

Francisco Marques

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89
papers

1,629
citations

24
h-index

35
g-index

92
ext. papers

1,799
ext. citations

3.3
avg, IF

4.71
L-index

#	Paper	IF	Citations
89	Symmetry breaking of two-dimensional time-periodic wakes. <i>Journal of Fluid Mechanics</i> , 2005 , 522, 395-411	4.1	75
88	An Efficient Spectral-Projection Method for the Navier-Stokes Equations in Cylindrical Geometries. <i>Journal of Computational Physics</i> , 2002 , 176, 384-401	4.1	52
87	Precessing vortex breakdown mode in an enclosed cylinder flow. <i>Physics of Fluids</i> , 2001 , 13, 1679-1682	4.4	52
86	Symmetry breaking in free-surface cylinder flows. <i>Journal of Fluid Mechanics</i> , 2004 , 502, 99-126	3.7	49
85	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	3.7	47
84	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	3.7	46
83	Instability and mode interactions in a differentially driven rotating cylinder. <i>Journal of Fluid Mechanics</i> , 2002 , 462, 383-409	3.7	46
82	Dynamics of three-tori in a periodically forced navier-stokes flow. <i>Physical Review Letters</i> , 2000 , 85, 972-5.4	5.4	42
81	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		42
80	Bifurcations in systems with Z_2 spatio-temporal and $O(2)$ spatial symmetry. <i>Physica D: Nonlinear Phenomena</i> , 2004 , 189, 247-276	3.3	41
79	Centrifugal effects in rotating convection: axisymmetric states and three-dimensional instabilities. <i>Journal of Fluid Mechanics</i> , 2007 , 580, 303-318	3.7	40
78	A Continuation and Bifurcation Technique for Navier-Stokes Flows. <i>Journal of Computational Physics</i> , 2002 , 180, 78-98	4.1	39
77	Oscillatory modes in an enclosed swirling flow. <i>Journal of Fluid Mechanics</i> , 2001 , 439, 109-129	3.7	39
76	The Boussinesq approximation in rapidly rotating flows. <i>Journal of Fluid Mechanics</i> , 2013 , 737, 56-77	3.7	36
75	Crossflow instability of finite Břewadt flows: Transients and spiral waves. <i>Physics of Fluids</i> , 2009 , 21, 114107	4.4	36
74	Centrifugal effects in rotating convection: nonlinear dynamics. <i>Journal of Fluid Mechanics</i> , 2009 , 628, 269-297	3.7	34
73	On the competition between centrifugal and shear instability in spiral Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 2002 , 455, 129-148	3.7	34

72	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	4.9	28
71	Global endwall effects on centrifugally stable flows. <i>Physics of Fluids</i> , 2008 , 20, 104104	4.4	28
70	On the competition between centrifugal and shear instability in spiral Couette flow. <i>Journal of Fluid Mechanics</i> , 2000 , 402, 33-56	3.7	28
69	Instability mechanisms and transition scenarios of spiral turbulence in Taylor-Couette flow. <i>Physical Review E</i> , 2009 , 80, 046315	2.4	27
68	Instability of plumes driven by localized heating. <i>Journal of Fluid Mechanics</i> , 2013 , 736, 616-640	3.7	26
67	Onset of convection in a moderate aspect-ratio rotating cylinder: Eckhaus-Benjamin-Feir instability. <i>Journal of Fluid Mechanics</i> , 2007 , 590, 187-208	3.7	26
66	Instabilities and inertial waves generated in a librating cylinder. <i>Journal of Fluid Mechanics</i> , 2011 , 687, 171-193	3.7	24
65	Bursting dynamics due to a homoclinic cascade in Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2008 , 613, 357-384	3.7	24
64	Onset of three-dimensional unsteady states in small-aspect-ratio Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2006 , 561, 255	3.7	24
63	Mode competition between rotating waves in a swirling flow with reflection symmetry. <i>Journal of Fluid Mechanics</i> , 2004 , 507, 265-288	3.7	23
62	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	5.7	23
61	Mode competition of rotating waves in reflection-symmetric Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2005 , 540, 269	3.7	22
60	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	2.3	21
59	Symmetry breaking via global bifurcations of modulated rotating waves in hydrodynamics. <i>Physical Review Letters</i> , 2005 , 94, 074501	7.4	21
58	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	3.3	21
57	Spatial and temporal resonances in a periodically forced hydrodynamic system. <i>Physica D: Nonlinear Phenomena</i> , 2000 , 136, 340-352	3.3	20
56	Non-linear spirals in the Taylor-Couette problem. <i>Physics of Fluids</i> , 1998 , 10, 829-838	4.4	20
55	Precession of a rapidly rotating cylinder flow: traverse through resonance. <i>Journal of Fluid Mechanics</i> , 2015 , 782, 63-98	3.7	19

54	Sidewall boundary layer instabilities in a rapidly rotating cylinder driven by a differentially corotating lid. <i>Physics of Fluids</i> , 2010 , 22, 114109	4.4	19
53	Stability control and catastrophic transition in a forced Taylor-Couette system. <i>Journal of Fluid Mechanics</i> , 2007 , 590, 471-496	3.7	19
52	Tangent double Hopf bifurcation in a differentially rotating cylinder flow. <i>Physical Review E</i> , 2003 , 68, 016310	2.4	19
51	Travelling circular waves in axisymmetric rotating convection. <i>Journal of Fluid Mechanics</i> , 2006 , 569, 331-337	3.7	18
50	Quenching of vortex breakdown oscillations via harmonic modulation. <i>Journal of Fluid Mechanics</i> , 2008 , 599, 441-464	3.7	16
49	Double Hopf bifurcation in corotating spiral Poiseuille flow. <i>Physics of Fluids</i> , 2006 , 18, 064101	4.4	16
48	Rapidly rotating precessing cylinder flows: forced triadic resonances. <i>Journal of Fluid Mechanics</i> , 2018 , 839, 239-270	3.7	15
47	Rapidly rotating cylinder flow with an oscillating sidewall. <i>Physical Review E</i> , 2014 , 89, 013013	2.4	15
46	Complex dynamics in a short annular container with rotating bottom and inner cylinder. <i>Journal of Fluid Mechanics</i> , 2004 , 501, 327-354	3.7	15
45	Modulated Taylor-Couette Flow: Onset of Spiral Modes. <i>Theoretical and Computational Fluid Dynamics</i> , 2002 , 16, 59-69	2.3	15
44	Small aspect ratio Taylor-Couette flow: onset of a very-low-frequency three-torus state. <i>Physical Review E</i> , 2003 , 68, 036302	2.4	15
43	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	2.4	14
42	Onset of K�ppers-Lortz-like dynamics in finite rotating thermal convection. <i>Journal of Fluid Mechanics</i> , 2010 , 644, 337-357	3.7	14
41	Optimal harmonic response in a confined B�ewadt boundary layer flow. <i>Physical Review E</i> , 2010 , 82, 036301	2.4	14
40	Families of subcritical spirals in highly counter-rotating Taylor-Couette flow. <i>Physical Review E</i> , 2009 , 79, 036309	2.4	13
39	Modulated rotating convection: radially travelling concentric rolls. <i>Journal of Fluid Mechanics</i> , 2008 , 608, 357-378	3.7	13
38	Mode competition in modulated Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2008 , 601, 381-406	3.7	13
37	Classical predictive electrodynamics of two charges with radiation: Energy and 3-momentum balance and scattering cross sections. II. <i>Journal of Mathematical Physics</i> , 1979 , 20, 1316-1320	1.2	13

36	Interacting oscillatory boundary layers and wall modes in modulated rotating convection. <i>Journal of Fluid Mechanics</i> , 2009 , 625, 75-96	3.7	12
35	Finite aspect ratio Taylor-Couette flow: Shil'nikov dynamics of 2-tori. <i>Physica D: Nonlinear Phenomena</i> , 2005 , 211, 168-191	3.3	12
34	Generalized Couette-Poiseuille flow with boundary mass transfer. <i>Journal of Fluid Mechanics</i> , 1998 , 374, 221-249	3.7	12
33	Confined rotating convection with large Prandtl number: centrifugal effects on wall modes. <i>Physical Review E</i> , 2014 , 89, 013019	2.4	11
32	Influence of wall modes on the onset of bulk convection in a rotating cylinder. <i>Physics of Fluids</i> , 2008 , 20, 024109	4.4	10
31	Imperfect gluing bifurcation in a temporal glide-reflection symmetric Taylor-Couette flow. <i>Physics of Fluids</i> , 2002 , 14, L33-L36	4.4	10
30	Nonlinear and detuning effects of the nutation angle in precessionally forced rotating cylinder flow. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	10
29	Pinning of rotating waves to defects in finite Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2011 , 666, 254-272	3.7	9
28	Three-dimensional modes in a periodically driven elongated cavity. <i>Physical Review E</i> , 2005 , 71, 026305	2.4	9
27	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	2.4	8
26	Harmonically forced enclosed swirling flow. <i>Physics of Fluids</i> , 2009 , 21, 034106	4.4	8
25	Comparison of several approaches to the relativistic dynamics of directly interacting particles. <i>Annals of Physics</i> , 1983 , 150, 114-149	2.5	8
24	Spontaneous generation of a swirling plume in a stratified ambient. <i>Journal of Fluid Mechanics</i> , 2014 , 761, 443-463	3.7	6
23	Transitions to three-dimensional flows in a cylinder driven by oscillations of the sidewall. <i>Journal of Fluid Mechanics</i> , 2011 , 681, 515-536	3.7	6
22	Impact of centrifugal buoyancy on strato-rotational instability. <i>Journal of Fluid Mechanics</i> , 2020 , 890,	3.7	5
21	Fold-pitchfork bifurcation for maps with $Z(2)$ symmetry in pipe flow. <i>Physical Review E</i> , 2013 , 88, 013006	2.4	5
20	On the stability of medium gap corotating spiral Poiseuille flow. <i>Physics of Fluids</i> , 2005 , 17, 094104	4.4	5
19	Endwall effects in a periodically forced centrifugally unstable flow. <i>Fluid Dynamics Research</i> , 2000 , 27, 91-108	1.2	5

18	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	4.4	4
17	World-line condition and the noninteraction theorem. <i>Physical Review D</i> , 1985 , 31, 314-318	4.9	4
16	Dynamics of axially localized states in Taylor-Couette flows. <i>Physical Review E</i> , 2015 , 91, 053011	2.4	3
15	Extensional channel flow revisited: a dynamical systems perspective. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017 , 473, 20170151	2.4	2
14	Realization of Poincaré group induced by a second-order ordinary differential system. Noninteraction theorem. <i>Journal of Mathematical Physics</i> , 1986 , 27, 519-523	1.2	2
13	Flows between orthogonally stretching parallel plates. <i>Physics of Fluids</i> , 2021 , 33, 024103	4.4	2
12	Quasiperiodic Response to Parametric Excitations. <i>The IMA Volumes in Mathematics and Its Applications</i> , 2000 , 209-227	0.5	2
11	Mode competition in cylindrical flows driven by sidewall oscillations. <i>Physical Review E</i> , 2013 , 87, 043001	2.4	1
10	Bicritical instabilities in pressure driven helicoidal flows. <i>Journal of Physics: Conference Series</i> , 2005 , 14, 228-235	0.3	1
9	Determining the self-rotation number following a Naimark-Backer bifurcation in the periodically forced Taylor-Couette flow. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 2000 , 51, 61-74	1.6	1
8	The problem of physical coordinates in predictive Hamiltonian systems. <i>Journal of Mathematical Physics</i> , 1983 , 24, 1665-1671	1.2	1
7	Extensional and torsional pipe flow. <i>Physical Review Fluids</i> , 2019 , 4,	2.8	1
6	Inertial waves in rapidly rotating flows: a dynamical systems perspective. <i>Physica Scripta</i> , 2016 , 91, 124001	2.6	1
5	Introductory remarks from the Editors. <i>Fluid Dynamics Research</i> , 2012 , 44, 031001	1.2	
4	From global to local bifurcations in a forced Taylor-Couette flow. <i>Theoretical and Computational Fluid Dynamics</i> , 2004 , 18, 115-128	2.3	
3	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	2	
2	Spiral Vortices Between Concentric Cylinders. <i>Fluid Mechanics and Its Applications</i> , 1993 , 55-59	0.2	
1	Shear instabilities in Taylor-Couette flow. <i>Springer Proceedings in Physics</i> , 2009 , 115-118	0.2	

