

Rigoberto Morales

List of Publications by Year in descending order

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127
papers

1,153
citations

394286

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127
docs citations

127
times ranked

785
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical Analysis of the Fluid Flow in the First Stage of a Two-Stage Centrifugal Pump With a Vaned Diffuser. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2013, 135, .	0.8	44
2	Dual-modality wire-mesh sensor for the visualization of three-phase flows. <i>Measurement Science and Technology</i> , 2015, 26, 105302.	1.4	41
3	Visualization of two-phase gas-liquid flow in a radial centrifugal pump with a vaned diffuser. <i>Journal of Petroleum Science and Engineering</i> , 2020, 187, 106848.	2.1	41
4	Perspectives on Gas Hydrates Cold Flow Technology. <i>Energy & Fuels</i> , 2019, 33, 1-15.	2.5	34
5	A Multiscale Approach for Gas Hydrates Considering Structure, Agglomeration, and Transportability under Multiphase Flow Conditions: I. Phenomenological Model. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 14446-14461.	1.8	33
6	Experimental study of the formation and deposition of gas hydrates in non-emulsifying oil and condensate systems. <i>Chemical Engineering Science</i> , 2016, 155, 111-126.	1.9	32
7	Capacitive measuring system for two-phase flow monitoring. Part 1: Hardware design and evaluation. <i>Flow Measurement and Instrumentation</i> , 2016, 47, 90-99.	1.0	32
8	Experimental measurements and modelling of carbon dioxide hydrate phase equilibrium with and without ethanol. <i>Fluid Phase Equilibria</i> , 2016, 413, 176-183.	1.4	29
9	Investigation of the Motion of Bubbles in a Centrifugal Pump Impeller. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2019, 141, .	0.8	29
10	Rock-Flow Cell: An Innovative Benchtop Testing Tool for Flow Assurance Studies. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 8544-8552.	1.8	29
11	Analytical study of pressure losses and fluid viscosity effects on pump performance during monophasic flow inside an ESP stage. <i>Journal of Petroleum Science and Engineering</i> , 2015, 127, 245-258.	2.1	27
12	Turbulent Flow in D-Type Corrugated Pipes: Flow Pattern and Friction Factor. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2012, 134, .	0.8	25
13	Characterization of slug initiation for horizontal air-water two-phase flow. <i>Experimental Thermal and Fluid Science</i> , 2017, 87, 80-92.	1.5	25
14	Numerical and Experimental Analysis of Turbulent Flow in Corrugated Pipes. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2010, 132, .	0.8	22
15	Two-Phase Slug Flow Characterization Using Artificial Neural Networks. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2016, 65, 494-501.	2.4	22
16	Gas-Liquid Flow Rate Measurement Using a Twin-Plane Capacitive Sensor and a Venturi Meter. <i>IEEE Access</i> , 2019, 7, 135933-135941.	2.6	22
17	Numerical simulation of gas-liquid flows in a centrifugal rotor. <i>Chemical Engineering Science</i> , 2020, 221, 115692.	1.9	21
18	Modeling the effects of hydrate wall deposition on slug flow hydrodynamics and heat transfer. <i>Applied Thermal Engineering</i> , 2017, 114, 245-254.	3.0	20

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19	A bench-scale flow loop study on hydrate deposition under multiphase flow conditions. <i>Fuel</i> , 2020, 262, 116558.	3.4	20
20	Single and Multiphase Flow Characterization by Means of an Optical Fiber Bragg Grating Grid. <i>Journal of Lightwave Technology</i> , 2015, 33, 1857-1862.	2.7	19
21	Single- and Two-Phase Flow Characterization Using Optical Fiber Bragg Gratings. <i>Sensors</i> , 2015, 15, 6549-6559.	2.1	19
22	Numerical investigation of the effect of viscosity in a multistage electric submersible pump. <i>Engineering Applications of Computational Fluid Mechanics</i> , 2017, 11, 258-272.	1.5	19
23	A three-phase solid-liquid-gas slug flow mechanistic model coupling hydrate dispersion formation with heat and mass transfer. <i>Chemical Engineering Science</i> , 2018, 178, 222-237.	1.9	17
24	Statistical features of the flow evolution in horizontal liquid-gas slug flow. <i>Experimental Thermal and Fluid Science</i> , 2020, 119, 110203.	1.5	17
25	Phase Behavior of Carbon Dioxide Hydrates: A Comparison of Inhibition Between Sodium Chloride and Ethanol. <i>Journal of Chemical & Engineering Data</i> , 2017, 62, 3445-3451.	1.0	16
26	Capacitive Multielectrode Direct-Imaging Sensor for the Visualization of Two-Phase Flows. <i>IEEE Sensors Journal</i> , 2017, 17, 8047-8058.	2.4	16
27	Gas Hydrate Sloughing as Observed and Quantified from Multiphase Flow Conditions. <i>Energy & Fuels</i> , 2018, 32, 3399-3405.	2.5	16
28	Multiphase flash calculations for gas hydrates systems. <i>Fluid Phase Equilibria</i> , 2018, 475, 45-63.	1.4	16
29	A Multiscale Approach for Gas Hydrates Considering Structure, Agglomeration, and Transportability under Multiphase Flow Conditions: II. Growth Kinetic Model. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 2123-2144.	1.8	16
30	Large-eddy simulation of the combined convection around a heated rotating cylinder. <i>International Journal of Heat and Mass Transfer</i> , 1999, 42, 941-949.	2.5	14
31	Sensing Platform for Two-Phase Flow Studies. <i>IEEE Access</i> , 2019, 7, 5374-5382.	2.6	14
32	Multiple Wire-Mesh Sensors Applied to the Characterization of Two-Phase Flow inside a Cyclonic Flow Distribution System. <i>Sensors</i> , 2019, 19, 193.	2.1	14
33	Experimental analysis of downward liquid-gas slug flow in slightly inclined pipes. <i>Experimental Thermal and Fluid Science</i> , 2019, 103, 222-233.	1.5	14
34	Capacitive measuring system for two-phase flow monitoring. Part 2: Simulation-based calibration. <i>Flow Measurement and Instrumentation</i> , 2016, 50, 102-111.	1.0	13
35	Measurements of Hydrate Formation Behavior in Shut-In and Restart Conditions. <i>Energy & Fuels</i> , 2019, 33, 9457-9465.	2.5	13
36	Phase Equilibrium of Carbon Dioxide Hydrates Inhibited with MEG and NaCl above the Upper Quadruple Point. <i>Journal of Chemical & Engineering Data</i> , 2020, 65, 280-286.	1.0	13

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37	Typical bubble shape estimation in two-phase flow using inverse problem techniques. Flow Measurement and Instrumentation, 2014, 40, 64-73.	1.0	12
38	Experimental analysis of horizontal liquid-gas slug flow pressure drop in d-type corrugated pipes. Experimental Thermal and Fluid Science, 2017, 81, 234-243.	1.5	12
39	Air Flow Detection in Crude Oil by Infrared Light. Sensors, 2017, 17, 1278.	2.1	12
40	Experimental and Numerical Development of a Two-Phase Venturi Flow Meter. Journal of Fluids Engineering, Transactions of the ASME, 2004, 126, 457-467.	0.8	11
41	An Examination of the Prediction of Hydrate Formation Conditions in the Presence of Thermodynamic Inhibitors. Brazilian Journal of Chemical Engineering, 2018, 35, 265-274.	0.7	11
42	New Algorithm to Discriminate Phase Distribution of Gas-Oil-Water Pipe Flow With Dual-Modality Wire-Mesh Sensor. IEEE Access, 2020, 8, 125163-125178.	2.6	11
43	Modeling the scooping phenomenon for the heat transfer in liquid-gas horizontal slug flows. Applied Thermal Engineering, 2016, 98, 862-871.	3.0	10
44	Measurements of horizontal three-phase solid-liquid-gas slug flow: Influence of hydrate-like particles on hydrodynamics. AIChE Journal, 2018, 64, 2864-2880.	1.8	10
45	A new model to predict the head degradation of centrifugal pumps handling highly viscous flows. Journal of Petroleum Science and Engineering, 2020, 187, 106737.	2.1	10
46	Numerical simulation of the heat transfer in fully developed horizontal two-phase slug flows using a slug tracking method. International Journal of Thermal Sciences, 2015, 88, 258-266.	2.6	9
47	A Multiscale Approach for Gas Hydrates Considering Structure, Agglomeration, and Transportability under Multiphase Flow Conditions: III. Agglomeration Model. Industrial & Engineering Chemistry Research, 2020, 59, 15357-15377.	1.8	9
48	Experimental characterization of hydrate formation in non-emulsifying systems upon shut-in and restart conditions. Fuel, 2022, 307, 121690.	3.4	9
49	Three-Dimensional Bubble Shape Estimation in Two-phase Gas-liquid Slug Flow. IEEE Sensors Journal, 2017, , 1-1.	2.4	8
50	Optical Fiber Transducer for Monitoring Single-Phase and Two-Phase Flows in Pipes. IEEE Sensors Journal, 2020, 20, 5943-5952.	2.4	8
51	Wire-Mesh Sensor Super-Resolution Based on Statistical Reconstruction. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-12.	2.4	8
52	Numerical assessment of performance characteristics and two-phase flow dynamics of a centrifugal rotor operating under gas entrainment condition. Experimental and Computational Multiphase Flow, 2022, 4, 221-240.	1.9	8
53	CFD Investigation of the Effect of Viscosity on a Three-Stage Electric Submersible Pump. , 2014, , .		7
54	An experimental analysis on the influence of flow direction changes on the transitions in gas-liquid, slug-to-stratified downward flows. International Journal of Multiphase Flow, 2019, 119, 155-165.	1.6	7

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55	Development of NIR optical tomography system for the investigation of two-phase flows. , 2014, , .		6
56	Micropipette-Based Microfluidic Device for Monodisperse Microbubbles Generation. <i>Micromachines</i> , 2018, 9, 387.	1.4	6
57	Modeling of free surface flow in a helical channel with finite pitch. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2007, 29, 345-353.	0.8	5
58	Numerical Study of the Influence of Viscosity on the Performance of an Electrical Submersible Pump. , 2013, , .		5
59	A New Method for Ultrasound Detection of Interfacial Position in Gas-Liquid Two-Phase Flow. <i>Sensors</i> , 2014, 14, 9093-9116.	2.1	5
60	Dual-modality impedance wire-mesh sensor for investigation of multiphase flows. , 2014, , .		5
61	Broadband Ultrasound Attenuation Technique Applied to Two Phase Flow Pattern Recognition. <i>Journal of Control, Automation and Electrical Systems</i> , 2014, 25, 547-556.	1.2	5
62	Advanced image processing of wire-mesh sensor data for two-phase flow investigation. <i>IEEE Latin America Transactions</i> , 2015, 13, 2269-2277.	1.2	5
63	Twin Direct-Imaging Sensor for Flow Velocity Profiling in Two-Phase Mixtures. , 2018, , .		5
64	Loss of Methanol and Monoethylene Glycol in VLE and LLE: Prediction of Hydrate Inhibitor Partition. <i>Journal of Chemical & Engineering Data</i> , 2019, 64, 3889-3903.	1.0	5
65	Multichannel Capacitive Imaging of Gas Vortex in Swirling Two-Phase Flows Using Parametric Reconstruction. <i>IEEE Access</i> , 2020, 8, 69557-69565.	2.6	5
66	Heat transfer modeling of non-boiling gas-liquid slug flow using a slug tracking approach. <i>International Journal of Heat and Mass Transfer</i> , 2021, 165, 120664.	2.5	5
67	Pressure Drop of Horizontal Air-Water Slug Flow in Different Configurations of Corrugated Pipes. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2020, 142, .	0.8	5
68	A Simplified Model with a Hybrid Analytical-Numerical Solution for Predicting the Unsteady Conjugate Heat Transfer Process in Pipelines. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 2011, 60, 18-33.	0.6	4
69	Modeling fully developed laminar flow in a helical duct with rectangular cross section and finite pitch. <i>Applied Mathematical Modelling</i> , 2012, 36, 5059-5067.	2.2	4
70	Evaluation of stability and size distribution of sunflower oil-coated micro bubbles for localized drug delivery. <i>BioMedical Engineering OnLine</i> , 2012, 11, 71.	1.3	4
71	Bubble shape estimation in gas-liquid slug flow using wire-mesh sensor and advanced data processing. , 2014, , .		4
72	An Experimental Characterization of Horizontal Gas-Liquid Slug Flow. , 2015, , .		4

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73	Characterization of the liquid film flow in a centrifugal separator. <i>AIChE Journal</i> , 2016, 62, 2213-2226.	1.8	4
74	Defining a Slurry Phase Map for Gas Hydrate Management in Multiphase Flow Systems. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 14004-14012.	1.8	4
75	Numerical and experimental analysis of vertically ascending swirling liquid film flow. <i>Journal of Petroleum Science and Engineering</i> , 2021, 206, 109030.	2.1	4
76	Images Analysis of Horizontal Two-Phase Slug Flows. , 2011, , .		3
77	Wire-mesh sensor, ultrasound and high-speed videometry applied for the characterization of horizontal gas-liquid slug flow. , 2012, , .		3
78	Multiphase flow characterization using optical fiber Bragg gratings. , 2012, , .		3
79	Optical fiber Bragg grating mesh for multiphase flow sensing. , 2014, , .		3
80	Multiphase flow parameter estimation based on laser scattering. <i>Measurement Science and Technology</i> , 2015, 26, 075205.	1.4	3
81	Capacitive direct-imaging sensor for two-phase flow visualization. , 2016, , .		3
82	Electrical and Optical Probe for Two-Phase Flow Monitoring. <i>IEEE Sensors Journal</i> , 2019, 19, 8706-8713.	2.4	3
83	Sensing Hydrates in Pipes by a Combined Electrical and Optical Fiber Sensor. <i>IEEE Sensors Journal</i> , 2020, 20, 5012-5018.	2.4	3
84	Dynamics of Hydrate Behavior in Shut-In and Restart Condition in Two and Three Phase System. , 2020, , .		3
85	Measurement of Mass Flow Rate by Employing Thermometry. , 2005, , .		3
86	Mapping Wall Deposition Trends of Gas Hydrates: I. Gas-Water-Hydrate Systems. <i>Industrial & Engineering Chemistry Research</i> , 2022, 61, 2333-2345.	1.8	3
87	Numerical Study of the Free Surface Flow in a Centrifugal Gas-Liquid Separator. , 2012, , .		2
88	Numerical Study of the Fluid Flow in a Cylindrical Hydrocyclone Separator. , 2014, , .		2
89	A Two-Fluid Model for Slug Flow Initiation Based on a Lagrangian Scheme. , 2014, , .		2
90	Hydrate Formation in Condensate and Mineral Oil Systems. , 2015, , .		2

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91	Evaluation of an Extended Autocorrelation Phase Estimator for Ultrasonic Velocity Profiles Using Nondestructive Testing Systems. <i>Sensors</i> , 2016, 16, 1250.	2.1	2
92	Simple measuring system for impedance spectroscopy analysis of fluids. , 2016, , .		2
93	Two-phase flow rate measurement using a capacitive sensor and a Venturi meter. , 2017, , .		2
94	GPU-accelerated Simulator for Optical Tomography applied to Two-Phase Flows. , 2019, , .		2
95	Kinematics of droplets and bubbles flowing in a liquid stream. <i>Journal of Petroleum Science and Engineering</i> , 2021, 202, 108550.	2.1	2
96	The dynamics of compound drops at high Reynolds numbers: Drag, shape, and trajectory. <i>International Journal of Multiphase Flow</i> , 2021, 142, 103699.	1.6	2
97	Infrared optical tomography applied to two-phase flow monitoring. , 2014, , .		2
98	Numerical Simulation of the Flow in a Centrifugal Pump With a Vaned Diffuser. , 2011, , .		1
99	Analysis of Slug Frequency Correlations for Two-Phase Gas-Liquid Horizontal Slug Flow. , 2014, , .		1
100	Microfluidics Device Manufacturing Using the Technique of 3D Printing. , 2014, , .		1
101	Fluid turbulence monitoring by means of FBG mesh. , 2014, , .		1
102	Two-phase flow measurement based on oblique laser scattering. <i>Proceedings of SPIE</i> , 2015, , .	0.8	1
103	Optical imaging of air and water bubbles flowing through oil. <i>Proceedings of SPIE</i> , 2015, , .	0.8	1
104	Algebraic modeling of the liquid film dynamics in a centrifugal separator. <i>AIChE Journal</i> , 2017, 63, 4147-4160.	1.8	1
105	Numerical Simulation of Two-Phase Slug Flow From Horizontal to Downward Inclined Pipe Using a Hybrid Code Based on Slug Tracking and Two-Fluid Methodologies. , 2017, , .		1
106	ANN-based image reconstruction for optical tomography applied to gas-liquid flow monitoring. , 2017, , .		1
107	Performance Analysis of the Slug Tracking Modeling for Intermittent Flows in Horizontal Pipes With Long Lengths. , 2017, , .		1
108	SENSITIVITY ANALYSIS OF A STATIONARY HEAT TRANSFER TWO-PHASE LIQUID-GAS SLUG FLOW MODEL FOR HORIZONTAL PIPES. , 0, , .		1

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109	Studies of hydrate accumulation under multiphase flow conditions. , 2017, , .		1
110	Experimental Phase Equilibria of Carbon Dioxide and Methane Hydrates in the Presence of 2-Propanol and Sodium Chloride. Journal of Chemical & Engineering Data, 2022, 67, 1528-1540.	1.0	1
111	Numerical Simulation of Gas-Liquid Slug Flow Along Vertical Pipes Using the Slug Tracking Model. , 2011, , .		0
112	Photonic crystal fibers as miniature monitoring platforms for petroleum characterization. , 2012, , .		0
113	Detailed Experimental Characterisation of Gas-Liquid Two-Phase Slug Flow in Horizontal Pipes. , 2012, , .		0
114	Photonic Sensors as Imaging Tools for Industrial Monitoring. , 2014, , .		0
115	A flexible ultrasonic velocity profiler development environment. , 2014, , .		0
116	Analysis of Numerical Simulation of Gas-Liquid Slug Flow Using Slug Tracking Model. , 2015, , .		0
117	Mid-infrared optical tomography for imaging through petroleum: A feasibility study. , 2015, , .		0
118	Numerical and Experimental Analysis of Vertical Ascendant Liquid-Gas Flow Under Action of Centrifugal and Gravitational Fields. , 2017, , .		0
119	Numerical Study of Transient Flow and the Influence of Height and Viscosity in a Cyclonic Chamber in a Distribution System. , 2017, , .		0
120	Dual sensor for simultaneous measurement of electrical impedance and temperature during ice formation process. , 2017, , .		0
121	Bubble Identification Based on High Speed Videometry Data: Algorithm and Validation. Lecture Notes in Computer Science, 2012, , 870-876.	1.0	0
122	Optical fiber sensors: the last step towards mainstream. , 2015, , .		0
123	Two-phase flow monitoring with an electrical-optical probe. , 2019, , .		0
124	Experimental Study of Bubble-Droplet Interactions in Improved Primary Oil Separation. , 2019, , .		0
125	Experimental Visualization of Gas-Liquid Flow Patterns in a Centrifugal Rotor. , 2019, , .		0
126	Experimental Analysis of a Liquid-Gas Two-Phase Flow in a Flow Distributor. , 2019, , .		0

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127	Experimental Analysis of Three-Phase Solid-Liquid-Gas Slug Flow with Hydrate-Like Particles. Lecture Notes in Mechanical Engineering, 2022, , 267-273.	0.3	0