan. Journal of Geophysical Research, 1990, 95, 4391-4404.	3.3	72
102	A simple statistical model for geomagnetic reversals. Journal of Geophysical Research, 1990, 95, 4587-4596.	3.3	35
103	The bootstrap for magnetic susceptibility tensors. Journal of Geophysical Research, 1990, 95, 8383-8395.	3.3	162
104	Parameter estimation in non-Gaussian noise. Geophysical Journal International, 1988, 94, 131-142.	2.4	68
105	Smoothing, splines and smoothing splines; Their application in geomagnetism. Journal of Computational Physics, 1988, 78, 493-508.	3.8	40
106	Statistics of the geomagnetic secular variation for the past 5 m.y.. Journal of Geophysical Research, 1988, 93, 11569-11581.	3.3	188
107	Occamâ€™s inversion: A practical algorithm for generating smooth models from electromagnetic sounding data. Geophysics, 1987, 52, 289-300.	2.6	2,235
108	Palaeointensity in the pelagic realm: marine sediment data compared with archaeomagnetic and lake sediment records. Geophysical Journal International, 1987, 90, 43-59.	2.4	46

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109	Holocene geomagnetic secular variation records from north-eastern Australian lake sediments. Geophysical Journal International, 1985, 81, 103-120.	2.4	44
110	Eastern Australian geomagnetic field intensity over the past 14000 yr. Geophysical Journal International, 1985, 81, 121-130.	2.4	31
111	Maximum entropy regularization of the geomagnetic core field inverse problem. Geophysical Journal International, 0, 171, 995-1004.	2.4	19