Marco Jose Da Silva

List of Publications by Year
in descending order

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117 papers	1,649 citations	304368 22 h-index	315357 38 g-index
118 all docs	118 docs citations	118 times ranked	857 citing authors

#	Article	IF	Citations
1	Capacitance wire-mesh sensor for fast measurement of phase fraction distributions. Measurement Science and Technology, 2007, 18, 2245-2251.	1.4	217
2	High-resolution gasâ€“oil two-phase flow visualization with a capacitance wire-mesh sensor. Flow Measurement and Instrumentation, 2010, 21, 191-197.	1.0	112
3	Comparative study of gasâ€“oil and gasâ€“water two-phase flow in a vertical pipe. Chemical Engineering Science, 2010, 65, 3836-3848.	1.9	87
4	Image processing techniques for high-speed videometry in horizontal two-phase slug flows. Flow Measurement and Instrumentation, 2013, 33, 257-264.	1.0	68
5	Design of an optical tomograph for the investigation of single- and two-phase pipe flows. Measurement Science and Technology, 2008, 19, 094006.	1.4	54
6	Slip ratio in dispersed viscous oilâ€“water pipe flow. Experimental Thermal and Fluid Science, 2011, 35, 11-19.	1.5	51
7	Comparison between wire mesh sensor and gamma densitometry void measurements in two-phase flows. Measurement Science and Technology, 2011, 22, 104019.	1.4	47
8	Comparison between Electrical Capacitance Tomography and Wire Mesh Sensor Output for Air/Silicone Oil Flow in a Vertical Pipe. Industrial & Engineering Chemistry Research, 2010, 49, 8805-8811.	1.8	46
9	Conductance Sensors for Multiphase Flow Measurement: A Review. IEEE Sensors Journal, 2021, 21, 12913-12925.	2.4	43
10	Phase fraction distribution measurement of oilâ€“water flow using a capacitance wire-mesh sensor. Measurement Science and Technology, 2011, 22, 104020.	1.4	42
11	Measurement of Dynamic Liquid Distributions in a Fixed Bed Using Electrical Capacitance Tomography and Capacitance Wire-Mesh Sensor. Industrial & Engineering Chemistry Research, 2010, 49, 2070-2077.	1.8	41
12	Dual-modality wire-mesh sensor for the visualization of three-phase flows. Measurement Science and Technology, 2015, 26, 105302.	1.4	41
13	Capacitance wire-mesh sensor applied for the visualization of three-phase gasâ€“liquidâ€“liquid flows. Flow Measurement and Instrumentation, 2013, 34, 113-117.	1.0	39
14	Wisp-like structures in vertical gasâ€“liquid pipe flow revealed by wire mesh sensor studies. International Journal of Multiphase Flow, 2010, 36, 908-915.	1.6	35
15	Measurement of Liquid Distributions in Particle Packings Using Wire-Mesh Sensor versus Transmission Tomographic Imaging. Industrial & Engineering Chemistry Research, 2010, 49, 9445-9453.	1.8	32
16	Capacitive measuring system for two-phase flow monitoring. Part 1: Hardware design and evaluation. Flow Measurement and Instrumentation, 2016, 47, 90-99.	1.0	32
17	Spatially resolved inline measurement of liquid velocity in trickle bed reactors. Chemical Engineering Journal, 2010, 158, 623-632.	6.6	30
18	Capacitance Planar Array Sensor for Fast Multiphase Flow Imaging. IEEE Sensors Journal, 2009, 9, 533-540.	2.4	27

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19	Planar Array Sensor for High-speed Component Distribution Imaging in Fluid Flow Applications. Sensors, 2007, 7, 2430-2445.	2.1	26
20	Characterization of slug initiation for horizontal air-water two-phase flow. Experimental Thermal and Fluid Science, 2017, 87, 80-92.	1.5	25
21	A Novel Needle Probe Based on High-Speed Complex Permittivity Measurements for Investigation of Dynamic Fluid Flows. IEEE Transactions on Instrumentation and Measurement, 2007, 56, 1249-1256.	2.4	22
22	Two-Phase Slug Flow Characterization Using Artificial Neural Networks. IEEE Transactions on Instrumentation and Measurement, 2016, 65, 494-501.	2.4	22
23	Gasâ€“Liquid Flow Rate Measurement Using a Twin-Plane Capacitive Sensor and a Venturi Meter. IEEE Access, 2019, 7, 135933-135941.	2.6	22
24	Measurement of Fluid Distributions in a Rotating Fluid Coupling Using High Resolution Gamma Ray Tomography. Journal of Fluids Engineering, Transactions of the ASME, 2008, 130, .	0.8	21
25	A field-focusing imaging sensor for fast visualization of multiphase flows. Measurement Science and Technology, 2009, 20, 104009.	1.4	19
26	Single and Multiphase Flow Characterization by Means of an Optical Fiber Bragg Grating Grid. Journal of Lightwave Technology, 2015, 33, 1857-1862.	2.7	19
27	Single- and Two-Phase Flow Characterization Using Optical Fiber Bragg Gratings. Sensors, 2015, 15, 6549-6559.	2.1	19
28	Drag reduction phenomenon in viscous oilâ€water dispersed pipe flow: Experimental investigation and phenomenological modeling. AICHE Journal, 2012, 58, 2900-2910.	1.8	17
29	Statistical features of the flow evolution in horizontal liquid-gas slug flow. Experimental Thermal and Fluid Science, 2020, 119, 110203.	1.5	17
30	Image Reconstruction for Electrical Capacitance Tomography Through Redundant Sensitivity Matrix. IEEE Sensors Journal, 2017, 17, 8157-8165.	2.4	16
31	Capacitive Multielectrode Direct-Imaging Sensor for the Visualization of Two-Phase Flows. IEEE Sensors Journal, 2017, 17, 8047-8058.	2.4	16
32	Electric discharge detection and localization using a distributed optical fiber vibration sensor. Optical Fiber Technology, 2020, 58, 102266.	1.4	16
33	Sensing Platform for Two-Phase Flow Studies. IEEE Access, 2019, 7, 5374-5382.	2.6	14
34	Multiple Wire-Mesh Sensors Applied to the Characterization of Two-Phase Flow inside a Cyclonic Flow Distribution System. Sensors, 2019, 19, 193.	2.1	14
35	Experimental analysis of downward liquid-gas slug flow in slightly inclined pipes. Experimental Thermal and Fluid Science, 2019, 103, 222-233.	1.5	14
36	Capacitive measuring system for two-phase flow monitoring. Part 2: Simulation-based calibration. Flow Measurement and Instrumentation, 2016, 50, 102-111.	1.0	13

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37	Autonomous planar conductivity array sensor for fast liquid distribution imaging in a fluid coupling. Sensors and Actuators A: Physical, 2008, 147, 508-515.	2.0	12
38	Experimental studies and CFD calculations for buoyancy driven mixing phenomena. Nuclear Engineering and Design, 2010, 240, 2185-2193.	0.8	12
39	Autonomous sensor particle for parameter tracking in large vessels. Measurement Science and Technology, 2010, 21, 085201.	1.4	12
40	Typical bubble shape estimation in two-phase flow using inverse problem techniques. Flow Measurement and Instrumentation, 2014, 40, 64-73.	1.0	12
41	Quantitative cross-sectional measurement of solid concentration distribution in slurries using a wire-mesh sensor. Measurement Science and Technology, 2016, 27, 015301.	1.4	12
42	Air Flow Detection in Crude Oil by Infrared Light. Sensors, 2017, 17, 1278.	2.1	12
43	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
44	Enhanced Local Void and Temperature Measurements for Highly Transient Multiphase Flows. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 401-405.	2.4	9
45	Three-Dimensional Bubble Shape Estimation in Two-phase Gas-liquid Slug Flow. IEEE Sensors Journal, 2017, , 1-1.	2.4	8
46	Optical Fiber Transducer for Monitoring Single-Phase and Two-Phase Flows in Pipes. IEEE Sensors Journal, 2020, 20, 5943-5952.	2.4	8
47	Wire-Mesh Sensor Super-Resolution Based on Statistical Reconstruction. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-12.	2.4	8
48	High-speed multichannel impedance measuring system. Acta IMEKO (2012), 2012, 1, 36.	0.4	7
49	Development of NIR optical tomography system for the investigation of two-phase flows. , 2014, , .		6
50	Two-phase flow pattern classification based on void fraction time series and machine learning. Flow Measurement and Instrumentation, 2022, 83, 102084.	1.0	6
51	Advanced wire-mesh sensor technology for fast flow imaging. , 2009, , .		5
52	Dual-modality impedance wire-mesh sensor for investigation of multiphase flows. , 2014, , .		5
53	Broadband Ultrasound Attenuation Technique Applied to Two Phase Flow Pattern Recognition. Journal of Control, Automation and Electrical Systems, 2014, 25, 547-556.	1.2	5
54	Advanced image processing of wire-mesh sensor data for two-phase flow investigation. IEEE Latin America Transactions, 2015, 13, 2269-2277.	1.2	5

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55	Twin Direct-Imaging Sensor for Flow Velocity Profiling in Two-Phase Mixtures. , 2018, , .		5
56	Multichannel Capacitive Imaging of Gas Vortex in Swirling Two-Phase Flows Using Parametric Reconstruction. IEEE Access, 2020, 8, 69557-69565.	2.6	5
57	Dielectric Constant of Mixtures of Carbon Dioxide and n-Dodecane Between 283 K and 343 K. International Journal of Thermophysics, 2020, 41, 1.	1.0	5
58	Neuartige kapazitive Sensoren fÃ¼r die Visualisierung von MehrphasenstrÃ¶mungenNovel Capacitive Sensors for the Visualization of Multi-Phase Flows. TM Technisches Messen, 2009, 76, 189-197.	0.3	5
59	Bubble shape estimation in gas-liquid slug flow using wire-mesh sensor and advanced data processing. , 2014, , .		4
60	An Experimental Characterization of Horizontal Gas-Liquid Slug Flow. , 2015, , .		4
61	Characterization of the liquid film flow in a centrifugal separator. AICHE Journal, 2016, 62, 2213-2226.	1.8	4
62	Cable Fault Characterization by Time-Domain Analysis From S-Parameter Measurement and Sparse Inverse Chirp-Z Transform. IEEE Sensors Journal, 2021, 21, 1009-1016.	2.4	4
63	Numerical and experimental analysis of vertically ascending swirling liquid film flow. Journal of Petroleum Science and Engineering, 2021, 206, 109030.	2.1	4
64	Interrogation of Gas/Oil Flow in a Vertical Using Two Tomographic Techniques. , 2009, , .		3
65	KapazitÃts-Gittersensor: Prinzip und AnwendungCapacitance Wire-Mesh Sensor: Principle and Application. TM Technisches Messen, 2010, 77, 209-214.	0.3	3
66	Images Analysis of Horizontal Two-Phase Slug Flows. , 2011, , .		3
67	Wire-mesh sensor, ultrasound and high-speed videometry applied for the characterization of horizontal gas-liquid slug flow. , 2012, , .		3
68	Multiphase flow characterization using optical fiber Bragg gratings. , 2012, , .		3
69	Optical fiber Bragg grating mesh for multiphase flow sensing. , 2014, , .		3
70	Multiphase flow parameter estimation based on laser scattering. Measurement Science and Technology, 2015, 26, 075205.	1.4	3
71	Capacitive direct-imaging sensor for two-phase flow visualization. , 2016, , .		3
72	Optical-electrical probe for two-phase flow investigation. , 2017, , .		3

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73	Reply to Comments: A Novel Low-Cost Instrumentation System for Measuring the Water Content and Apparent Electrical Conductivity of Soils, Sensors, 15, 25546â€“25563. Sensors, 2018, 18, 1742.	2.1	3
74	Electrical and Optical Probe for Two-Phase Flow Monitoring. IEEE Sensors Journal, 2019, 19, 8706-8713.	2.4	3
75	Void Fraction Measurement in a Gas-Liquid Swirling Flow Using an Ultrasonic Sensor. IEEE Access, 2020, 8, 194477-194484.	2.6	3
76	Sensing Hydrates in Pipes by a Combined Electrical and Optical Fiber Sensor. IEEE Sensors Journal, 2020, 20, 5012-5018.	2.4	3
77	Model analysis for differential pressure two-phase flow rate meter in intermittent flow. Flow Measurement and Instrumentation, 2021, 81, 102017.	1.0	3
78	Enhanced Local Void and Temperature Measurements for Highly Transient Two-Phase Flows. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	2
79	High-speed Complex Admittance/permittivity Needle Probe for Investigation of Multiphase Flows. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	2
80	Design of a neutrally buoyant self-powered multi-parameter sensor for data logging in flow applications. , 2009, , .		2
81	Simple measuring system for impedance spectroscopy analysis of fluids. , 2016, , .		2
82	Multiphase flow instrumentation and measurement research in Brazil. IEEE Instrumentation and Measurement Magazine, 2017, 20, 57-62.	1.2	2
83	Photonic sensors: from horse racing to horse power. , 2017, , .		2
84	Two-phase flow rate measurement using a capacitive sensor and a Venturi meter. , 2017, , .		2
85	GPU-accelerated Simulator for Optical Tomography applied to Two-Phase Flows. , 2019, , .		2
86	Combined Finite Element and Electronic Circuit Model of a Wire-Mesh Sensor. IEEE Access, 2021, 9, 66309-66322.	2.6	2
87	Infrared optical tomography applied to two-phase flow monitoring. , 2014, , .		2
88	Improvement of wire-mesh sensor accuracy via adapted circuit design and integrated energy loss measurement. Measurement Science and Technology, 2022, 33, 084002.	1.4	2
89	Development of a high-speed capacitive surface sensor for fluid distribution imaging. , 2007, , .		1
90	Experiments on Air Entrainment due to Free Falling- and Wall-Jets. , 2010, , .		1

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91	Characterisation of Air-Water Two-Phase Flow Using a Wire-Mesh Sensor. , 2011, , .		1
92	Two-phase flow measurement based on oblique laser scattering. Proceedings of SPIE, 2015, , .	0.8	1
93	Optical imaging of air and water bubbles flowing through oil. Proceedings of SPIE, 2015, , .	0.8	1
94	Requirements for an integrated conditioning circuit for multiphase flow imaging using impedance wire-mesh sensors. , 2016, , .		1
95	ANN-based image reconstruction for optical tomography applied to gas-liquid flow monitoring. , 2017, , .		1
96	Addendum to â€œDielectric Constant of Mixtures of Carbon dioxide and n-Dodecane Between 283ÂK and 343ÂK, Int. J. Thermophysics 41, 26, 2020â€• Complementary Results for Mixtures of Carbon dioxide and Squalane Between 283ÂK and 343ÂK. International Journal of Thermophysics, 2020, 41, 1.	1.0	1
97	Horse Gait Identification Using Distributed Acoustic Sensing. IEEE Sensors Journal, 2021, 21, 3058-3065.	2.4	1
98	Tuning capacitance wire-mesh sensor gains for measurement of conductive fluids. TM Technisches Messen, 2021, 88, s107-s113.	0.3	1
99	Optical Imaging Through Crude Oil. , 2014, , .		1
100	Experimental investigation on air entrainment below impinging jets by means of video observations and image processing. , 2009, , .		1
101	DISTRIBUTED RESISTIVE SENSOR AND WEB DATA MANAGEMENT SYSTEM FOR SYSTEMATIC STUDIES OF TWO-PHASE GAS-LIQUID FLOWS. , 2016, , .		1
102	WIRED HORSES. , 2018, , .		1
103	High-speed Complex Admittance/permittivity Needle Probe for Investigation of Multiphase Flows. Conference Record - IEEE Instrumentation and Measurement Technology Conference, 2006, , .	0.0	0
104	Photonic crystal fibers as miniature monitoring platforms for petroleum characterization. , 2012, , .		0
105	Detailed Experimental Characterisation of Gas-Liquid Two-Phase Slug Flow in Horizontal Pipes. , 2012, , .		0
106	Discrete approach to electrical resistance tomography with applications to distributed network sensing. , 2014, , .		0
107	Single and two-phase flow measurements using optical fiber Bragg gratings. , 2014, , .		0
108	Photonic Sensors as Imaging Tools for Industrial Monitoring. , 2014, , .		0

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109	Photonic sensors: from crude oil to engine monitoring. , 2014, , .		0
110	Mid-infrared optical tomography for imaging through petroleum: A feasibility study. , 2015, , .		0
111	Guest Editorial Special Issue on Sensors for Process Imaging. IEEE Sensors Journal, 2017, 17, 8026-8026.	2.4	0
112	Dual sensor for simultaneous measurement of electrical impedance and temperature during ice formation process. , 2017, , .		0
113	Bubble Identification Based on High Speed Videometry Data: Algorithm and Validation. Lecture Notes in Computer Science, 2012, , 870-876.	1.0	0
114	Optical fiber sensors: the last step towards mainstream. , 2015, , .		0
115	3D Optical Tomography Image Reconstruction in Opaque Media. , 2018, , .		0
116	Two-phase flow monitoring with an electrical-optical probe. , 2019, , .		0
117	Simulation Software for an Optical FBG Sensor Applied in Flow Measurements. , 2021, , .		0