Roberto Zenit

List of Publications by Citations

105 papers	2,391 citations	28 h-index	46 g-index
112 ext. papers	2,766 ext. citations	3.3 avg, IF	5.27 L-index

#	Paper	IF	Citations
105	Particle–wall collisions in a viscous fluid. *Journal of Fluid Mechanics*, **2001**, 433, 329-346	3.7	252
104	Dense granular flow around an immersed cylinder. *Physics of Fluids*, **2003**, 15, 1622	4.4	124
103	Measurements of the average properties of a suspension of bubbles rising in a vertical channel. *Journal of Fluid Mechanics*, **2001**, 429, 307-342	3.7	106
102	Revisiting the 1954 suspension experiments of R. A. Bagnold. *Journal of Fluid Mechanics*, **2002**, 452, 1-24	3.7	101
101	On the deformation of gas bubbles in liquids. *Physics of Fluids*, **2012**, 24, 043303	4.4	95
100	Computer simulations of the collapse of a granular column. *Physics of Fluids*, **2005**, 17, 031703	4.4	86
99	Path instability of rising spheroidal air bubbles: A shape-controlled process. *Physics of Fluids*, **2008**, 20, 061702	4.4	84
98	Dilute granular flow around an immersed cylinder. *Physics of Fluids*, **2003**, 15, 3318-3330	4.4	80
97	Collisional particle pressure measurements in solid–liquid flows. *Journal of Fluid Mechanics*, **1997**, 353, 261-283	3.7	71
96	Fluid elasticity increases the locomotion of flexible swimmers. *Physics of Fluids*, **2013**, 25, 031701	4.4	64
95	Hydrodynamic Interactions Among Bubbles, Drops, and Particles in Non-Newtonian Liquids. *Annual Review of Fluid Mechanics*, **2018**, 50, 505-534	22	63
94	Increased mobility of bidisperse granular avalanches. *Journal of Fluid Mechanics*, **2007**, 593, 475-504	3.7	56
93	A note on the modelling of the bouncing of spherical drops or solid spheres on a wall in viscous fluid. *Chemical Engineering Science*, **2006**, 61, 3543-3549	4.4	54
92	Measurement of pseudoturbulence intensity in monodispersed bubbly liquids for 10. *Physics of Fluids*, **2007**, 19, 103302	4.4	54
91	The coefficient of restitution for air bubbles colliding against solid walls in viscous liquids. *Physics of Fluids*, **2009**, 21, 083306	4.4	50
90	Hydrodynamic interaction between a pair of bubbles ascending in shear-thinning inelastic fluids. *Journal of Non-Newtonian Fluid Mechanics*, **2011**, 166, 118-132	2.7	48
89	The flow of non-Newtonian fluids around bubbles and its connection to the jump discontinuity. *Journal of Non-Newtonian Fluid Mechanics*, **2003**, 111, 199-209	2.7	48

88	Measurements of the streamwise vorticity in the wake of an oscillating bubble. *International Journal of Multiphase Flow*, **2009**, 35, 195-203	3.6	46
87	Motion of a particle near a rough wall in a viscous shear flow. *Journal of Fluid Mechanics*, **2007**, 570, 431-453	3.7	43
86	Mathematical and physical simulation of the interaction between a gas jet and a liquid free surface. *Applied Mathematical Modelling*, **2011**, 35, 4991-5005	4.5	35
85	Clustering in high Re monodispersed bubbly flows. *Physics of Fluids*, **2005**, 17, 091701	4.4	33
84	A study of velocity discontinuity for single air bubbles rising in an associative polymer. *Physics of Fluids*, **2006**, 18, 121510	4.4	31
83	Solid fraction fluctuations in solid–liquid flows. *International Journal of Multiphase Flow*, **2000**, 26, 763-781	3.6	31
82	Helical propulsion in shear-thinning fluids. *Journal of Fluid Mechanics*, **2017**, 812,	3.7	30
81	Complex fluids affect low-Reynolds number locomotion in a kinematic-dependent manner. *Experiments in Fluids*, **2015**, 56, 1	2.5	29
80	Collisions in a liquid fluidized bed. *International Journal of Multiphase Flow*, **2011**, 37, 695-705	3.6	29
79	The effect of confinement on the motion of a single clean bubble. *Journal of Fluid Mechanics*, **2008**, 616, 419-443	3.7	29
78	Mechanics of Immersed Particle Collisions. *Journal of Fluids Engineering, Transactions of the ASME*, **1999**, 121, 179-184	2.1	28
77	Power spectral distributions of pseudo-turbulent bubbly flows. *Physics of Fluids*, **2013**, 25, 043303	4.4	27
76	The unsteady drag force on a cylinder immersed in a dilute granular flow. *Physics of Fluids*, **2006**, 18, 043301	4.4	27
75	Bubble cluster formation in shear-thinning inelastic bubbly columns. *Journal of Non-Newtonian Fluid Mechanics*, **2011**, 166, 32-41	2.7	25
74	Microbubble generation using fiber optic tips coated with nanoparticles. *Optics Express*, **2012**, 20, 8732-40	3.3	21
73	Study of the properties of bubbly flows in Boger-type fluids. *Journal of Non-Newtonian Fluid Mechanics*, **2012**, 175-176, 1-9	2.7	18
72	Vortex ring formation for low Re numbers. *Acta Mechanica*, **2013**, 224, 383-397	2.1	18
71	The formation of vortex rings in shear-thinning liquids. *Journal of Non-Newtonian Fluid Mechanics*, **2013**, 194, 1-13	2.7	16

70	Velocity fluctuations resulting from the interaction of a bubble with a vertical wall. *Physics of Fluids*, **2005**, 17, 098106	4.4	16
69	A hydrodynamic description of the flow behavior in shaken flasks. *Biochemical Engineering Journal*, **2015**, 99, 61-66	4.2	15
68	Mathematical Modeling of Fluid Flow in a Water Physical Model of an Aluminum Degassing Ladle Equipped with an Impeller-Injector. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2013**, 44, 423-435	2.5	15
67	On the hydrodynamics characterization of the straight Maxblend impeller with Newtonian fluids. *Chemical Engineering Research and Design*, **2012**, 90, 1117-1128	5.5	15
66	The fluid mechanics of bubbly drinks. *Physics Today*, **2018**, 71, 44-50	0.9	15
65	Computer simulations of the collapse of columns formed by elongated grains. *Physical Review E*, **2012**, 85, 061304	2.4	13
64	The micromechanical behavior of lyophilized glutaraldehyde-treated bovine pericardium under uniaxial tension. *Journal of the Mechanical Behavior of Biomedical Materials*, **2010**, 3, 640-6	4.1	13
63	Effect of the Fluid-Dynamic Structure on the Mixing Time of a Ladle Furnace. *Steel Research International*, **2018**, 89, 1700281	1.6	12
62	Experimental study of a model valve with flexible leaflets in a pulsatile flow. *Journal of Fluid Mechanics*, **2014**, 739, 338-362	3.7	12
61	Compact bubble clusters in Newtonian and non-Newtonian liquids. *Physics of Fluids*, **2014**, 26, 053101	4.4	12
60	A criterion for the transition from wall to core peak gas volume fraction distributions in bubbly flows. *International Journal of Multiphase Flow*, **2012**, 43, 56-61	3.6	12
59	Note: design of a novel rotating magnetic field device. *Review of Scientific Instruments*, **2012**, 83, 066109	1.7	12
58	Impedance probe to measure local gas volume fraction and bubble velocity in a bubbly liquid. *Review of Scientific Instruments*, **2003**, 74, 2817-2827	1.7	12
57	Drag coefficient for a sedimenting and rotating sphere in a viscoelastic fluid. *Physical Review Fluids*, **2019**, 4,	2.8	12
56	Experimental study on laminar flow over two confined isothermal cylinders in tandem during mixed convection. *International Journal of Thermal Sciences*, **2017**, 115, 176-196	4.1	11
55	Drift by air bubbles crossing an interface of a stratified medium at moderate Reynolds number. *International Journal of Multiphase Flow*, **2016**, 85, 258-266	3.6	11
54	On the flow of associative polymers past a sphere: Evaluation of negative wake criteria. *Physics of Fluids*, **2009**, 21, 033104	4.4	11
53	Measurement of the temperature rise in non-Newtonian oscillatory pipe flows. *Journal of Non-Newtonian Fluid Mechanics*, **2003**, 109, 157-176	2.7	10

52	The flow inside shaking flasks and its implication for mycelial cultures. *Chemical Engineering Science*, **2016**, 152, 163-171	4.4	9
51	Experimental study of the effect of wettability on the relative permeability for air–water flow through porous media. *International Journal of Multiphase Flow*, **2019**, 120, 103091	3.6	9
50	Evaluation of drag correction factor for spheres settling in associative polymers. *Rheologica Acta*, **2010**, 49, 979-984	2.3	9
49	Shear flow of a suspension of bubbles rising in an inclined channel. *Journal of Fluid Mechanics*, **2004**, 515, 261-292	3.7	9
48	Compaction force in a confined granular column. *Physical Review E*, **2003**, 68, 051301	2.4	9
47	Effects of inertia and turbulence on rheological measurements of neutrally buoyant suspensions. *Journal of Fluid Mechanics*, **2017**, 811, 525-543	3.7	8
46	Physical Modeling of Fluid Flow in Ladles of Aluminum Equipped with Impeller and Gas Purging For Degassing. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2013**, 44, 974-983	2.5	8
45	A hydrodynamic instability is used to create aesthetically appealing patterns in painting. *PLoS ONE*, **2015**, 10, e0126135	3.7	8
44	The impulsive motion of a liquid resulting from a particle collision. *Journal of Fluid Mechanics*, **1998**, 375, 345-361	3.7	8
43	Viscoelastic propulsion of a rotating dumbbell. *Microfluidics and Nanofluidics*, **2019**, 23, 1	2.8	7
42	Viscous Filament Fragmentation in a Turbulent Flow Inside a Stirred Tank. *Chemical Engineering Communications*, **2015**, 202, 1251-1260	2.2	7
41	Lifetime of Surface Bubbles in Surfactant Solutions. *Langmuir*, **2020**, 36, 7749-7764	4	7
40	Conditions for the sliding-bouncing transition for the interaction of a bubble with an inclined wall. *Physical Review Fluids*, **2016**, 1,	2.8	7
39	Effect of Separation Angle and Nozzle Radial Position on Mixing Time in Ladles with Two Nozzles. *Journal of Applied Fluid Mechanics*, **2018**, 11, 11-20	1.5	7
38	Effect of eccentricity on the pumping capacity in an unbaffled vessel. *Canadian Journal of Chemical Engineering*, **2011**, 89, 1051-1058	2.3	6
37	Heat Transfer Resulting From the Interaction of a Vortex Pair With a Heated Wall. *Journal of Heat Transfer*, **2008**, 130,	1.8	6
36	A space-fractional model of thermo-electromagnetic wave propagation in anisotropic media. *Applied Thermal Engineering*, **2016**, 93, 529-536	5.8	5
35	Viscous pumping inspired by flexible propulsion. *Bioinspiration and Biomimetics*, **2014**, 9, 036007	2.6	5

34	Sedimentation of a rotating sphere in a power-law fluid. *Journal of Non-Newtonian Fluid Mechanics*, **2014**, 213, 27-30	2.7	5
33	Fluid velocity fluctuations in a collision of a sphere with a wall. *Physics of Fluids*, **2011**, 23, 063301	4.4	5
32	Study of the velocity and strain fields in the flow through prosthetic heart valves. *Journal of Biomechanical Engineering*, **2011**, 133, 121003	2.1	5
31	A new model for the computation of the formation factor of core rocks. *Journal of Structural Geology*, **2017**, 97, 189-198	3	4
30	Application of the Euler□agrange Method to Model Developed Hydrodynamic Slugs in Conduits. *Journal of Fluids Engineering, Transactions of the ASME*, **2011**, 133,	2.1	4
29	Some fluid mechanical aspects of artistic painting. *Physical Review Fluids*, **2019**, 4,	2.8	4
28	Coiling of a viscoelastic fluid filament. *Physical Review Fluids*, **2021**, 6,	2.8	4
27	The effect of column tilt on flow homogeneity and particle agitation in a liquid fluidized bed. *International Journal of Multiphase Flow*, **2017**, 92, 50-60	3.6	3
26	Topological invariants can be used to quantify complexity in abstract paintings. *Knowledge-Based Systems*, **2017**, 126, 48-55	7.3	3
25	Reduction of compaction force in a confined bidisperse granular media. *Physical Review E*, **2013**, 87, 052210	2.4	3
24	On the Direct and Radiated Components of the Collisional Particle Pressure in Liquid-Solid Flows. *Flow, Turbulence and Combustion*, **1997**, 58, 305-317		3
23	Self-propulsion of a helical swimmer in granular matter. *Physical Review Fluids*, **2019**, 4,	2.8	3
22	Front-back asymmetry controls the impact of viscoelasticity on helical swimming. *Physical Review Fluids*, **2021**, 6,	2.8	3
21	Effect of the curvature of elastic plates on the evolution of pulsatile flow fields. *Journal of Fluids and Structures*, **2015**, 56, 177-189	3.1	2
20	Negative vortices: The formation of vortex rings with reversed rotation in viscoelastic liquids. *Physics of Fluids*, **2015**, 27, 051703	4.4	2
19	Pollock avoided hydrodynamic instabilities to paint with his dripping technique. *PLoS ONE*, **2019**, 14, e0223706	3.7	2
18	Sliding motion of a bubble against an inclined wall from moderate to high bubble Reynolds number. *Physical Review Fluids*, **2019**, 4,	2.8	2
17	Bubbles determine the amount of alcohol in Mezcal. *Scientific Reports*, **2020**, 10, 11014	4.9	2

16	Hydrodynamic Characterization of Three Axial Impellers under Gassed and Ungassed Conditions. *Journal of Chemical Engineering of Japan*, **2016**, 49, 894-903	0.8	1
15	On the maximum operating frequency of prosthetic heart valves. *Biomedical Physics and Engineering Express*, **2018**, 4, 047007	1.5	1
14	Interaction of a vortex ring with a natural convective layer. *Physics of Fluids*, **2014**, 26, 083602	4.4	1
13	A conjugate thermo-electric model for a composite medium. *PLoS ONE*, **2014**, 9, e97895	3.7	1
12	Modelado físico de la incidencia de un chorro de aire sobre una superficie de agua. *Revista De Metalurgia*, **2010**, 46, 421-434	0.4	1
11	Bubble Clusters in Associative Polymers. *Environmental Science and Engineering*, **2012**, 497-498	0.2	1
10	Encapsulation of Droplets Using Cusp Formation behind a Drop Rising in a Non-Newtonian Fluid. *Fluids*, **2018**, 3, 54	1.6	1
9	The lifespan of clusters in confined bubbly liquids. *International Journal of Multiphase Flow*, **2018**, 106, 138-146	3.6	1
8	The dynamics of compound drops at high Reynolds numbers: Drag, shape, and trajectory. *International Journal of Multiphase Flow*, **2021**, 142, 103699	3.6	0
7	Force and torque-free helical tail robot to study low Reynolds number micro-organism swimming.. *Review of Scientific Instruments*, **2022**, 93, 044103	1.7	0
6	Experimental study of the deflections of curved plates exposed to pulsating cross-flows. *Acta Mechanica*, **2016**, 227, 3621-3637	2.1	
5	Mathematical Modeling of Impingement of an Air Jet in a Liquid Bath. *Materials Research Society Symposia Proceedings*, **2010**, 1276, 1		
4	GRAIN DRYING AND AERATION IN A SOLAR HEXAGONAL SILO. *Particulate Science and Technology*, **2001**, 19, 45-65	2	
3	On the Modeling Strategies for Hydrodynamic Slugging in Conduits of General Shapes and Layouts. *Environmental Science and Engineering*, **2012**, 313-318	0.2	
2	Pseudoturbulence in Bubbly and Transition Flow Regimes. *Environmental Science and Engineering*, **2013**, 217-224	0.2	
1	Using CFD and PIV to investigate rotating cage-related hydrodynamics for CO2 corrosion studies analyzing 2-, 4- and 8-coupons setups. *Anti-Corrosion Methods and Materials*, **2019**, 66, 802-811	0.8	