Miguel A Herrada

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7366758/publications.pdf

Version: 2024-02-01

117	2,348	218677	265206
papers	citations	26 h-index	42 g-index

120	120	120	1621
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Stability and tip streaming of a surfactant-loaded drop in an extensional flow. Influence of surface viscosity. Journal of Fluid Mechanics, 2022, 934, .	3.4	17
2	Global stability analysis of flexible channel flow with a hyperelastic wall. Journal of Fluid Mechanics, 2022, 934, .	3.4	2
3	On the hydrodynamic focusing for producing microemulsions via tip streaming. Journal of Fluid Mechanics, 2022, 934, .	3.4	5
4	Symmetry breaking of a parallel two-phase flow in a finite length channel. Physical Review Fluids, 2022, 7, .	2.5	1
5	Global stability analysis of axisymmetric liquidâ€“liquid flow focusing. Journal of Fluid Mechanics, 2021, 909, .	3.4	10
6	Regular and complex singularities of the generalized thin film equation in two dimensions. Journal of Fluid Mechanics, 2021, 917, .	3.4	2
7	Axisymmetric Ferrofluid Oscillations in a Cylindrical Tank in Microgravity. Microgravity Science and Technology, 2021, 33, 1.	1.4	7
8	The Natural Breakup Length of a Steady Capillary Jet: Application to Serial Femtosecond Crystallography. Crystals, 2021, 11, 990.	2.2	6
9	Motion of a tightly fitting axisymmetric object through a lubricated elastic tube. Journal of Fluid Mechanics, 2021, 926, .	3.4	3
10	Effect of an axial electric field on the breakup of a leaky-dielectric liquid filament. Physics of Fluids, 2021, 33, .	4.0	8
11	Elastic Rayleighâ€“Plateau instability: dynamical selection of nonlinear states. Soft Matter, 2021, 17, 5148-5161.	2.7	7
12	Formation of Multiple Vortices in a Confined Two-Fluid Swirling Flow. Journal of Engineering Thermophysics, 2021, 30, 636-645.	1.4	0
13	Influence of the dynamical free surface deformation on the stability of thermal convection in high-Prandtl-number liquid bridges. International Journal of Heat and Mass Transfer, 2020, 146, 118831.	4.8	17
14	A numerical simulation of coaxial electrosprays. Journal of Fluid Mechanics, 2020, 885, .	3.4	11
15	Self-similarity in the breakup of very dilute viscoelastic solutions. Journal of Fluid Mechanics, 2020, 904, .	3.4	28
16	Formation of dual vortex breakdown in a two-fluid confined flow. Physics of Fluids, 2020, 32, .	4.0	12
17	StELIUM: A student experiment to investigate the sloshing of magnetic liquids in microgravity. Acta Astronautica, 2020, 173, 344-355.	3.2	19
18	Influence of the surface viscous stress on the pinch-off of free surfaces loaded with nearly-inviscid surfactants. Scientific Reports, 2020, 10, 16065.	3.3	12

#	Article	IF	Citations
19	Breakup of an electrified viscoelastic liquid bridge. Physical Review E, 2020, 102, 033103.	2.1	6
20	Total magnetic force on a ferrofluid droplet in microgravity. Experimental Thermal and Fluid Science, 2020, 117, 110124.	2.7	14
21	Mechanism of Disappearance of Vortex Breakdown in a Confined Flow. Journal of Engineering Thermophysics, 2020, 29, 49-66.	1.4	11
22	Whipping in gaseous flow focusing. International Journal of Multiphase Flow, 2020, 130, 103367.	3.4	9
23	Self-similar breakup of polymeric threads as described by the Oldroyd-B model. Journal of Fluid Mechanics, 2020, 887, .	3.4	35
24	The relationship between viscoelasticity and elasticity. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200419.	2.1	31
25	A method for measuring the interfacial tension for density-matched liquids. Journal of Colloid and Interface Science, 2020, 566, 90-97.	9.4	1
26	Electrospray cone-jet mode for weakly viscoelastic liquids. Physical Review E, 2019, 100, 043114.	2.1	4
27	Aerodynamically stabilized Taylor cone jets. Physical Review E, 2019, 100, 031101.	2.1	11
28	Development and validation of the terrain stability model for assessing landslide instability during heavy rain infiltration. Natural Hazards and Earth System Sciences, 2019, 19, 721-736.	3.6	10
29	Stability of a jet moving in a rectangular microchannel. Physical Review E, 2019, 100, 053104.	2.1	4
30	Complex behavior very close to the pinching of a liquid free surface. Physical Review Fluids, 2019, 4, .	2.5	10
31	Stability of an airâ€“water flow in a semispherical container. European Journal of Mechanics, B/Fluids, 2018, 67, 377-384.	2.5	0
32	Stabilization of axisymmetric liquid bridges through vibration-induced pressure fields. Journal of Colloid and Interface Science, 2018, 513, 409-417.	9.4	9
33	Cavity losses estimation in CSP applications. AIP Conference Proceedings, 2018, , .	0.4	1
34	Column formation and hysteresis in a two-fluid tornado. Journal of Physics: Conference Series, 2018, 980, 012008.	0.4	0
35	Viscous Effects on Inertial Drop Formation. Physical Review Letters, 2018, 121, 254501.	7.8	41
36	The steady cone-jet mode of electrospraying close to the minimum volume stability limit. Journal of Fluid Mechanics, 2018, 857, 142-172.	3.4	34

#	Article	IF	Citations
37	Controlled cavity collapse: scaling laws of drop formation. Soft Matter, 2018, 14, 7671-7679.	2.7	10
38	Review on the physics of electrospray: From electrokinetics to the operating conditions of single and coaxial Taylor cone-jets, and AC electrospray. Journal of Aerosol Science, 2018, 125, 32-56.	3.8	182
39	Slip at the interface of a two-fluid swirling flow. Physics of Fluids, 2018, 30, .	4.0	26
40	On the validity of the Jeffreys (Oldroyd-B) model to describe the oscillations of a viscoelastic pendant drop. Journal of Non-Newtonian Fluid Mechanics, 2018, 260, 69-75.	2.4	4
41	Novel swirl flow-focusing microfluidic device for the production of monodisperse microbubbles. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	3
42	Hysteretic growth and decay of a waterspout column. Physical Review Fluids, 2018, 3, .	2.5	20
43	Influence of the Surface Viscosity on the Breakup of a Surfactant-Laden Drop. Physical Review Letters, 2017, 118, 024501.	7.8	49
44	Spatial structure of shock formation. Journal of Fluid Mechanics, 2017, 820, 208-231.	3.4	10
45	Topology changes in a water-oil swirling flow. Physics of Fluids, 2017, 29, 032109.	4.0	22
46	Patterns and stability of a whirlpool flow. Fluid Dynamics Research, 2017, 49, 025519.	1.3	6
47	Global stability of axisymmetric flow focusing. Journal of Fluid Mechanics, 2017, 832, 329-344.	3.4	22
48	Mean flow produced by small-amplitude vibrations of a liquid bridge with its free surface covered with an insoluble surfactant. Physical Review E, 2017, 96, 033101.	2.1	1
49	Topology and stability of a water-soybean-oil swirling flow. Physical Review Fluids, 2017, 2, .	2.5	17
50	Stability of thermal convection in a rotating cylindrical container. Physics of Fluids, 2016, 28, 083601.	4.0	4
51	Linear and nonlinear dynamics of an insoluble surfactant-laden liquid bridge. Physics of Fluids, 2016, 28, 112103.	4.0	14
52	Patterns of a slow airâ€“water flow in a semispherical container. European Journal of Mechanics, B/Fluids, 2016, 58, 1-8.	2.5	8
53	Velocity reversals via bifurcation in thermal convection. International Journal of Heat and Mass Transfer, 2016, 92, 66-75.	4.8	5
54	Analysis of a resonance liquid bridge oscillation on board of the International Space Station. European Journal of Mechanics, B/Fluids, 2016, 57, 15-21.	2.5	7

#	Article	IF	Citations
55	Instability of a water-spout flow. Physics of Fluids, 2016, 28, 034107.	4.0	11
56	Bifurcations of a creeping airâ€“water flow in a conical container. Theoretical and Computational Fluid Dynamics, 2016, 30, 485-496.	2.2	4
57	Effect of a Surrounding Liquid Environment on the Electrical Disruption of Pendant Droplets. Langmuir, 2016, 32, 6815-6824.	3.5	10
58	A numerical method to study the dynamics of capillary fluid systems. Journal of Computational Physics, 2016, 306, 137-147.	3.8	65
59	Convective-to-absolute instability transition in a viscoelastic capillary jet subject to unrelaxed axial elastic tension. Physical Review E, 2015, 92, 023006.	2.1	12
60	Stability of centrifugal convection in a rotating pipe. Physics of Fluids, 2015, 27, .	4.0	7
61	Vortex breakdown in a truncated conical bioreactor. Fluid Dynamics Research, 2015, 47, 065503.	1.3	15
62	Electrokinetic effects in the breakup of electrified jets: A Volume-Of-Fluid numerical study. International Journal of Multiphase Flow, 2015, 71, 14-22.	3.4	34
63	The instability nature of the Vogelâ€“Escudier flow. Journal of Fluid Mechanics, 2015, 766, 590-610.	3.4	34
64	Stability of a rivulet flowing in a microchannel. International Journal of Multiphase Flow, 2015, 69, 1-7.	3.4	16
65	Dynamics of an axisymmetric liquid bridge close to the minimum-volume stability limit. Physical Review E, 2014, 90, 013015.	2.1	22
66	Dynamical response of liquid bridges to a step change in the mass force magnitude. Physics of Fluids, 2014, 26, 012108.	4.0	8
67	Air-water centrifugal convection. Physics of Fluids, 2014, 26, .	4.0	7
68	Modeling infiltration rates in a saturated/unsaturated soil under the free draining condition. Journal of Hydrology, 2014, 515, 10-15.	5.4	38
69	An experimental technique to produce micrometer waves on a cylindrical sub-millimeter free surface. Measurement Science and Technology, 2014, 25, 075303.	2.6	2
70	Isothermal dissolution of small rising bubbles in a low viscosity liquid. Chemical Engineering and Processing: Process Intensification, 2014, 85, 136-144.	3.6	5
71	How does a shear boundary layer affect the stability of a capillary jet?. Physics of Fluids, 2014, 26, .	4.0	8
72	Production of microbubbles from axisymmetric flow focusing in the jetting regime for moderate Reynolds numbers. Physical Review E, 2014, 89, 063012.	2.1	12

#	Article	IF	Citations
73	Patterns of a creeping water-spout flow. Journal of Fluid Mechanics, 2014, 744, 65-88.	3.4	23
74	Dynamical behavior of electrified pendant drops. Physics of Fluids, 2013, 25, .	4.0	40
75	On the validity and applicability of the one-dimensional approximation in cone-jet electrospray. Journal of Aerosol Science, 2013, 61, 60-69.	3.8	3
76	Vortex breakdown in a water-spout flow. Physics of Fluids, 2013, 25, 093604.	4.0	22
77	Experimental analysis of the evolution of an electrified drop following high voltage switching. European Journal of Mechanics, B/Fluids, 2013, 38, 58-64.	2.5	4
78	A novel technique for producing metallic microjets and microdrops. Microfluidics and Nanofluidics, 2013, 14, 101-111.	2.2	13
79	Theoretical investigation of a technique to produce microbubbles by a microfluidicTjunction. Physical Review E, 2013, 88, 033027.	2.1	15
80	Off-axis vortex breakdown in a shallow whirlpool. Physical Review E, 2013, 87, 063016.	2.1	10
81	Surface Wave Damping. Understanding Complex Systems, 2013, , 349-361.	0.6	0
82	Enhancement of the stability of the flow focusing technique for low-viscosity liquids. Journal of Micromechanics and Microengineering, 2012, 22, 115039.	2.6	13
83	Numerical simulation of electrospray in the cone-jet mode. Physical Review E, 2012, 86, 026305.	2.1	75
84	Effect of swirl decay on vortex breakdown in a confined steady axisymmetric flow. Physics of Fluids, 2012, 24, .	4.0	39
85	Development of a swirling double counterflow. Physical Review E, 2011, 83, 056322.	2.1	9
86	Experimental and numerical study of the recirculation flow inside a liquid meniscus focused by air. Microfluidics and Nanofluidics, 2011, 11, 65-74.	2.2	13
87	A charge-conservative approach for simulating electrohydrodynamic two-phase flows using volume-of-fluid. Journal of Computational Physics, 2011, 230, 1939-1955.	3.8	169
88	Publisherâ€™s Note: Development of a swirling double counterflow [Phys. Rev. E83, 056322 (2011)]. Physical Review E, 2011, 83, .	2.1	0
89	The effect of surface shear viscosity on the damping of oscillations in millimetric liquid bridges. Physics of Fluids, 2011, 23, .	4.0	20
90	Generation of small mono-disperse bubbles in axisymmetric T-junction: The role of swirl. Physics of Fluids, 2011, 23, .	4.0	9

#	Article	IF	Citations
91	Global stability of the focusing effect of fluid jet flows. Physical Review E, 2011, 83, 036309.	2.1	41
92	Development of colliding swirling counterflows. Physical Review E, 2011, 84, 046306.	2.1	9
93	On the validity of a universal solution for viscous capillary jets. Physics of Fluids, 2011, 23, .	4.0	15
94	Numerical simulation of a liquid bridge in a coaxial gas flow. Physics of Fluids, 2011, 23, .	4.0	24
95	Two-cell circulation in a liquid meniscus driven by a swirling gas jet. Physics of Fluids, 2011, 23, 012003.	4.0	3
96	Liquid Capillary Micro/Nanojets in Freeâ€Jet Expansion. Small, 2010, 6, 822-824.	10.0	28
97	Analysis of the drippingâ€“jetting transition in compound capillary jets. Journal of Fluid Mechanics, 2010, 649, 523-536.	3.4	48
98	Absolute lateral instability in capillary coflowing jets. Physics of Fluids, 2010, 22, 064104.	4.0	14
99	Global and local instability of flow focusing: The influence of the geometry. Physics of Fluids, 2010, 22, .	4.0	72
100	Absolute to convective instability transition in charged liquid jets. Physics of Fluids, 2010, 22, .	4.0	20
101	Swirl flow focusing: A novel procedure for the massive production of monodisperse microbubbles. Physics of Fluids, 2009, 21, 042003.	4.0	17
102	Confined swirling jet impingement on a flat plate at moderate Reynolds numbers. Physics of Fluids, 2009, 21, .	4.0	16
103	Liquid flow focused by a gas: Jetting, dripping, and recirculation. Physical Review E, 2008, 78, 036323.	2.1	80
104	Stability of the boundary layer flow on a long thin rotating cylinder. Physics of Fluids, 2008, 20, .	4.0	10
105	Spatiotemporal instability of a confined capillary jet. Physical Review E, 2008, 78, 046312.	2.1	41
106	Focusing capillary jets close to the continuum limit. Nature Physics, 2007, 3, 737-742.	16.7	111
107	On the development of three-dimensional vortex breakdown in cylindrical regions. Physics of Fluids, 2006, 18, 084105.	4.0	15
108	Bubbling in Unbounded Coflowing Liquids. Physical Review Letters, 2006, 96, 124504.	7.8	45

#	ARTICLE	IF	CITATIONS
109	Nonparallel linear stability analysis of unconfined vortices. Physics of Fluids, 2004, 16, 3755-3764.	4.0	2
110	Nonparallel local spatial stability analysis of pipe entrance swirling flows. Physics of Fluids, 2004, 16, 2147-2153.	4.0	9
111	Vortex breakdown control by adding near-axis swirl and temperature gradients. Physical Review E, 2003, 68, 041202.	2.1	23
112	Control of vortex breakdown by temperature gradients. Physics of Fluids, 2003, 15, 3468-3477.	4.0	33
113	Vortex breakdown in compressible flows in pipes. Physics of Fluids, 2003, 15, 2208-2218.	4.0	26
114	Self-rotation in electrocapillary flows. Physical Review E, 2002, 66, 036311.	2.1	7
115	Downstream evolution of unconfined vortices: mechanical and thermal aspects. Journal of Fluid Mechanics, 2002, 471, 51-70.	3.4	15
116	New features of swirling jets. Physics of Fluids, 2000, 12, 2868.	4.0	21
117	Thermal separation in near-axis boundary layers with intense swirl. Physics of Fluids, 1999, 11, 3678-3687.	4.0	5