Sergey V Nazarenko

List of Publications by Year
in descending order

129	4,168	94433	123424
papers	citations	37 h-index	61 g-index

135	135	135	1568
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A weak turbulence theory for incompressible magnetohydrodynamics. Journal of Plasma Physics, 2000, 63, 447-488.	2.1	526
2	Wave Turbulence. Lecture Notes in Physics, 2011, , .	0.7	480
3	Wave turbulence and intermittency. Physica D: Nonlinear Phenomena, 2001, 152-153, 520-550.	2.8	197
4	Gravity Wave Turbulence in a Laboratory Flume. Physical Review Letters, 2007, 99, 014501.	7.8	100
5	Wave turbulence and vortices in Boseâ€“Einstein condensation. Physica D: Nonlinear Phenomena, 2006, 219, 1-12.	2.8	87
6	Critical balance in magnetohydrodynamic, rotating and stratified turbulence: towards a universal scaling conjecture. Journal of Fluid Mechanics, 2011, 677, 134-153.	3.4	87
7	Warm Cascades and Anomalous Scaling in a Diffusion Model of Turbulence. Physical Review Letters, 2004, 92, 044501.	7.8	82
8	One-dimensional optical wave turbulence: Experiment and theory. Physics Reports, 2012, 514, 121-175.	25.6	74
9	Dynamics of the Boseâ€“Einstein condensation. Physica D: Nonlinear Phenomena, 2005, 201, 203-211.	2.8	73
10	Optical wave turbulence and the condensation of light. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 2280.	2.1	67
11	Statistics of surface gravity wave turbulence in the space and time domains. Journal of Fluid Mechanics, 2010, 642, 395-420.	3.4	66
12	Discreteness and its effect on water-wave turbulence. Physica D: Nonlinear Phenomena, 2006, 218, 24-35.	2.8	59
13	Energy Spectra of Developed Turbulence in Helium Superfluids. Journal of Low Temperature Physics, 2006, 145, 125-142.	1.4	59
14	Interaction of Kelvin waves and nonlocality of energy transfer in superfluids. Physical Review B, 2010, 81, .	3.2	59
15	Dimensional analysis and weak turbulence. Physica D: Nonlinear Phenomena, 2003, 184, 86-97.	2.8	58
16	Quantum turbulence cascades in the Gross-Pitaevskii model. Physical Review A, 2009, 80, .	2.5	56
17	Modulational instability of Rossby and drift waves and generation of zonal jets. Journal of Fluid Mechanics, 2010, 654, 207-231.	3.4	56
18	Joint statistics of amplitudes and phases in wave turbulence. Physica D: Nonlinear Phenomena, 2005, 201, 121-149.	2.8	52

#	Article	IF	Citations
19	Wave turbulence. Contemporary Physics, 2015, 56, 359-373.	1.8	52
20	Freely decaying Turbulence and Boseâ€“Einstein Condensation in Grossâ€“Pitaevski Model. Journal of Low Temperature Physics, 2007, 146, 31-46.	1.4	51
21	Anomalous probability of large amplitudes in wave turbulence. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 339, 361-369.	2.1	49
22	New invariant for drift turbulence. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 152, 276-280.	2.1	45
23	Analytical Solution for Nonlinear SchrÃ¶dinger Vortex Reconnection. Journal of Low Temperature Physics, 2003, 132, 1-10.	1.4	45
24	Sandpile behaviour in discrete water-wave turbulence. Journal of Statistical Mechanics: Theory and Experiment, 2006, 2006, L02002-L02002.	2.3	45
25	Breakdown of wave turbulence and the onset of intermittency. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 280, 28-32.	2.1	44
26	Wave turbulence in Boseâ€“Einstein condensates. Physica D: Nonlinear Phenomena, 2003, 184, 333-351.	2.8	44
27	On the nonlocal turbulence of drift type waves. Physics Letters, Section A: General, Atomic and Solid State Physics, 1990, 146, 217-221.	2.1	42
28	Exact solution for the energy spectrum of Kelvin-wave turbulence in superfluids. Physical Review B, 2011, 84, .	3.2	42
29	Noisy spectra, long correlations, and intermittency in wave turbulence. Physical Review E, 2004, 69, 066608.	2.1	41
30	Modeling Kelvin Wave Cascades in Superfluid Helium. Journal of Low Temperature Physics, 2009, 156, 193-214.	1.4	41
31	Wave-vortex dynamics in drift and Î²-plane turbulence. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 165, 330-334.	2.1	40
32	Gradual Eddy-Wave Crossover in Superfluid Turbulence. Journal of Low Temperature Physics, 2008, 153, 140-161.	1.4	40
33	WKB theory for rapid distortion of inhomogeneous turbulence. Journal of Fluid Mechanics, 1999, 390, 325-348.	3.4	39
34	Nonlinear RDT theory of near-wall turbulence. Physica D: Nonlinear Phenomena, 2000, 139, 158-176.	2.8	39
35	Turbulence of Weak Gravitational Waves in the Early Universe. Physical Review Letters, 2017, 119, 221101.	7.8	39
36	Communication through plasma sheaths via Raman (threeâ€wave) scattering process. Physics of Plasmas, 1994, 1, 2827-2834.	1.9	38

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37	Interaction of turbulence and large-scale vortices in incompressible 2D fluids. Physica D: Nonlinear Phenomena, 1997, 110, 123-138.	2.8	38
38	Probability densities and preservation of randomness in wave turbulence. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 332, 230-238.	2.1	37
39	Triple Cascade Behavior in Quasigeostrophic and Drift Turbulence and Generation of Zonal Jets. Physical Review Letters, 2009, 103, 118501.	7.8	36
40	Bose-Einstein condensation and Berezinskii-Kosterlitz-Thouless transition in the two-dimensional nonlinear SchrÃ¶dinger model. Physical Review A, 2014, 90, .	2.5	35
41	Wave Turbulence on Water Surface. Annual Review of Condensed Matter Physics, 2016, 7, 61-88.	14.5	35
42	Gravity Wave Turbulence in Wave Tanks: Space and Time Statistics. Physical Review Letters, 2009, 103, 044501.	7.8	34
43	Rossby and drift wave turbulence and zonal flows: The Charneyâ€“Hasegawaâ€“Mima model and its extensions. Physics Reports, 2015, 604, 1-71.	25.6	34
44	Energy and vorticity spectra in turbulent superfluid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">He</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>4</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>from<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>T</mml:mi><mml:mo>=</mml:mo><mml:mn>0</mml:mn><mml:mr	3.2	33
45	xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi>î». Physic Non-local MHD turbulence. Physica D: Nonlinear Phenomena, 2001, 152-153, 646-652.	2.8	32
46	Discreteness and quasiresonances in weak turbulence of capillary waves. Physical Review E, 2001, 63, 046306.	2.1	32
47	Sustained turbulence in the three-dimensional Grossâ€“Pitaevskii model. Physica D: Nonlinear Phenomena, 2012, 241, 304-314.	2.8	32
48	Non-local two-dimensional turbulence and Batchelor's regime for passive scalars. Journal of Fluid Mechanics, 2000, 408, 301-321.	3.4	28
49	Wave turbulence in quantum fluids. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 4727-4734.	7.1	28
50	Nonlocality of Interaction of Scales in the Dynamics of 2D Incompressible Fluids. Physical Review Letters, 1999, 83, 4061-4064.	7.8	25
51	2D enslaving of MHD turbulence. New Journal of Physics, 2007, 9, 307-307.	2.9	24
52	Derivation of the Biot-Savart equation from the nonlinear SchrÃ¶dinger equation. Physical Review E, 2015, 92, 053019.	2.1	24
53	Resonant interactions of nonlinear water waves in a finite basin. Physical Review E, 2008, 78, 016304.	2.1	23
54	Nonlinear interaction of smallâ€scale Rossby waves with an intense largeâ€scale zonal flow. Physics of Fluids, 1994, 6, 1158-1167.	4.0	22

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55	Dual non-Kolmogorov cascades in a von KÃ¡rmÃ¡n flow. Europhysics Letters, 2012, 100, 44003.	2.0	22
56	Zonal flow generation and its feedback on turbulence production in drift wave turbulence. Physics of Plasmas, 2013, 20, .	1.9	21
57	Dynamical modeling of sub-grid scales in 2D turbulence. Physica D: Nonlinear Phenomena, 2000, 142, 231-253.	2.8	20
58	Feedback of zonal flows on wave turbulence driven by small-scale instability in the Charney-Hasegawa-Mima model. Europhysics Letters, 2011, 96, 25001.	2.0	20
59	Anomalous spectral laws in differential models of turbulence. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 285501.	2.1	20
60	Exact solutions for near-wall turbulence theory. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 264, 444-448.	2.1	19
61	Weak AlfvÃ©n-wave turbulence revisited. Physical Review E, 2012, 85, 036406.	2.1	19
62	Magnus-force model for active particles trapped on superfluid vortices. Physical Review A, 2020, 101, .	2.5	19
63	On Scaling Laws for the Transition to Turbulence in Uniform-Shear Flows. Europhysics Letters, 1994, 27, 129-134.	2.0	18
64	Reply: On Role of Symmetries in Kelvin Wave Turbulence. Journal of Low Temperature Physics, 2010, 161, 606-610.	1.4	18
65	Invariant solutions for the nonlinear diffusion model of turbulence. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 185501.	2.1	18
66	Nonlinear soundâ€“vortex interactions in an inviscid isentropic fluid: A twoâ€fluid model. Physics of Fluids, 1995, 7, 2407-2419.	4.0	17
67	A model for rapid stochastic distortions of small-scale turbulence. Journal of Fluid Mechanics, 2004, 520, 1-21.	3.4	17
68	Weak turbulence of Kelvin waves in superfluid He. Low Temperature Physics, 2010, 36, 785-791.	0.6	17
69	Wave turbulence in self-gravitating Bose gases and nonlocal nonlinear optics. Physical Review A, 2020, 102, .	2.5	15
70	Energy Spectrum of Two-Dimensional Acoustic Turbulence. Physical Review Letters, 2022, 128, .	7.8	15
71	Fast numerical simulations of 2D turbulence using a dynamic model for subfilter motions. Journal of Computational Physics, 2004, 196, 184-207.	3.8	14
72	Numerical analysis of a self-similar turbulent flow in Boseâ€“Einstein condensates. Communications in Nonlinear Science and Numerical Simulation, 2021, 102, 105903.	3.3	14

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73	Nonlinear diffusion models for gravitational wave turbulence. Physica D: Nonlinear Phenomena, 2019, 390, 84-88.	2.8	13
74	Kinetic equation for point vortices in a shear flow. Physica D: Nonlinear Phenomena, 1992, 56, 381-388.	2.8	12
75	Coalescence of Particles by Differential Sedimentation. Journal of Statistical Physics, 2008, 130, 1177-1195.	1.2	12
76	The modulational instability in the extended Hasegawa-Mima equation with a finite Larmor radius. Physics of Plasmas, 2012, 19, 122115.	1.9	12
77	Phase transition in time-reversible Navier-Stokes equations. Physical Review E, 2019, 100, 043104.	2.1	12
78	Shock bowing and vorticity dynamics during propagation into different transverse density profiles. Physica D: Nonlinear Phenomena, 2002, 163, 150-165.	2.8	11
79	Quadratic invariants for discrete clusters of weakly interacting waves. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 245501.	2.1	11
80	Breaking of Josephson junction oscillations and onset of quantum turbulence in Boseâ€“Einstein condensates. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 175701.	2.1	11
81	Testing wave turbulence theory for the Gross-Pitaevskii system. Physical Review E, 2022, 106, .	2.1	11
82	Absorption of Sound by Vortex Filaments. Physical Review Letters, 1994, 73, 1793-1796.	7.8	10
83	Resonant absorption of short pulses. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 197, 159-163.	2.1	10
84	On the Wave Turbulence Theory for the Nonlinear SchrÃ¶dinger Equation with Random Potentials. Entropy, 2019, 21, 823.	2.2	10
85	How trapped particles interact with and sample superfluid vortex excitations. Physical Review Research, 2020, 2, .	3.6	10
86	Self-similar evolution of Alfven wave turbulence. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 435501.	2.1	9
87	Direct Evidence of a Dual Cascade in Gravitational Wave Turbulence. Physical Review Letters, 2021, 127, 131101.	7.8	9
88	Comment on â€œSymmetry of Kelvin-wave dynamics and the Kelvin-wave cascade in theT=0superfluid turbulenceâ€• Physical Review B, 2012, 86, .	3.2	8
89	Vortex creation, annihilation, and nonlinear dynamics in atomic vapors. Physical Review A, 2022, 105, .	2.5	8
90	Kolmogorov weakly turbulent spectra of some types of drift waves in plasmas. Physics Letters, Section A: General, Atomic and Solid State Physics, 1988, 133, 407-409.	2.1	7

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91	Warm cascade states in a forced-dissipated Boltzmann gas of hard spheres. Physica D: Nonlinear Phenomena, 2012, 241, 600-615.	2.8	7
92	Canonical Hamiltonians for waves in inhomogeneous media. Journal of Mathematical Physics, 2009, 50, 013527.	1.1	6
93	Aspects of Two-Mode Probability Density Function in Weak Wave Turbulence. Journal of the Physical Society of Japan, 2009, 78, 084403.	1.6	6
94	Nonequilibrium Bose-Einstein condensation. Physical Review A, 2022, 105, .	2.5	6
95	Communication with reentry space vehicles via short pulses. Radio Science, 1995, 30, 1753-1766.	1.6	5
96	Comment on â€œSuperfluid Turbulence from Quantum Kelvin Wave to Classical Kolmogorov Cascadesâ€• Physical Review Letters, 2010, 104, 219401.	7.8	5
97	The role of the convective modes and sheared variables in the Hamiltonian dynamics of uniform-shear-flow perturbations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 191, 403-408.	2.1	4
98	Steady states in Leith's model of turbulence. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 365501.	2.1	4
99	Gregory Falkovich. Introduction to turbulence theory. , 2008, , 1-43.		3
100	Wave Turbulence Formalism. Lecture Notes in Physics, 2011, , 67-105.	0.7	3
101	Nonstationary distributions of wave intensities in wave turbulence. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 355502.	2.1	3
102	Rotating magnetohydrodynamic turbulence. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 445501.	2.1	3
103	A Plausible Model of Inflation Driven by Strong Gravitational Wave Turbulence. Universe, 2020, 6, 98.	2.5	3
104	Investigation of properties of superfluid <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi>He</mml:mi><mml:mprescripts /><mml:none /><mml:mn>4</mml:mn></mml:mmultiscripts></mml:math> turbulence using a hot-wire signal. Physical Review Fluids, 2021, 6, .	2.5	3
105	Equilibria and condensates in Rossby and drift wave turbulence. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 015701.	2.1	3
106	The circulation density and its role in 3D turbulence. Physica D: Nonlinear Phenomena, 1997, 102, 343-348.	2.8	2
107	Warm turbulence in the Boltzmann equation. Europhysics Letters, 2011, 96, 24004.	2.0	2
108	Wave turbulence in the two-layer ocean model. Journal of Fluid Mechanics, 2014, 756, 309-327.	3.4	2

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109	Steady states in dual-cascade wave turbulence. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 365701.	2.1	2
110	Comment on â€œTheoretical analysis of quantum turbulence using the Onsager ideal turbulence theoryâ€• Physical Review E, 2022, 105, 027101.	2.1	2
111	Finite-Size Effects in Wave Turbulence. Lecture Notes in Physics, 2011, , 163-171.	0.7	1
112	List of Projects. Lecture Notes in Physics, 2011, , 269-279.	0.7	1
113	Wave-turbulence description of interacting particles: Klein-Gordon model with a Mexican-hat potential. Physical Review E, 2015, 92, 012909.	2.1	1
114	Analytical Solution for Nonlinear SchrÃ¶dinger Vortex Reconnection. , 2003, 132, 1.		1
115	Inverse cascade anomalies in fourth-order Leith models. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 015702.	2.1	1
116	Theory of anisotropic superfluid⁴He counterflow turbulence. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210094.	3.4	1
117	Nazarenko Replies:. Physical Review Letters, 1995, 75, 1868-1868.	7.8	0
118	Publisherâ€™s Note: Triple Cascade Behavior in Quasigeostrophic and Drift Turbulence and Generation of Zonal Jets [Phys. Rev. Lett.103, 118501 (2009)]. Physical Review Letters, 2010, 104, .	7.8	0
119	Magneto-Hydrodynamic Turbulence. Lecture Notes in Physics, 2011, , 209-230.	0.7	0
120	Steady State and Evolving Solutions for the Wave Spectrum. Lecture Notes in Physics, 2011, , 133-161.	0.7	0
121	For the Impatient: A WT Cheatsheet. Lecture Notes in Physics, 2011, , 29-48.	0.7	0
122	Wave Turbulence as a Part of General Turbulence Theory. Lecture Notes in Physics, 2011, , 17-28.	0.7	0
123	Bose-Einstein Condensation. Lecture Notes in Physics, 2011, , 231-268.	0.7	0
124	Properties of the Higher-Order Statistics. Intermittency and WT Life Cycle. Lecture Notes in Physics, 2011, , 173-184.	0.7	0
125	Statistical Objects in Wave Turbulence. Lecture Notes in Physics, 2011, , 55-66.	0.7	0
126	Nonlocal Drift/Rossby Wave Turbulence. Lecture Notes in Physics, 2011, , 191-208.	0.7	0

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127	Non-equilibrium cluster growth: where did it all begin. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 431003.	2.1	0
128	Triple cascade behaviour in QG and drift turbulence and generation of zonal jets. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2010, , 265-288.	0.2	0
129	Verifying Weak Turbulence Theory. Physics Magazine, 0, 13, .	0.1	0