

Renato Fedele

List of Publications by Year in descending order

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papers

1,884
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279798

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docs citations

118
times ranked

830
citing authors

#	ARTICLE	IF	CITATIONS
1	Solitary waves in the Madelung's fluid: Connection between the nonlinear Schrödinger equation and the Korteweg-de Vries equation. <i>European Physical Journal B</i> , 2002, 27, 313-320.	1.5	143
2	Envelope Solitons versus Solitons. <i>Physica Scripta</i> , 2002, 65, 502-508.	2.5	116
3	Statistical theory for incoherent light propagation in nonlinear media. <i>Physical Review E</i> , 2002, 65, 035602.	2.1	115
4	Plasma lenses for focusing particle beams. <i>Physical Review A</i> , 1990, 41, 3321-3331.	2.5	101
5	Thermal wave model for nonlinear longitudinal dynamics in particle accelerators. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1993, 179, 407-413.	2.1	67
6	Envelope solitons of nonlinear Schrödinger equation with an anti-cubic nonlinearity. <i>Journal of Physics A</i> , 2003, 36, 1169-1173.	1.6	67
7	Quantum corrected electron holes. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2004, 324, 185-192.	2.1	67
8	Generation of radial fields in the beat-wave accelerator for Gaussian pump profiles. <i>Physical Review A</i> , 1986, 33, 4412-4414.	2.5	49
9	A thermal-wave model for relativistic-charged-particle beam propagation. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1991, 13, 1527-1544.	0.4	49
10	Landau damping and coherent structures in narrow-banded 1+1 deep water gravity waves. <i>Physical Review E</i> , 2003, 67, 046305.	2.1	49
11	New uncertainty relations for tomographic entropy: application to squeezed states and solitons. <i>European Physical Journal B</i> , 2006, 52, 191-198.	1.5	47
12	Nonlinear effects caused by intense electromagnetic waves in an electron-positron-ion plasma. <i>Physics of Plasmas</i> , 2003, 10, 310-313.	1.9	43
13	The resonant multi-pulse ionization injection. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	36
14	Kinetic theory of solitary waves on coasting beams in synchrotrons. <i>Physics of Plasmas</i> , 2000, 7, 3421-3430.	1.9	32
15	Self-consistent interaction between the plasma wake field and the driving relativistic electron beam. <i>Physical Review A</i> , 1992, 45, 4045-4049.	2.5	31
16	A quantum-like Landau damping of an electromagnetic wavepacket. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2000, 2, 207-213.	1.4	30
17	Propagation of partially incoherent light in nonlinear media via the Wigner transform method. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2002, 8, 408-412.	2.9	29
18	Landau damping of partially incoherent Langmuir waves. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2002, 303, 61-66.	2.1	29

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19	Quantumlike corrections and semiclassical description of charged-particle beam transport. <i>Physical Review E</i> , 1998, 58, 992-1001.	2.1	28
20	Quantum Tomography, Wave Packets, and Solitons. <i>Journal of Russian Laser Research</i> , 2004, 25, 1-29.	0.6	28
21	An effective potential for one-dimensional matter-wave solitons in an axially inhomogeneous trap. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2006, 360, 164-168.	2.1	27
22	A tutorial presentation of the two stream instability and Landau damping. <i>American Journal of Physics</i> , 2001, 69, 1262-1266.	0.7	26
23	Spherical aberrations in the thermal-wave model for luminosity estimates in particle accelerators. <i>Physical Review A</i> , 1992, 46, 6634-6639.	2.5	25
24	Role of semiclassical description in the quantumlike theory of light rays. <i>Physical Review E</i> , 1999, 60, 6042-6050.	2.1	23
25	Modification of the ion background profile in the nonlinear electron plasma oscillations. <i>Physica Scripta</i> , 1991, 43, 301-305.	2.5	22
26	Full phase-space analysis of particle beam transport in the thermal wave model. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1995, 209, 263-276.	2.1	21
27	Tomographic-probability description of solitons in Bose-Einstein condensates. <i>European Physical Journal B</i> , 2003, 36, 385-390.	1.5	21
28	The plasma undulator. <i>Physica Scripta</i> , 1990, T30, 192-197.	2.5	20
29	Modulational instabilities within the thermal wave model description of high energy charged particle beam dynamics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1999, 258, 244-248.	2.1	20
30	Probability Representation and New Entropic Uncertainty Relations for Symplectic and Optical Tomograms. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 2006, 26, 71-77.	0.4	20
31	Coupling between nonlinear Langmuir waves and electron holes in quantum plasmas. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 364, 304-312.	2.1	19
32	Wave-optics applications in charged-particle-beam transport. <i>Journal of Russian Laser Research</i> , 2000, 21, 1-33.	0.6	18
33	Controlling potential traps for filtering solitons in Bose-Einstein condensates. <i>JETP Letters</i> , 2004, 80, 535-539.	1.4	18
34	New inequalities for tomograms in the probability representation of quantum states. <i>Theoretical and Mathematical Physics(Russian Federation)</i> , 2007, 152, 1081-1086.	0.9	18
35	Aberrations in the thermal wave model: Comparison with particle tracking simulations. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994, 185, 93-98.	2.1	17
36	Coherent states for particle beams in the thermal wave model. <i>Physica Scripta</i> , 1995, 52, 191-198.	2.5	16

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37	Fresnel Tomography: A Novel Approach to Wave-Function Reconstruction Based on the Fresnel Representation of Tomograms. Theoretical and Mathematical Physics(Russian Federation), 2005, 144, 1206-1213.	0.9	16
38	Radiation damping and quantum excitation for longitudinal charged particle dynamics in the thermal wave model. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 194, 113-118.	2.1	15
39	Tomography of solitons. Journal of Optics B: Quantum and Semiclassical Optics, 2003, 5, 95-104.	1.4	15
40	Symplectic entropy. Journal of Physics: Conference Series, 2007, 70, 012007.	0.4	15
41	Quantum ring solitons and nonlocal effects in plasma wake field excitations. Physics of Plasmas, 2012, 19, .	1.9	15
42	The slingshot effect: A possible new laser-driven high energy acceleration mechanism for electrons. Physics of Plasmas, 2014, 21, 113105.	1.9	14
43	Beam optics applications: quantumlike versus classical-like domains. European Physical Journal D, 2003, 27, 263-271.	1.3	13
44	Antihydrogen production and precision experiments. The ATHENA collaboration. , 1997, 109, 1-32.		12
45	Effects of dust particles on the dynamics of blobs in the scrape off layer. Physics of Plasmas, 2007, 14, 083704.	1.9	12
46	Nonlocal effects in the self-consistent nonlinear 3D propagation of an ultrastrong, femtosecond laser pulse in plasmas. European Physical Journal D, 2012, 66, 1.	1.3	12
47	1D stability analysis of filtering and controlling the solitons in Bose-Einstein condensates. European Physical Journal B, 2006, 54, 113-119.	1.5	11
48	Wave theories of non-laminar charged particle beams: from quantum to thermal regime. Journal of Plasma Physics, 2014, 80, 133-145.	2.1	11
49	Nonlinear coupling of electrostatic waves in magnetized plasmas. Physical Review A, 1985, 31, 517-519.	2.5	10
50	Nonlocal effects in high-energy charged-particle beams. Physical Review E, 2004, 69, 066501.	2.1	10
51	How the coherent instabilities of an intense high-energy charged-particle beam in the presence of nonlocal effects can be explained within the context of the Madelung fluid description. European Physical Journal B, 2006, 49, 275-281.	1.5	10
52	Kinetic theory of periodic holes in debunched particle beams. Physical Review Special Topics: Accelerators and Beams, 2002, 5, .	1.8	9
53	Envelope solitons induced by high-order effects of light-plasma interaction. European Physical Journal B, 2002, 29, 613-618.	1.5	9
54	Cylindrical nonlinear Schrödinger equation versus cylindrical Korteweg-de Vries equation. , 2008, , .		9

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55	Entropic uncertainty relations for electromagnetic beams. <i>Physica Scripta</i> , 2009, T135, 014053.	2.5	9
56	Charged-particle-beam propagator in wave-electron optics: phase-space and tomographic pictures. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2000, 17, 2506.	1.5	8
57	Modulational Instability of Two Colliding Bose-Einstein Condensates. <i>Physica Scripta</i> , 2001, 64, 553-553.	2.5	8
58	Excitation of large amplitude plasma waves in a plasma filled open resonator. <i>Plasma Physics and Controlled Fusion</i> , 1987, 29, 789-806.	2.1	7
59	Solitary Waves in a Madelung Fluid Description of Derivative NLS Equations. <i>Journal of Nonlinear Mathematical Physics</i> , 2008, 15, 209.	1.3	7
60	Mathematical and physical aspects of controlling the exact solutions of the 3D Gross-Pitaevskii equation. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2010, 374, 788-795.	2.1	7
61	Quantum ring soliton formation by strongly nonlocal plasma wake field response to a relativistic electron beam. <i>Europhysics Letters</i> , 2012, 100, 55002.	2.0	6
62	Thermal wave model for nonlinear longitudinal dynamics of a relativistic charged particle bunch in cold plasmas. <i>Physica Scripta</i> , 1994, T52, 36-39.	2.5	5
63	A Method for Filtering and Controlling Soliton States of Bose-Einstein Condensates. <i>Physica Scripta</i> , 2005, , 10.	2.5	5
64	Coherent quantum hollow beam creation in a plasma wakefield accelerator. <i>Journal of Plasma Physics</i> , 2013, 79, 397-403.	2.1	5
65	Self-modulation of a relativistic charged-particle beam as thermal matter wave envelope. <i>Journal of Physics: Conference Series</i> , 2014, 482, 012014.	0.4	5
66	Dust-acoustic wave electrostatic and self-gravitational potentials in an opposite polarity dusty plasma system. <i>AIP Advances</i> , 2021, 11, .	1.3	5
67	A proposal to use a plasma lens to achieve a 12 nm spot at the end of CLIC. <i>Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics</i> , 1990, 12, 1497-1508.	0.4	4
68	A beat wave experiment in an open resonator. <i>Physica Scripta</i> , 1990, T30, 122-126.	2.5	4
69	Some mathematical aspects of the correspondence between the generalized nonlinear Schrödinger equation and the generalized Korteweg-de Vries equation. , 2009, , .		4
70	On the mapping connecting the cylindrical nonlinear von Neumann equation with the standard von Neumann equation. <i>Journal of Plasma Physics</i> , 2010, 76, 645-653.	2.1	4
71	The quantum plasma lens concept: A preliminary investigation. <i>Journal of Plasma Physics</i> , 2013, 79, 421-427.	2.1	4
72	Dynamics of the wakefield of a multi-petawatt, femtosecond laser pulse in a configuration with ultrarelativistic electrons. <i>Europhysics Letters</i> , 2014, 107, 44004.	2.0	4

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73	Transverse evolution of a long relativistic electron beam governed by the Vlasov-Poisson-type pair of equations within the plasma wake field dynamics in the local regime. <i>European Physical Journal D</i> , 2014, 68, 1.	1.3	4
74	Self-modulated dynamics of a relativistic charged particle beam in plasma wake field excitation. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 829, 426-431.	1.6	4
75	A numerical check of the thermal wave-model for particle-beam dynamics. , 0, , .		3
76	A wave theory for the negative mass instability. <i>Physica Scripta</i> , 1996, T63, 162-166.	2.5	3
77	Locally controlled coherence in the longitudinal dynamics of electron bunches in particle accelerators. <i>Physica Scripta</i> , 1997, 56, 426-429.	2.5	3
78	Stability of two-dimensional, controlled, Bose-Einstein coherent states. <i>European Physical Journal B</i> , 2007, 60, 363-368.	1.5	3
79	From Maxwell's theory of Saturn's rings to the negative mass instability. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2008, 366, 1717-1733.	3.4	3
80	Fresnel tomography and interferometric technique for characterizing Laguerreâ€“Gaussian beams. <i>Journal of Russian Laser Research</i> , 2010, 31, 139-151.	0.6	3
81	Modulational Instability of Cylindrical and Spherical NLS Equations. <i>Statistical Approach</i> . , 2010, , .		3
82	Self consistent nonlinear transverse quantum dynamics of a cold relativistic electron beam in a magnetized plasma. , 2012, , .		3
83	Modulational instability analysis of the cylindrical nonlinear von Neumann equation. <i>Journal of Plasma Physics</i> , 2013, 79, 443-446.	2.1	3
84	Photon mirror acceleration in the quantum regime. <i>Physics of Plasmas</i> , 2014, 21, 123105.	1.9	3
85	Vlasovâ€™s kinetic theory of the collective charged particle beam transport through a magnetized plasma in the strongly nonlocal regime. <i>European Physical Journal D</i> , 2014, 68, 1.	1.3	3
86	Self-modulation of a long externally injected relativistic charged-particle beam in a laser wake field acceleration scheme. A preliminary quantum-like investigation. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 740, 180-185.	1.6	3
87	Ring-type multisoliton dynamics in shallow water. <i>Physical Review E</i> , 2015, 91, 012921.	2.1	3
88	Semianalytical study of the propagation of an ultrastrong femtosecond laser pulse in a plasma with ultrarelativistic electron jitter. <i>Physics of Plasmas</i> , 2015, 22, 043110.	1.9	3
89	A Microwave-Driven Beat Wave Accelerator for Scaled Experiments. <i>IEEE Transactions on Plasma Science</i> , 1987, 15, 179-185.	1.3	2
90	Recombination Rate Estimate in the Quantum-like Description of a Nested Trap. <i>Physica Scripta</i> , 2001, 64, 144-148.	2.5	2

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91	Modelling Quantum Mechanics by a Quantumlike Description of Electric Signal Propagation in Transmission Lines. <i>Physica Scripta</i> , 2003, 68, 377-382.	2.5	2
92	Optical, Symplectic and Fresnel Tomographies of Quantum States. <i>European Physical Journal A</i> , 2004, 20, 261-268.	0.2	2
93	Stability and collapse of localized solutions of the controlled three-dimensional Gross-Pitaevskii equation. <i>European Physical Journal B</i> , 2010, 74, 97-116.	1.5	2
94	Fresnel entropic characterization of optical Laguerre-Gaussian beams. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2011, 375, 961-965.	2.1	2
95	Self consistent hydrodynamic description of the plasma wake field excitation induced by a relativistic charged-particle beam in an unmagnetized plasma. <i>Physica Scripta</i> , 2017, 92, 124006.	2.5	2
96	Modulation instability of lower hybrid waves leading to cusp solitons in electron-positron(hole)-ion Thomas Fermi plasma. <i>Contributions To Plasma Physics</i> , 2019, 59, e201800132.	1.1	2
97	Tomographic Description of a Quantum Wave Packet in an Accelerated Frame. <i>Entropy</i> , 2021, 23, 636.	2.2	2
98	Instability of a quasi-neutral plasma soliton-like perturbation in the presence of an oscillating electric field. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1989, 140, 242-244.	2.1	1
99	A Quantum-Like Approach to the Interaction of Relativistic Charged Particle Beams with Plasmas. <i>European Physical Journal Special Topics</i> , 1995, 05, C6-119-C6-130.	0.2	1
100	MESOSCOPIC DESCRIPTION OF DYNAMICAL SYSTEMS: HIERARCHY OF RECURSIVE EQUATIONS FOR THE MOMENTS OF THE DENSITY DISTRIBUTION WITH AN APPLICATION TO CHARGED PARTICLE BEAM DYNAMICS. <i>International Journal of Modern Physics B</i> , 2004, 18, 655-665.	2.0	1
101	Soliton solutions of the 3D Gross-Pitaevskii equation by a potential control method. , 2010, , .		1
102	Ring localized structures in nonlinear shallow water wave dynamics. <i>Journal of Physics: Conference Series</i> , 2014, 482, 012030.	0.4	1
103	The concept of coupling impedance in the self-consistent plasma wake field excitation. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 829, 397-402.	1.6	1
104	Formation and stability of a hollow electron beam in the presence of a plasma wake field driven by an ultra-short electron bunch. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 829, 130-136.	1.6	1
105	High-quality electron bunch production for high-brilliance Thomson Scattering sources. , 2017, , .		1
106	Stability properties of a thin relativistic beam propagation in a magnetized plasma. <i>European Physical Journal D</i> , 2018, 72, 1.	1.3	1
107	Adiabatic Vlasov theory of ultrastrong femtosecond laser pulse propagation in plasma. The scaling of ultrarelativistic quasi-stationary states: spikes, peakons, and bubbles. <i>Physics of Plasmas</i> , 2019, 26, 123104.	1.9	1
108	Longitudinal dynamics for electrons in the thermal wave model for charged particle beams. , 0, , .		0

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109	Photonic Vortices in an Electron-Positron Plasma. Physica Scripta, 2002, 66, 173-174.	2.5	0
110	Classical and Quantum-like Approaches to Charged-Particle Fluids in a Quadrupole. Physica Scripta, 2002, 65, 345-349.	2.5	0
111	Analytical and numerical aspects in solving the controlled 3D Gross-Pitaevskii equation. , 2009, , .		0
112	Special Solutions of some Generalized NLS Equations. , 2009, , .		0
113	Periodic and Solitary Wave Solutions of Two Component Zakharov-Yajima-Oikawa System, Using Madelung's Approach. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2011, , .	0.5	0
114	The plasma wake field excitation: Recent developments from thermal to quantum regime. Journal of Plasma Physics, 2013, 79, 1095-1098.	2.1	0
115	The role of the Wigner function in charged-particle beam transport. EPJ Web of Conferences, 2014, 78, 04003.	0.3	0
116	Semi-analytical fluid study of the laser wake field excitation in the strong intensity regime. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 829, 413-417.	1.6	0
117	Quasi-Linear Evolution of the Modulational Instability in the Presence of Partial Incoherence. Physica Scripta, 2004, , 56.	2.5	0
118	Kinetic theory of longitudinal stability analysis of a non-laminar electron beam in self-consistent plasma wake field excitation. Physica Scripta, 2022, 97, 065602.	2.5	0