

# Benjamin Favier

## List of Publications by Year in descending order

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66  
papers

1,149  
citations

331670

21  
h-index

414414

32  
g-index

67  
all docs

67  
docs citations

67  
times ranked

785  
citing authors

#	ARTICLE	IF	CITATIONS
1	Inverse cascade and symmetry breaking in rapidly rotating Boussinesq convection. <i>Physics of Fluids</i> , 2014, 26, .	4.0	93
2	Non-linear evolution of tidally forced inertial waves in rotating fluid bodies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2014, 439, 845-860.	4.4	83
3	Rayleigh-Bénard convection with a melting boundary. <i>Journal of Fluid Mechanics</i> , 2019, 858, 437-473.	3.4	61
4	Inertial Wave Turbulence Driven by Elliptical Instability. <i>Physical Review Letters</i> , 2017, 119, 034502.	7.8	48
5	Libration-driven flows in ellipsoidal shells. <i>Journal of Geophysical Research E: Planets</i> , 2017, 122, 1926-1950.	3.6	44
6	Low-frequency Variability in Massive Stars: Core Generation or Surface Phenomenon?. <i>Astrophysical Journal Letters</i> , 2019, 886, L15.	8.3	39
7	Quasi-static magnetohydrodynamic turbulence at high Reynolds number. <i>Journal of Fluid Mechanics</i> , 2011, 681, 434-461.	3.4	38
8	Robust wall states in rapidly rotating Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2020, 895, .	3.4	38
9	Growth rate degeneracies in kinematic dynamos. <i>Physical Review E</i> , 2013, 88, 031001.	2.1	35
10	A laboratory model for deep-seated jets on the gas giants. <i>Nature Physics</i> , 2017, 13, 387-390.	16.7	34
11	On space and time correlations of isotropic and rotating turbulence. <i>Physics of Fluids</i> , 2010, 22, .	4.0	32
12	Generation and maintenance of bulk turbulence by libration-driven elliptical instability. <i>Physics of Fluids</i> , 2015, 27, .	4.0	32
13	Subcritical turbulent condensate in rapidly rotating Rayleigh-Bénard convection. <i>Journal of Fluid Mechanics</i> , 2019, 864, .	3.4	31
14	The energy flux spectrum of internal waves generated by turbulent convection. <i>Journal of Fluid Mechanics</i> , 2018, 854, .	3.4	30
15	Experimental study of the nonlinear saturation of the elliptical instability: inertial wave turbulence versus geostrophic turbulence. <i>Journal of Fluid Mechanics</i> , 2019, 879, 296-326.	3.4	29
16	Dynamics of mixed convective-stably-stratified fluids. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	26
17	On the two-dimensionalization of quasistatic magnetohydrodynamic turbulence. <i>Physics of Fluids</i> , 2010, 22, .	4.0	25
18	Order Out of Chaos: Slowly Reversing Mean Flows Emerge from Turbulently Generated Internal Waves. <i>Physical Review Letters</i> , 2018, 120, 244505.	7.8	25

#	ARTICLE	IF	CITATIONS
19	Bistability in Rayleigh-Bénard convection with a melting boundary. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	25
20	On the problem of large-scale magnetic field generation in rotating compressible convection. <i>Journal of Fluid Mechanics</i> , 2013, 723, 529-555.	3.4	22
21	The linear instability of the stratified plane Couette flow. <i>Journal of Fluid Mechanics</i> , 2018, 853, 205-234.	3.4	22
22	Small-scale dynamo action in rotating compressible convection. <i>Journal of Fluid Mechanics</i> , 2012, 690, 262-287.	3.4	19
23	Topography generation by melting and freezing in a turbulent shear flow. <i>Journal of Fluid Mechanics</i> , 2021, 911, .	3.4	19
24	Turbulent Kinematic Dynamos in Ellipsoids Driven by Mechanical Forcing. <i>Geophysical Research Letters</i> , 2018, 45, 1741-1750.	4.0	18
25	Laboratory model for plastic fragmentation in the turbulent ocean. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	18
26	Large-scale dynamos in rapidly rotating plane layer convection. <i>Astronomy and Astrophysics</i> , 2018, 612, A97.	5.1	16
27	Near-resonant instability of geostrophic modes: beyond Greenspan's theorem. <i>Journal of Fluid Mechanics</i> , 2020, 900, .	3.4	16
28	Parametric instability and wave turbulence driven by tidal excitation of internal waves. <i>Journal of Fluid Mechanics</i> , 2018, 840, 498-529.	3.4	15
29	Characterisation of flexible fibre deformations in turbulence. <i>Europhysics Letters</i> , 2018, 123, 24001.	2.0	15
30	Mesogranulation and small-scale dynamo action in the quiet Sun. <i>Astronomy and Astrophysics</i> , 2014, 562, A72.	5.1	14
31	Improved phase-field models of melting and dissolution in multi-component flows. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20200508.	2.1	14
32	Remote determination of the shape of Jupiter's vortices from laboratory experiments. <i>Nature Physics</i> , 2020, 16, 695-700.	16.7	14
33	Numerical validation of the volume penalization method in three-dimensional pseudo-spectral simulations. <i>Computers and Fluids</i> , 2012, 67, 41-56.	2.5	13
34	How can large-scale twisted magnetic structures naturally emerge from buoyancy instabilities?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 426, 3349-3359.	4.4	12
35	Coupled convection and internal gravity waves excited in water around its density maximum at 4°C. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	12
36	Convectively driven dynamo action in the quiet Sun. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2012, 106, 508-523.	1.2	11

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37	The diffusive sheet method for scalar mixing. <i>Journal of Fluid Mechanics</i> , 2018, 837, 230-257.	3.4	11
38	Zonal jets at the laboratory scale: hysteresis and Rossby waves resonance. <i>Journal of Fluid Mechanics</i> , 2021, 910, .	3.4	10
39	Kinematic dynamo action in square and hexagonal patterns. <i>Physical Review E</i> , 2013, 88, 053011.	2.1	9
40	Hysteresis and instabilities in a spheroid in precession near the resonance with the tilt-over mode. <i>Journal of Fluid Mechanics</i> , 2021, 909, .	3.4	9
41	Evidence of the Zakharov-Kolmogorov spectrum in numerical simulations of inertial wave turbulence. <i>Europhysics Letters</i> , 2020, 132, 64002.	2.0	9
42	Surface manifestation of stochastically excited internal gravity waves. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 508, 132-143.	4.4	8
43	Instability of vertically stratified horizontal plane Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 2021, 907, .	3.4	7
44	Internal shear layers in librating spherical shells: the case of periodic characteristic paths. <i>Journal of Fluid Mechanics</i> , 2022, 939, .	3.4	7
45	Tidally-forced turbulence in planetary interiors. <i>Geophysical Journal International</i> , 0, , ggw479.	2.4	6
46	Spontaneous generation and reversal of helicity in anisotropic turbulence. <i>Physical Review E</i> , 2021, 103, L061101.	2.1	5
47	Shape and size of large-scale vortices: A generic fluid pattern in geophysical fluid dynamics. <i>Physical Review Research</i> , 2020, 2, .	3.6	5
48	Modeling the far-field acoustic emission of rotating turbulence. <i>Journal of Turbulence</i> , 2008, 9, N30.	1.4	4
49	Shear instabilities in a fully compressible polytropic atmosphere. <i>Astronomy and Astrophysics</i> , 2015, 577, A76.	5.1	4
50	Internal gravity waves in a stratified layer atop a convecting liquid core in a non-rotating spherical shell. <i>Geophysical Journal International</i> , 2021, 228, 337-354.	2.4	4
51	Evolution of forced shear flows in polytropic atmospheres: a comparison of forcing methods and energetics. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 463, 282-295.	4.4	3
52	Some statistical properties of three-dimensional zonostrophic turbulence. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2018, 112, 207-221.	1.2	3
53	Quasi-static magnetohydrodynamic turbulence at high Reynolds number. <i>Journal of Physics: Conference Series</i> , 2011, 318, 072026.	0.4	2
54	Fluid dynamics of a mixed convective/stably stratified system – A review of some recent works. <i>Comptes Rendus Physique</i> , 2020, 21, 151-164.	0.9	2

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55	Dynamos in rotating compressible convection. Journal of Physics: Conference Series, 2011, 318, 072027.	0.4	1
56	Spontaneous knotting of a flexible fiber in chaotic flows. Physical Review E, 2021, 103, 043101.	2.1	1
57	Incorporating Linear Dynamics and Strong Anisotropy in KS. Application to Diffusion in Rotating, Stratified, MHD Turbulence, and to Aeroacoustics. ERCOFTAC Series, 2012, , 59-80.	0.1	1
58	The turbulent response to tidal and libration forcing. EAS Publications Series, 2019, 82, 51-58.	0.3	0
59	Evolution and characteristics of forced shear flows in polytropic atmospheres: large and small Péclet number regimes. Monthly Notices of the Royal Astronomical Society, 2019, 482, 1338-1351.	4.4	0
60	A Brief Introduction to Turbulence in Rotating and Stratified Fluids. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2020, , 213-241.	0.6	0
61	A Model for the Far-Field Anisotropic Acoustic Emission of Rotating Turbulence. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2008, , 297-302.	0.2	0
62	Synthetic turbulence model and DNS for magnetohydrodynamics with rotation. Springer Proceedings in Physics, 2009, , 837-840.	0.2	0
63	Video: Libration-Driven Elliptical Instability Experiments in Ellipsoidal Shells. , 0, , .		0
64	Gas giant-like zonal jets in the laboratory. Physical Review Fluids, 2020, 5, .	2.5	0
65	Un cycle nœud du chaos. Pourlascience Fr, 2019, N° 497 - mars, 26-33.	0.0	0
66	La Grande Tache rouge de Jupiter en laboratoire. Pourlascience Fr, 2021, N° 519 - janvier, 24-33.	0.0	0