Michel Rieutord

List of Publications by Year
in descending order

111 papers	3,463 citations	126907 33 h-index	149698 56 g-index
122 all docs	122 docs citations	122 times ranked	1812 citing authors

#	Article	IF	Citations
1	Magnetic structures in a dynamo simulation. Journal of Fluid Mechanics, 1996, 306, 325-352.	3.4	203
2	Dynamo action in stratified convection with overshoot. Astrophysical Journal, 1992, 392, 647.	4.5	201
3	Gravity darkening in rotating stars. Astronomy and Astrophysics, 2011, 533, A43.	5.1	186
4	Inertial waves in a rotating spherical shell. Journal of Fluid Mechanics, 1997, 341, 77-99.	3.4	155
5	Inertial waves in a rotating spherical shell: attractors and asymptotic spectrum. Journal of Fluid Mechanics, 2001, 435, 103-144.	3.4	151
6	Acoustic oscillations of rapidly rotating polytropic stars. Astronomy and Astrophysics, 2006, 455, 621-637.	5.1	133
7	The Sunâ€™s Supergranulation. Living Reviews in Solar Physics, 2010, 7, 1.	22.0	111
8	Acoustic oscillations of rapidly rotating polytropic stars. Astronomy and Astrophysics, 2006, 455, 607-620.	5.1	96
9	Gravito-inertial waves in a rotating stratified sphere or spherical shell. Journal of Fluid Mechanics, 1999, 398, 271-297.	3.4	94
10	Self-consistent 2D models of fast-rotating early-type stars. Astronomy and Astrophysics, 2013, 552, A35.	5.1	87
11	The first view of Î´Scuti and Î³Doradus stars with the TESS mission. Monthly Notices of the Royal Astronomical Society, 2019, 490, 4040-4059.	4.4	78
12	The Sunâ€™s supergranulation. Living Reviews in Solar Physics, 2018, 15, 1.	22.0	76
13	Viscous dissipation by tidally forced inertial modes in a rotating spherical shell. Journal of Fluid Mechanics, 2010, 643, 363-394.	3.4	69
14	Regular patterns in the acoustic spectrum of rapidly rotating stars. Astronomy and Astrophysics, 2008, 481, 449-452.	5.1	65
15	Gravity modes in rapidly rotating stars. Astronomy and Astrophysics, 2010, 518, A30.	5.1	61
16	The dynamics of a fully radiative rapidly rotating star enclosed within a spherical box. Astronomy and Astrophysics, 2007, 470, 1013-1022.	5.1	61
17	The dynamics of the radiative envelope of rapidly rotating stars. Astronomy and Astrophysics, 2006, 451, 1025-1036.	5.1	57
18	Tidal instability in stellar and planetary binary systems. Physics of the Earth and Planetary Interiors, 2010, 178, 48-55.	1.9	57

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19	An algorithm for computing the 2D structure of fast rotating stars. Journal of Computational Physics, 2016, 318, 277-304.	3.8	55
20	On the power spectrum of solar surface flows. Astronomy and Astrophysics, 2010, 512, A4.	5.1	54
21	Are granules good tracers of solar surface velocity fields?. Astronomy and Astrophysics, 2001, 377, L14-L17.	5.1	54
22	Linear theory of rotating fluids using spherical harmonics part II, time-periodic flows. Geophysical and Astrophysical Fluid Dynamics, 1991, 59, 185-208.	1.2	51
23	Adiabatic oscillations of non-rotating superfluid neutron stars. Astronomy and Astrophysics, 2002, 393, 949-963.	5.1	51
24	Inertial waves in a differentially rotating spherical shell. Journal of Fluid Mechanics, 2013, 719, 47-81.	3.4	49
25	The environment of the fast rotating star Achernar. Astronomy and Astrophysics, 2014, 569, A10.	5.1	43
26	Linear theory of rotating fluids using spherical harmonics part I: Steady flows. Geophysical and Astrophysical Fluid Dynamics, 1987, 39, 163-182.	1.2	42
27	Wave Attractors in Rotating Fluids: A Paradigm for Ill-Posed Cauchy Problems. Physical Review Letters, 2000, 85, 4277-4280.	7.8	41
28	Solar supergranulation revealed by granule tracking. Astronomy and Astrophysics, 2008, 479, L17-L20.	5.1	41
29	Slichter modes of the Earth revisited. Physics of the Earth and Planetary Interiors, 2002, 131, 269-278.	1.9	40
30	Ekman Layers and the Damping of Inertialrâ€Modes in a Spherical Shell: Application to Neutron Stars. Astrophysical Journal, 2001, 550, 443-447.	4.5	38
31	Ekman Pumping and Tidal Dissipation in Close Binaries: A Refutation of Tassoul's Mechanism. Astrophysical Journal, 1997, 474, 760-767.	4.5	35
32	Supergranules over the solar cycle. Astronomy and Astrophysics, 2008, 488, 1109-1115.	5.1	34
33	Analysis of singular inertial modes in a spherical shell: the slender toroidal shell model. Journal of Fluid Mechanics, 2002, 463, 345-360.	3.4	33
34	Convergence and round-off errors in a two-dimensional eigenvalue problem using spectral methods and Arnoldiâ€“Chebyshev algorithm. Journal of Computational and Applied Mathematics, 2007, 205, 382-393.	2.0	32
35	Tidal inertial waves in differentially rotating convective envelopes of low-mass stars. Astronomy and Astrophysics, 2016, 589, A22.	5.1	32
36	Inertial modes in the liquid core of the Earth. Physics of the Earth and Planetary Interiors, 1995, 91, 41-46.	1.9	31

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37	Tracking granules on the Sun's surface and reconstructing velocity fields. Astronomy and Astrophysics, 2007, 471, 687-694.	5.1	31
38	Do tidally-generated inertial waves heat the subsurface oceans of Europa and Enceladus?. Icarus, 2019, 321, 126-140.	2.5	31
39	Gravity darkening in binary stars. Astronomy and Astrophysics, 2012, 547, A32.	5.1	31
40	Velocities and divergences as a function of supergranule size. Astronomy and Astrophysics, 2007, 461, 1141-1147.	5.1	31
41	Excitation of inertial modes in an experimental spherical Couette flow. Physical Review E, 2012, 86, 026304.	2.1	28
42	Axisymmetric inertial modes in a spherical shell at low Ekman numbers. Journal of Fluid Mechanics, 2018, 844, 597-634.	3.4	28
43	Supergranulation and multiscale flows in the solar photosphere. Astronomy and Astrophysics, 2017, 599, A69.	5.1	26
44	Mesoscale flows in large aspect ratio simulations of turbulent compressible convection. Astronomy and Astrophysics, 2005, 430, L57-L60.	5.1	25
45	ON THE INTERPRETATION OF ECHELLE DIAGRAMS FOR SOLAR-LIKE OSCILLATIONS EFFECT OF CENTRIFUGAL DISTORTION. Astrophysical Journal, 2010, 721, 537-546.	4.5	25
46	A realistic two-dimensional model of Altair. Astronomy and Astrophysics, 2020, 633, A78.	5.1	25
47	Critical angular velocity and anisotropic mass loss of rotating stars with radiation-driven winds. Astronomy and Astrophysics, 2019, 625, A88.	5.1	23
48	Relation between trees of fragmenting granules and supergranulation evolution. Astronomy and Astrophysics, 2016, 590, A121.	5.1	22
49	Mesoscale dynamics on the Sun's surface from HINODE observations. Astronomy and Astrophysics, 2009, 495, 945-952.	5.1	21
50	Gravito-inertial waves in a differentially rotating spherical shell. Journal of Fluid Mechanics, 2016, 800, 213-247.	3.4	21
51	COMPARISON OF SOLAR SURFACE FLOWS INFERRED FROM TIME-DISTANCE HELIOSEISMOLOGY AND COHERENT STRUCTURE TRACKING USING HMI/SDOOBSERVATIONS. Astrophysical Journal, 2013, 771, 32.	4.5	20
52	Completeness of inertial modes of an incompressible inviscid fluid in a corotating ellipsoid. Physical Review E, 2017, 95, 053116.	2.1	20
53	Evolution of rotation in rapidly rotating early-type stars during the main sequence with 2D models. Astronomy and Astrophysics, 2019, 625, A89.	5.1	20
54	Oscillations of magnetic stars: I. Axisymmetric shear AlfvÃ©n modes of a spherical shell in a dipolar magnetic field. Astronomy and Astrophysics, 2003, 398, 663-675.	5.1	17

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55	On the dynamics of radiative zones in rotating stars. EAS Publications Series, 2006, 21, 275-295.	0.3	17
56	A comparison of the anelastic and subseismic approximations for low-frequency gravity modes in stars. Monthly Notices of the Royal Astronomical Society, 2001, 324, 635-642.	4.4	16
57	Photospheric flows measured with TRACE. Astronomy and Astrophysics, 2002, 387, 672-677.	5.1	16
58	Oscillations of 2D ESTER models. Astronomy and Astrophysics, 2021, 645, A46.	5.1	14
59	Ab Initio Modelling of Steady Rotating Stars. Lecture Notes in Physics, 2013, , 49-73.	0.7	12
60	Gravity darkening in stars with surface differential rotation. Astronomy and Astrophysics, 2017, 606, A32.	5.1	12
61	On the analogy between gravity modes and inertial modes in spherical geometry. European Physical Journal B, 1999, 9, 731-738.	1.5	11
62	A note on inertial modes in the core of the Earth. Physics of the Earth and Planetary Interiors, 2000, 117, 63-70.	1.9	11
63	The solar dynamo. Comptes Rendus Physique, 2008, 9, 757-765.	0.9	11
64	Dynamics of the envelope of a rapidly rotating star or giant planet in gravitational contraction. Astronomy and Astrophysics, 2014, 572, A15.	5.1	11
65	Predictions for Gravity-mode Periods and Surface Abundances in Intermediate-mass Dwarfs from Shear Mixing and Radiative Levitation. Astrophysical Journal, 2022, 925, 154.	4.5	11
66	More concerning the anelastic and subseismic approximations for low-frequency modes in stars. Monthly Notices of the Royal Astronomical Society, 2002, 337, 1087-1090.	4.4	10
67	An r-mode in a magnetic rotating spherical layer: application to neutron stars. Monthly Notices of the Royal Astronomical Society, 2012, 419, 2893-2899.	4.4	10
68	Dynamics of the radiative envelope of rapidly rotating stars: Effects of spin-down driven by mass loss. Astronomy and Astrophysics, 2014, 570, A42.	5.1	10
69	Tracking granules on the Sun's surface and reconstructing velocity fields. Astronomy and Astrophysics, 2007, 471, 695-703.	5.1	9
70	The evolved fast rotator Sargas. Astronomy and Astrophysics, 2018, 619, A167.	5.1	7
71	Ekman Layers and the Damping of Inertialrâ€Modes in a Spherical Shell: Application to Neutron Stars. Astrophysical Journal, 2001, 557, 493-493.	4.5	7
72	Internal shear layers in librating spherical shells: the case of periodic characteristic paths. Journal of Fluid Mechanics, 2022, 939, .	3.4	7

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73	Acoustic Events in the Solar Atmosphere from Hinode/SOT NFI Observations. Solar Physics, 2012, 278, 241-256.	2.5	6
74	Families of Granules, Flows, and Acoustic Events in the Solar Atmosphere from Hinode Observations. Solar Physics, 2015, 290, 321-333.	2.5	6
75	Approaching the Low-Frequency Spectrum of Rotating Stars. Lecture Notes in Physics, 2009, , 101-121.	0.7	6
76	Tidal heating in close binary stellar systems. Monthly Notices of the Royal Astronomical Society, 1987, 227, 295-314.	4.4	5
77	Evolution of Rotation in Binaries: Physical Processes. Symposium - International Astronomical Union, 2004, 215, 394-403.	0.1	5
78	Non-adiabatic pulsations in ESTER models. EPJ Web of Conferences, 2017, 160, 02007.	0.3	5
79	Gravity darkening in late-type stars. Astronomy and Astrophysics, 2018, 609, A124.	5.1	5
80	Seismology of Altair with MOST. Astronomy and Astrophysics, 2021, 653, A26.	5.1	5
81	Physical Processes Leading to Surface Inhomogeneities: The Case of Rotation. Lecture Notes in Physics, 2016, , 101-125.	0.7	5
82	The dynamics of rotating fluids and binary stars. EAS Publications Series, 2008, 29, 127-147.	0.3	4
83	Two-dimensional models of early-type fast rotating stars: new challenges in stellar physics. EAS Publications Series, 2013, 63, 385-394.	0.3	3
84	The 2D dynamics of radiative zones of low-mass stars. Astronomy and Astrophysics, 2018, 610, A35.	5.1	3
85	Modeling rotating stars in two dimensions. EAS Publications Series, 2013, 62, 307-322.	0.3	2
86	Pulsations of rapidly rotating stars with compositional discontinuities. Proceedings of the International Astronomical Union, 2013, 9, 169-172.	0.0	2
87	Asteroseismology of fast-rotating stars: the example of Î± Ophiuchi. Proceedings of the International Astronomical Union, 2013, 9, 455-456.	0.0	2
88	Gravito-inertial modes in a differentially rotating spherical shell. EPJ Web of Conferences, 2015, 101, 06046.	0.3	2
89	Stress-driven spin-down of a viscous fluid within a spherical shell. Journal of Fluid Mechanics, 2020, 904, .	3.4	2
90	Î±Î›-dynamos. International Astronomical Union Colloquium, 1991, 130, 147-150.	0.1	1

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91	Non linear stability of slender accretion disks by bifurcation method. Geophysical and Astrophysical Fluid Dynamics, 1993, 70, 235-251.	1.2	1
92	Oscillations of Fast Rotating Stars: p-Modes in Centrifugally Flattened Polytropes. Symposium - International Astronomical Union, 2004, 215, 414-415.	0.1	1
93	MHD simulations of the solar photosphere. EAS Publications Series, 2012, 55, 5-13.	0.3	1
94	Flows of Incompressible Viscous Fluids. Graduate Texts in Physics, 2015, , 111-148.	0.2	1
95	On the oscillation spectrum of a magnetized core in a giant star. EPJ Web of Conferences, 2017, 160, 02011.	0.3	1
96	A CMOS Sensor for Solar Observation. , 2006, , 123-128.		1
97	Large Scale Convection in Stars : Towards a Model for the Action of Coherent Structures. International Astronomical Union Colloquium, 1991, 130, 33-36.	0.1	0
98	Oscillations of Rapidly Rotating Stars. International Astronomical Union Colloquium, 2000, 176, 373-373.	0.1	0
99	On the Theory of Oscillations of Rapidly Rotating Stars. International Astronomical Union Colloquium, 2002, 185, 190-191.	0.1	0
100	The oscillations of rapidly rotating stars. , 2003, , 99-110.		0
101	Development of large and fast cmos aps cameras at latt. EAS Publications Series, 2009, 37, 301-306.	0.3	0
102	Two-dimensional models of early-type fast rotating stars: the ESTER project. Proceedings of the International Astronomical Union, 2015, 11, 147-148.	0.0	0
103	The 2D dynamics of the differentially rotating envelope of massive stars. Proceedings of the International Astronomical Union, 2016, 12, 409-409.	0.0	0
104	2D dynamics of the radiative core of low mass stars. EPJ Web of Conferences, 2017, 160, 02006.	0.3	0
105	Classical and general relativistic post-Keplerian effects in binary pulsars hosting fast rotating main sequence stars. European Physical Journal C, 2019, 79, 1.	3.9	0
106	Core overshooting under the light of fluid dynamics. EAS Publications Series, 2019, 82, 153-165.	0.3	0
107	Dynamo Effect With Inertial Modes in a Spherical Shell?. , 2001, , 271-277.		0
108	Recurrence of fragmenting granules and their relation to meso- and supergranular flow fields. EAS Publications Series, 2003, 9, 371-371.	0.3	0

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109	An introduction to thermal convection. EAS Publications Series, 2006, 21, 5-5.	0.3	0
110	Beyond Fluid Mechanics: An Introduction to the Statistical Foundations of Gas Dynamics. Graduate Texts in Physics, 2015, , 407-452.	0.2	0
111	Flows of Perfect Fluids. Graduate Texts in Physics, 2015, , 71-109.	0.2	0