

PUBLICACIONES

José Roberto Zenit Camacho

1. Producción científica

1.1. Artículos Publicados en Revistas Indizadas

1. Zenit, R., Hunt, M.L. and Brennen, C.E., Collisional particle pressure measurements in solid-liquid flows, *Journal of Fluid Mechanics*, **353**, 261–283, 1997.
2. Zenit, R., Hunt, M.L. and Brennen, C.E., On the direct and radiated components of the particle pressure in liquid-solid flows, *Applied Scientific Research*, **58**, 305–317, 1998.
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4. Zenit, R. and Hunt, M.L., Mechanics of immersed particle collisions, *Journal of Fluids Engineering*, **121**, 1999, 179–184.
5. Zenit, R. and Hunt, M.L., Solid fraction fluctuations in solid-liquid flows, *International Journal of Multi-Phase Flow*, **26**, 763–781, 2000.
6. Hernandez-Cordero J., Zenit, R., Geffroy, E., and Mena, B., Experiments on granular flow in a hexagonal silo; a design that minimizes dynamic stresses, *Korea-Australia Journal of Rheology*, **12**, 269–281, 2000.
7. Zenit, R., Koch, D.L. and Sangani, A.K., Measurements of the average properties of a suspension of bubbles rising in a vertical channel, *Journal of Fluid Mechanics*, **429**, 307–342, 2001.
8. Joseph, G.G., Zenit, R., Hunt, M.L. and Rosenwinkel, A., Particle-wall collisions in a viscous fluid, *Journal of Fluid Mechanics*, **433**, 329 - 346, 2001.
9. Chávez, B.E., Galicia, O.M., Geffroy, E., Zenit, R. and Mena, B. Grain Drying and Aeration in a New Solar Hexagonal Silo, *Particulate Science and Technology*, **19**, 45-65, 2001.
10. Herrera-Velarde, J.R., Zenit, R. and Mena, B., Viscous dissipation of a power law fluid in an oscillatory pipe flow, *Revista Mexicana de Física*, **47**, 351-356, 2001.
11. Hunt, M.L., Zenit, R. Campbell, C.S. and Brennen, C.E., Revisiting the 1954 suspension experiments of R. A. Bagnold, *Journal of Fluid Mechanics*, **452**, 1-24, 2002.

12. Herrera-Velarde, J.R., Zenit, R. and Mena, B., Measurement of the temperature rise in non-Newtonian oscillatory pipe flows, *Journal of Non-Newtonian Fluid Mechanics*, **109**, 157-176, 2003.
13. Herrera-Velarde, J.R., Zenit, R., Chehata, D. and Mena, B., The flow of non-Newtonian fluids around bubbles and its connection to the jump discontinuity, *Journal of Non-Newtonian Fluid Mechanics*, **111**,199–209, 2003.
14. Zenit, R., Koch, D.L. and Sangani, A.S., Impedance probe to measure local gas volume fraction and bubble velocity in a bubbly liquid, *Review of Scientific Instruments*, **74**, 2817–2827, 2003.
15. Lima-Ochoterena and Zenit, R., Visualization of the flow around a bubble moving in a low viscosity liquid, *Revista Mexicana de Física*, **49**, 348–352, 2003.
16. Chehata, D., Zenit, R. and Wassgren, C.R., Dense granular flow around an immersed cylinder, *Physics of Fluids*, **15**, 1622–1631, 2003.
17. Wassgren, C.R., Cordova, J.A. Zenit, R. and Karion, A., Dilute granular flow around an immersed cylinder, *Physics of Fluids*, **15**, 3318–3330, 2003.
18. Arroyo-Cetto, D., Pulos, G., Zenit, R. and Wassgren, C.R., Compaction force in a confined granular column, *Physical Review E*, **68**, 051301, 2003.
19. Zenit, R., Tsang, Y.H., Koch, D.L. and Sangani, A.S., Shear flow of a suspension of bubbles rising in an inclined channel, *Journal of Fluid Mechanics*, **515**, 261 - 292, 2004.
20. Zenit, R., Computer simulations of the collapse of a granular column, *Physics of Fluids*, **17**, 031703, 2005.
21. Herrera-Velarde, J.R., Mena, B. and Zenit, R., Propiedades mecánicas del producto extrudido de un flujo viscoelástico oscilante, *Ingeniería Mecánica, Tecnología y Desarrollo*, **1**, 202–208, 2005.
22. Figueroa-Espinoza, B. and Zenit, R., Clustering in high Re monodispersed bubbly flows, *Physics of Fluids*, **17**, 091701, 2005.
23. Moctezuma, M., Lima-Ochoterena, R. and Zenit, R., Velocity fluctuations resulting from the interaction of a bubble with a vertical wall, *Physics of Fluids*, **17**, 098106, 2005.
24. Bharadwaj, R., Wassgren, C.R and Zenit, R., The unsteady drag force on a cylinder immersed in a dilute granular flow, *Physics of Fluids*, **18**, 043301, 2006.
25. Legendre, D., Zenit, R., Daniel, C. and Guirand, P. A note on the modelling of the bouncing of spherical drops or solid spheres on a wall in viscous fluid, *Chemical Engineering Science*, **61**, 3543 – 3549, 2006.
26. Soto, E., Goujon, C., Zenit, R. and Manero, O. A study of velocity discontinuity for single air bubbles rising in an associative polymer, *Physics of Fluids*, **18**, 121510, 2006.

27. Charru, F., Larrieu, E., J.-B., Dupont and Zenit, R., Motion of a particle near a rough wall in a viscous shear flow, *Journal of Fluid Mechanics*, **570**, 431-453, 2007.
28. Dominguez, H. and Zenit, R. On the cooling law of a non-dilute granular gas. *Revista Mexicana de Física*, **53**, 83-86, 2007.
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30. Martinez-Mercado, J., Palacios-Morales, C.A. and Zenit, R. Measurement of pseudoturbulence intensity in monodispersed bubbly liquids for $10 < \text{Re} < 500$. *Physics of Fluids*, **19**, 103302, 2007.
31. Martin, R. and Zenit, R. Heat transfer resulting from the interaction of a vortex ring with a heated wall. *Journal of Heat Transfer*, **130**, 051701, 2008.
32. Zenit, R. and Magnaudet, J. Path instability of rising spheroidal air bubbles: a shape-controlled process. *Physics of Fluids*, **20**, 061702, 2008.
33. Soto, E., Zenit, R. and Manero, O. Break up of the tail of a bubble in a non Newtonian fluid. *Physics of Fluids*, **20**, 091110, 2008.
34. Figueroa-Espinoza, B., Zenit, R. and Legendre, D. The effect of confinement on the motion of a single clean bubble. *Journal of Fluid Mechanics*, **616**, 419-443, 2008.
35. Zenit, R. and Magnaudet, J. Measurements of the streamwise vorticity in the wake of an oscillating bubble. *International Journal of Multiphase Flow*, **35**, 195-203, 2009.
36. Mendoza-Fuentes, A.J., Montiel, R., Zenit, R., Manero, O., On the flow of associative polymers past a sphere: Evaluation of negative wake criteria. *Physics of Fluids*, **21**, 033104, 2009.
37. Zenit, R. and Legendre, D. The coefficient of restitution for air bubbles colliding against solid walls in viscous liquids. *Physics of Fluids*, **21**, 083306, 2009.
38. Camacho-Martínez, J., Ramirez-Argaez, M., Zenit, R., Juárez-Hernández, A., Barceñas-Sánchez, O. and Trapaga, G., Physical modelling of an Aluminium degassing operation with rotating impellers –a comparative hydrodynamic analysis. *Materials and Manufacturing Processes*, **25**, 581-591, 2010.
39. Mendoza-Fuentes, A.J., Zenit, R., Manero, O., Evaluation of the drag correction factor for spheres settling in associative polymers. *Rheologica Acta*, **49**, 979–984, 2010.
40. Sánchez-Arévalo, F. M., Farfán, M., Covarrubias, D., Zenit, R. and Pulos, G. Micromechanical behavior of lyophilized glutaraldehyde-treated bovine pericardium under uniaxial tension. *Journal of the Mechanical Behavior of Biomedical Materials*, **3**, 640-646, 2010.
41. Solórzano-Lopez, J. , Ramirez-Argaez, M., Zenit, R. Modelado físico de la incidencia de un chorro de aire sobre una superficie de agua. *Revista de Metalurgia*, **46**, 405–420, 2010.

42. Vélez-Cordero, J.R. and Zenit, R. Bubble cluster formation in shear-thinning inelastic bubbly columns. *Journal of Non Newtonian Fluid Mechanics*, **166**, 32–41, 2011.
43. Vélez-Cordero, J.R., Sámano, D., Yue, P., Feng, J. J. and Zenit, R. Hydrodynamic interaction between a pair of bubbles ascending in shear-thinning inelastic fluids. *Journal of Non Newtonian Fluid Mechanics*, **166**, 118–132, 2011.
44. Guzman, J.E.V. and Zenit, R. Application of the Euler– Lagrange Method to Model Developed Hydrodynamic Slugs in Conduits. *Journal of Fluids Engineering*, **133**, 041301, 2011.
45. Solórzano-Lopez, J. , Ramirez-Argaez, M., Zenit, R. Mathematical and Physical Simulation of the Interaction between a Gas Jet and a Liquid Free Surface. *Applied Mathematical Modelling*, **35**, 2011, 4991–5005.
46. Aguilar-Corona, A., Zenit, R. and Masbernat, O., Collisions in a liquid fluidized bed. *International Journal of Multiphase Flow*, **37**, 695–705, 2011.
47. Pacheco, R., Ruiz-Angulo, A., Zenit, R. and Verzicco, R., Fluid velocity fluctuations in a collision of a sphere with a wall. *Physics of Fluids*, **23**, 063301, 2011.
48. Hidalgo-Millán, A. , Soto, E., Zenit, R. and Ascanio, G. Effect of eccentricity on the pumping capacity in an unbaffled vessel. *Canadian Journal of Chemical Engineering*, **89**, 1051–1058, 2011.
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51. Pimentel-Domínguez, R., Hernandez-Cordero, J., Zenit, R. Microbubble generation using fiber optic tips coated with nanoparticles. *Optics Express*, **20**, 8732-8740, 2012.
52. Legendre, D., Zenit, R. and Vélez-Cordero, J.R., On the deformation of gas bubbles in liquids. *Physics of Fluids*, **24**, 043303, 2012.
53. Vélez-Cordero, J.R., Sámano, D. and Zenit, R. Study of the properties of bubbly flows in Boger-type fluids. *Journal of Non Newtonian Fluid Mechanics*, **175-176**, 1-9, 2012.
54. Tapia-McClung, H. and Zenit, R., Computer simulations of the collapse of columns formed by elongated grains. *Physical Review E*, **85**, 061304, 061304, 2012.
55. Godinez, F., Chávez, O. and Zenit, R. Design of a novel rotating magnetic field device. *Review of Scientific Instruments*, **83**, 066109, 2012.

56. A. Hidalgo-Millán, R. Zenit, C. Palacios, R. Yatomi, H. Horiguchi, P.A. Tanguy and G. Ascanio. On the hydrodynamic characterization of the straight Maxblend impeller with Newtonian fluids. *Chemical Engineering Research and Design*, **90**, 1117–1128, 2012.
57. Hidalgo-Millán, A., Taboada, B., Vega-Alvarado, L., Zenit, R., and Ascanio, G., Enhancement of laminar mixing in stirred vessels using off-centered impellers. *Journal of Applied Research and Technology*, **10**, 520–533, 2012.

1.1.1. Artículos en Prensa (aceptados)

1. Palacios-Morales, C.A. and Zenit R., Vortex ring formation for low Re numbers. Aceptado en *Acta Mechanica*, mayo 2012.
2. Eudoxio Ramos Gómez, Roberto Zenit, Carlos Gonzalez-Rivera, Gerardo Trapaga, and Marco Ramirez-Argaez, Mathematical modeling of fluid flow in a water physical of an aluminum ladle equipped with impeller and gas purging for degassing. Aceptado en *Metallurgical and Material Transactions B*, octubre 2012.
3. Palacios-Morales, C.A. and Zenit R., The formation of vortex rings in shear-thinning liquids. Aceptado en *Journal of Non Newtonian Fluid Mechanics*, junio 2012.

1.1.2. Artículos en Proceso de Arbitraje

1. Kruesi, K., Alcaraz, G., Stern, C., Zenit R., The sword does decrease the escape performance in swordtails. Enviado a *Journal of Experimental Biology*, diciembre 2011.
2. Ledesma-Alonso, R., Guzman, J.E.V. and Zenit, R., Experimental study of a model valve with flexible leaflets in a pulsatile flow. Enviado a *Journal of Fluid Mechanics*, junio 2012.
3. S. Mendez-Diaz, J.C. Serrano-Garcia, R. Zenit and J.A. Hernández-Cordero, Power spectral distributions of pseudo-turbulent bubbly flows. Enviado a *Physics of Fluids*, junio 2012.
4. Tapia-McClung, H. and Zenit. R., Computer simulations of the collapse of granular columns in different gravities. Enviado a *Earth and Planetary Science Letters*, agosto 2012.

1.2. Artículos Publicados en Memorias en Extenso (con arbitraje)

1. Zenit, R., Hernandez, J. and Mena, B. Granular flow in a silo, en memorias del 11th International Congress on Rheology, Brussels, Belgium, 1992.
2. Gama, J., Nuñez, F., Zenit, R., von-Ziegler, A. and Mena, B. A new shear-elongational viscometer, en memorias del 11th International Congress on Rheology, Brussels, Belgium, 1992.
3. Zenit, R. and Hunt, M.L., Influence of fluid properties on submerged collision of particles, en memorias del 6th International Symposium on Liquid-Solid Flows, Vancouver, Canada, 1997.

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5. Zenit, R., Joseph, G.G. and Hunt, M.L. The coefficient of restitution for liquid immersed collisions, en memorias del 7th International Symposium on Liquid-Solid Flows, San Francisco, California, USA, 1999.
6. Zenit, R. and Karion A., Granular flow around a cylinder , en memorias del Particle Technology Forum, the AIChE Annual Meeting, Los Angeles, California, USA, 2000.
7. Herrera-Velarde, J.R., Zenit, R. and Mena, B., Viscous dissipation of a power law fluid in an oscillatory pipe flow, en memorias del Latin American -Caribbean Fluid Mechanics Conference, Caracas Venezuela, 53–58, 2001.
8. Herrera-Velarde, J.R., Zenit, R. and Mena, B., Viscous dissipation of a power law fluid in an oscillatory pipe flow, en memorias del Pacific Rim Conference on Rheology, Vancouver, Canada, 2001.
9. Wassgren, C.R., Zenit, R. and Karion, A. Flow around a cylinder immersed in a collisional granular flow, en Proceedings of the World Congress on Particle Technology, Sydney Australia, 2002.
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11. Wassgren, C.R., J.A. Cordova, Zenit, R., The unsteady drag force on a cylinder immersed in a dilute granular flow, memorias del VIth Conference on Computer Simulation and Industrial Applications , Tijuana, México. 2003.
12. Zenit, R, Chehata, D., Herrera-Velarde, J.R, and Mena, B., The flow of non-Newtonian liquids around bubbles, memorias del 14th International Congress on Rheology, Seul, Corea del Sur, 2004.
13. Camacho-Martinez, J.L., Trápaga, G., Zenit, R., Juárez-Hernández, J., Ramirez-Argaez, M.A., Barceinas-Sánchez, O. and Villanueva, M. Modelación física de la operación de desgasificado de aluminio con impulsor rotatorio. XIV Panel Técnico Internacional del Procesamiento del Aluminio y Exposición. Cancun, Mexico, Junio 2006.
14. Aguilar-Corona A., Masbernát O., Climent E. and Zenit R., Measurement of particle diffusion in a liquid fluidized bed, 6th International Conference on Multiphase Flow, ICMF 2007, Leipzig, Germany, Julio, 2007.
15. Figueroa-Espinoza, B., Zenit, R. and Legendre, D., The effect of confinement on the motion of a clean bubble rising through a liquid of small viscosity, 6th International Conference on Multiphase Flow, ICMF 2007, Leipzig, Germany, Julio, 2007.

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17. J. Solórzano-Lopez, Zenit, R. Gonzalez-Rivera, C, Ramirez-Argaez, M. Physical modeling of the interaction between a gas jet and a liquid at the free surface. XVIII International Materials Research Congress, Cancun Mexico, agosto 2009.
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20. M. Fuentes Cruz, E. Díaz Nácar, R. Zenit Camacho, M. Vázquez Hernández, I. Sánchez Domínguez, Digital control for shooting a high-speed camera to capture images from emulador of the blood flow, 2nd International Congress on Instrumentation and Applied Sciences, Puebla, Mexico, Octubre 2011.

1.3. Capítulos en libros

1. J. F. Hernández Sánchez and R. Zenit, The collision of a deformable particle with a corner formed by two perpendicular walls, Experimental and Theoretical Advances in Fluid Dynamics (Environmental Science and Engineering), Jaime Klapp, Ed., ISBN:978-3-642-17957-0, Springer 2011.
2. J.E.V. Guzmán and R. Zenit, On the modeling strategies for hydrodynamic slugging in conduits of general shapes and layouts, Experimental and Theoretical Advances in Fluid Dynamics (Environmental Science and Engineering), Jaime Klapp, Ed., ISBN:978-3-642-17957-0, Springer 2011.
3. A. Aguilar-Corona, O. Masbernat, R. Zenit and B. Figueroa-Espinoza, Agitation in a liquid fluidized bed, Experimental and Theoretical Advances in Fluid Dynamics (Environmental Science and Engineering), Jaime Klapp, Ed., ISBN:978-3-642-17957-0, Springer 2011.
4. E. Mancilla, R. Zenit, E. Soto and G. Ascanio. Bubbles in isotropic turbulence, Fluid Dynamics in Physics, Engineering and Environmental Applications (Environmental Science and Engineering), Jaime Klapp, Ed., ISBN: 978-3-642-27722-1, Springer 2012.
5. S. Mendez, R. Zenit, Pseudoturbulence in Bubbly and Transition Flow Regimes, Fluid Dynamics in Physics, Engineering and Environmental Applications (Environmental Science and Engineering), Jaime Klapp, Ed., ISBN: 978-3-642-27722-1, Springer 2012.

1.4. Citas a trabajos publicados

- 491 citas (excluyendo autocitas) según Science Citation Index[©] y Scopus[©].
- Índice H : 11, según Scopus[©].
- Promedio de citas por artículo: 8.6
- 75 % de las publicaciones son el revistas tipo A o A*, según clasificación ERA.

1.5. Artículos de Divulgación de la Ciencia

1. Zenit, R. , La microgravedad y su importancia en la investigación científica, *El Faro*, Año 2, **22**, 12, CIC-UNAM, enero 2003.
2. Zenit, R. , La microgravedad y su importancia en la investigación científica, *Boletín Sociedad Mexicana de Física*, **17**, 23–27, enero 2003.
3. Zenit, R., y Pulos, G., Materiales granulares: otro estado de la materia, *Materiales Avanzados*, **3**, 21–27, agosto 2005.
4. Zenit, R. and Homsy, G.M. What to do with heavy oil residues, *UC MexUS NEWS*, en prensa, 2009.
5. Cien preguntas y cien respuestas sobre materiales.
 - a) Guzmán, J.E.V., Zenit R., ¿Porqué es difícil diseñar válvulas cardiacas?
 - b) Mendez Diaz, S., Zenit R., ¿Que es la pseudo-turbulencia?
 - c) Hernández Sánchez, J.F., Zenit, R. Materiales granulares ¿sólidos o fluidos?

Ed. Terracota, México, 2011

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