

Alexei A Mailybaev

List of Publications by Year in descending order

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73
papers

2,054
citations

471509

17
h-index

243625

44
g-index

75
all docs

75
docs citations

75
times ranked

1460
citing authors

#	ARTICLE	IF	CITATIONS
1	Hidden scale invariance in Navier–Stokes intermittency. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210098.	3.4	8
2	Shell model intermittency is the hidden self-similarity. Physical Review Fluids, 2022, 7, .	2.5	4
3	Dissipation-range fluid turbulence and thermal noise. Physical Review E, 2022, 105, .	2.1	16
4	Hidden spatiotemporal symmetries and intermittency in turbulence. Nonlinearity, 2022, 35, 3630-3679.	1.4	5
5	“Life after death”™ in ordinary differential equations with a non-Lipschitz singularity. Nonlinearity, 2021, 34, 2296-2326.	1.4	6
6	Fluid dynamics on logarithmic lattices. Nonlinearity, 2021, 34, 4684-4715.	1.4	5
7	Hidden scale invariance of intermittent turbulence in a shell model. Physical Review Fluids, 2021, 6, .	2.5	11
8	From the butterfly effect to spontaneous stochasticity in singular shear flows. Communications Physics, 2020, 3, .	5.3	19
9	Explosive ripple instability due to incipient wave-breaking. Journal of Fluid Mechanics, 2019, 863, 876-892.	3.4	5
10	Light Stops at Exceptional Points. Physical Review Letters, 2018, 120, 013901.	7.8	138
11	Chaotic Blowup in the 3D Incompressible Euler Equations on a Logarithmic Lattice. Physical Review Letters, 2018, 121, 064501.	7.8	16
12	Toward analytic theory of the Rayleigh–Taylor instability: lessons from a toy model. Nonlinearity, 2017, 30, 2466-2484.	1.4	8
13	Optimal subgrid scheme for shell models of turbulence. Physical Review E, 2017, 95, 043108.	2.1	14
14	Chaotic and regular instantons in helical shell models of turbulence. Physical Review Fluids, 2017, 2, .	2.5	7
15	Spontaneous Stochasticity of Velocity in Turbulence Models. Multiscale Modeling and Simulation, 2016, 14, 96-112.	1.6	15
16	Multicomponent effects in liquid–gas filtration combustion. Combustion and Flame, 2016, 169, 51-62.	5.2	4
17	Dynamically encircling an exceptional point for asymmetric mode switching. Nature, 2016, 537, 76-79.	27.8	684
18	Spontaneously stochastic solutions in one-dimensional inviscid systems. Nonlinearity, 2016, 29, 2238-2252.	1.4	18

#	ARTICLE	IF	CITATIONS
19	Oxidation wave structure and oxygen breakthrough for air injection into light oil reservoirs. Computational Geosciences, 2016, 20, 1095-1107.	2.4	2
20	Inverse energy cascade in nonlocal helical shell models of turbulence. Physical Review E, 2015, 92, 043021.	2.1	19
21	Recovery of light oil by air injection at medium temperature: Experiments. Journal of Petroleum Science and Engineering, 2015, 133, 29-39.	4.2	15
22	Continuous representation for shell models of turbulence. Nonlinearity, 2015, 28, 2497-2514.	1.4	11
23	Stability analysis of a rotating disk with rotating and nonrotating asymmetries in translatory and rotational degrees of freedom. Journal of Sound and Vibration, 2015, 359, 107-115.	3.9	0
24	Development of high vorticity structures in incompressible 3D Euler equations. Physics of Fluids, 2015, 27, .	4.0	24
25	Combined effect of spatially fixed and rotating asymmetries on stability of a rotor. Journal of Sound and Vibration, 2015, 336, 227-239.	3.9	7
26	COMPOSITIONAL EFFECTS IN LIGHT/MEDIUM OIL RECOVERY BY AIR INJECTION: VAPORIZATION VS. COMBUSTION. Journal of Porous Media, 2014, 17, 937-952.	1.9	9
27	Diffusive Effects on Recovery of Light Oil by Medium Temperature Oxidation. Transport in Porous Media, 2014, 105, 191-209.	2.6	7
28	Effects of water on light oil recovery by air injection. Fuel, 2014, 137, 200-210.	6.4	19
29	Time-asymmetric quantum-state-exchange mechanism. Physical Review A, 2013, 88, .	2.5	93
30	Instability of a general rotating system with small axial asymmetry and damping. Journal of Sound and Vibration, 2013, 332, 346-360.	3.9	4
31	Recovery of Light Oil by Medium Temperature Oxidation. Transport in Porous Media, 2013, 97, 317-343.	2.6	12
32	Bifurcations of blowup in inviscid shell models of convective turbulence. Nonlinearity, 2013, 26, 1105-1124.	1.4	9
33	Blowup as a driving mechanism of turbulence in shell models. Physical Review E, 2013, 87, 053011.	2.1	14
34	Breakdown of adiabatic transfer of light in waveguides in the presence of absorption. Physical Review A, 2013, 88, .	2.5	52
35	Computation of anomalous scaling exponents of turbulence from self-similar instanton dynamics. Physical Review E, 2012, 86, 025301.	2.1	6
36	Renormalization and universality of blowup in hydrodynamic flows. Physical Review E, 2012, 85, 066317.	2.1	13

#	ARTICLE	IF	CITATIONS
37	A remark to the paper by O. N. Kirillov and F. Verhulst "Paradoxes of dissipation-induced destabilization or who opened Whitney's umbrella?" [Zamm 90, No. 6, 462-488 (2010)]. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2012, 92, 253-253.	1.6	1
38	Authors' reply to "A remark to the paper by O. N. Kirillov and F. Verhulst "Paradoxes of dissipation-induced destabilization or who opened Whitney's umbrella?" [Zamm 90, No. 6, 462-488 (2010)]. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2012, 92, 254-254.	1.6	0
39	Asymptotic approximation of long-time solution for low-temperature filtration combustion. Computational Geosciences, 2012, 16, 799-808.	2.4	15
40	Resonance in Low-Temperature Oxidation Waves for Porous Media. SIAM Journal on Mathematical Analysis, 2011, 43, 2230-2252.	1.9	14
41	The effect of nonconservative forces on the stability of systems with multiple frequencies and the Nicolai paradox. Doklady Physics, 2011, 56, 32-38.	0.7	3
42	Paradox of Nicolai and related effects. Zeitschrift Fur Angewandte Mathematik Und Physik, 2011, 62, 539-548.	1.4	13
43	Analysis of in situ combustion of oil with pyrolysis and vaporization. Combustion and Flame, 2011, 158, 1097-1108.	5.2	37
44	On the observability and asymmetry of adiabatic state flips generated by exceptional points. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 435302.	2.1	170
45	Stabilization of statically unstable systems by parametric excitation. Journal of Sound and Vibration, 2009, 323, 1016-1031.	3.9	11
46	Stabilization of statically unstable columns by axial vibration of arbitrary frequency. Journal of Sound and Vibration, 2009, 328, 203-212.	3.9	3
47	Vibrational stabilization of statically unstable systems. Doklady Physics, 2009, 54, 294-300.	0.7	1
48	Hyperbolicity singularities in Rarefaction Waves. Journal of Dynamics and Differential Equations, 2008, 20, 1-29.	1.9	9
49	Birth of a New Class of Period-Doubling Scaling Behavior as a Result of Bifurcation in the Renormalization Equation. Journal of Statistical Physics, 2008, 130, 599-616.	1.2	8
50	LAX SHOCKS IN MIXED-TYPE SYSTEMS OF CONSERVATION LAWS. Journal of Hyperbolic Differential Equations, 2008, 05, 295-315.	0.5	3
51	Bifurcations of Equilibria in Potential Systems at Bimodal Critical Points. Journal of Applied Mechanics, Transactions ASME, 2008, 75, .	2.2	4
52	Bimodal bifurcations of equilibria in symmetric potential systems. Doklady Physics, 2007, 52, 600-606.	0.7	0
53	Conditions revisited for asymptotic stability of pervasive damped linear systems. Journal of Sound and Vibration, 2006, 298, 471-474.	3.9	7
54	Berry phase around degeneracies. Doklady Mathematics, 2006, 73, 129-133.	0.6	9

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55	Dual-Family Viscous Shock Waves in n Conservation Laws with Application to Multi-Phase Flow in Porous Media. Archive for Rational Mechanics and Analysis, 2006, 182, 1-24.	2.4	6
56	Computation of multiple eigenvalues and generalized eigenvectors for matrices dependent on parameters. Numerical Linear Algebra With Applications, 2006, 13, 419-436.	1.6	18
57	Singularities of energy surfaces under non-Hermitian perturbations. Doklady Physics, 2005, 50, 577-582.	0.7	2
58	Unfolding of eigenvalue surfaces near a diabolic point due to a complex perturbation. Journal of Physics A, 2005, 38, 5531-5546.	1.6	43
59	Geometric phase around exceptional points. Physical Review A, 2005, 72, .	2.5	143
60	Coupling of eigenvalues of complex matrices at diabolic and exceptional points. Journal of Physics A, 2005, 38, 1723-1740.	1.6	110
61	Interaction of eigenvalues in multi-parameter problems. Journal of Sound and Vibration, 2003, 267, 1047-1064.	3.9	24
62	Reduction to Versal Deformations of Matrix Pencils and Matrix Pairs with Application to Control Theory. SIAM Journal on Matrix Analysis and Applications, 2003, 24, 943-962.	1.4	10
63	Uncontrollability for Linear Autonomous Multi-input Dynamical Systems Depending on Parameters. SIAM Journal on Control and Optimization, 2003, 42, 1431-1450.	2.1	4
64	On stability domains of nonconservative systems under small parametric excitation. Acta Mechanica, 2002, 154, 11-30.	2.1	5
65	Transformation to versal deformations of matrices. Linear Algebra and Its Applications, 2001, 337, 87-108.	0.9	15
66	Parametric resonance in systems with small dissipation. Prikladnaya Matematika I Mekhanika, 2001, 65, 755-767.	0.4	18
67	Parametric resonance in systems with weak dissipation. Doklady Physics, 2001, 46, 434-439.	0.7	2
68	Transformation of Families of Matrices to Normal Forms and its Application to Stability Theory. SIAM Journal on Matrix Analysis and Applications, 2000, 21, 396-417.	1.4	17
69	On Singularities of a Boundary of the Stability Domain. SIAM Journal on Matrix Analysis and Applications, 1999, 21, 106-128.	1.4	19
70	Uncontrollability set for multi-input dynamical systems depending on parameters. , 0, , .		0
71	On eigenvalue surfaces near a diabolic point. , 0, , .		0
72	Strong and weak coupling of eigenvalues of complex matrices. , 0, , .		1

#	ARTICLE	IF	CITATIONS
73	Solvable Intermittent Shell Model of Turbulence. Communications in Mathematical Physics, 0, , 1.	2.2	8