Francisco Marques

List of Publications by Year in Descending Order

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	Flows between orthogonally stretching parallel plates. *Physics of Fluids*, **2021**, 33, 024103	4.4	2
88	Impact of centrifugal buoyancy on strato-rotational instability. *Journal of Fluid Mechanics*, **2020**, 890,	3.7	5
87	Extensional and torsional pipe flow. *Physical Review Fluids*, **2019**, 4,	2.8	1
86	Rapidly rotating precessing cylinder flows: forced triadic resonances. *Journal of Fluid Mechanics*, **2018**, 839, 239-270	3.7	15
85	Extensional channel flow revisited: a dynamical systems perspective. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2017**, 473, 20170151	2.4	2
84	Nonlinear and detuning effects of the nutation angle in precessionally forced rotating cylinder flow. *Physical Review Fluids*, **2016**, 1,	2.8	10
83	Inertial waves in rapidly rotating flows: a dynamical systems perspective. *Physica Scripta*, **2016**, 91, 124001	1.16	1
82	Dynamics of axially localized states in Taylor-Couette flows. *Physical Review E*, **2015**, 91, 053011	2.4	3
81	Conductive and convective heat transfer in fluid flows between differentially heated and rotating cylinders. *International Journal of Heat and Mass Transfer*, **2015**, 90, 959-967	4.9	28
80	Precession of a rapidly rotating cylinder flow: traverse through resonance. *Journal of Fluid Mechanics*, **2015**, 782, 63-98	3.7	19
79	Three-dimensional instabilities in a discretely heated annular flow: Onset of spatio-temporal complexity via defect dynamics. *Physics of Fluids*, **2014**, 26, 064102	4.4	4
78	Rapidly rotating cylinder flow with an oscillating sidewall. *Physical Review E*, **2014**, 89, 013013	2.4	15
77	Confined rotating convection with large Prandtl number: centrifugal effects on wall modes. *Physical Review E*, **2014**, 89, 013019	2.4	11
76	Spontaneous generation of a swirling plume in a stratified ambient. *Journal of Fluid Mechanics*, **2014**, 761, 443-463	3.7	6
75	The Boussinesq approximation in rapidly rotating flows. *Journal of Fluid Mechanics*, **2013**, 737, 56-77	3.7	36
74	Instability of plumes driven by localized heating. *Journal of Fluid Mechanics*, **2013**, 736, 616-640	3.7	26
73	Mode competition in cylindrical flows driven by sidewall oscillations. *Physical Review E*, **2013**, 87, 043001	2.4	1

72	Fold-pitchfork bifurcation for maps with Z(2) symmetry in pipe flow. *Physical Review E*, **2013**, 88, 013006	2.4	5
71	Bifurcations with imperfect SO(2) symmetry and pinning of rotating waves. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2013**, 469, 20120348	2.4	8
70	Symmetry-breaking Hopf bifurcations to 1-, 2-, and 3-tori in small-aspect-ratio counterrotating Taylor-Couette flow. *Physical Review E*, **2012**, 86, 046316	2.4	14
69	Introductory remarks from the Editors. *Fluid Dynamics Research*, **2012**, 44, 031001	1.2	
68	Transitions to three-dimensional flows in a cylinder driven by oscillations of the sidewall. *Journal of Fluid Mechanics*, **2011**, 681, 515-536	3.7	6
67	Instabilities and inertial waves generated in a librating cylinder. *Journal of Fluid Mechanics*, **2011**, 687, 171-193	3.7	24
66	Pinning of rotating waves to defects in finite Taylor Couette flow. *Journal of Fluid Mechanics*, **2011**, 666, 254-272	3.7	9
65	Onset of Küppers Lortz-like dynamics in finite rotating thermal convection. *Journal of Fluid Mechanics*, **2010**, 644, 337-357	3.7	14
64	Sidewall boundary layer instabilities in a rapidly rotating cylinder driven by a differentially corotating lid. *Physics of Fluids*, **2010**, 22, 114109	4.4	19
63	Optimal harmonic response in a confined Bödewadt boundary layer flow. *Physical Review E*, **2010**, 82, 036301	2.4	14
62	Instability mechanisms and transition scenarios of spiral turbulence in Taylor-Couette flow. *Physical Review E*, **2009**, 80, 046315	2.4	27
61	Families of subcritical spirals in highly counter-rotating Taylor-Couette flow. *Physical Review E*, **2009**, 79, 036309	2.4	13
60	Harmonically forced enclosed swirling flow. *Physics of Fluids*, **2009**, 21, 034106	4.4	8
59	Crossflow instability of finite Bödewadt flows: Transients and spiral waves. *Physics of Fluids*, **2009**, 21, 114107	4.4	36
58	Interacting oscillatory boundary layers and wall modes in modulated rotating convection. *Journal of Fluid Mechanics*, **2009**, 625, 75-96	3.7	12
57	Centrifugal effects in rotating convection: nonlinear dynamics. *Journal of Fluid Mechanics*, **2009**, 628, 269-297	3.7	34
56	Shear instabilities in Taylor-Couette flow. *Springer Proceedings in Physics*, **2009**, 115-118	0.2	
55	Influence of wall modes on the onset of bulk convection in a rotating cylinder. *Physics of Fluids*, **2008**, 20, 024109	4.4	10

54	Global endwall effects on centrifugally stable flows. *Physics of Fluids*, **2008**, 20, 104104	4.4	28
53	Modulated rotating convection: radially travelling concentric rolls. *Journal of Fluid Mechanics*, **2008**, 608, 357-378	3.7	13
52	Quenching of vortex breakdown oscillations via harmonic modulation. *Journal of Fluid Mechanics*, **2008**, 599, 441-464	3.7	16
51	Mode competition in modulated Taylor Couette flow. *Journal of Fluid Mechanics*, **2008**, 601, 381-406	3.7	13
50	Bursting dynamics due to a homoclinic cascade in Taylor Couette flow. *Journal of Fluid Mechanics*, **2008**, 613, 357-384	3.7	24
49	Onset of convection in a moderate aspect-ratio rotating cylinder: Eckhaus Benjamin Feir instability. *Journal of Fluid Mechanics*, **2007**, 590, 187-208	3.7	26
48	Stability control and catastrophic transition in a forced Taylor Couette system. *Journal of Fluid Mechanics*, **2007**, 590, 471-496	3.7	19
47	Centrifugal effects in rotating convection: axisymmetric states and three-dimensional instabilities. *Journal of Fluid Mechanics*, **2007**, 580, 303-318	3.7	40
46	Solenoidal spectral formulations for the computation of secondary flows in cylindrical and annular geometries. *European Physical Journal: Special Topics*, **2007**, 146, 249-259	2.3	21
45	Double Hopf bifurcation in corotating spiral Poiseuille flow. *Physics of Fluids*, **2006**, 18, 064101	4.4	16
44	Travelling circular waves in axisymmetric rotating convection. *Journal of Fluid Mechanics*, **2006**, 569, 331	3.7	18
43	Onset of three-dimensional unsteady states in small-aspect-ratio Taylor Couette flow. *Journal of Fluid Mechanics*, **2006**, 561, 255	3.7	24
42	Mode competition of rotating waves in reflection-symmetric Taylor Couette flow. *Journal of Fluid Mechanics*, **2005**, 540, 269	3.7	22
41	Symmetry breaking of two-dimensional time-periodic wakes. *Journal of Fluid Mechanics*, **2005**, 522, 395-411	3.7	75
40	Bicritical instabilities in pressure driven helicoidal flows. *Journal of Physics: Conference Series*, **2005**, 14, 228-235	0.3	1
39	Finite aspect ratio Taylor Couette flow: Shilnikov dynamics of 2-tori. *Physica D: Nonlinear Phenomena*, **2005**, 211, 168-191	3.3	12
38	Symmetry breaking via global bifurcations of modulated rotating waves in hydrodynamics. *Physical Review Letters*, **2005**, 94, 074501	7.4	21
37	Three-dimensional modes in a periodically driven elongated cavity. *Physical Review E*, **2005**, 71, 026305	2.4	9

36	On the stability of medium gap corotating spiral Poiseuille flow. *Physics of Fluids*, **2005**, 17, 094104	4.4	5
35	From global to local bifurcations in a forced Taylor Couette flow. *Theoretical and Computational Fluid Dynamics*, **2004**, 18, 115-128	2.3	
34	Bifurcations in systems with Z2 spatio-temporal and O(2) spatial symmetry. *Physica D: Nonlinear Phenomena*, **2004**, 189, 247-276	3.3	41
33	Mode competition between rotating waves in a swirling flow with reflection symmetry. *Journal of Fluid Mechanics*, **2004**, 507, 265-288	3.7	23
32	Symmetry breaking in free-surface cylinder flows. *Journal of Fluid Mechanics*, **2004**, 502, 99-126	3.7	49
31	Complex dynamics in a short annular container with rotating bottom and inner cylinder. *Journal of Fluid Mechanics*, **2004**, 501, 327-354	3.7	15
30	Small aspect ratio Taylor-Couette flow: onset of a very-low-frequency three-torus state. *Physical Review E*, **2003**, 68, 036302	2.4	15
29	Tangent double Hopf bifurcation in a differentially rotating cylinder flow. *Physical Review E*, **2003**, 68, 016310	2.4	19
28	Imperfect gluing bifurcation in a temporal glide-reflection symmetric Taylor Couette flow. *Physics of Fluids*, **2002**, 14, L33-L36	4.4	10
27	An Efficient Spectral-Projection Method for the Navier Stokes Equations in Cylindrical Geometries. *Journal of Computational Physics*, **2002**, 176, 384-401	4.1	52
26	A Continuation and Bifurcation Technique for Navier Stokes Flows. *Journal of Computational Physics*, **2002**, 180, 78-98	4.1	39
25	Modulated Taylor-Couette Flow: Onset of Spiral Modes. *Theoretical and Computational Fluid Dynamics*, **2002**, 16, 59-69	2.3	15
24	Instability and mode interactions in a differentially driven rotating cylinder. *Journal of Fluid Mechanics*, **2002**, 462, 383-409	3.7	46
23	On the competition between centrifugal and shear instability in spiral Poiseuille flow. *Journal of Fluid Mechanics*, **2002**, 455, 129-148	3.7	34
22	Mode interactions in an enclosed swirling flow: a double Hopf bifurcation between azimuthal wavenumbers 0 and 2. *Journal of Fluid Mechanics*, **2002**, 455, 263-281	3.7	47
21	Precessing vortex breakdown mode in an enclosed cylinder flow. *Physics of Fluids*, **2001**, 13, 1679-1682	4.4	52
20	A periodically forced flow displaying symmetry breaking via a three-tori gluing bifurcation and two-tori resonances. *Physica D: Nonlinear Phenomena*, **2001**, 156, 81-97	3.3	21
19	Oscillatory modes in an enclosed swirling flow. *Journal of Fluid Mechanics*, **2001**, 439, 109-129	3.7	39

18	On the competition between centrifugal and shear instability in spiral Couette flow. *Journal of Fluid Mechanics*, **2000**, 402, 33-56	3.7	28
17	Endwall effects in a periodically forced centrifugally unstable flow. *Fluid Dynamics Research*, **2000**, 27, 91-108	1.2	5
16	Spatial and temporal resonances in a periodically forced hydrodynamic system. *Physica D: Nonlinear Phenomena*, **2000**, 136, 340-352	3.3	20
15	Determining the self-rotation number following a Naimark-Sacker bifurcation in the periodically forced Taylor-Couette flow. *Zeitschrift Fur Angewandte Mathematik Und Physik*, **2000**, 51, 61-74	1.6	1
14	Dynamics of three-tori in a periodically forced navier-stokes flow. *Physical Review Letters*, **2000**, 85, 972-5	7.4	42
13	Quasiperiodic Response to Parametric Excitations. *The IMA Volumes in Mathematics and Its Applications*, **2000**, 209-227	0.5	2
12	Non-linear spirals in the Taylor-Couette problem. *Physics of Fluids*, **1998**, 10, 829-838	4.4	20
11	Generalized Couette-Poiseuille flow with boundary mass transfer. *Journal of Fluid Mechanics*, **1998**, 374, 221-249	3.7	12
10	Taylor-Couette flow with axial oscillations of the inner cylinder: Floquet analysis of the basic flow. *Journal of Fluid Mechanics*, **1997**, 348, 153-175	3.7	46
9	FEIGENBAUM'S UNIVERSALITY IN A LOW-DIMENSIONAL FLUID MODEL. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **1996**, 06, 1587-1594	2	
8	Thermal convection in vertical cylinders. A method based on potentials of velocity. *Computer Methods in Applied Mechanics and Engineering*, **1993**, 110, 157-169	5.7	23
7	Spiral Vortices Between Concentric Cylinders. *Fluid Mechanics and Its Applications*, **1993**, 55-59	0.2	
6	On boundary conditions for velocity potentials in confined flows: Application to Couette flow. *Physics of Fluids A, Fluid Dynamics*, **1990**, 2, 729-737		42
5	Realization of Poincaré group induced by a second-order ordinary differential system. Noninteraction theorem. *Journal of Mathematical Physics*, **1986**, 27, 519-523	1.2	2
4	World-line condition and the noninteraction theorem. *Physical Review D*, **1985**, 31, 314-318	4.9	4
3	Comparison of several approaches to the relativistic dynamics of directly interacting particles. *Annals of Physics*, **1983**, 150, 114-149	2.5	8
2	The problem of physical coordinates in predictive Hamiltonian systems. *Journal of Mathematical Physics*, **1983**, 24, 1665-1671	1.2	1
1	Classical predictive electrodynamics of two charges with radiation: Energy and 3-momentum balance and scattering cross sections. II. *Journal of Mathematical Physics*, **1979**, 20, 1316-1320	1.2	13