

Alexandre Fournier

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8749005/publications.pdf>

Version: 2024-02-01

66
papers

3,800
citations

172457

29
h-index

123424

61
g-index

73
all docs

73
docs citations

73
times ranked

3620
citing authors

#	ARTICLE	IF	CITATIONS
1	An assessment of implicit-explicit time integrators for the pseudo-spectral approximation of Boussinesq thermal convection in an annulus. <i>Journal of Computational Physics</i> , 2022, , 110965.	3.8	1
2	Sustaining Earth's magnetic dynamo. <i>Nature Reviews Earth & Environment</i> , 2022, 3, 255-269.	29.7	21
3	Can machine learning reveal precursors of reversals of the geomagnetic axial dipole field?. <i>Geophysical Journal International</i> , 2022, 231, 520-535.	2.4	1
4	A taxonomy of simulated geomagnetic jerks. <i>Geophysical Journal International</i> , 2022, 231, 650-672.	2.4	11
5	Analyzing the geomagnetic axial dipole field moment over the historical period from new archeointensity results at Bukhara (Uzbekistan, Central Asia). <i>Physics of the Earth and Planetary Interiors</i> , 2021, 310, 106633.	1.9	11
6	Evaluation of candidate models for the 13th generation International Geomagnetic Reference Field. <i>Earth, Planets and Space</i> , 2021, 73, .	2.5	33
7	International Geomagnetic Reference Field: the thirteenth generation. <i>Earth, Planets and Space</i> , 2021, 73, .	2.5	319
8	A secular variation candidate model for IGRF-13 based on Swarm data and ensemble inverse geodynamo modelling. <i>Earth, Planets and Space</i> , 2021, 73, .	2.5	9
9	Archeomagnetic intensity variations during the era of geomagnetic spikes in the Levant. <i>Physics of the Earth and Planetary Interiors</i> , 2021, 312, 106657.	1.9	12
10	Geomagnetic semblance and dipolar-to-multipolar transition in top-heavy double-diffusive geodynamo models. <i>Geophysical Journal International</i> , 2021, 226, 1897-1919.	2.4	12
11	Tracing the geomagnetic field intensity variations in Upper Mesopotamia during the Pottery Neolithic to improve ceramic-based chronologies. <i>Journal of Archaeological Science</i> , 2021, 132, 105430.	2.4	4
12	Archeomagnetic intensity investigations of French medieval ceramic workshops: Contribution to regional field modeling and archeointensity-based dating. <i>Physics of the Earth and Planetary Interiors</i> , 2021, 318, 106750.	1.9	10
13	Physics-based secular variation candidate models for the IGRF. <i>Earth, Planets and Space</i> , 2021, 73, .	2.5	4
14	Can one use Earth's magnetic axial dipole field intensity to predict reversals?. <i>Geophysical Journal International</i> , 2021, 225, 277-297.	2.4	3
15	Refining the high-fidelity archeointensity curve for western Europe over the past millennium: analysis of Tuscan architectural bricks (Italy). <i>Geological Society Special Publication</i> , 2020, 497, 73-88.	1.3	4
16	Analysis of geomagnetic field intensity variations in Mesopotamia during the third millennium BC with archaeological implications. <i>Earth and Planetary Science Letters</i> , 2020, 537, 116183.	4.4	18
17	Imprint of magnetic flux expulsion at the core-mantle boundary on geomagnetic field intensity variations. <i>Geophysical Journal International</i> , 2020, 221, 1984-2009.	2.4	8
18	Seismic Wave-Based Constraints on Geodynamical Processes: An Application to Partial Melting Beneath the R�union Island. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2019GC008815.	2.5	1

#	ARTICLE	IF	CITATIONS
19	Dynamo-based limit to the extent of a stable layer atop Earth's core. <i>Geophysical Journal International</i> , 2020, 222, 1433-1448.	2.4	32
20	Impact of Earth's Magnetic Field Secular Drift on the Low-Altitude Proton Radiation Belt From 1900 to 2050. <i>IEEE Transactions on Nuclear Science</i> , 2019, 66, 1746-1752.	2.0	4
21	A solar cycle 25 prediction based on 4D-var data assimilation approach. <i>Proceedings of the International Astronomical Union</i> , 2019, 15, 138-146.	0.0	2
22	Transdimensional inference of archeomagnetic intensity change. <i>Geophysical Journal International</i> , 2018, 215, 2008-2034.	2.4	27
23	Ensemble Kalman filter for the reconstruction of the Earth's mantle circulation. <i>Nonlinear Processes in Geophysics</i> , 2018, 25, 99-123.	1.3	9
24	Spherical convective dynamos in the rapidly rotating asymptotic regime. <i>Journal of Fluid Mechanics</i> , 2017, 813, 558-593.	3.4	121
25	Variational Estimation of the Large-scale Time-dependent Meridional Circulation in the Sun: Proofs of Concept with a Solar Mean Field Dynamo Model. <i>Astrophysical Journal</i> , 2017, 849, 160.	4.5	14
26	A particle-in-cell method for studying double-diffusive convection in the liquid layers of planetary interiors. <i>Journal of Computational Physics</i> , 2017, 346, 552-571.	3.8	14
27	Turbulent geodynamo simulations: a leap towards Earth's core. <i>Geophysical Journal International</i> , 2017, 211, 1-29.	2.4	171
28	Coarse predictions of dipole reversals by low-dimensional modeling and data assimilation. <i>Physics of the Earth and Planetary Interiors</i> , 2017, 262, 8-27.	1.9	12
29	Towards Estimating the Solar Meridional Flow and Predicting the 11-yr Cycle Using Advanced Variational Data Assimilation Techniques. <i>Proceedings of the International Astronomical Union</i> , 2017, 13, 183-186.	0.0	0
30	Frequency spectrum of the geomagnetic field harmonic coefficients from dynamo simulations. <i>Geophysical Journal International</i> , 2016, 207, 1142-1157.	2.4	38
31	Modelling the archaeomagnetic field under spatial constraints from dynamo simulations: a resolution analysis. <i>Geophysical Journal International</i> , 2016, 207, 983-1002.	2.4	21
32	Deciphering records of geomagnetic reversals. <i>Reviews of Geophysics</i> , 2016, 54, 410-446.	23.0	82
33	Coupled dynamics of Earth's geomagnetic westward drift and inner core super-rotation. <i>Earth and Planetary Science Letters</i> , 2016, 437, 114-126.	4.4	11
34	A sequential data assimilation approach for the joint reconstruction of mantle convection and surface tectonics. <i>Geophysical Journal International</i> , 2016, 204, 200-214.	2.4	47
35	International Geomagnetic Reference Field: the 12th generation. <i>Earth, Planets and Space</i> , 2015, 67, .	2.5	1,015
36	The impact of geomagnetic spikes on the production rates of cosmogenic ¹⁴ C and ¹⁰ Be in the Earth's atmosphere. <i>Geophysical Research Letters</i> , 2015, 42, 2759-2766.	4.0	12

#	ARTICLE	IF	CITATIONS
37	A candidate secular variation model for IGRF-12 based on Swarm data and inverse geodynamo modelling. <i>Earth, Planets and Space</i> , 2015, 67, .	2.5	32
38	ESTIMATING THE DEEP SOLAR MERIDIONAL CIRCULATION USING MAGNETIC OBSERVATIONS AND A DYNAMO MODEL: A VARIATIONAL APPROACH. <i>Astrophysical Journal</i> , 2015, 814, 151.	4.5	12
39	The Present and Future Geomagnetic Field. , 2015, , 33-78.		44
40	AxiSEM: broadband 3-D seismic wavefields in axisymmetric media. <i>Solid Earth</i> , 2014, 5, 425-445.	2.8	205
41	A mean-field Babcock-Leighton solar dynamo model with long-term variability. <i>Anais Da Academia Brasileira De Ciencias</i> , 2014, 86, 11-26.	0.8	4
42	THE PREDICTABILITY OF ADVECTION-DOMINATED FLUX-TRANSPORT SOLAR DYNAMO MODELS. <i>Astrophysical Journal</i> , 2014, 781, 8.	4.5	15
43	Hydromagnetic quasi-geostrophic modes in rapidly rotating planetary cores. <i>Physics of the Earth and Planetary Interiors</i> , 2014, 229, 1-15.	1.9	35
44	Core-flow constraints on extreme archeomagnetic intensity changes. <i>Earth and Planetary Science Letters</i> , 2014, 387, 145-156.	4.4	62
45	Corrigendum to "Hydromagnetic quasi-geostrophic modes in rapidly rotating planetary cores" [Phys. Earth Planet. Inter. 229 (2014) 1-15]. <i>Physics of the Earth and Planetary Interiors</i> , 2014, 234, 60.	1.9	0
46	The influence of a sloping bottom endwall on the linear stability in the thermally driven baroclinic annulus with a free surface. <i>Theoretical and Computational Fluid Dynamics</i> , 2013, 27, 433-451.	2.2	8
47	Bottom-up control of geomagnetic secular variation by the Earth's inner core. <i>Nature</i> , 2013, 502, 219-223.	27.8	154
48	An ensemble Kalman filter for the time-dependent analysis of the geomagnetic field. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 4035-4043.	2.5	30
49	Dynamical similarity of geomagnetic field reversals. <i>Nature</i> , 2012, 490, 89-93.	27.8	94
50	The geomagnetic secular variation timescale in observations and numerical dynamo models. <i>Geophysical Research Letters</i> , 2011, 38, .	4.0	80
51	Inferring internal properties of Earth's core dynamics and their evolution from surface observations and a numerical geodynamo model. <i>Nonlinear Processes in Geophysics</i> , 2011, 18, 657-674.	1.3	38
52	Inference on core surface flow from observations and 3-D dynamo modelling. <i>Geophysical Journal International</i> , 2011, 186, 118-136.	2.4	38
53	An Introduction to Data Assimilation and Predictability in Geomagnetism. <i>Space Science Reviews</i> , 2010, 155, 247-291.	8.1	110
54	Fast torsional waves and strong magnetic field within the Earth's core. <i>Nature</i> , 2010, 465, 74-77.	27.8	270

#	ARTICLE	IF	CITATIONS
55	An Introduction to Data Assimilation and Predictability in Geomagnetism. Space Sciences Series of ISSI, 2010, , 247-291.	0.0	3
56	Forward and adjoint quasi-geostrophic models of the geomagnetic secular variation. Journal of Geophysical Research, 2009, 114, .	3.3	41
57	A 2-D spectral-element method for computing spherical-earth seismograms-II. Waves in solid-fluid media. Geophysical Journal International, 2008, 174, 873-888.	2.4	56
58	A case for variational geomagnetic data assimilation: insights from a one-dimensional, nonlinear, and sparsely observed MHD system. Nonlinear Processes in Geophysics, 2007, 14, 163-180.	1.3	44
59	Energy distribution in nonaxisymmetric magnetic Taylor-Couette flow. Astronomische Nachrichten, 2007, 328, 1162-1165.	1.2	14
60	Spherical Couette flow in a dipolar magnetic field. European Journal of Mechanics, B/Fluids, 2007, 26, 729-737.	2.5	26
61	A two-dimensional spectral-element method for computing spherical-earth seismograms - I. Moment-tensor source. Geophysical Journal International, 2007, 168, 1067-1092.	2.4	73
62	Spherical-earth Fréchet sensitivity kernels. Geophysical Journal International, 2007, 168, 1051-1066.	2.4	53
63	A Fourier-spectral element algorithm for thermal convection in rotating axisymmetric containers. Journal of Computational Physics, 2005, 204, 462-489.	3.8	33
64	End-effects in rapidly rotating cylindrical Taylor-Couette flow. AIP Conference Proceedings, 2004, , .	0.4	16
65	Application of the spectral-element method to the axisymmetric Navier-Stokes equation. Geophysical Journal International, 2004, 156, 682-700.	2.4	33
66	Changes in rotation induced by Pleistocene ice masses with stratified analytical Earth models. Journal of Geophysical Research, 1997, 102, 27689-27702.	3.3	55