# Roberto Zenit

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3696754/publications.pdf

Version: 2024-02-01

| 109 | 3,102 | 159585 | 175258 |
|---|---|---|---|
| papers | citations | 30 h-index | 52 g-index |

| 112 | 112 | 112 | 2216 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Particleâ€“wall collisions in a viscous fluid. Journal of Fluid Mechanics, 2001, 433, 329-346. | 3.4 | 303 |
| 2 | Dense granular flow around an immersed cylinder. Physics of Fluids, 2003, 15, 1622. | 4.0 | 141 |
| 3 | On the deformation of gas bubbles in liquids. Physics of Fluids, 2012, 24, . | 4.0 | 130 |
| 4 | Measurements of the average properties of a suspension of bubbles rising in a vertical channel. Journal of Fluid Mechanics, 2001, 429, 307-342. | 3.4 | 125 |
| 5 | Revisiting the 1954 suspension experiments of R. A. Bagnold. Journal of Fluid Mechanics, 2002, 452, 1-24. | 3.4 | 120 |
| 6 | Computer simulations of the collapse of a granular column. Physics of Fluids, 2005, 17, 031703. | 4.0 | 115 |
| 7 | Path instability of rising spheroidal air bubbles: A shape-controlled process. Physics of Fluids, 2008, 20, . | 4.0 | 102 |
| 8 | Hydrodynamic Interactions Among Bubbles, Drops, and Particles in Non-Newtonian Liquids. Annual Review of Fluid Mechanics, 2018, 50, 505-534. | 25.0 | 101 |
| 9 | Dilute granular flow around an immersed cylinder. Physics of Fluids, 2003, 15, 3318-3330. | 4.0 | 90 |
| 10 | Collisional particle pressure measurements in solidâ€“liquid flows. Journal of Fluid Mechanics, 1997, 353, 261-283. | 3.4 | 85 |
| 11 | Fluid elasticity increases the locomotion of flexible swimmers. Physics of Fluids, 2013, 25, . | 4.0 | 83 |
| 12 | Increased mobility of bidisperse granular avalanches. Journal of Fluid Mechanics, 2007, 593, 475-504. | 3.4 | 69 |
| 13 | Measurements of the streamwise vorticity in the wake of an oscillating bubble. International Journal of Multiphase Flow, 2009, 35, 195-203. | 3.4 | 66 |
| 14 | 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. | 3.8 | 65 |
| 15 | Hydrodynamic interaction between a pair of bubbles ascending in shear-thinning inelastic fluids. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 118-132. | 2.4 | 65 |
| 16 | Measurement of pseudoturbulence intensity in monodispersed bubbly liquids for 10<Re<500. Physics of Fluids, 2007, 19, . | 4.0 | 63 |
| 17 | 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. | 2.4 | 59 |
| 18 | The coefficient of restitution for air bubbles colliding against solid walls in viscous liquids. Physics of Fluids, 2009, 21, . | 4.0 | 57 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Motion of a particle near a rough wall in a viscous shear flow. Journal of Fluid Mechanics, 2007, 570, 431-453. | 3.4 | 55 |
| 20 | Helical propulsion in shear-thinning fluids. Journal of Fluid Mechanics, 2017, 812, . | 3.4 | 48 |
| 21 | Power spectral distributions of pseudo-turbulent bubbly flows. Physics of Fluids, 2013, 25, . | 4.0 | 42 |
| 22 | Mathematical and physical simulation of the interaction between a gas jet and a liquid free surface. Applied Mathematical Modelling, 2011, 35, 4991-5005. | 4.2 | 41 |
| 23 | The effect of confinement on the motion of a single clean bubble. Journal of Fluid Mechanics, 2008, 616, 419-443. | 3.4 | 40 |
| 24 | A study of velocity discontinuity for single air bubbles rising in an associative polymer. Physics of Fluids, 2006, 18, 121510. | 4.0 | 39 |
| 25 | Complex fluids affect low-Reynolds number locomotion in a kinematic-dependent manner. Experiments in Fluids, 2015, 56, 1. | 2.4 | 38 |
| 26 | Solid fraction fluctuations in solidâ€“liquid flows. International Journal of Multiphase Flow, 2000, 26, 763-781. | 3.4 | 37 |
| 27 | Collisions in a liquid fluidized bed. International Journal of Multiphase Flow, 2011, 37, 695-705. | 3.4 | 36 |
| 28 | Clustering in high Re monodispersed bubbly flows. Physics of Fluids, 2005, 17, 091701. | 4.0 | 35 |
| 29 | Mechanics of Immersed Particle Collisions. Journal of Fluids Engineering, Transactions of the ASME, 1999, 121, 179-184. | 1.5 | 32 |
| 30 | Bubble cluster formation in shear-thinning inelastic bubbly columns. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 32-41. | 2.4 | 32 |
| 31 | The unsteady drag force on a cylinder immersed in a dilute granular flow. Physics of Fluids, 2006, 18, 043301. | 4.0 | 30 |
| 32 | Microbubble generation using fiber optic tips coated with nanoparticles. Optics Express, 2012, 20, 8732. | 3.4 | 29 |
| 33 | Study of the properties of bubbly flows in Boger-type fluids. Journal of Non-Newtonian Fluid Mechanics, 2012, 175-176, 1-9. | 2.4 | 29 |
| 34 | 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. | 2.1 | 24 |
| 35 | Vortex ring formation for low Re numbers. Acta Mechanica, 2013, 224, 383-397. | 2.1 | 24 |
| 36 | The fluid mechanics of bubbly drinks. Physics Today, 2018, 71, 44-50. | 0.3 | 22 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Velocity fluctuations resulting from the interaction of a bubble with a vertical wall. Physics of Fluids, 2005, 17, 098106. | 4.0 | 20 |
| 38 | Computer simulations of the collapse of columns formed by elongated grains. Physical Review E, 2012, 85, 061304. | 2.1 | 19 |
| 39 | A hydrodynamic description of the flow behavior in shaken flasks. Biochemical Engineering Journal, 2015, 99, 61-66. | 3.6 | 19 |
| 40 | On the hydrodynamics characterization of the straight MaxblendÂ® impeller with Newtonian fluids. Chemical Engineering Research and Design, 2012, 90, 1117-1128. | 5.6 | 18 |
| 41 | The formation of vortex rings in shear-thinning liquids. Journal of Non-Newtonian Fluid Mechanics, 2013, 194, 1-13. | 2.4 | 18 |
| 42 | Experimental study on laminar flow over two confined isothermal cylinders in tandem during mixed convection. International Journal of Thermal Sciences, 2017, 115, 176-196. | 4.9 | 18 |
| 43 | Effect of the Fluidâ€Dynamic Structure on the Mixing Time of a Ladle Furnace. Steel Research International, 2018, 89, 1700281. | 1.8 | 18 |
| 44 | Viscoelastic propulsion of a rotating dumbbell. Microfluidics and Nanofluidics, 2019, 23, 1. | 2.2 | 18 |
| 45 | Lifetime of Surface Bubbles in Surfactant Solutions. Langmuir, 2020, 36, 7749-7764. | 3.5 | 17 |
| 46 | Drag coefficient for a sedimenting and rotating sphere in a viscoelastic fluid. Physical Review Fluids, 2019, 4, . | 2.5 | 17 |
| 47 | The micromechanical behavior of lyophilized glutaraldehyde-treated bovine pericardium under uniaxial tension. Journal of the Mechanical Behavior of Biomedical Materials, 2010, 3, 640-646. | 3.1 | 16 |
| 48 | Note: Design of a novel rotating magnetic field device. Review of Scientific Instruments, 2012, 83, 066109. | 1.3 | 16 |
| 49 | Experimental study of a model valve with flexible leaflets in a pulsatile flow. Journal of Fluid Mechanics, 2014, 739, 338-362. | 3.4 | 16 |
| 50 | Impedance probe to measure local gas volume fraction and bubble velocity in a bubbly liquid. Review of Scientific Instruments, 2003, 74, 2817-2827. | 1.3 | 15 |
| 51 | 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. | 3.4 | 15 |
| 52 | 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. | 2.1 | 15 |
| 53 | Compact bubble clusters in Newtonian and non-Newtonian liquids. Physics of Fluids, 2014, 26, . | 4.0 | 15 |
| 54 | Drift by air bubbles crossing an interface of a stratified medium at moderate Reynolds number. International Journal of Multiphase Flow, 2016, 85, 258-266. | 3.4 | 15 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | 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. | 0.2 | 13 |
| 56 | The impulsive motion of a liquid resulting from a particle collision. Journal of Fluid Mechanics, 1998, 375, 345-361. | 3.4 | 12 |
| 57 | On the flow of associative polymers past a sphere: Evaluation of negative wake criteria. Physics of Fluids, 2009, 21, . | 4.0 | 12 |
| 58 | The flow inside shaking flasks and its implication for mycelial cultures. Chemical Engineering Science, 2016, 152, 163-171. | 3.8 | 12 |
| 59 | Shear flow of a suspension of bubbles rising in an inclined channel. Journal of Fluid Mechanics, 2004, 515, 261-292. | 3.4 | 11 |
| 60 | Experimental study of the effect of wettability on the relative permeability for airâ€“water flow through porous media. International Journal of Multiphase Flow, 2019, 120, 103091. | 3.4 | 11 |
| 61 | Bubbles determine the amount of alcohol in Mezcal. Scientific Reports, 2020, 10, 11014. | 3.3 | 11 |
| 62 | Measurement of the temperature rise in non-Newtonian oscillatory pipe flows. Journal of Non-Newtonian Fluid Mechanics, 2003, 109, 157-176. | 2.4 | 10 |
| 63 | Viscous Filament Fragmentation in a Turbulent Flow Inside a Stirred Tank. Chemical Engineering Communications, 2015, 202, 1251-1260. | 2.6 | 10 |
| 64 | Front-back asymmetry controls the impact of viscoelasticity on helical swimming. Physical Review Fluids, 2021, 6, . | 2.5 | 10 |
| 65 | Dynamics of a helical swimmer crossing viscosity gradients. Physical Review Fluids, 2021, 6, . | 2.5 | 10 |
| 66 | Conditions for the sliding-bouncing transition for the interaction of a bubble with an inclined wall. Physical Review Fluids, 2016, 1, . | 2.5 | 10 |
| 67 | Compaction force in a confined granular column. Physical Review E, 2003, 68, 051301. | 2.1 | 9 |
| 68 | Evaluation of drag correction factor for spheres settling in associative polymers. Rheologica Acta, 2010, 49, 979-984. | 2.4 | 9 |
| 69 | A Hydrodynamic Instability Is Used to Create Aesthetically Appealing Patterns in Painting. PLoS ONE, 2015, 10, e0126135. | 2.5 | 9 |
| 70 | Effects of inertia and turbulence on rheological measurements of neutrally buoyant suspensions. Journal of Fluid Mechanics, 2017, 811, 525-543. | 3.4 | 9 |
| 71 | Heat Transfer Resulting From the Interaction of a Vortex Pair With a Heated Wall. Journal of Heat Transfer, 2008, 130, . | 2.1 | 8 |
| 72 | Viscous pumping inspired by flexible propulsion. Bioinspiration and Biomimetics, 2014, 9, 036007. | 2.9 | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Texture Analysis of Dried Droplets for the Quality Control of Medicines. Sensors, 2021, 21, 4048. | 3.8 | 8 |
| 74 | Some fluid mechanical aspects of artistic painting. Physical Review Fluids, 2019, 4, . | 2.5 | 8 |
| 75 | Effect of eccentricity on the pumping capacity in an unbaffled vessel. Canadian Journal of Chemical Engineering, 2011, 89, 1051-1058. | 1.7 | 7 |
| 76 | A space-fractional model of thermo-electromagnetic wave propagation in anisotropic media. Applied Thermal Engineering, 2016, 93, 529-536. | 6.0 | 7 |
| 77 | Self-propulsion of a helical swimmer in granular matter. Physical Review Fluids, 2019, 4, . | 2.5 | 7 |
| 78 | Fluid velocity fluctuations in a collision of a sphere with a wall. Physics of Fluids, 2011, 23, . | 4.0 | 6 |
| 79 | Encapsulation of Droplets Using Cusp Formation behind a Drop Rising in a Non-Newtonian Fluid. Fluids, 2018, 3, 54. | 1.7 | 6 |
| 80 | Coiling of a viscoelastic fluid filament. Physical Review Fluids, 2021, 6, . | 2.5 | 6 |
| 81 | Study of the Velocity and Strain Fields in the Flow Through Prosthetic Heart Valves. Journal of Biomechanical Engineering, 2011, 133, 121003. | 1.3 | 5 |
| 82 | Sedimentation of a rotating sphere in a power-law fluid. Journal of Non-Newtonian Fluid Mechanics, 2014, 213, 27-30. | 2.4 | 5 |
| 83 | Negative vortices: The formation of vortex rings with reversed rotation in viscoelastic liquids. Physics of Fluids, 2015, 27, . | 4.0 | 5 |
| 84 | A new model for the computation of the formation factor of core rocks. Journal of Structural Geology, 2017, 97, 189-198. | 2.3 | 5 |
| 85 | Topological invariants can be used to quantify complexity in abstract paintings. Knowledge-Based Systems, 2017, 126, 48-55. | 7.1 | 5 |
| 86 | Dynamics of a helical swimmer crossing an interface between two immiscible fluids. Physical Review Fluids, 2019, 4, . | 2.5 | 5 |
| 87 | Sliding motion of a bubble against an inclined wall from moderate to high bubble Reynolds number. Physical Review Fluids, 2019, 4, . | 2.5 | 5 |
| 88 | Application of the Eulerâ€“Lagrange Method to Model Developed Hydrodynamic Slugs in Conduits. Journal of Fluids Engineering, Transactions of the ASME, 2011, 133, . | 1.5 | 4 |
| 89 | 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. | 3.4 | 4 |
| 90 | Pollock avoided hydrodynamic instabilities to paint with his dripping technique. PLoS ONE, 2019, 14, e0223706. | 2.5 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Force and torque-free helical tail robot to study low Reynolds number micro-organism swimming. Review of Scientific Instruments, 2022, 93, 044103. | 1.3 | 4 |
| 92 | On the Direct and Radiated Components of the Collisional Particle Pressure in Liquid-Solid Flows. Flow, Turbulence and Combustion, 1997, 58, 305-317. | 0.2 | 3 |
| 93 | Reduction of compaction force in a confined bidisperse granular media. Physical Review E, 2013, 87, 052210. | 2.1 | 3 |
| 94 | Effect of the curvature of elastic plates on the evolution of pulsatile flow fields. Journal of Fluids and Structures, 2015, 56, 177-189. | 3.4 | 3 |
| 95 | The lifespan of clusters in confined bubbly liquids. International Journal of Multiphase Flow, 2018, 106, 138-146. | 3.4 | 3 |
| 96 | Hydrodynamic Characterization of Three Axial Impellers under Gassed and Ungassed Conditions. Journal of Chemical Engineering of Japan, 2016, 49, 894-903. | 0.6 | 2 |
| 97 | The dynamics of compound drops at high Reynolds numbers: Drag, shape, and trajectory. International Journal of Multiphase Flow, 2021, 142, 103699. | 3.4 | 2 |
| 98 | Interaction of a vortex ring with a natural convective layer. Physics of Fluids, 2014, 26, 083602. | 4.0 | 1 |
| 99 | Experimental study of the deflections of curved plates exposed to pulsating cross-flows. Acta Mechanica, 2016, 227, 3621-3637. | 2.1 | 1 |
| 100 | On the maximum operating frequency of prosthetic heart valves. Biomedical Physics and Engineering Express, 2018, 4, 047007. | 1.2 | 1 |
| 101 | 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. | 1.5 | 1 |
| 102 | A Conjugate Thermo-Electric Model for a Composite Medium. PLoS ONE, 2014, 9, e97895. | 2.5 | 1 |
| 103 | Modelado fÃsico de la incidencia de un chorro de aire sobre una superficie de agua. Revista De Metalurgia, 2010, 46, 421-434. | 0.5 | 1 |
| 104 | Average properties of bidisperse bubbly flows. Physical Review Fluids, 2018, 3, . | 2.5 | 1 |
| 105 | Viscoelastic levitation. Journal of Fluid Mechanics, 2022, 943, . | 3.4 | 1 |
| 106 | Mathematical Modeling of Impingement of an Air Jet in a Liquid Bath. Materials Research Society Symposia Proceedings, 2010, 1276, 1. | 0.1 | 0 |
| 107 | GRAIN DRYING AND AERATION IN A SOLAR HEXAGONAL SILO. Particulate Science and Technology, 2001, 19, 45-65. | 2.1 | 0 |
| 108 | On the Modeling Strategies for Hydrodynamic Slugging in Conduits of General Shapes and Layouts. Environmental Science and Engineering, 2012, , 313-318. | 0.2 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Pseudoturbulence in Bubbly and Transition Flow Regimes. Environmental Science and Engineering, 2013, , 217-224. | 0.2 | 0 |