

# Lu-Sheng Zhai

## List of Publications by Year in descending order

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64  
papers

955  
citations

471509

17  
h-index

501196

28  
g-index

64  
all docs

64  
docs citations

64  
times ranked

545  
citing authors

#	ARTICLE	IF	CITATIONS
1	Flow pattern and water holdup measurements of vertical upward oil-water two-phase flow in small diameter pipes. <i>International Journal of Multiphase Flow</i> , 2012, 41, 91-105.	3.4	93
2	A Four-Sector Conductance Method for Measuring and Characterizing Low-Velocity Oil-Water Two-Phase Flows. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2016, 65, 1690-1697.	4.7	85
3	Liquid holdup measurement with double helix capacitance sensor in horizontal oil-water two-phase flow pipes. <i>Chinese Journal of Chemical Engineering</i> , 2015, 23, 268-275.	3.5	46
4	The development of a conductance method for measuring liquid holdup in horizontal oil-water two-phase flows. <i>Measurement Science and Technology</i> , 2012, 23, 025304.	2.6	43
5	Experimental flow pattern map, slippage and time-frequency representation of oil-water two-phase flow in horizontal small diameter pipes. <i>International Journal of Multiphase Flow</i> , 2015, 76, 168-186.	3.4	43
6	The measurement of gas-liquid two-phase flows in a small diameter pipe using a dual-sensor multi-electrode conductance probe. <i>Measurement Science and Technology</i> , 2016, 27, 045101.	2.6	37
7	The measurement of local flow parameters for gas-liquid two-phase bubbly flows using a dual-sensor probe array. <i>Chemical Engineering Science</i> , 2016, 144, 346-363.	3.8	36
8	The experimental signals analysis for bubbly oil-in-water flow using multi-scale weighted-permutation entropy. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2015, 417, 230-244.	2.6	34
9	The ultrasonic measurement of high water volume fraction in dispersed oil-in-water flows. <i>Chemical Engineering Science</i> , 2013, 94, 271-283.	3.8	32
10	Nonlinear multi-scale dynamic stability of oil-gas-water three-phase flow in vertical upward pipe. <i>Chemical Engineering Journal</i> , 2016, 302, 595-608.	12.7	28
11	Measurement of Liquid Film Thickness Using Distributed Conductance Sensor in Multiphase Slug Flow. <i>IEEE Transactions on Industrial Electronics</i> , 2020, 67, 8841-8850.	7.9	28
12	Development of a rotating electric field conductance sensor for measurement of water holdup in vertical oil-gas-water flows. <i>Measurement Science and Technology</i> , 2018, 29, 075301.	2.6	27
13	Cross-correlation analysis of interfacial wave and droplet entrainment in horizontal liquid-liquid two-phase flows. <i>Chemical Engineering Journal</i> , 2017, 320, 416-426.	12.7	26
14	The nonlinear analysis of horizontal oil-water two-phase flow in a small diameter pipe. <i>International Journal of Multiphase Flow</i> , 2017, 92, 39-49.	3.4	21
15	Measurement of Oil-Water Interface Characteristics in Horizontal Pipe Using a Conductance Parallel-Wire Array Probe. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2019, 68, 3232-3243.	4.7	20
16	Multivariate multiscale complex network analysis of vertical upward oil-water two-phase flow in a small diameter pipe. <i>Scientific Reports</i> , 2016, 6, 20052.	3.3	18
17	Ultrasonic method for measuring water holdup of low velocity and high-water-cut oil-water two-phase flow. <i>Applied Geophysics</i> , 2016, 13, 179-193.	0.6	18
18	An investigation of oil-water two-phase flow instability using multivariate multi-scale weighted permutation entropy. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2019, 518, 131-144.	2.6	17

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19	Prediction of curved oil-water interface in horizontal pipes using modified model with dynamic contact angle. Chinese Journal of Chemical Engineering, 2020, 28, 698-711.	3.5	17
20	Measurement of Water Holdup in Oil-in-Water Flows Using Three-Channel Conductance Probe With Center Body. IEEE Sensors Journal, 2018, 18, 2845-2852.	4.7	16
21	Detection of transient gas-liquid flow structures in horizontal shale gas well using wire-mesh sensor. Journal of Natural Gas Science and Engineering, 2019, 72, 103013.	4.4	16
22	Measurement of Water Velocity in Gas-Water Two-Phase Flow with the Combination of Electromagnetic Flowmeter and Conductance Sensor. Sensors, 2020, 20, 3122.	3.8	13
23	The Finite Element Analysis for Parallel-wire Capacitance Probe in Small Diameter Two-phase Flow Pipe. Chinese Journal of Chemical Engineering, 2013, 21, 813-819.	3.5	12
24	A novel online technique for water conductivity detection of vertical upward oil-gas-water pipe flow using conductance method. Measurement Science and Technology, 2018, 29, 105302.	2.6	12
25	Complex Admittance Detection of Horizontal Oil-Water Two-Phase Flows Using a Capacitance Sensor. IEEE Sensors Journal, 2019, 19, 7489-7498.	4.7	12
26	Instability of horizontal oil-water flows based on the signal-dependent complex admittance representations. Experimental Thermal and Fluid Science, 2019, 103, 337-346.	2.7	12
27	The Performance Characteristics of Electromagnetic Flowmeter in Vertical Low-Velocity Oil-Water Two-Phase Flow. IEEE Sensors Journal, 2021, 21, 464-475.	4.7	12
28	Measurement of Liquid Film Thickness in Vertical Multiphase Slug and Churn Flows Using Distributed Ultrasonic Method. IEEE Sensors Journal, 2019, 19, 10537-10544.	4.7	11
29	Response Characteristics of Coaxial Capacitance Sensor for Horizontal Segregated and Non-Uniform Oil-Water Two-Phase Flows. IEEE Sensors Journal, 2017, 17, 359-368.	4.7	10
30	Measurement of Oil-Gas-Water Mixture Velocity Using a Conductance Cross-Correlation Flowmeter With Center Body in Small Pipe. IEEE Sensors Journal, 2019, 19, 4471-4479.	4.7	10
31	Ultrasonic method for measuring the gas holdup of gas-liquid bubbly flow in a small-diameter pipe. Korean Journal of Chemical Engineering, 2016, 33, 1170-1180.	2.7	9
32	Characterizing flow instability in oil-gas-water three-phase flow using multi-channel conductance sensor signals. Chemical Engineering Journal, 2020, 386, 121237.	12.7	9
33	Salinity Independent Flow Measurement of Vertical Upward Gas-Liquid Flows in a Small Pipe Using Conductance Method. Sensors, 2020, 20, 5263.	3.8	9
34	Measurement of droplet sizes in bubbly oil-in-water flows using a fluid-sampling device. Measurement: Journal of the International Measurement Confederation, 2017, 102, 296-308.	5.0	8
35	Reconstruction of Taylor Bubbles in Slug Flow Using a Direct-Image Multielectrode Conductance Sensor. IEEE Sensors Journal, 2020, 20, 10643-10652.	4.7	8
36	Capacitive Phase Shift Detection for Measuring Water Holdup in Horizontal Oil-Water Two-Phase Flow. Sensors, 2018, 18, 2234.	3.8	7

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37	Development of wire-mesh sensor in small bubble visualization based on differential measurement mode. , 2020, , .		7
38	Gas Volume Fraction Measurement of Oil-Gas-Water Three-Phase Flows in Vertical Pipe by Combining Ultrasonic Sensor and Deep Attention Network. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-9.	4.7	7
39	Measurement of Water Holdup in Vertical Upward Oil-Gas-Water Two-Phase Flow Pipes Using a Helical Capacitance Sensor. Sensors, 2022, 22, 690.	3.8	7
40	Methodology for production logging in oil-in-water flows under low flow rate and high water-cut conditions. Applied Geophysics, 2019, 16, 302-313.	0.6	6
41	Prediction of pressure drop for segregated oil-water flows in small diameter pipe using modified two-fluid model. Experimental Thermal and Fluid Science, 2020, 114, 110078.	2.7	6
42	Measurement of Gas Holdup in Oil-Gas-Water Flows Using Combined Conductance Sensors. IEEE Sensors Journal, 2021, 21, 12171-12178.	4.7	6
43	A Distributed Conductance Cross-Correlation Method for Measuring Low-Velocity and High Water-Cut Oil-Water Flows. IEEE Sensors Journal, 2021, 21, 23860-23871.	4.7	6
44	Visualization of Vertical Oil-Gas-Water Flows Using Conductance Compensated Wire-Mesh Sensor. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-16.	4.7	6
45	Detection of Interfacial Structures in Inclined Liquid-Liquid Flows Using Parallel-Wire Array Probe and Planar Laser-Induced Fluorescence Methods. Sensors, 2020, 20, 3159.	3.8	5
46	An investigation of transition processes from transient gas-liquid plug to slug flow in horizontal pipe: Experiment and Cost-based recurrence analysis. Nuclear Engineering and Design, 2021, 379, 111253.	1.7	5
47	Method based on parallel-wire conductivity probe for measuring water holdup in near-horizontal oil-gas-water two-phase flow pipes. IET Science, Measurement and Technology, 2020, 14, 676-683.	1.6	5
48	Flow Measurement of Oil-Water Two-Phase Flow at Low Flow Rate Using the Plug-in Conductance Sensor Array. Sensors, 2019, 19, 4649.	3.8	4
49	Local detrended cross-correlation analysis for non-stationary time series. Physica A: Statistical Mechanics and Its Applications, 2019, 513, 222-233.	2.6	4
50	Measurement of Oil-Gas-Water Flows in Vertical Pipes Using Electromagnetic Flowmeter and Dual-Conductance Sensors. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-12.	4.7	4
51	Gas Holdup Measurement of Horizontal Gas-Liquid Two-Phase Flows by Using a Novel Combined Ultrasonic-Conductance Sensor. IEEE Sensors Journal, 2021, 21, 27590-27600.	4.7	4
52	Multi-scale symbolic time reverse analysis of gas-liquid two-phase flow structures. International Journal of Modern Physics C, 2017, 28, 1750007.	1.7	3
53	Topological causality analysis of horizontal gas-liquid flows based on cross map of phase spaces. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126693.	2.1	3
54	Structure Detection of Horizontal Gas-Liquid Slug Flow Using Ultrasonic Transducer and Conductance Sensor. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-10.	4.7	3

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55	Measurement of transient flow structures of horizontal gas-liquid two-phase flows using wire-mesh sensor. , 2019, , .		2
56	A three-phase flow visualization method using wire-mesh sensor based on continuous phase conductance compensation. , 2021, , .		2
57	Measurement of interfacial characteristics and droplet entrainment in nearly horizontal liquid-liquid flows using PLIF method. , 2022, , .		2
58	Gas-liquid two phase flow pattern evolution characteristics based on detrended fluctuation analysis. Mapan - Journal of Metrology Society of India, 2011, 26, 255-265.	1.5	1
59	Characterizing dynamics of swirling film in gas-liquid cylindrical cyclone separator using multi-scale entropy analysis. International Journal of Modern Physics C, 2019, 30, 2050001.	1.7	1
60	Cost-based recurrence analysis of conductance time series for gas-liquid two-phase flow system. International Journal of Modern Physics C, 0, , 2150161.	1.7	1
61	Parameter Measurement Fusion Algorithm Based on Choquet Integral. , 2021, , .		0
62	Pseudo-slug Detection of Horizontal Gas-Liquid Flow Using Ultrasonic Transducer. , 2021, , .		0
63	Quantitative research of the liquid film characteristics in upward vertical gas, oil and water flows. Chinese Journal of Chemical Engineering, 2023, 54, 67-79.	3.5	0
64	Detection of interfacial shear stress and droplet detachment using PLIF&PIV methods in horizontal liquid-liquid flows. , 2022, , .		0