

Alejandro Clausse

List of Publications by Year in descending order

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137
papers

2,077
citations

279798

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276875

41
g-index

139
all docs

139
docs citations

139
times ranked

1093
citing authors

#	ARTICLE	IF	CITATIONS
1	Two-phase flow instabilities: A review. International Journal of Heat and Mass Transfer, 2014, 71, 521-548.	4.8	309
2	The use of fractal techniques for flow regime identification. International Journal of Multiphase Flow, 1991, 17, 545-552.	3.4	104
3	A Lattice-Boltzmann solver for 3D fluid simulation on GPU. Simulation Modelling Practice and Theory, 2012, 25, 163-171.	3.8	91
4	Demonstration of neutron production in a table-top pinch plasma focus device operating at only tens of joules. Journal Physics D: Applied Physics, 2008, 41, 205215.	2.8	81
5	Conceptual engineering of plasma-focus thermonuclear pulsors. IEEE Transactions on Plasma Science, 2000, 28, 1735-1741.	1.3	65
6	A plasma focus driven by a capacitor bank of tens of joules. Review of Scientific Instruments, 2002, 73, 2583-2587.	1.3	55
7	Nanofocus: an ultra-miniature dense pinch plasma focus device with submillimetric anode operating at 0.1â€‰%. Plasma Sources Science and Technology, 2009, 18, 015007.	3.1	53
8	Density-wave oscillations in parallel channels - an analytical approach. Nuclear Engineering and Design, 1991, 125, 121-136.	1.7	52
9	Characterization of the axial plasma shock in a table top plasma focus after the pinch and its possible application to testing materials for fusion reactors. Physics of Plasmas, 2014, 21, .	1.9	51
10	A combined region growing and deformable model method for extraction of closed surfaces in 3D CT and MRI scans. Computerized Medical Imaging and Graphics, 2009, 33, 369-376.	5.8	47
11	The analysis of periodic and strange attractors during density-wave oscillations in boiling flows. Chaos, Solitons and Fractals, 1991, 1, 167-178.	5.1	45
12	Experimental study of the hard x-ray emissions in a plasma focus of hundreds of Joules. Plasma Physics and Controlled Fusion, 2009, 51, 045001.	2.1	43
13	Industrial applications of plasma focus radiation. Brazilian Journal of Physics, 2002, 32, 20.	1.4	42
14	A Lumped Parameter Model of Plasma Focus. IEEE Transactions on Plasma Science, 2004, 32, 1383-1391.	1.3	42
15	Plasma focus as a powerful hard X-ray source for ultrafast imaging of moving metallic objects. Brazilian Journal of Physics, 2004, 34, 1696-1699.	1.4	37
16	Plasma-focus-based tabletop hard x-ray source for 50ns resolution introspective imaging of metallic objects through metallic walls. Applied Physics Letters, 2006, 89, 091502.	3.3	36
17	A bubble number density constitutive equation. Nuclear Engineering and Design, 1994, 152, 213-224.	1.7	34
18	Cellular automata algorithm for simulation of surface flows in large plains. Simulation Modelling Practice and Theory, 2007, 15, 315-327.	3.8	33

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19	The influence of gravity on the stability of boiling flows. Nuclear Engineering and Design, 1991, 127, 129-139.	1.7	32
20	A simple plasma diagnostic based on processing the electrical signals from coaxial discharges. Plasma Physics and Controlled Fusion, 2006, 48, 609-620.	2.1	30
21	Transient electrical discharges in small devices. Physics of Plasmas, 2001, 8, 2572-2578.	1.9	27
22	Modeling of the Dynamic Plasma Pinch in Plasma Focus Discharges Based in Von Karman Approximations. IEEE Transactions on Plasma Science, 2009, 37, 2178-2185.	1.3	25
23	An analysis of stability and oscillation modes in boiling multichannel loops using parameter perturbation methods. International Journal of Heat and Mass Transfer, 1989, 32, 2055-2064.	4.8	23
24	Void fraction along a vertical heated rod bundle under flow stagnation conditions. Nuclear Engineering and Design, 1994, 152, 225-230.	1.7	23
25	Experimental study and two-dimensional modelling of the plasma dynamics of magnetically driven shock waves in a coaxial tube. Plasma Physics and Controlled Fusion, 2003, 45, 1989-1999.	2.1	23
26	Proliferative diabetic retinopathy characterization based on fractal features: Evaluation on a publicly available dataset. Medical Physics, 2017, 44, 6425-6434.	3.0	22
27	Two-Fluid Model Stability, Simulation and Chaos. , 2017, , .		22
28	Finite-elements numerical model of the current-sheet movement and shaping in coaxial discharges. Plasma Physics and Controlled Fusion, 2005, 47, 1239-1250.	2.1	20
29	Evidence of nuclear fusion neutrons in an extremely small plasma focus device operating at 0.1 Joules. Physics of Plasmas, 2017, 24, 082703.	1.9	20
30	Natural modes of the two-fluid model of two-phase flow. Physics of Fluids, 2021, 33, .	4.0	20
31	A CONTRIBUTION TO THE MATHEMATICAL MODELING OF BUBBLY/SLUG FLOW REGIME TRANSITION. Chemical Engineering Communications, 1991, 102, 69-85.	2.6	19
32	Hard x-ray source for flash radiography based on a 2.5kJ plasma focus. Journal of Applied Physics, 2007, 102, 033304.	2.5	19
33	Numerical investigation into the effect of surface wettability in pool boiling heat transfer with a stochastic-automata model. International Journal of Heat and Mass Transfer, 2017, 111, 657-665.	4.8	18
34	Homogenization of the Navier-Stokes equations by means of the Multi-scale Virtual Power Principle. Computer Methods in Applied Mechanics and Engineering, 2017, 315, 760-779.	6.6	18
35	Neutron correlations with electrical measurements in a Plasma Focus device. Brazilian Journal of Physics, 2008, 38, 117-122.	1.4	17
36	A genetic algorithm for adaptive tomography of elliptical objects. IEEE Signal Processing Letters, 2000, 7, 176-178.	3.6	16

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37	Effective hard x-ray spectrum of a tabletop Mather-type plasma focus optimized for flash radiography of metallic objects. <i>Journal of Applied Physics</i> , 2007, 102, 123303.	2.5	16
38	The lift-off stage of plasma focus discharges. <i>Plasma Physics and Controlled Fusion</i> , 2007, 49, 105-112.	2.1	16
39	Flow instabilities between two parallel planes semi-obstructed by an easily penetrable porous medium. <i>Journal of Fluid Mechanics</i> , 2011, 689, 417-433.	3.4	15
40	Using a 4.7 kJ Plasma Focus for introspective imaging of metallic objects and for neutronic detection of water. , 2001, , .		14
41	MODELING AND ANALYSIS OF CHANNEL-TO-CHANNEL INSTABILITIES IN BOILING SYSTEMS. <i>Chemical Engineering Communications</i> , 1990, 93, 75-92.	2.6	13
42	Detection of water by neutron scattering using a small Plasma Focus. <i>Brazilian Journal of Physics</i> , 2004, 34, 1756-1758.	1.4	13
43	A delay theory for boiling flow stability analysis. <i>International Journal of Multiphase Flow</i> , 2001, 27, 657-671.	3.4	12
44	Toroidal High-Density Singularity in a Small Plasma Focus. <i>Journal of Fusion Energy</i> , 2012, 31, 279-283.	1.2	12
45	Dependence of Hard X-ray Emissions with the Charging Pressure in a Small Plasma Focus. <i>Journal of Fusion Energy</i> , 2012, 31, 105-108.	1.2	12
46	Axial development of void fraction profiles in vertical two-phase flow. <i>International Journal of Multiphase Flow</i> , 1993, 19, 385-389.	3.4	11
47	Correlation of methane emissions with cattle population in Argentine Pampas. <i>Atmospheric Environment</i> , 2010, 44, 2780-2786.	4.1	11
48	Analysis of stability, verification and chaos with the Kreissâ€™YstrÃ¶m equations. <i>Applied Mathematics and Computation</i> , 2014, 248, 28-46.	2.2	11
49	Experimental phase trajectories in boiling flow oscillations. <i>Experimental Thermal and Fluid Science</i> , 1994, 9, 47-52.	2.7	10
50	Plasma focus based repetitive source of fusion neutrons and hard x-rays. <i>PMC Physics A</i> , 2008, 2, .	9.1	10
51	Feasibility study of a hybrid subcritical fission system driven by Plasma-Focus fusion neutrons. <i>Annals of Nuclear Energy</i> , 2015, 78, 10-14.	1.8	10
52	Hard X-ray dosimetry of a plasma focus suitable for industrial radiography. <i>Radiation Physics and Chemistry</i> , 2018, 145, 39-42.	2.8	10
53	Modelling of the internal dynamics and density in a tens of joules plasma focus device. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	9
54	Effect of the external outer electrode in plasma-focus discharges. <i>Plasma Physics and Controlled Fusion</i> , 2012, 54, 012001.	2.1	9

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55	Chaos in wavy-stratified fluid-fluid flow. <i>Chaos</i> , 2019, 29, 033121.	2.5	9
56	Void wave dispersion in bubbly flows. <i>Nuclear Engineering and Design</i> , 1990, 121, 1-10.	1.7	8
57	A Computational Environment for Water Flow along Floodplains. <i>International Journal of Computational Fluid Dynamics</i> , 2002, 16, 327-330.	1.2	8
58	Application of color image segmentation to estrusc detection. <i>Journal of Visualization</i> , 2006, 9, 171-178.	1.8	8
59	Tuning a lattice-Boltzmann model for applications in computational hemodynamics. <i>Medical Engineering and Physics</i> , 2012, 34, 339-349.	1.7	8
60	Time-Varying Inductance of the Plasma Sheet in the PF1000 Plasma-Focus Device. <i>IEEE Transactions on Plasma Science</i> , 2016, 44, 968-972.	1.3	8
61	Two-phase flow in the localized boiling field adjacent to a heated wall. <i>International Journal of Heat and Mass Transfer</i> , 1993, 36, 1367-1372.	4.8	7
62	On the search of more stable second-order lattice-Boltzmann schemes in confined flows. <i>Journal of Computational Physics</i> , 2015, 294, 605-618.	3.8	7
63	Experimental study of the two-phase flow dynamics in nucleate and film pool boiling. <i>International Journal of Multiphase Flow</i> , 1995, 21, 405-418.	3.4	6
64	Multiple pinch formations in small plasma-focus devices. <i>Plasma Physics and Controlled Fusion</i> , 2010, 52, 032001.	2.1	6
65	Simulation of boiling heat transfer in small heaters by a coupled cellular and geometrical automata. <i>Heat and Mass Transfer</i> , 2011, 47, 13-25.	2.1	6
66	Influence of the Anode Length on the Neutron Emission of a 50 J Plasma Focus: Modeling and Experiment. <i>IEEE Transactions on Plasma Science</i> , 2015, 43, 629-636.	1.3	6
67	Association between three-dimensional vessel geometry and the presence of atherosclerotic plaques in the left anterior descending coronary artery of high-risk patients. <i>Biomedical Signal Processing and Control</i> , 2017, 31, 569-575.	5.7	6
68	A Python implementation in graphic processing unit of a lattice Boltzmann model for unstable three-dimensional flows in immersed permeable media. <i>Physics of Fluids</i> , 2020, 32, 127107.	4.0	6
69	A study of the effects of the cathode configuration on the plasma kinetics and neutron emission of plasma-focus discharges in deuterium. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 055002.	2.1	6
70	Assessment of a double-MRT pseudopotential lattice Boltzmann model for multiphase flow and heat transfer simulations. <i>International Journal of Thermal Sciences</i> , 2021, 159, 106536.	4.9	6
71	Design and construction of a very small plasma focus in the limit of low energy. , 2001, , .		5
72	Evolution of a Gas Embedded Z-pinch: A Quasi Static Zero Dimensional Approach. <i>Physica Scripta</i> , 2003, 67, 77-83.	2.5	5

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73	A validated fast algorithm for simulation of flooding events in plains. Hydrological Processes, 2007, 21, 1115-1124.	2.6	5
74	Lattice-Boltzmann modeling of unstable flows amid arrays of wires. Computers and Fluids, 2015, 120, 37-45.	2.5	5
75	One-dimensional two-fluid model for wavy flow beyond the Kelvin-Helmholtz instability: Limit cycles and chaos. Nuclear Engineering and Design, 2016, 310, 656-663.	1.7	5
76	The influence of flow development on subcooled boiling. International Communications in Heat and Mass Transfer, 1990, 17, 545-554.	5.6	4
77	An analysis of onlinear instabilities in boiling systems. Dynamical Systems, 1991, 6, 191-216.	0.7	4
78	Analysis of the spatial distribution of aerosol dispersions. Annals of Nuclear Energy, 1995, 22, 17-28.	1.8	4
79	Geometrical automata for two phase flow simulation. Nuclear Engineering and Design, 1996, 163, 117-124.	1.7	4
80	Thermal insulation in houses and sheds. IEEE Latin America Transactions, 2012, 10, 2324-2330.	1.6	4
81	Stray Capacitance in a Plasma Focus Device: Implications on the Current Derivative Calibration and the Effective Discharge Current. Journal of Fusion Energy, 2017, 36, 87-91.	1.2	4
82	A multiscale method for producing homogenized drag laws of a permeable medium by conflating experimental data with Lattice-Boltzmann simulations. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 29, 4394-4407.	2.8	4
83	GAS FLOW IN A CHANNEL SEMIOBSTRICTED BY A POROUS MEDIUM. Journal of Porous Media, 2012, 15, 927-936.	1.9	4
84	Development of a double-MRT pseudopotential model for tridimensional boiling simulation. International Journal of Thermal Sciences, 2022, 179, 107637.	4.9	4
85	A CONTRIBUTION TO A KINETIC FORMULATION OF GAS-LIQUID FLOWS. Chemical Engineering Communications, 1993, 120, 99-109.	2.6	3
86	Non-equilibrium effects in void fraction distribution. Nuclear Engineering and Design, 1995, 154, 183-192.	1.7	3
87	Economics of combined nuclear-gas power generation. Nuclear Engineering and Design, 2000, 195, 109-115.	1.7	3
88	Design, hard x-ray source characterization and applications of a plasma focus tailored for flash hard x-ray imaging. Physica Scripta, 2008, T131, 014033.	2.5	3
89	Metropolis Monte Carlo for tomographic reconstruction with prior smoothness information. IET Image Processing, 2011, 5, 198.	2.5	3
90	Electrical Behavior of an Ultralow-Energy Plasma-Focus Device. IEEE Transactions on Plasma Science, 2014, 42, 138-142.	1.3	3

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91	Temporal Variation of the Current Sheet Inductance from PACO Plasma Focus Device. Journal of Fusion Energy, 2016, 35, 561-566.	1.2	3
92	Numerical study of gas mixture separation in curved nozzles. International Journal of Heat and Mass Transfer, 2016, 98, 176-182.	4.8	3
93	Physical Reasoning to Synchronize Electrical Signals and Related Diagnostics in Plasma Focus Devices. Journal of Fusion Energy, 2018, 37, 45-50.	1.2	3
94	Thermodynamic analogies for the characterization of 3D human coronary arteries. Biomedical Signal Processing and Control, 2018, 40, 163-170.	5.7	3
95	Simulation of phase separation in a Van der Waals fluid under gravitational force with Lattice Boltzmann method. International Journal of Numerical Methods for Heat and Fluid Flow, 2019, 29, 3095-3109.	2.8	3
96	A Mathematical Description of the Critical Heat Flux as a Non-Linear Dynamic Instability. , 1993, , 101-111.		3
97	Kinematic stability and simulations of the variational two-fluid model for slug flow. Physics of Fluids, 2022, 34, .	4.0	3
98	Measurements of void fraction spatial distribution in pool boiling. International Communications in Heat and Mass Transfer, 1992, 19, 499-505.	5.6	2
99	Hydrodynamic Characteristics of Daphnia middendorffiana. International Review of Hydrobiology, 1998, 83, 267-277.	0.9	2
100	Compact Repetitive Plasma Focus as a Powerful Source for Hard-X-Ray and Neutron Scanning. , 2005, , .		2
101	0.2 Hz Plasma-Focus-based source of fast neutrons and hard x rays for applications. AIP Conference Proceedings, 2006, , .	0.4	2
102	Determination Of The Effective Energy Of Pulsed Powerful Hard X-Ray Sources Based On Pinch Plasma Focus Discharges. AIP Conference Proceedings, 2006, , .	0.4	2
103	Hard x-ray spectrum emitted by a plasma focus optimized for flash radiography. Physica Scripta, 2008, T131, 014034.	2.5	2
104	Tomography reconstruction by entropy maximization with smoothing filtering. Inverse Problems in Science and Engineering, 2010, 18, 711-722.	1.2	2
105	Correcting magnetic probe perturbations on current density measurements of current carrying plasmas. Review of Scientific Instruments, 2010, 81, 093504.	1.3	2
106	Numerical Simulation of the Inductance Variation of a Plasma Focus Based in a Two-Dimensional Model. IEEE Transactions on Plasma Science, 2012, 40, 2312-2315.	1.3	2
107	Numerical Solution of Wavy-Stratified Fluid-Fluid Flow With the One-Dimensional Two-Fluid Model: Stability, Boundedness, Convergence and Chaos. , 2014, , .		2
108	Experimental assessment on the performance of hot wire anemometry in and around a permeable medium by comparison with Particle Image Velocimetry. Flow Measurement and Instrumentation, 2021, 78, 101827.	2.0	2

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109	Object-oriented Programming Strategies for Numerical Solvers Applied to Continuous Simulation. Journal of Applied Sciences, 2011, 11, 2723-2733.	0.3	2
110	Morphometry and Cyclomorphosis in <i>Daphnia middendorffiana</i> from a Fishless Pond of the Southern Andes. Journal of Freshwater Ecology, 2000, 15, 329-338.	1.2	1
111	A Very Small Plasma Focus Operating at Tens of Joules. AIP Conference Proceedings, 2002, , .	0.4	1
112	An application of the method of moments to the modeling of bubbly flow. Annals of Nuclear Energy, 2005, 32, 1705-1718.	1.8	1
113	Spectral Characteristics of the Hard X Ray Emission from a Plasma Focus Device. AIP Conference Proceedings, 2006, , .	0.4	1
114	Tomographic reconstruction using heuristic Monte Carlo methods. Journal of Heuristics, 2007, 13, 227-242.	1.4	1
115	Wall Pressure Profile Around Cylindrical Rods in Yawed Gas Flow. Journal of Fluids Engineering, Transactions of the ASME, 2011, 133, .	1.5	1
116	Multiple pinching in the miniature plasma focus nanoPLADEMA. Journal of Physics: Conference Series, 2012, 370, 012058.	0.4	1
117	A model of hard X-rays emission from free expanding Plasma-Focus discharges. Journal of Physics: Conference Series, 2014, 511, 012036.	0.4	1
118	Flow diverter stents simulation with CFD: porous media modelling. , 2017, , .		1
119	RELAP5 Two-Fluid Model. , 2017, , 225-245.		1
120	Lattice-boltzmann Navier-stokes Simulation on Graphic Processing Units. Asian Journal of Applied Sciences, 2011, 4, 762-770.	0.4	1
121	Nanofocus: An Ultra Miniature Pinch Focus Discharge Operating at 0.1 Joule. , 2005, , .		0
122	Energy Diagnostics of Pulsed Powerful Hard X-Ray Sources Based on Plasma Focus Discharges. , 2005, , .		0
123	Speed2 Driven A Gas Embedded Z-Pinch: A Preliminary Approach. , 2005, , .		0
124	A Gas Embedded Z-pinch Driven by SPEED2 Generator. AIP Conference Proceedings, 2006, , .	0.4	0
125	Improved multistep method with non-linear corrections. International Journal for Numerical Methods in Biomedical Engineering, 2010, 26, n/a-n/a.	2.1	0
126	Gas flow in a channel semi-obstructed by an array of wires. Journal of Physics: Conference Series, 2011, 296, 012009.	0.4	0

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127	Ludwig: A Training Simulator of the Safety Operation of a CANDU Reactor. Science and Technology of Nuclear Installations, 2011, 2011, 1-8.	0.8	0
128	Nuclear Activities in Argentina, 2010. Science and Technology of Nuclear Installations, 2011, 2011, 1-2.	0.8	0
129	Numerical simulation of current sheet instabilities in a small plasma focus. Journal of Physics: Conference Series, 2014, 511, 012031.	0.4	0
130	Modeling of the pinch electron-density distribution in a small Plasma Focus. Journal of Physics: Conference Series, 2014, 511, 012030.	0.4	0
131	Downstream-Conditioned Maximum Entropy Method for Exit Boundary Conditions in the Lattice Boltzmann Method. Mathematical Problems in Engineering, 2015, 2015, 1-12.	1.1	0
132	Mechanical Properties in Nuclear Installation and the Relevant Measurement Methods. Science and Technology of Nuclear Installations, 2016, 2016, 1-2.	0.8	0
133	Interactive Simulator of Complex Supply-chain Dynamics with Customer Preference Feedback. Asian Journal of Applied Sciences, 2012, 5, 473-484.	0.4	0
134	Drift-Flux Model Nonlinear Dynamics and Chaos. , 2017, , 195-223.		0
135	Drift-Flux Model. , 2017, , 163-193.		0
136	Fixed-Flux Model Chaos. , 2017, , 107-137.		0
137	Flow invariants in a channel obstructed by a line of inclined rods. Scientific Reports, 2022, 12, 6170.	3.3	0