

Francisco Marques

List of Publications by Year in descending order

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88
papers

1,916
citations

201575

27
h-index

315616

38
g-index

92
all docs

92
docs citations

92
times ranked

835
citing authors

#	ARTICLE	IF	CITATIONS
1	Symmetry breaking of two-dimensional time-periodic wakes. <i>Journal of Fluid Mechanics</i> , 2005, 522, 395-411.	1.4	95
2	Precessing vortex breakdown mode in an enclosed cylinder flow. <i>Physics of Fluids</i> , 2001, 13, 1679-1682.	1.6	58
3	An Efficient Spectral-Projection Method for the Navier–Stokes Equations in Cylindrical Geometries. <i>Journal of Computational Physics</i> , 2002, 176, 384-401.	1.9	58
4	Symmetry breaking in free-surface cylinder flows. <i>Journal of Fluid Mechanics</i> , 2004, 502, 99-126.	1.4	58
5	Taylor–Couette flow with axial oscillations of the inner cylinder: Floquet analysis of the basic flow. <i>Journal of Fluid Mechanics</i> , 1997, 348, 153-175.	1.4	52
6	Instability and mode interactions in a differentially driven rotating cylinder. <i>Journal of Fluid Mechanics</i> , 2002, 462, 383-409.	1.4	51
7	Mode interactions in an enclosed swirling flow: a double Hopf bifurcation between azimuthal wavenumbers 0 and 2. <i>Journal of Fluid Mechanics</i> , 2002, 455, 263-281.	1.4	49
8	The Boussinesq approximation in rapidly rotating flows. <i>Journal of Fluid Mechanics</i> , 2013, 737, 56-77.	1.4	47
9	Dynamics of Three-Tori in a Periodically Forced Navier-Stokes Flow. <i>Physical Review Letters</i> , 2000, 85, 972-975.	2.9	46
10	On the competition between centrifugal and shear instability in spiral Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 2002, 455, 129-148.	1.4	46
11	Bifurcations in systems with Z_2 spatio-temporal and $O(2)$ spatial symmetry. <i>Physica D: Nonlinear Phenomena</i> , 2004, 189, 247-276.	1.3	46
12	On boundary conditions for velocity potentials in confined flows: Application to Couette flow. <i>Physics of Fluids A, Fluid Dynamics</i> , 1990, 2, 729-737.	1.6	44
13	Centrifugal effects in rotating convection: axisymmetric states and three-dimensional instabilities. <i>Journal of Fluid Mechanics</i> , 2007, 580, 303-318.	1.4	44
14	A Continuation and Bifurcation Technique for Navier–Stokes Flows. <i>Journal of Computational Physics</i> , 2002, 180, 78-98.	1.9	43
15	Oscillatory modes in an enclosed swirling flow. <i>Journal of Fluid Mechanics</i> , 2001, 439, 109-129.	1.4	40
16	Crossflow instability of finite Bårdewadt flows: Transients and spiral waves. <i>Physics of Fluids</i> , 2009, 21, .	1.6	39
17	Centrifugal effects in rotating convection: nonlinear dynamics. <i>Journal of Fluid Mechanics</i> , 2009, 628, 269-297.	1.4	37
18	Conductive and convective heat transfer in fluid flows between differentially heated and rotating cylinders. <i>International Journal of Heat and Mass Transfer</i> , 2015, 90, 959-967.	2.5	37

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19	Instability mechanisms and transition scenarios of spiral turbulence in Taylor-Couette flow. <i>Physical Review E</i> , 2009, 80, 046315.	0.8	35
20	Instability of plumes driven by localized heating. <i>Journal of Fluid Mechanics</i> , 2013, 736, 616-640.	1.4	35
21	Global endwall effects on centrifugally stable flows. <i>Physics of Fluids</i> , 2008, 20, .	1.6	33
22	On the competition between centrifugal and shear instability in spiral Couette flow. <i>Journal of Fluid Mechanics</i> , 2000, 402, 33-56.	1.4	32
23	Onset of three-dimensional unsteady states in small-aspect-ratio Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2006, 561, 255.	1.4	32
24	Bursting dynamics due to a homoclinic cascade in Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2008, 613, 357-384.	1.4	31
25	Onset of convection in a moderate aspect-ratio rotating cylinder: Eckhaus-Benjamin-Feir instability. <i>Journal of Fluid Mechanics</i> , 2007, 590, 187-208.	1.4	29
26	Spatial and temporal resonances in a periodically forced hydrodynamic system. <i>Physica D: Nonlinear Phenomena</i> , 2000, 136, 340-352.	1.3	28
27	Symmetry Breaking Via Global Bifurcations of Modulated Rotating Waves in Hydrodynamics. <i>Physical Review Letters</i> , 2005, 94, 074501.	2.9	28
28	Mode competition of rotating waves in reflection-symmetric Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2005, 540, 269.	1.4	27
29	Thermal convection in vertical cylinders. A method based on potentials of velocity. <i>Computer Methods in Applied Mechanics and Engineering</i> , 1993, 110, 157-169.	3.4	26
30	Precession of a rapidly rotating cylinder flow: traverse through resonance. <i>Journal of Fluid Mechanics</i> , 2015, 782, 63-98.	1.4	26
31	Instabilities and inertial waves generated in a librating cylinder. <i>Journal of Fluid Mechanics</i> , 2011, 687, 171-193.	1.4	25
32	Rapidly rotating precessing cylinder flows: forced triadic resonances. <i>Journal of Fluid Mechanics</i> , 2018, 839, 239-270.	1.4	24
33	Mode competition between rotating waves in a swirling flow with reflection symmetry. <i>Journal of Fluid Mechanics</i> , 2004, 507, 265-288.	1.4	23
34	Stability control and catastrophic transition in a forced Taylor-Couette system. <i>Journal of Fluid Mechanics</i> , 2007, 590, 471-496.	1.4	23
35	A periodically forced flow displaying symmetry breaking via a three-tori gluing bifurcation and two-tori resonances. <i>Physica D: Nonlinear Phenomena</i> , 2001, 156, 81-97.	1.3	22
36	Tangent double Hopf bifurcation in a differentially rotating cylinder flow. <i>Physical Review E</i> , 2003, 68, 016310.	0.8	22

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37	Travelling circular waves in axisymmetric rotating convection. <i>Journal of Fluid Mechanics</i> , 2006, 569, 331.	1.4	22
38	Solenoidal spectral formulations for the computation of secondary flows in cylindrical and annular geometries. <i>European Physical Journal: Special Topics</i> , 2007, 146, 249-259.	1.2	22
39	Non-linear spirals in the Taylor-Couette problem. <i>Physics of Fluids</i> , 1998, 10, 829-838.	1.6	21
40	Sidewall boundary layer instabilities in a rapidly rotating cylinder driven by a differentially corotating lid. <i>Physics of Fluids</i> , 2010, 22, .	1.6	21
41	Small aspect ratio Taylor-Couette flow: Onset of a very-low-frequency three-torus state. <i>Physical Review E</i> , 2003, 68, 036302.	0.8	19
42	Mode competition in modulated Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2008, 601, 381-406.	1.4	19
43	Modulated Taylor-Couette Flow: Onset of Spiral Modes. <i>Theoretical and Computational Fluid Dynamics</i> , 2002, 16, 59-69.	0.9	18
44	Double Hopf bifurcation in corotating spiral Poiseuille flow. <i>Physics of Fluids</i> , 2006, 18, 064101.	1.6	18
45	Symmetry-breaking Hopf bifurcations to 1-, 2-, and 3-tori in small-aspect-ratio counterrotating Taylor-Couette flow. <i>Physical Review E</i> , 2012, 86, 046316.	0.8	18
46	Complex dynamics in a short annular container with rotating bottom and inner cylinder. <i>Journal of Fluid Mechanics</i> , 2004, 501, 327-354.	1.4	17
47	Quenching of vortex breakdown oscillations via harmonic modulation. <i>Journal of Fluid Mechanics</i> , 2008, 599, 441-464.	1.4	17
48	Optimal harmonic response in a confined Bédewadt boundary layer flow. <i>Physical Review E</i> , 2010, 82, 036301.	0.8	17
49	Onset of Lortz-like dynamics in finite rotating thermal convection. <i>Journal of Fluid Mechanics</i> , 2010, 644, 337-357.	1.4	16
50	Finite aspect ratio Taylor-Couette flow: Shilnikov dynamics of 2-tori. <i>Physica D: Nonlinear Phenomena</i> , 2005, 211, 168-191.	1.3	15
51	Rapidly rotating cylinder flow with an oscillating sidewall. <i>Physical Review E</i> , 2014, 89, 013013.	0.8	15
52	Generalized Couette-Poiseuille flow with boundary mass transfer. <i>Journal of Fluid Mechanics</i> , 1998, 374, 221-249.	1.4	14
53	Modulated rotating convection: radially travelling concentric rolls. <i>Journal of Fluid Mechanics</i> , 2008, 608, 357-378.	1.4	14
54	Families of subcritical spirals in highly counter-rotating Taylor-Couette flow. <i>Physical Review E</i> , 2009, 79, 036309.	0.8	14

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55	Pinning of rotating waves to defects in finite Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2011, 666, 254-272.	1.4	14
56	Classical predictive electrodynamics of two charges with radiation: Energy and momentum balance and scattering cross sections. II. <i>Journal of Mathematical Physics</i> , 1979, 20, 1316-1320.	0.5	13
57	Interacting oscillatory boundary layers and wall modes in modulated rotating convection. <i>Journal of Fluid Mechanics</i> , 2009, 625, 75-96.	1.4	13
58	Confined rotating convection with large Prandtl number: Centrifugal effects on wall modes. <i>Physical Review E</i> , 2014, 89, 013019.	0.8	13
59	Nonlinear and detuning effects of the nutation angle in precessionally forced rotating cylinder flow. <i>Physical Review Fluids</i> , 2016, 1, .	1.0	13
60	Influence of wall modes on the onset of bulk convection in a rotating cylinder. <i>Physics of Fluids</i> , 2008, 20, .	1.6	12
61	Bifurcations with imperfect $SO(2)$ symmetry and pinning of rotating waves. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2013, 469, 20120348.	1.0	11
62	Imperfect gluing bifurcation in a temporal glide-reflection symmetric Taylor-Couette flow. <i>Physics of Fluids</i> , 2002, 14, L33-L36.	1.6	10
63	Three-dimensional modes in a periodically driven elongated cavity. <i>Physical Review E</i> , 2005, 71, 026305.	0.8	10
64	Spontaneous generation of a swirling plume in a stratified ambient. <i>Journal of Fluid Mechanics</i> , 2014, 761, 443-463.	1.4	9
65	Impact of centrifugal buoyancy on strato-rotational instability. <i>Journal of Fluid Mechanics</i> , 2020, 890, .	1.4	9
66	Comparison of several approaches to the relativistic dynamics of directly interacting particles. <i>Annals of Physics</i> , 1983, 150, 114-149.	1.0	8
67	On the stability of medium gap corotating spiral Poiseuille flow. <i>Physics of Fluids</i> , 2005, 17, 094104.	1.6	8
68	Harmonically forced enclosed swirling flow. <i>Physics of Fluids</i> , 2009, 21, .	1.6	8
69	Transitions to three-dimensional flows in a cylinder driven by oscillations of the sidewall. <i>Journal of Fluid Mechanics</i> , 2011, 681, 515-536.	1.4	7
70	Three-dimensional instabilities in a discretely heated annular flow: Onset of spatio-temporal complexity via defect dynamics. <i>Physics of Fluids</i> , 2014, 26, 064102.	1.6	7
71	Endwall effects in a periodically forced centrifugally unstable flow. <i>Fluid Dynamics Research</i> , 2000, 27, 91-108.	0.6	6
72	Fold-pitchfork bifurcation for maps with Z_2 symmetry in pipe flow. <i>Physical Review E</i> , 2013, 88, 013006.	0.8	6

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73	Flows between orthogonally stretching parallel plates. <i>Physics of Fluids</i> , 2021, 33, 024103.	1.6	5
74	World-line condition and the noninteraction theorem. <i>Physical Review D</i> , 1985, 31, 314-318.	1.6	4
75	Dynamics of axially localized states in Taylor-Couette flows. <i>Physical Review E</i> , 2015, 91, 053011.	0.8	3
76	Extensional channel flow revisited: a dynamical systems perspective. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170151.	1.0	3
77	Stratified Taylor-Couette flow: nonlinear dynamics. <i>Journal of Fluid Mechanics</i> , 2022, 930, .	1.4	3
78	Realization of Poincaré group induced by a second-order ordinary differential system. Noninteraction theorem. <i>Journal of Mathematical Physics</i> , 1986, 27, 519-523.	0.5	2
79	Determining the self-rotation number following a Naimark-Sacker bifurcation in the periodically forced Taylor-Couette flow. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2000, 51, 61-74.	0.7	2
80	Inertial waves in rapidly rotating flows: a dynamical systems perspective. <i>Physica Scripta</i> , 2016, 91, 124001.	1.2	2
81	Extensional and torsional pipe flow. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	2
82	The problem of physical coordinates in predictive Hamiltonian systems. <i>Journal of Mathematical Physics</i> , 1983, 24, 1665-1671.	0.5	1
83	Bicritical instabilities in pressure driven helicoidal flows. <i>Journal of Physics: Conference Series</i> , 2005, 14, 228-235.	0.3	1
84	Mode competition in cylindrical flows driven by sidewall oscillations. <i>Physical Review E</i> , 2013, 87, 043001.	0.8	1
85	FEIGENBAUM'S UNIVERSALITY IN A LOW-DIMENSIONAL FLUID MODEL. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 1996, 06, 1587-1594.	0.7	0
86	From global to local bifurcations in a forced Taylor-Couette flow. <i>Theoretical and Computational Fluid Dynamics</i> , 2004, 18, 115-128.	0.9	0
87	Introductory remarks from the Editors. <i>Fluid Dynamics Research</i> , 2012, 44, 031001.	0.6	0
88	Spiral Vortices Between Concentric Cylinders. <i>Fluid Mechanics and Its Applications</i> , 1993, , 55-59.	0.1	0