

Ramon Fernandez-Feria

List of Publications by Year in descending order

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80
papers

877
citations

516710

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610901

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88
all docs

88
docs citations

88
times ranked

496
citing authors

#	ARTICLE	IF	CITATIONS
1	Structure of trailing vortices: Comparison between particle image velocimetry measurements and theoretical models. <i>Physics of Fluids</i> , 2011, 23, .	4.0	47
2	Dynamics of the wing-tip vortex in the near field of a NACA 0012 aerofoil. <i>Aeronautical Journal</i> , 2011, 115, 229-239.	1.6	45
3	Vortex flow structures and interactions for the optimum thrust efficiency of a heaving airfoil at different mean angles of attack. <i>Physics of Fluids</i> , 2015, 27, .	4.0	41
4	Linearized propulsion theory of flapping airfoils revisited. <i>Physical Review Fluids</i> , 2016, 1, .	2.5	35
5	Note on optimum propulsion of heaving and pitching airfoils from linear potential theory. <i>Journal of Fluid Mechanics</i> , 2017, 826, 781-796.	3.4	31
6	Solution breakdown in a family of self-similar nearly inviscid axisymmetric vortices. <i>Journal of Fluid Mechanics</i> , 1995, 305, 77-91.	3.4	29
7	Spatial stability and the onset of absolute instability of Batchelor's vortex for high swirl numbers. <i>Journal of Fluid Mechanics</i> , 2007, 583, 27-43.	3.4	26
8	The onset of absolute instability of rotating Hagen-Poiseuille flow: A spatial stability analysis. <i>Physics of Fluids</i> , 2002, 14, 3087-3097.	4.0	25
9	A Cartesian grid finite-difference method for 2D incompressible viscous flows in irregular geometries. <i>Journal of Computational Physics</i> , 2005, 204, 302-318.	3.8	24
10	Dam-Break Flow for Arbitrary Slopes of the Bottom. <i>Journal of Engineering Mathematics</i> , 2006, 54, 319-331.	1.2	24
11	Conically similar swirling flows at high Reynolds numbers. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 1999, 52, 1-53.	1.3	21
12	Experimental study on sand bed excavation by impinging swirling jets. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2011, 49, 601-610.	1.7	21
13	On the origin and structure of a stationary circular hydraulic jump. <i>Physics of Fluids</i> , 2019, 31, .	4.0	20
14	Kinetic theory of binary gas mixtures with large mass disparity. <i>Physics of Fluids</i> , 1987, 30, 740.	1.4	19
15	Shock wave structure in gas mixtures with large mass disparity. <i>Journal of Fluid Mechanics</i> , 1987, 179, 21-40.	3.4	18
16	Analytical results for the propulsion performance of a flexible foil with prescribed pitching and heaving motions and passive small deflection. <i>Journal of Fluid Mechanics</i> , 2021, 910, .	3.4	18
17	An explicit projection method for solving incompressible flows driven by a pressure difference. <i>Computers and Fluids</i> , 2004, 33, 463-483.	2.5	17
18	Transport of suspended sediment under the dam-break flow on an inclined plane bed of arbitrary slope. <i>Hydrological Processes</i> , 2008, 22, 2615-2633.	2.6	17

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19	Analysis of the aerodynamic interaction between two plunging plates in tandem at low Reynolds number for maximum propulsive efficiency. <i>Journal of Fluids and Structures</i> , 2016, 63, 351-373.	3.4	17
20	Propulsion of a foil undergoing a flapping undulatory motion from the impulse theory in the linear potential limit. <i>Journal of Fluid Mechanics</i> , 2020, 883, .	3.4	17
21	Axisymmetric instabilities of BÃ¶rdewadt flow. <i>Physics of Fluids</i> , 2000, 12, 1730-1739.	4.0	16
22	Unsteady thrust, lift and moment of a two-dimensional flapping thin airfoil in the presence of leading-edge vortices: a first approximation from linear potential theory. <i>Journal of Fluid Mechanics</i> , 2018, 851, 344-373.	3.4	16
23	On the development of three-dimensional vortex breakdown in cylindrical regions. <i>Physics of Fluids</i> , 2006, 18, 084105.	4.0	15
24	Nonlinear waves in the pressure driven flow in a finite rotating pipe. <i>Physics of Fluids</i> , 2005, 17, 014104.	4.0	13
25	Three-dimensional structure of confined swirling jets at moderately large Reynolds numbers. <i>Physics of Fluids</i> , 2008, 20, .	4.0	12
26	Comparison of aerodynamic models for two-dimensional pitching foils with experimental data. <i>Physics of Fluids</i> , 2019, 31, .	4.0	12
27	The role of liquid viscosity and electrical conductivity on the motions inside Taylor cones in E.H.D. spraying of liquids. <i>Journal of Aerosol Science</i> , 1996, 27, S175-S176.	3.8	11
28	Nonparallel linear stability analysis of LongÃ©'s vortex. <i>Physics of Fluids</i> , 1999, 11, 1114-1126.	4.0	11
29	Self-consistent, nonlocal electron heat flux at arbitrary ion charge number. <i>Physics of Fluids B</i> , 1992, 4, 3579-3585.	1.7	10
30	Viscous and inviscid instabilities of non-parallel self-similar axisymmetric vortex cores. <i>Journal of Fluid Mechanics</i> , 1996, 323, 339-365.	3.4	10
31	Stability of the boundary layer flow on a long thin rotating cylinder. <i>Physics of Fluids</i> , 2008, 20, .	4.0	10
32	On the development of lift and drag in a rotating and translating cylinder. <i>Journal of Fluids and Structures</i> , 2015, 54, 868-885.	3.4	10
33	A Simple Model for Gliding and Low-Amplitude Flapping Flight of a Bio-Inspired UAV. , 2019, , .		10
34	Two-fluid ChapmanÃ©nskog theory for binary gas mixtures. <i>Physics of Fluids</i> , 1987, 30, 2063.	1.4	8
35	Interaction of an unconfined vortex with a solid surface. <i>Physics of Fluids</i> , 2007, 19, 067104.	4.0	8
36	Lift and drag characteristics of a cascade of flat plates in a configuration of interest for a tidal current energy converter: Numerical simulations analysis. <i>Journal of Renewable and Sustainable Energy</i> , 2013, 5, .	2.0	8

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37	Separation in the mixed convection boundary-layer radial flow over a constant temperature horizontal plate. <i>Physics of Fluids</i> , 2014, 26, 103603.	4.0	8
38	Aerodynamics of Heaving and Pitching Foils in Tandem from Linear Potential Theory. <i>AIAA Journal</i> , 2020, 58, 37-52.	2.6	8
39	Propulsion performance of tandem flapping foils with chordwise prescribed deflection from linear potential theory. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	8
40	Assessment of two vortex formulations for computing forces of a flapping foil at high Reynolds numbers. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	8
41	Nonlocal electron heat flux revisited. <i>Physics of Fluids B</i> , 1990, 2, 2519-2521.	1.7	7
42	Experimental evidence of convective and absolute instabilities in rotating Hagen-Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 2013, 716, .	3.4	7
43	Propulsion enhancement of flexible plunging foils: Comparing linear theory predictions with high-fidelity CFD results. <i>Ocean Engineering</i> , 2021, 235, 109331.	4.3	7
44	Flutter stability analysis of an elastically supported flexible foil. Application to the energy harvesting of a fully-passive flexible flapping-foil of small amplitude. <i>Journal of Fluids and Structures</i> , 2022, 109, 103454.	3.4	7
45	Interspecies transfer of momentum and energy in disparate-mass gas mixtures. <i>Physics of Fluids</i> , 1987, 30, 45.	1.4	6
46	Inviscid vortex breakdown models in pipes. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1999, 50, 698.	1.4	6
47	Nonparallel stability of the flow in an axially rotating pipe. <i>Fluid Dynamics Research</i> , 2003, 32, 261-281.	1.3	6
48	Experimental study of the aerodynamic characteristics of a low-aspect-ratio flat plate array in a configuration of interest for a tidal energy converter. <i>Journal of Fluids and Structures</i> , 2014, 48, 487-496.	3.4	6
49	Purely pulsating flow of a viscoelastic fluid in a pipe revisited: The limit of large Womersley number. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2015, 217, 32-36.	2.4	6
50	Maximum propulsive efficiency of two pitching and plunging plates in tandem at low Reynolds number. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2019, 29, 4013-4033.	2.8	6
51	Propulsion and energy harvesting performances of a flexible thin airfoil undergoing forced heaving motion with passive pitching and deformation of small amplitude. <i>Journal of Fluids and Structures</i> , 2021, 102, 103255.	3.4	6
52	On the appearance of swirl in a confined sink flow. <i>Physics of Fluids</i> , 2000, 12, 3082.	4.0	5
53	Nonlinear instabilities in a vertical pipe flow discharging from a cylindrical container. <i>Physics of Fluids</i> , 2006, 18, 024101.	4.0	5
54	Effect of the angle of attack on the transient lift during the interaction of a vortex with a flat plate. Potential theory and experimental results. <i>Journal of Fluids and Structures</i> , 2017, 74, 130-141.	3.4	5

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55	Numerical validation of simple non-stationary models for self-propelled pitching foils. <i>Ocean Engineering</i> , 2022, 260, 111973.	4.3	5
56	Solution of the Fokker-Planck equation for the shock wave problem. <i>Journal of Statistical Physics</i> , 1987, 48, 901-917.	1.2	4
57	On the autorotation of animal wings. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20160870.	3.4	4
58	A Linearized Model for an Ornithopter in Gliding Flight: Experiments and Simulations. , 2020, , .		4
59	Effect of the pivot point location on the propulsive performance of a pitching foil. <i>Journal of Fluids and Structures</i> , 2020, 97, 103089.	3.4	4
60	Numerical study of the propulsive performance of two-dimensional pitching foils at very high frequencies: scaling laws and turbulence effects. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2022, 32, 1602-1617.	2.8	4
61	Nonlocal electron heat relaxation in a plasma shock at arbitrary ionization number. <i>Physics of Fluids B</i> , 1993, 5, 1485-1490.	1.7	3
62	Boundary layer induced by a conical vortex. <i>Quarterly Journal of Mechanics and Applied Mathematics</i> , 2000, 53, 609-628.	1.3	3
63	A numerical method for the study of nonlinear stability of axisymmetric flows based on the vector potential. <i>Journal of Computational Physics</i> , 2008, 227, 3307-3321.	3.8	3
64	Three-dimensional transitions in a swirling jet impinging against a solid wall at moderate Reynolds numbers. <i>Physics of Fluids</i> , 2009, 21, 034107.	4.0	3
65	Quasicylindrical description of a swirling light gas jet discharging into a heavier ambient gas. <i>Physics of Fluids</i> , 2010, 22, 113601.	4.0	3
66	A pseudospectral based method of lines for solving integro-differential boundary-layer equations. Application to the mixed convection over a heated horizontal plate. <i>Applied Mathematics and Computation</i> , 2014, 242, 388-396.	2.2	3
67	On analytical approximations for the structure of a shock wave in a fully ionized plasma. <i>Physics of Plasmas</i> , 2019, 26, 082118.	1.9	3
68	Energy Harvesting and Propulsion of Pitching Airfoils with Passive Heave and Deformation. <i>AIAA Journal</i> , 2022, 60, 783-797.	2.6	3
69	Fokker-Planck and Langevin equations for arbitrary slip velocities. <i>Physical Review A</i> , 1987, 36, 4940-4944.	2.5	2
70	Hypersonic expansion of the Fokker-Planck equation. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989, 1, 394-402.	1.6	2
71	Stability analysis of boundary layer flow due to the presence of a small hole on a surface. <i>Physical Review E</i> , 2002, 65, 036307.	2.1	2
72	Buoyancy effects in a wall jet over a heated horizontal plate. <i>Journal of Fluid Mechanics</i> , 2016, 793, 21-40.	3.4	2

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73	Heavy gas relaxation in a light gas shock wave at small Prandtl number. Physical Review E, 2016, 94, 033108.	2.1	2
74	Stability analysis of the interface between two weak viscoelastic liquids under periodic oscillations. Physics of Fluids, 2017, 29, .	4.0	2
75	On the added-mass force and moment and the vortex projection method. Application to thin airfoils. Fluid Dynamics Research, 2019, 51, 035509.	1.3	2
76	Inviscid evolution of incompressible swirling flows in pipes: The dependence of the flow structure upon the inlet velocity field. European Journal of Mechanics, B/Fluids, 1999, 18, 1067-1084.	2.5	1
77	On the efficiency of a numerical method with periodic time strides for solving incompressible flows. Journal of Computational Physics, 2003, 186, 212-229.	3.8	1
78	High accuracy numerical methods for the Gardner–Ostrovsky equation. Applied Mathematics and Computation, 2014, 240, 140-148.	2.2	1
79	Effects of Unsteady Aerodynamics on Gliding Stability of a Bio-Inspired UAV. , 2020, , .		1
80	Nonparallel spatial stability of the boundary layer induced by Longâ€™s vortex on a solid plane perpendicular to its axis. Physical Review E, 2005, 72, 036305.	2.1	0