

Lazar Friedland

List of Publications by Year in descending order

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78
papers

1,578
citations

257450

24
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315739

38
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78
all docs

78
docs citations

78
times ranked

586
citing authors

#	ARTICLE	IF	CITATIONS
1	Autoresonant (nonstationary) excitation of pendulums, Plutinos, plasmas, and other nonlinear oscillators. American Journal of Physics, 2001, 69, 1096-1102.	0.7	169
2	Strong autoresonance excitation of Rydberg atoms: The Rydberg accelerator. Physical Review A, 1990, 41, 5233-5236.	2.5	111
3	Autoresonant (Nonstationary) Excitation of the Diocotron Mode in Non-neutral Plasmas. Physical Review Letters, 1999, 82, 4444-4447.	7.8	94
4	Parametric amplification in Josephson junction embedded transmission lines. Physical Review B, 2013, 87, .	3.2	75
5	Excitation of Solitons by Adiabatic Multiresonant Forcing. Physical Review Letters, 1998, 81, 4357-4360.	7.8	55
6	Migration Timescale Thresholds for Resonant Capture in the Plutino Problem. Astrophysical Journal, 2001, 547, L75-L79.	4.5	52
7	Autoresonant (nonstationary) excitation of a collective nonlinear mode. Physics of Plasmas, 1999, 6, 4497-4503.	1.9	47
8	Excitation of multiphase waves of the nonlinear Schrödinger equation by capture into resonances. Physical Review E, 2005, 71, 036206.	2.1	46
9	From quantum ladder climbing to classical autoresonance. Physical Review A, 2004, 69, .	2.5	45
10	Phase-Locking Transition in a Chirped Superconducting Josephson Resonator. Physical Review Letters, 2008, 101, 117005.	7.8	42
11	Theory of a nonwiggler collective free electron laser in uniform magnetic field. IEEE Journal of Quantum Electronics, 1983, 19, 327-333.	1.9	40
12	Control of Kirchhoff vortices by a resonant strain. Physical Review E, 1999, 59, 4106-4111.	2.1	40
13	Quantum fluctuations in the chirped pendulum. Nature Physics, 2011, 7, 105-108.	16.7	39
14	Autoresonance in nonlinear systems. Scholarpedia Journal, 2009, 4, 5473.	0.3	38
15	Autoresonant Phase-Space Holes in Plasmas. Physical Review Letters, 2006, 96, 225001.	7.8	33
16	Spatial autoresonance: Enhancement of mode conversion due to nonlinear phase locking. Physics of Fluids B, 1992, 4, 3199-3209.	1.7	30
17	Quantum and Classical Chirps in an Anharmonic Oscillator. Physical Review Letters, 2012, 108, 037701.	7.8	30
18	Autoresonant Dynamics of Optical Guided Waves. Physical Review Letters, 2009, 103, 123901.	7.8	29

#	ARTICLE	IF	CITATIONS
19	Second harmonic autoresonant control of the $l=1$ diocotron mode in pure-electron plasmas. <i>Physical Review E</i> , 2000, 62, 4131-4136.	2.1	27
20	The effect of damping on autoresonant (nonstationary) excitation. <i>Physics of Plasmas</i> , 2001, 8, 423-427.	1.9	27
21	Autoresonance microwave accelerator. <i>Journal of Applied Physics</i> , 1991, 70, 1101-1106.	2.5	26
22	Autoresonant solutions of the nonlinear Schrödinger equation. <i>Physical Review E</i> , 1998, 58, 3865-3875.	2.1	26
23	Emergence and Control of Multiphase Nonlinear Waves by Synchronization. <i>Physical Review Letters</i> , 2003, 90, 074101.	7.8	25
24	Resonant Formation and Control of 2D Symmetric Vortex Waves. <i>Physical Review Letters</i> , 2000, 85, 2941-2944.	7.8	24
25	Spatially autoresonant stimulated Raman scattering in nonuniform plasmas. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	22
26	Quantum versus classical phase-locking transition in a frequency-chirped nonlinear oscillator. <i>Physical Review A</i> , 2011, 84, .	2.5	22
27	Resonant excitation and control of high order dispersive nonlinear waves. <i>Physics of Plasmas</i> , 1998, 5, 645-658.	1.9	21
28	Driven phase space holes and synchronized Bernstein, Greene, and Kruskal modes. <i>Physics of Plasmas</i> , 2004, 11, 4305-4317.	1.9	19
29	Experimental and computational study of the injection of antiprotons into a positron plasma for antihydrogen production. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	19
30	Spatial control of a classical electron state in a Rydberg atom by adiabatic synchronization. <i>Physical Review E</i> , 2002, 65, 046230.	2.1	18
31	Autoresonant switching of the magnetization in single-domain nanoparticles: Two-level theory. <i>Physical Review B</i> , 2015, 91, .	3.2	18
32	Molecular vibrational ladder climbing using a sub-nanosecond chirped laser pulse. <i>Europhysics Letters</i> , 2006, 74, 43-48.	2.0	17
33	Amplification of frequency upshifted radiation by cold relativistic guided electron beams. <i>Journal of Applied Physics</i> , 1982, 53, 4011-4015.	2.5	15
34	Capture into resonance and phase-space dynamics in an optical centrifuge. <i>Physical Review A</i> , 2016, 93, .	2.5	14
35	Excitation and control of large amplitude standing ion acoustic waves. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	14
36	Numerical studies of driven, chirped Bernstein, Greene, and Kruskal modes. <i>Physics of Plasmas</i> , 2005, 12, 062112.	1.9	13

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37	Chirped-frequency excitation of gravitationally bound ultracold neutrons. <i>Physical Review D</i> , 2017, 95, .	4.7	12
38	Quantum versus classical dynamics in the optical centrifuge. <i>Physical Review A</i> , 2017, 96, .	2.5	12
39	Autoresonant excitation of Bose-Einstein condensates. <i>Physical Review E</i> , 2018, 97, 032210.	2.1	12
40	Emergence and control of breather and plasma oscillations by synchronizing perturbations. <i>Physical Review E</i> , 2006, 73, 066612.	2.1	11
41	Quantum Phenomena in a Chirped Parametric Anharmonic Oscillator. <i>Physical Review Letters</i> , 2014, 113, 040403.	7.8	11
42	Extreme driven ion acoustic waves. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	11
43	Autoresonant excitation of multiphase waves in the sine-Gordon model. <i>Physica D: Nonlinear Phenomena</i> , 2009, 238, 1561-1568.	2.8	10
44	Multidimensional autoresonant mode conversion. <i>Physics of Plasmas</i> , 1995, 2, 1393-1397.	1.9	9
45	Multiphase control of a nonlinear lattice. <i>Physical Review E</i> , 2003, 68, 066214.	2.1	9
46	Autoresonant excitation of dark solitons. <i>Physical Review E</i> , 2015, 91, 012913.	2.1	9
47	Autoresonant beat-wave generation. <i>Physics of Plasmas</i> , 2006, 13, 123103.	1.9	8
48	Multiresonant control of two-dimensional dynamical systems. <i>Physical Review E</i> , 2007, 76, 016211.	2.1	8
49	Nonlocal, kinetic stimulated Raman scattering in nonuniform plasmas: Averaged variational approach. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	8
50	Two-photon ladder climbing and transition to autoresonance in a chirped oscillator. <i>Physical Review A</i> , 2013, 87, .	2.5	8
51	A water bag model of driven phase space holes in non-neutral plasmas. <i>Physics of Plasmas</i> , 2008, 15, 082110.	1.9	5
52	Excitation and control of chirped nonlinear ion-acoustic waves. <i>Physical Review E</i> , 2014, 89, 053103.	2.1	5
53	Chirped resonance dynamics in phase space. <i>Journal of Plasma Physics</i> , 2016, 82, .	2.1	5
54	Parametric autoresonant excitation of the nonlinear Schrödinger equation. <i>Physical Review E</i> , 2016, 94, 042216.	2.1	4

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55	Standing autoresonant plasma waves. <i>Journal of Plasma Physics</i> , 2020, 86, .	2.1	4
56	A class of conservative tunneling problems. <i>Physics of Fluids B</i> , 1992, 4, 24-34.	1.7	3
57	Removal of resonances by rotation in linearly degenerate two-dimensional oscillator systems. <i>Journal of Mathematical Physics</i> , 2007, 48, 042701.	1.1	3
58	Driven chirped vorticity holes. <i>Physics of Fluids</i> , 2008, 20, 086602.	4.0	3
59	Anomalous autoresonance threshold for chirped-driven Kortewegâ€“de-Vries waves. <i>Physical Review E</i> , 2015, 92, 042924.	2.1	3
60	Spin-torque switching and control using chirped AC currents. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 415002.	2.8	3
61	Quantum versus classical effects in the chirped-drive discrete nonlinear SchrÃ“dinger equation. <i>Physical Review A</i> , 2019, 100, .	2.5	3
62	Narrow autoresonant magnetization structures in finite-length ferromagnetic nanoparticles. <i>Physical Review E</i> , 2019, 100, 032208.	2.1	3
63	Excitation and control of large-amplitude standing magnetization waves. <i>Physical Review B</i> , 2019, 99, .	3.2	3
64	Autoresonant excitation of space-time quasicrystals in plasma. <i>Physical Review Research</i> , 2022, 4, .	3.6	3
65	Hermitian description of interacting inhomogeneous electron beams. <i>Physics of Fluids B</i> , 1992, 4, 1457-1464.	1.7	2
66	Quantum versus classical chirps in a Rydberg atom. <i>Physical Review A</i> , 2020, 102, .	2.5	2
67	Electron beam transport in gasâ€“loaded freeâ€“electron lasers. <i>Physics of Fluids B</i> , 1990, 2, 3114-3119.	1.7	1
68	Threeâ€“dimensional transmission of the fast wave in ion cyclotron resonance plasma heating. <i>Physics of Fluids B</i> , 1990, 2, 1204-1209.	1.7	1
69	From the pendulum to rydberg accelerator and planetary dynamics: autoresonant formation and control of nonlinear states. , 0, , .		1
70	First-harmonic approximation in nonlinear chirped-driven oscillators. <i>Physical Review E</i> , 2014, 89, 012902.	2.1	1
71	Theory of electron multiplication in gases in strong weakly nonuniform electric fields. <i>Journal of Applied Physics</i> , 1984, 56, 742-745.	2.5	0
72	Autoresonant wave interactions in nonuniform plasmas. <i>AIP Conference Proceedings</i> , 1995, , .	0.4	0

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73	Autoresonance of coupled nonlinear waves. , 2011, , .		0
74	AUTORESONANCE. Advanced Textbooks in Physics, 2016, , 255-274.	0.1	0
75	Transient precessing domain structures in finite-size nanomagnets and inversion of magnetization. Physical Review B, 2021, 104, .	3.2	0
76	Creating and Controlling Plasma-Based Optical Elements. , 2020, , .		0
77	Multiphoton transitions in free electron lasers. , 1983, , .		0
78	Simplified small signal gain calculations in free electron lasers. , 1983, , .		0