

Catherine Constable

List of Publications by Year in descending order

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111
papers

8,632
citations

53939

47
h-index

49824

91
g-index

117
all docs

117
docs citations

117
times ranked

4467
citing authors

#	ARTICLE	IF	CITATIONS
1	A new power spectrum and stochastic representation for the geomagnetic axial dipole. <i>Geophysical Journal International</i> , 2022, 231, 15-26.	1.0	5
2	Consistent and Contrasting Aspects of the Geomagnetic Field Across Epochs With Distinct Reversal Frequencies Revealed by Modeling the Kiaman Superchron. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009866.	1.0	2
3	Giant Gaussian process models of geomagnetic palaeosecular variation: a directional outlook. <i>Geophysical Journal International</i> , 2020, 222, 1526-1541.	1.0	13
4	Rapid geomagnetic changes inferred from Earth observations and numerical simulations. <i>Nature Communications</i> , 2020, 11, 3371.	5.8	17
5	The Global Geomagnetic Field of the Past Hundred Thousand Years. <i>Eos</i> , 2020, 101, .	0.1	0
6	New Late Pennsylvanian Paleomagnetic Results From Paran Basin (Southern Brazil): Is the Recent Giant Gaussian Process Model Valid for the Kiaman Superchron?. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 6223-6242.	1.4	7
7	One Hundred Thousand Years of Geomagnetic Field Evolution. <i>Reviews of Geophysics</i> , 2019, 57, 1289-1337.	9.0	59
8	Refining Holocene geochronologies using palaeomagnetic records. <i>Quaternary Geochronology</i> , 2019, 50, 47-74.	0.6	29
9	Spectral methods for analyzing energy balances in geodynamo simulations. <i>Physics of the Earth and Planetary Interiors</i> , 2019, 286, 127-137.	0.7	3
10	Global and Regional Assessments of Paleosecular Variation Activity Over the Past 100 ka. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 1559-1580.	1.0	26
11	The inverse problem of unpolarized infrared spectroscopy of geological materials: Estimation from noisy random sampling of a quadratic form. <i>American Mineralogist</i> , 2018, 103, 1176-1184.	0.9	4
12	Extending Global Continuous Geomagnetic Field Reconstructions on Timescales Beyond Human Civilization. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 4757-4772.	1.0	58
13	Searching for geomagnetic spikes in numerical dynamo simulations. <i>Earth and Planetary Science Letters</i> , 2018, 504, 72-83.	1.8	9
14	PSV10: A Global Data Set for 010 Ma Time-Averaged Field and Paleosecular Variation Studies. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 1533-1558.	1.0	70
15	Archeomagnetic Intensity Spikes: Global or Regional Geomagnetic Field Features?. <i>Frontiers in Earth Science</i> , 2018, 6, .	0.8	30
16	Geomagnetic spikes on the core-mantle boundary. <i>Nature Communications</i> , 2017, 8, 15593.	5.8	39
17	An activity index for geomagnetic paleosecular variation, excursions, and reversals. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 1366-1375.	1.0	21
18	Asymmetry in growth and decay of the geomagnetic dipole revealed in seafloor magnetization. <i>Earth and Planetary Science Letters</i> , 2017, 467, 79-88.	1.8	8

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19	PmagPy: Software package for paleomagnetic data analysis and a bridge to the Magnetism Information Consortium (MagIC) Database. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 2450-2463.	1.0	213
20	Visualization of Geodynamo Simulations. , 2016, , .		0
21	Persistent high paleosecular variation activity in southern hemisphere for at least 10â€™000 years. <i>Earth and Planetary Science Letters</i> , 2016, 453, 78-86.	1.8	208
22	Earthâ€™s Electromagnetic Environment. <i>Surveys in Geophysics</i> , 2016, 37, 27-45.	2.1	25
23	Testing the geocentric axial dipole hypothesis using regional paleomagnetic intensity records from 0 to 300 ka. <i>Earth and Planetary Science Letters</i> , 2015, 423, 48-56.	1.8	12
24	Limitations in paleomagnetic data and modelling techniques and their impact on Holocene geomagnetic field models. <i>Geophysical Journal International</i> , 2015, 202, 402-418.	1.0	54
25	GEOMAGIA50.v3: 1. general structure and modifications to the archeological and volcanic database. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	149
26	GEOMAGIA50.v3: 2. A new paleomagnetic database for lake and marine sediments. <i>Earth, Planets and Space</i> , 2015, 67, .	0.9	55
27	Insights from geodynamo simulations into long-term geomagnetic field behaviour. <i>Earth and Planetary Science Letters</i> , 2014, 404, 238-249.	1.8	32
28	Constable Receives 2013 William Gilbert Award: Response. <i>Eos</i> , 2014, 95, 257-257.	0.1	0
29	Revised and updated paleomagnetic results from Costa Rica. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 3379-3388.	1.0	15
30	A stochastic model for palaeomagnetic field variations. <i>Geophysical Journal International</i> , 2013, 195, 86-97.	1.0	24
31	In search of longâ€™term hemispheric asymmetry in the geomagnetic field: Results from high northern latitudes. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 3234-3249.	1.0	39
32	Spectral estimation for geophysical time-series with inconvenient gaps. <i>Geophysical Journal International</i> , 2012, 190, 1404-1422.	1.0	10
33	Scripted finite element tools for global electromagnetic induction studies. <i>Geophysical Journal International</i> , 2012, 188, 435-446.	1.0	8
34	The time-dependence of intense archeomagnetic flux patches. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	39
35	Asymmetry in growth and decay of the geomagnetic dipole. <i>Earth and Planetary Science Letters</i> , 2011, 312, 300-304.	1.8	22
36	Reconstructing the Holocene geomagnetic field. <i>Earth and Planetary Science Letters</i> , 2011, 312, 497-505.	1.8	264

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37	Modelling the geomagnetic field from syntheses of paleomagnetic data. <i>Physics of the Earth and Planetary Interiors</i> , 2011, 187, 109-117.	0.7	9
38	Improving geomagnetic field reconstructions for 0-3ka. <i>Physics of the Earth and Planetary Interiors</i> , 2011, 188, 247-259.	0.7	203
39	Changing spectrum of geomagnetic intensity variations in a fragmented 12My sediment record from the Oligocene. <i>Physics of the Earth and Planetary Interiors</i> , 2011, 188, 260-269.	0.7	8
40	PADM2M: a penalized maximum likelihood model of the 0-2 Ma palaeomagnetic axial dipole moment. <i>Geophysical Journal International</i> , 2011, 184, 1069-1089.	1.0	158
41	The Magnetic Field of Planet Earth. <i>Space Science Reviews</i> , 2010, 152, 159-222.	3.7	120
42	Millennial Variations of the Geomagnetic Field: from Data Recovery to Field Reconstruction. <i>Space Science Reviews</i> , 2010, 155, 219-246.	3.7	29
43	The Earth's Magnetic Field in the Space Age: An Introduction to Terrestrial Magnetism. <i>Space Science Reviews</i> , 2010, 155, 1-7.	3.7	11
44	The Magnetic Field of Planet Earth. <i>Space Sciences Series of ISSI</i> , 2010, , 159-222.	0.0	6
45	The Earth's Magnetic Field in the Space Age: An Introduction to Terrestrial Magnetism. <i>Space Sciences Series of ISSI</i> , 2010, , 1-7.	0.0	1
46	Paleomagnetic field properties at high southern latitude. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	1.0	63
47	Geomagnetic field for 0-3 ka: 1. New data sets for global modeling. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	1.0	154
48	Geomagnetic field for 0-3 ka: 2. A new series of time-varying global models. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	1.0	270
49	Spatial and temporal resolution of millennial scale geomagnetic field models. <i>Advances in Space Research</i> , 2008, 41, 57-69.	1.2	51
50	Recent investigations of the 0-5 Ma geomagnetic field recorded by lava flows. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	1.0	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. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	1.0	174
52	AMSSpin: A LabVIEW program for measuring the anisotropy of magnetic susceptibility with the Kappabridge KLY4S. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	1.0	19
53	Testing the robustness and limitations of 1Ma absolute paleointensity data. <i>Physics of the Earth and Planetary Interiors</i> , 2008, 170, 34-45.	0.7	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. <i>Geophysical Journal International</i> , 2007, 171, 133-144.	1.0	31
56	Paleosecular variation and the average geomagnetic field at $\hat{A}\pm 20\hat{A}^\circ$ latitude. <i>Geochemistry, Geophysics, Geosystems</i> , 2006, 7, n/a-n/a.	1.0	28
57	Limitations in correlation of regional relative geomagnetic paleointensity. <i>Geochemistry, Geophysics, Geosystems</i> , 2006, 7, n/a-n/a.	1.0	9
58	On the use of calibrated relative paleointensity records to improve millennial-scale geomagnetic field models. <i>Geochemistry, Geophysics, Geosystems</i> , 2006, 7, n/a-n/a.	1.0	22
59	Is Earth's magnetic field reversing?. <i>Earth and Planetary Science Letters</i> , 2006, 246, 1-16.	1.8	64
60	Centennial to millennial geomagnetic secular variation. <i>Geophysical Journal International</i> , 2006, 167, 43-52.	1.0	42
61	The geomagnetic dipole moment over the last 7000 yearsâ€™ new results from a global model. <i>Earth and Planetary Science Letters</i> , 2005, 236, 348-358.	1.8	167
62	A paleomagnetic power spectrum. <i>Physics of the Earth and Planetary Interiors</i> , 2005, 153, 61-73.	0.7	77
63	Continuous geomagnetic field models for the past 7 millennia: 1. A new global data compilation. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, .	1.0	95
64	Continuous geomagnetic field models for the past 7 millennia: 2. CALS7K. <i>Geochemistry, Geophysics, Geosystems</i> , 2005, 6, .	1.0	149
65	Hydrothermal venting at Vailulu'u Seamount: The smoking end of the Samoan chain. <i>Geochemistry, Geophysics, Geosystems</i> , 2004, 5, n/a-n/a.	1.0	28
66	Observing geomagnetic induction in magnetic satellite measurements and associated implications for mantle conductivity. <i>Geochemistry, Geophysics, Geosystems</i> , 2004, 5, n/a-n/a.	1.0	75
67	Assessing the dipolar signal in stacked paleointensity records using a statistical error model and geodynamo simulations. <i>Physics of the Earth and Planetary Interiors</i> , 2004, 145, 37-54.	0.7	22
68	Satellite magnetic field measurements: Applications in studying the deep Earth. <i>Geophysical Monograph Series</i> , 2004, , 147-159.	0.1	19
69	Gaussian statistics for palaeomagnetic vectors. <i>Geophysical Journal International</i> , 2003, 152, 515-565.	1.0	46
70	Effects of near-surface conductance on global satellite induction responses. <i>Geophysical Journal International</i> , 2003, 153, 277-286.	1.0	86
71	Paleomagnetism of the southwestern U.S.A. recorded by 0-5 Ma igneous rocks. <i>Geochemistry, Geophysics, Geosystems</i> , 2003, 4, .	1.0	51
72	Continuous global geomagnetic field models for the past 3000 years. <i>Physics of the Earth and Planetary Interiors</i> , 2003, 140, 73-89.	0.7	103

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73	GEOPHYSICS: Mapping Long-Term Changes in Earth's Magnetic Field. <i>Science</i> , 2003, 300, 2044-2045.	6.0	19
74	Research-oriented data base for rock and paleomagnetism to be developed. <i>Eos</i> , 2002, 83, 560.	0.1	1
75	Revised magnetic power spectrum of the oceanic crust. <i>Journal of Geophysical Research</i> , 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. <i>Earth and Planetary Science Letters</i> , 2002, 201, 509-523.	1.8	32
77	A statistical analysis of magnetic fields from some geodynamo simulations. <i>Geochemistry, Geophysics, Geosystems</i> , 2001, 2, n/a-n/a.	1.0	19
78	Estimating the crustal power spectrum from vector Magsat data. <i>Journal of Geophysical Research</i> , 2001, 106, 8589-8598.	3.3	6
79	Noise in the quiet zone. <i>Earth and Planetary Science Letters</i> , 2001, 190, 13-30.	1.8	60
80	Global geomagnetic field models for the past 3000 years: transient or permanent flux lobes?. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2000, 358, 991-1008.	1.6	95
81	On rates of occurrence of geomagnetic reversals. <i>Physics of the Earth and Planetary Interiors</i> , 2000, 118, 181-193.	0.7	52
82	Årsted Initial Field Model. <i>Geophysical Research Letters</i> , 2000, 27, 3607-3610.	1.5	120
83	Anisotropic paleosecular variation models: implications for geomagnetic field observables. <i>Physics of the Earth and Planetary Interiors</i> , 1999, 115, 35-51.	0.7	76
84	Magnetic power spectrum of the ocean crust on large scales. <i>Journal of Geophysical Research</i> , 1999, 104, 29189-29201.	3.3	9
85	⁴⁰ Ar/ ³⁹ Ar ages and paleomagnetism of São Miguel lavas, Azores. <i>Earth and Planetary Science Letters</i> , 1998, 160, 637-649.	1.8	100
86	Persistently anomalous Pacific geomagnetic fields. <i>Geophysical Research Letters</i> , 1998, 25, 1011-1014.	1.5	55
87	Analysis of 11 Myr of geomagnetic intensity variation. <i>Journal of Geophysical Research</i> , 1998, 103, 17735-17748.	3.3	50
88	Frozen-flux modelling for epochs 1915 and 1980. <i>Geophysical Journal International</i> , 1997, 128, 434-450.	1.0	26
89	The influence of correlated crustal signals in modelling the main geomagnetic field. <i>Geophysical Journal International</i> , 1997, 130, 717-726.	1.0	16
90	The time-averaged geomagnetic field: global and regional biases for 0-5 Ma. <i>Geophysical Journal International</i> , 1997, 131, 643-666.	1.0	151

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91	Towards absolute calibration of sedimentary paleointensity records. <i>Earth and Planetary Science Letters</i> , 1996, 143, 269-274.	1.8	17
92	Palaeosecular variation recorded by lava flows over the past five million years. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 1996, 354, 89-141.	1.6	80
93	The time-averaged geomagnetic field as recorded by lava flows over the past 5 Myr. <i>Geophysical Journal International</i> , 1995, 122, 489-519.	1.0	146
94	About turn for reversals. <i>Nature</i> , 1993, 361, 305-306.	13.7	2
95	Geomagnetic field models incorporating frozen-flux constraints. <i>Geophysical Journal International</i> , 1993, 113, 419-433.	1.0	85
96	Early Oligocene geomagnetic field behavior from Deep Sea Drilling Project site 522. <i>Journal of Geophysical Research</i> , 1993, 98, 19649-19665.	3.3	26
97	Reply [to "Comment on "The bootstrap for magnetic susceptibility tensors"™ by C. Constable and L. Tauxe"]. <i>Journal of Geophysical Research</i> , 1992, 97, 13997-13998.	3.3	1
98	Link between geomagnetic reversal paths and secular variation of the field over the past 5 Myr. <i>Nature</i> , 1992, 358, 230-233.	13.7	65
99	Bootstrap statistics for paleomagnetic data. <i>Journal of Geophysical Research</i> , 1991, 96, 11723-11740.	3.3	118
100	Deconvolution of long-core palaeomagnetic measurements? spline therapy for the linear problem. <i>Geophysical Journal International</i> , 1991, 104, 453-468.	1.0	51
101	Use of anisotropy to determine the origin of characteristic remanence in the Siwalik red beds of northern Pakistan. <i>Journal of Geophysical Research</i> , 1990, 95, 4391-4404.	3.3	72
102	A simple statistical model for geomagnetic reversals. <i>Journal of Geophysical Research</i> , 1990, 95, 4587-4596.	3.3	35
103	The bootstrap for magnetic susceptibility tensors. <i>Journal of Geophysical Research</i> , 1990, 95, 8383-8395.	3.3	162
104	Parameter estimation in non-Gaussian noise. <i>Geophysical Journal International</i> , 1988, 94, 131-142.	1.0	68
105	Smoothing, splines and smoothing splines; Their application in geomagnetism. <i>Journal of Computational Physics</i> , 1988, 78, 493-508.	1.9	40
106	Statistics of the geomagnetic secular variation for the past 5 m.y.. <i>Journal of Geophysical Research</i> , 1988, 93, 11569-11581.	3.3	188
107	Occam's inversion: A practical algorithm for generating smooth models from electromagnetic sounding data. <i>Geophysics</i> , 1987, 52, 289-300.	1.4	2,235
108	Palaeointensity in the pelagic realm: marine sediment data compared with archaeomagnetic and lake sediment records. <i>Geophysical Journal International</i> , 1987, 90, 43-59.	1.0	46

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109	Holocene geomagnetic secular variation records from north-eastern Australian lake sediments. <i>Geophysical Journal International</i> , 1985, 81, 103-120.	1.0	44
110	Eastern Australian geomagnetic field intensity over the past 14000 yr. <i>Geophysical Journal International</i> , 1985, 81, 121-130.	1.0	31
111	Maximum entropy regularization of the geomagnetic core field inverse problem. <i>Geophysical Journal International</i> , 0, 171, 995-1004.	1.0	19