

# Fernando Haas

## List of Publications by Year in descending order

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116  
papers

4,086  
citations

218592

26  
h-index

118793

62  
g-index

118  
all docs

118  
docs citations

118  
times ranked

785  
citing authors

#	ARTICLE	IF	CITATIONS
1	Exchange fluid model derived from quantum kinetic theory for plasmas. Contributions To Plasma Physics, 2022, 62, e202100046.	0.5	1
2	Bernstein-Greene-Kruskal and Case-Van Kampen Modes for the Landau-Vlasov Equation. Atoms, 2022, 10, 28.	0.7	0
3	Linear and nonlinear waves in quantum plasmas with arbitrary degeneracy of electrons. Reviews of Modern Plasma Physics, 2022, 6, 1.	2.2	3
4	Multi-Hamiltonian structure of the epidemics model accounting for vaccinations and a suitable test for the accuracy of its numerical solvers. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 225206.	0.7	4
5	Relativistic Ermakov-Milne-Pinney Systems and First Integrals. Physics, 2021, 3, 59-70.	0.5	3
6	Dynamics and Stability of Axially Symmetric Atomic Clouds in Magneto-Optical Trap. Acta Physica Polonica A, 2021, 139, 659-665.	0.2	1
7	Electron holes in a $\delta$ distribution background with singularities. Physics of Plasmas, 2021, 28, .	0.7	6
8	Dynamics of antiproton plasma in a time-dependent harmonic trap. Physics of Plasmas, 2021, 28, 074502.	0.7	0
9	Nonlinear oscillations of non-neutral plasmas in a time-dependent harmonic trap. Physics of Plasmas, 2020, 27, .	0.7	1
10	Bernstein-Greene-Kruskal approach for the quantum Vlasov equation. Europhysics Letters, 2020, 132, 20006.	0.7	2
11	Nonlinear oscillations of ultra-cold atomic clouds in a magneto-optical trap. Physica Scripta, 2019, 94, 125214.	1.2	2
12	Neutrino oscillations and instabilities in degenerate relativistic astrophysical plasmas. Physical Review E, 2019, 99, 063209.	0.8	7
13	Kinetic theory derivation of exchange-correlation in quantum plasma hydrodynamics. Plasma Physics and Controlled Fusion, 2019, 61, 044001.	0.9	16
14	Modified plasma waves described by a logarithmic electrodynamics. Physics of Plasmas, 2019, 26, .	0.7	3
15	Large amplitude oscillations in a trapped dissipative electron gas. Physics of Plasmas, 2018, 25, .	0.7	6
16	Magnetosonic waves in a quantum plasma with arbitrary electron degeneracy. Physical Review E, 2018, 97, 063206.	0.8	15
17	Time-dependent variational approach for Bose-Einstein condensates with nonlocal interaction. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 175302.	0.6	12
18	Coupling between ion-acoustic waves and neutrino oscillations. Physical Review E, 2017, 95, 013207.	0.8	8

#	ARTICLE	IF	CITATIONS
19	Li(e)nearity. <i>European Journal of Physics</i> , 2017, 38, 045005.	0.3	2
20	Ion-beam/plasma modes in ultradense relativistic quantum plasmas: Dispersion characteristics and beam-driven instability. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	13
21	Ion-beamâ€“plasma interaction effects on electrostatic solitary wave propagation in ultradense relativistic quantum plasmas. <i>Physical Review E</i> , 2017, 96, 043206.	0.8	11
22	Instabilities and propagation of neutrino magnetohydrodynamic waves in arbitrary direction. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	7
23	New insight into the dispersion characteristics of electrostatic waves in ultradense plasmas: electron degeneracy and relativistic effects. <i>Plasma Physics and Controlled Fusion</i> , 2017, 59, 105013.	0.9	12
24	Collisional effects, ion-acoustic waves, and neutrino oscillations. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	7
25	Neutrino-driven electrostatic instabilities in a magnetized plasma. <i>Physical Review D</i> , 2017, 96, .	1.6	5
26	Ion-acoustic envelope modes in a degenerate relativistic electron-ion plasma. <i>Physics of Plasmas</i> , 2016, 23, .	0.7	39
27	Effective photon mass and exact translating quantum relativistic structures. <i>Physics of Plasmas</i> , 2016, 23, 042102.	0.7	6
28	Neutrino magnetohydrodynamics. <i>Physics of Plasmas</i> , 2016, 23, .	0.7	13
29	Nonlinear vortex-phonon interactions in a Boseâ€“Einstein condensate. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2016, 49, 145302.	0.6	4
30	Nonlinear ion-acoustic solitons in a magnetized quantum plasma with arbitrary degeneracy of electrons. <i>Physical Review E</i> , 2016, 94, 033212.	0.8	38
31	Modelling of relativistic ion-acoustic waves in ultra-degenerate plasmas. <i>Journal of Plasma Physics</i> , 2016, 82, .	0.7	14
32	Pedagogical systematic derivation of Noether point symmetries in special relativistic field theories and extended gravity cosmology. <i>European Journal of Physics</i> , 2016, 37, 065603.	0.3	0
33	High-harmonic generation in a quantum electron gas trapped in a nonparabolic and anisotropic well. <i>Physical Review B</i> , 2016, 93, .	1.1	25
34	Weakly nonlinear ion-acoustic excitations in a relativistic model for dense quantum plasma. <i>Physical Review E</i> , 2016, 93, 023206.	0.8	26
35	<i>Quantum Plasmas.</i> , 2016, , 1216-1223.		1
36	Linear and nonlinear ion-acoustic waves in nonrelativistic quantum plasmas with arbitrary degeneracy. <i>Physical Review E</i> , 2015, 92, 053112.	0.8	80

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37	Equilibrium and oscillations in a turbulent Bose-Einstein condensate. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 065302.	0.6	4
38	Nonlinear hydrodynamic Langmuir waves in fully degenerate relativistic plasma. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 044006.	0.9	21
39	A new two-stream instability mode in magnetized quantum plasma. <i>Physica Scripta</i> , 2015, 90, 088005.	1.2	33
40	New nonlinear structures in a degenerate one-dimensional electron gas. <i>Europhysics Letters</i> , 2014, 105, 30006.	0.7	9
41	Ion-acoustic cnoidal waves in a quantum plasma. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	37
42	Trapping and instability of directional gravity waves in localized water currents. <i>Physical Review E</i> , 2014, 89, 063014.	0.8	1
43	Influence of flavor oscillations on neutrino beam instabilities. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	8
44	Freak waves and electrostatic wavepacket modulation in a quantum electron-positron-ion plasma. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 035007.	0.9	44
45	Relativistic theory for localized electrostatic excitations in degenerate electron-ion plasmas. <i>Physical Review E</i> , 2014, 90, 033112.	0.8	22
46	High-harmonic generation by nonlinear resonant excitation of surface plasmon modes in metallic nanoparticles. <i>Physical Review B</i> , 2014, 89, .	1.1	15
47	Exact solution to neutrino-plasma two-flavor dynamics. <i>Journal of Plasma Physics</i> , 2013, 79, 991-993.	0.7	3
48	Time-Dependent Gaussian Solution for the Kostin Equation Around Classical Trajectories. <i>International Journal of Theoretical Physics</i> , 2013, 52, 88-95.	0.5	7
49	Wave dispersion derived from the square-root Klein-Gordon-Poisson system. <i>Journal of Plasma Physics</i> , 2013, 79, 371-376.	0.7	10
50	Variational approach to the time-dependent Schrödinger-Newton equations. <i>Classical and Quantum Gravity</i> , 2013, 30, 075006.	1.5	20
51	Neutrino oscillations in a turbulent plasma. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	6
52	Quantum effects in beam-plasma instabilities. , 2012, , .		0
53	Variational method for the three-dimensional many-electron dynamics of semiconductor quantum wells. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	2
54	Nonlinear dynamics of electron-positron clusters. <i>New Journal of Physics</i> , 2012, 14, 075012.	1.2	11

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55	Relativistic Klein-Gordon-Maxwell multistream model for quantum plasmas. <i>Physical Review E</i> , 2012, 85, 056411.	0.8	38
56	Nonlinear low-frequency collisional quantum Buneman instability. <i>Europhysics Letters</i> , 2012, 97, 26001.	0.7	37
57	Negative energy waves and quantum relativistic Buneman instabilities. <i>Physical Review E</i> , 2012, 86, 036406.	0.8	12
58	An Introduction to Quantum Plasmas. <i>Brazilian Journal of Physics</i> , 2011, 41, 349-363.	0.7	27
59	Quantum kinetic theory of the filamentation instability. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	12
60	Comment on "Dynamical systems and Poisson structures" [J. Math. Phys. 50, 112703 (2009)]. <i>Journal of Mathematical Physics</i> , 2011, 52, 124101.	0.5	0
61	Quantum Plasmas. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , .	0.1	288
62	A Fluid Model for Quantum Plasmas. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , 65-93.	0.1	14
63	Electromagnetic Quantum Plasmas. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , 109-131.	0.1	2
64	The Wigner-Poisson System. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , 15-38.	0.1	0
65	The Three-Dimensional Quantum Zakharov System. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , 169-187.	0.1	0
66	The Quantum Two-Stream Instability. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , 39-63.	0.1	0
67	The One-Dimensional Quantum Zakharov System. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , 133-167.	0.1	0
68	The Moments Method. <i>Springer Series on Atomic, Optical, and Plasma Physics</i> , 2011, , 189-204.	0.1	0
69	Fluid moment hierarchy equations derived from quantum kinetic theory. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 481-484.	0.9	31
70	On quantum plasma kinetic equations with a Bohmian force. <i>Journal of Plasma Physics</i> , 2010, 76, 389-393.	0.7	1
71	Effects of the electron spin on the nonlinear generation of quasi-static magnetic fields in a plasma. <i>Journal of Plasma Physics</i> , 2010, 76, 865-873.	0.7	1
72	Fluid moment hierarchy equations derived from gauge invariant quantum kinetic theory. <i>New Journal of Physics</i> , 2010, 12, 073027.	1.2	30

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73	Temporal dynamics in the one-dimensional quantum Zakharov equations for plasmas. Physics of Plasmas, 2010, 17, 032307.	0.7	38
74	Soliton solutions of the 3D Gross-Pitaevskii equation by a potential control method. , 2010, , .		1
75	Connection between the two branches of the quantum two-stream instability across the k space. Physics of Plasmas, 2010, 17, 052101.	0.7	13
76	The damped Pinney equation and its applications to dissipative quantum mechanics. Physica Scripta, 2010, 81, 025004.	1.2	16
77	Translating oscillatory nonlinear structure in a plasma boundary. Physics of Plasmas, 2009, 16, .	0.7	3
78	Nonlinear saturation of the Weibel instability in a dense Fermi plasma. Journal of Plasma Physics, 2009, 75, 251-258.	0.7	20
79	Nonlinear electrostatic oscillations in a sharp plasma interface. , 2009, , .		0
80	Quantum and classical dynamics of Langmuir wave packets. Physical Review E, 2009, 79, 066402.	0.8	41
81	Physical interpretation of the quantum two-stream instability. Physical Review E, 2009, 80, 066407.	0.8	26
82	Breather mode in the many-electron dynamics of semiconductor quantum wells. Physical Review B, 2009, 80, .	1.1	71
83	Nonlinear structures: Explosive, soliton, and shock in a quantum electron-positron-ion magnetoplasma. Physics of Plasmas, 2008, 15, .	0.7	88
84	Macroscopic description for the quantum Weibel instability. Physical Review E, 2008, 77, 046404.	0.8	23
85	Phase-space structures in quantum-plasma wave turbulence. Physical Review E, 2008, 78, 056407.	0.8	15
86	Nonlinear stationary solutions of the Wigner and Wigner-Poisson equations. Physics of Plasmas, 2008, 15, 112302.	0.7	7
87	Quantum Weibel instability. Physics of Plasmas, 2008, 15, .	0.7	39
88	Nonlinear structure in a current-carrying collisional dusty plasma. Physics of Plasmas, 2008, 15, 093702.	0.7	6
89	Variational approach for the quantum Zakharov system. Physics of Plasmas, 2007, 14, 042309.	0.7	48
90	Harris sheet solution for magnetized quantum plasmas. Europhysics Letters, 2007, 77, 45004.	0.7	29

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91	MHD Equations for Quantum Plasmas. AIP Conference Proceedings, 2006, , .	0.3	1
92	Stochastic Quantization of Time-Dependent Systems by the Haba and Kleinert Method. International Journal of Theoretical Physics, 2005, 44, 1-9.	0.5	3
93	Stochastic Quantization of Time-Dependent Systems by the Haba and Kleinert Method. International Journal of Theoretical Physics, 2005, 44, 609-617.	0.5	0
94	Jacobi structures in R3. Journal of Mathematical Physics, 2005, 46, 102703.	0.5	4
95	Low-momentum classical mechanics with effective quantum potentials. Physical Review B, 2005, 71, .	1.1	0
96	A magnetohydrodynamic model for quantum plasmas. Physics of Plasmas, 2005, 12, 062117.	0.7	426
97	Modified Zakharov equations for plasmas with a quantum correction. Physics of Plasmas, 2005, 12, 012302.	0.7	212
98	Lie point symmetries for reduced Ermakov systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 332, 25-34.	0.9	6
99	Quantum ion-acoustic waves. Physics of Plasmas, 2003, 10, 3858-3866.	0.7	572
100	Stability analysis of a three-stream quantum-plasma equilibrium. Brazilian Journal of Physics, 2003, 33, 128-132.	0.7	39
101	Anisotropic Bose-Einstein condensates and completely integrable dynamical systems. Physical Review A, 2002, 65, .	1.0	24
102	Comment on "A note on the construction of the Ermakov-Lewis invariant". Journal of Physics A, 2002, 35, 9943-9944.	1.6	0
103	Generalized Hamiltonian structures for Ermakov systems. Journal of Physics A, 2002, 35, 2925-2935.	1.6	19
104	Self-consistent fluid model for a quantum electron gas. Physical Review B, 2001, 64, .	1.1	589
105	Dynamical symmetries and the Ermakov invariant. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 279, 181-188.	0.9	28
106	Frobenius method and invariants for one-dimensional time-dependent Hamiltonian systems. Journal of Physics A, 2001, 34, 1005-1017.	1.6	1
107	Nyquist method for Wigner-Poisson quantum plasmas. Physical Review E, 2001, 64, 026413.	0.8	76
108	Lie symmetries for two-dimensional charged-particle motion. Journal of Physics A, 2000, 33, 4661-4677.	1.6	8

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109	Multistream model for quantum plasmas. <i>Physical Review E</i> , 2000, 62, 2763-2772.	0.8	349
110	Noether symmetries for two-dimensional charged particle motion. <i>Journal of Physics A</i> , 1999, 32, 6837-6852.	1.6	11
111	On the linearization of the generalized Ermakov systems. <i>Journal of Physics A</i> , 1999, 32, 2835-2844.	1.6	14
112	Lie symmetries of generalized Ermakov systems. , 1999, , 288-296.		0
113	On the Lie symmetries of a class of generalized Ermakov systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1998, 239, 348-352.	0.9	16
114	On the Hamiltonian structure of Ermakov systems. <i>Journal of Physics A</i> , 1996, 29, 4083-4092.	1.6	20
115	On the generalized Hamiltonian structure of 3D dynamical systems. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 199, 173-179.	0.9	25
116	Generalized Hamiltonian structures for systems in three dimensions with a rescalable constant of motion. <i>Journal of Physics A</i> , 1994, 27, 6495-6507.	1.6	20