Luis Garcia

List of Publications by Year
in descending order

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119	2,565	257450	223800
papers	citations	24 h-index	46 g-index

122	122	122	1154
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Wavelet bicoherence: A new turbulence analysis tool. Physics of Plasmas, 1995, 2, 3017-3032.	1.9	308
2	TJ-II Project: A Flexible Heliac Stellarator. Fusion Science and Technology, 1990, 17, 131-139.	0.6	174
3	Theory of resistive pressure-gradient-driven turbulence. Physics of Fluids, 1987, 30, 1388.	1.4	134
4	Electron diamagnetic effects on the resistive pressureâ€gradientâ€driven turbulence and poloidal flow generation. Physics of Fluids B, 1991, 3, 1438-1444.	1.7	91
5	Theory of shear flow effects on longâ€wavelength drift wave turbulence. Physics of Fluids B, 1992, 4, 3115-3131.	1.7	82
6	Theory of resistivity-gradient-driven turbulence. Physics of Fluids, 1985, 28, 2147.	1.4	79
7	Confinement transitions in TJ-II under Li-coated wall conditions. Nuclear Fusion, 2009, 49, 104018.	3.5	75
8	MHD study of the reactor-relevant high-beta regime in the Large Helical Device. Plasma Physics and Controlled Fusion, 2008, 50, 124014.	2.1	72
9	Generation of sheared poloidal flows via Reynolds stress and transport barrier physics. Plasma Physics and Controlled Fusion, 2000, 42, A153-A160.	2.1	71
10	Resistive pressureâ€gradientâ€driven turbulence with selfâ€consistent flow profile evolution. Physics of Fluids B, 1993, 5, 1491-1505.	1.7	69
11	Equilibrium and stability properties of high-beta torsatrons. Physics of Fluids, 1983, 26, 3569.	1.4	61
12	Development of net-current free heliotron plasmas in the Large Helical Device. Nuclear Fusion, 2009, 49, 104015.	3.5	54
13	Sheared flow amplification by vacuum magnetic islands in stellarator plasmas. Physics of Plasmas, 2001, 8, 4111-4119.	1.9	50
14	Ballistic transport phenomena in TJ-II. Nuclear Fusion, 2002, 42, 787-795.	3.5	49
15	Experimental evidence of coupling between sheared-flow development and an increase in the level of turbulence in theTJâ"IIstellarator. Physical Review E, 2004, 70, 067402.	2.1	47
16	Dynamics of secondâ€order phase transitions in resistive pressureâ€gradientâ€driven turbulence. Physics of Plasmas, 1995, 2, 2744-2752.	1.9	43
17	Low-aspect-ratio torsatron configurations. Nuclear Fusion, 1988, 28, 1195-1207.	3.5	38
18	3D nonlinear MHD calculations using implicit and explicit time integration schemes. Journal of Computational Physics, 1986, 65, 253-272.	3.8	35

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19	Theory of electricâ€field curvature effects on longâ€wavelength drift wave turbulence. Physics of Plasmas, 1994, 1, 1142-1153.	1.9	33
20	Role of impurity dynamics in resistivity-gradient-driven turbulence and tokamak edge plasma phenomena. Physics of Fluids, 1987, 30, 1452.	1.4	32
21	Resistive MHD studies of high Î² tokamak plasmas. Computer Physics Communications, 1981, 24, 465-476.	7.5	31
22	The calculation of stellarator equilibria in vacuum flux surface coordinates. Journal of Computational Physics, 1985, 60, 76-96.	3.8	28
23	Sheared flows and turbulence in fusion plasmas. Plasma Physics and Controlled Fusion, 2007, 49, B303-B311.	2.1	27
24	Lowâ€nstability calculations for threeâ€dimensional stellarator configurations. Physics of Fluids B, 1990, 2, 2162-2167.	1.7	25
25	Characterization of Nondiffusive Transport in Plasma Turbulence via a Novel Lagrangian Method. Physical Review Letters, 2008, 101, 165001.	7.8	24
26	Overview of TJ-II experiments. Nuclear Fusion, 2011, 51, 094022.	3.5	24
27	Comparison of the Calculations of the Stability Properties of a Specific Stellarator Equilibrium with Different MHD Stability Codes. Journal of Computational Physics, 1996, 128, 43-57.	3.8	19
28	Topological instability along filamented invariant surfaces. Chaos, 2003, 13, 1175-1187.	2.5	19
29	Analysis of Alfven eigenmode destabilization in DIII-D high poloidal Î² discharges using a Landau closure model. Nuclear Fusion, 2018, 58, 076017.	3.5	19
30	A self-organized critical transport model based on critical-gradient fluctuation dynamics. Physics of Plasmas, 2002, 9, 841-848.	1.9	18
31	Analysis of AlfvÃ©n eigenmode destabilization by energetic particles in Large Helical Device using a Landau-closure model. Nuclear Fusion, 2017, 57, 046018.	3.5	18
32	The impact of rational surfaces on radial heat transport in TJ-II. Nuclear Fusion, 2017, 57, 056028.	3.5	18
33	Spectrum of resistivity-gradient-driven turbulence. Physics of Fluids, 1986, 29, 2501.	1.4	17
34	Ideal Mercier stability for the TJ-II flexible Heliac. Nuclear Fusion, 1990, 30, 2597-2609.	3.5	17
35	Mesoscale transport properties induced by near critical resistive pressure-gradient-driven turbulence in toroidal geometry. Physics of Plasmas, 2006, 13, 022310.	1.9	17
36	Critical transition for the edge shear layer formation: Comparison of model and experiment. Physics of Plasmas, 2006, 13, 122509.	1.9	17

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37	On the nature of transport in near-critical dissipative-trapped-electron-mode turbulence: Effect of a subdominant diffusive channel. Physics of Plasmas, 2008, 15, 112301.	1.9	16
38	3D effects on transport and plasma control in the TJ-II stellarator. Nuclear Fusion, 2017, 57, 102022.	3.5	16
39	Equilibrium studies for low-aspect-ratio torsatrons. Nuclear Fusion, 1984, 24, 115-129.	3.5	15
40	Effect of a poloidal shear flow on the probability of accessing the multiple saturated states in the resistive interchange instability. Physics of Fluids B, 1993, 5, 1795-1803.	1.7	15
41	Full torus Landau fluid calculations of ion temperature gradient-driven turbulence in cylindrical geometry. Physics of Plasmas, 2000, 7, 5013-5022.	1.9	15
42	Analysis of Alfven eigenmodes destabilization by energetic particles in TJ-II using a Landau-closure model. Nuclear Fusion, 2017, 57, 126019.	3.5	15
43	Equilibrium, Stability, and Deeply Trapped Energetic Particle Confinement Calculations for l = 2 Torsatron/Heliotron Configurations. Fusion Science and Technology, 1991, 19, 217-233.	0.6	14
44	Compressibility effects on ideal and resistive ballooning stability in the TJ-II heliac device. Nuclear Fusion, 1997, 37, 1363-1373.	3.5	14
45	Spatiotemporal structure of resistive pressure-gradient-driven turbulence. Physics of Plasmas, 1999, 6, 107-115.	1.9	14
46	Study of radial heat transport in W7-X using the transfer entropy. Nuclear Fusion, 2018, 58, 076002.	3.5	14
47	MHD mode activity and the velocity shear layer at TJ-II. Nuclear Fusion, 2012, 52, 013006.	3.5	13
48	Torsatron equilibrium and stability studies. Nuclear Fusion, 1985, 25, 1463-1473.	3.5	12
49	Study of the interaction between diffusive and avalanche-like transport in near-critical dissipative-trapped-electron-mode turbulence. Physics of Plasmas, 2006, 13, 102308.	1.9	12
50	Overview of recent TJ-II stellarator results. Nuclear Fusion, 2019, 59, 112019.	3.5	12
51	A Classical Model of the Nucleon. Progress of Theoretical Physics, 1980, 64, 671-693.	2.0	11
52	Stellarator expansion methods for MHD equilibrium and stability Calculations. Journal of Computational Physics, 1986, 66, 411-444.	3.8	11
53	Fluctuation spectrum of resistive pressureâ€gradientâ€driven turbulence. Physics of Fluids B, 1989, 1, 119-133.	1.7	11
54	Reynolds stress and shear flow generation. Plasma Physics and Controlled Fusion, 2001, 43, 1377-1395.	2.1	11

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55	Dynamical Coupling between Gradients and Transport in Fusion Plasmas. Physical Review Letters, 2012, 108, 065001.	7.8	11
56	Design studies of low aspect ratio quasi-omnigenous stellarators. Nuclear Fusion, 2000, 40, 563-567.	3.5	10
57	Zonal flows and long-distance correlations during the formation of the edge shear layer in the TJ-II stellarator. Plasma Physics and Controlled Fusion, 2009, 51, 065007.	2.1	10
58	Internal disruptions and sawtooth like activity in Large Helical Device. Physics of Plasmas, 2012, 19, 082501.	1.9	10
59	Study of Alfven eigenmodes stability in plasma with multiple NBI driven energetic particle species. Physics of Plasmas, 2019, 26, 062502.	1.9	10
60	Subdominant modes and optimization trends of DIII-D reverse magnetic shear configurations. Nuclear Fusion, 2019, 59, 046017.	3.5	10
61	Analysis of the MHD stability and energetic particles effects on EIC events in LHD plasma using a Landau-closure model. Nuclear Fusion, 2019, 59, 046008.	3.5	10
62	Effect of the tangential NBI current drive on the stability of pressure and energetic particle driven MHD modes in LHD plasma. Nuclear Fusion, 2020, 60, 026016.	3.5	10
63	Study of the Alfven eigenmodes stability in CFQS plasma using a Landau closure model. Nuclear Fusion, 2021, 61, 026023.	3.5	10
64	Modeling of the ECCD injection effect on the Heliotron J and LHD plasma stability. Nuclear Fusion, 2020, 60, 112015.	3.5	10
65	Toroidal field effects on the stability of a Heliotron configuration. Physics of Fluids, 1986, 29, 3356.	1.4	9
66	Effect of Â and collisionality on the vacuum magnetic field islands in stellarators. Nuclear Fusion, 2003, 43, 553-557.	3.5	9
67	Avalanche properties in a transport model based on critical-gradient fluctuation dynamics. Physics of Plasmas, 2005, 12, 092305.	1.9	9
68	Topological instability along invariant surfaces and pseudochaotic transport. Physical Review E, 2005, 72, 026227.	2.1	9
69	Overview of TJ-II experiments. Nuclear Fusion, 2007, 47, S677-S685.	3.5	9
70	Transport, stability and plasma control studies in the TJ-II stellarator. Nuclear Fusion, 2015, 55, 104014.	3.5	9
71	The causal relation between turbulent particle flux and density gradient. Physics of Plasmas, 2016, 23, 072307.	1.9	9
72	The Radial Propagation of Heat in Strongly Driven Non-Equilibrium Fusion Plasmas. Entropy, 2019, 21, 148.	2.2	9

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73	Overview of the TJ-II stellarator research programme towards model validation in fusion plasmas. Nuclear Fusion, 2022, 62, 042025.	3.5	9
74	Role of rational surfaces on fluctuations and transport in the plasma edge of the TJ-II stellarator. European Physical Journal D, 2000, 50, 1463-1470.	0.4	8
75	A dynamical model for plasma confinement transitions. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 125502.	2.1	8
76	Topological structures of the resistive pressure gradient turbulence with averaged poloidal flow. Nuclear Fusion, 2014, 54, 103005.	3.5	8
77	Effect of fast electrons on the stability of resistive interchange modes in the TJ-II stellarator. Physics of Plasmas, 2016, 23, 062319.	1.9	8
78	Analysis of Alfven eigenmode destabilization in ITER using a Landau closure model. Nuclear Fusion, 2019, 59, 076036.	3.5	8
79	Intermittence and turbulence in fusion devices. Plasma Physics and Controlled Fusion, 2020, 62, 025011.	2.1	8
80	Theoretical analysis of energetic-ion-driven resistive interchange mode stabilization strategies using a Landau closure model. Nuclear Fusion, 2020, 60, 046013.	3.5	8
81	Resistive pressure gradient-driven turbulence at stellarator plasma edge. Physics of Plasmas, 1997, 4, 3282-3292.	1.9	7
82	Resistive pressure-gradient-driven instabilities in the transition regime to fully developed turbulence. Physics of Plasmas, 2002, 9, 47-54.	1.9	7
83	The role of magnetic islands in modifying long range temporal correlations of density fluctuations and local heat transport. Nuclear Fusion, 2016, 56, 016013.	3.5	7
84	MHD stability of JT-60SA operation scenarios driven by passing energetic particles for a hot Maxwellian model. Nuclear Fusion, 2020, 60, 096009.	3.5	7
85	Nonlinear dynamics and transport driven by energetic particle instabilities using a gyro-Landau closure model. Nuclear Fusion, 0, , .	3.5	7
86	Effect of poloidally asymmetric sheared flow on resistive ballooning turbulence. Physics of Plasmas, 1999, 6, 3910-3917.	1.9	6
87	Pseudochaotic poloidal transport in the laminar regime of the resistive ballooning instabilities. Physics of Plasmas, 2008, 15, 042302.	1.9	6
88	PB3D: A new code for edge 3-D ideal linear peeling-ballooning stability. Journal of Computational Physics, 2017, 330, 997-1009.	3.8	6
89	Effects of negative triangularity shaping on energetic particle driven AlfvÃ©n eigenmodes in DIII-D [*]. Nuclear Fusion, 2021, 61, 126020.	3.5	6
90	A simple model for Poincarï¿½ self-stresses. Foundations of Physics, 1980, 10, 137-149.	1.3	5

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91	Recurrence quantification analysis of simulations of near-marginal dissipative-trapped-electron-mode turbulence. Physics of Plasmas, 2011, 18, 062306.	1.9	5
92	Dynamics of flows and confinement in the TJ-II stellarator. Nuclear Fusion, 2013, 53, 104016.	3.5	5
93	Applicability of transfer entropy for the calculation of effective diffusivity in heat transport. Physics of Plasmas, 2018, 25, 102304.	1.9	5
94	The localization of low order rational surfaces based on the intermittence parameter in the TJ-II stellarator. Nuclear Fusion, 2020, 60, 056010.	3.5	5
95	Theoretical analysis of the saturation phase of the 1/1 energetic-ion-driven resistive interchange mode. Nuclear Fusion, 0, , .	3.5	5
96	Theoretical study of the Alfven eigenmode stability in CFETR steady state discharges. Nuclear Fusion, 2022, 62, 036005.	3.5	5
97	A topological analysis of plasma flow structures. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 375501.	2.1	4
98	Three-dimensional linear peeling-ballooning theory in magnetic fusion devices. Physics of Plasmas, 2014, 21, 042507.	1.9	4
99	Filaments in the edge confinement region of TJ-II. Nuclear Fusion, 2018, 58, 026030.	3.5	4
100	Plasma Turbulence Calculations On Supercomputers. The International Journal of Supercomputer Applications, 1990, 4, 97-110.	0.5	3
101	Kinetic effects on ideal ballooning stability of the TJ-II heliac device. Nuclear Fusion, 1998, 38, 1511-1521.	3.5	3
102	Topological characterization of flow structures in resistive pressure-gradient-driven turbulence. Physical Review E, 2008, 78, 066402.	2.1	3
103	Topological characterization of the transition from laminar regime to fully developed turbulence in the resistive pressure-gradient-driven turbulence model. Physical Review E, 2009, 80, 046410.	2.1	3
104	Width and rugosity of the topological plasma flow structures and their relation to the radial flights of particle tracers. Nuclear Fusion, 2015, 55, 113023.	3.5	3
105	The impact of magnetic shear on the dynamics of a seeded 3D filament in slab geometry. Nuclear Materials and Energy, 2017, 12, 798-807.	1.3	3
106	Topology of 2-D turbulent structures based on intermittence in the TJ-II stellarator. Nuclear Fusion, 0, , .	3.5	3
107	Ballooning Modes Instabilities in Outward LHD Configurations. Plasma and Fusion Research, 2011, 6, 1403013-1403013.	0.7	3
108	Finite pressure equilibrium effects on helical ripple transport in torsatrons. Nuclear Fusion, 1988, 28, 871-879.	3.5	2

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109	Emergence and decay rate of the edge plasma flow shear near a critical transition. Plasma Physics and Controlled Fusion, 2009, 51, 015003.	2.1	2
110	Tracer particle trapping times in pressure-gradient-driven turbulence in toroidal geometry and their connection to the dynamics of large-scale cycles. Plasma Physics and Controlled Fusion, 2010, 52, 105005.	2.1	2
111	Radial correlation length across magnetic islands: Simulations and experiments. Physics of Plasmas, 2017, 24, 072513.	1.9	2
112	Relation of plasma flow structures to passive particle tracer orbits. Nuclear Fusion, 2017, 57, 116013.	3.5	2
113	Identification and characterization of topological structures of turbulence in magnetic confined plasmas. Plasma Physics and Controlled Fusion, 2020, 62, 115013.	2.1	2
114	The impact of radial electric fields and plasma rotation on intermittence in TJ-II. Plasma Physics and Controlled Fusion, 2022, 64, 055006.	2.1	2
115	Drift Wave Turbulence in a Plasma with Sheared Flow. Journal of Computational Physics, 1994, 114, 100-112.	3.8	1
116	Scale-free transport in fusion plasmas: theory and applications. , 2008, , .		1
117	Time-dependent solutions of a classical nonlinear scalar field. Lettere Al Nuovo Cimento Rivista Internazionale Della SocietÃ Italiana Di Fisica, 1978, 23, 23-26.	0.4	0
118	Numerical Tokamak Turbulence calculations on the CRAY T3E. , 1997, , .		0
119	Correlations and non-local transport in a critical-gradient fluctuation model. Journal of Physics: Conference Series, 2016, 775, 012008.	0.4	0