Alexei A Mailybaev

List of Publications by Year
in descending order

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	Dynamically encircling an exceptional point for asymmetric mode switching. Nature, 2016, 537, 76-79.	27.8	684
2	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
3	Geometric phase around exceptional points. Physical Review A, 2005, 72, .	2.5	143
4	Light Stops at Exceptional Points. Physical Review Letters, 2018, 120, 013901.	7.8	138
5	Coupling of eigenvalues of complex matrices at diabolic and exceptional points. Journal of Physics A, 2005, 38, 1723-1740.	1.6	110
6	Time-asymmetric quantum-state-exchange mechanism. Physical Review A, 2013, 88, .	2.5	93
7	Breakdown of adiabatic transfer of light in waveguides in the presence of absorption. Physical Review A, 2013, 88, .	2.5	52
8	Unfolding of eigenvalue surfaces near a diabolic point due to a complex perturbation. Journal of Physics A, 2005, 38, 5531-5546.	1.6	43
9	Analysis of in situ combustion of oil with pyrolysis and vaporization. Combustion and Flame, 2011, 158, 1097-1108.	5.2	37
10	Interaction of eigenvalues in multi-parameter problems. Journal of Sound and Vibration, 2003, 267, 1047-1064.	3.9	24
11	Development of high vorticity structures in incompressible 3D Euler equations. Physics of Fluids, 2015, 27, .	4.0	24
12	On Singularities of a Boundary of the Stability Domain. SIAM Journal on Matrix Analysis and Applications, 1999, 21, 106-128.	1.4	19
13	Effects of water on light oil recovery by air injection. Fuel, 2014, 137, 200-210.	6.4	19
14	Inverse energy cascade in nonlocal helical shell models of turbulence. Physical Review E, 2015, 92, 043021.	2.1	19
15	From the butterfly effect to spontaneous stochasticity in singular shear flows. Communications Physics, 2020, 3, .	5.3	19
16	Parametric resonance in systems with small dissipation. Prikladnaya Matematika I Mekhanika, 2001, 65, 755-767.	0.4	18
17	Computation of multiple eigenvalues and generalized eigenvectors for matrices dependent on parameters. Numerical Linear Algebra With Applications, 2006, 13, 419-436.	1.6	18
18	Spontaneously stochastic solutions in one-dimensional inviscid systems. Nonlinearity, 2016, 29, 2238-2252.	1.4	18

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19	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
20	Chaotic Blowup in the 3D Incompressible Euler Equations on a Logarithmic Lattice. Physical Review Letters, 2018, 121, 064501.	7.8	16
21	Dissipation-range fluid turbulence and thermal noise. Physical Review E, 2022, 105, .	2.1	16
22	Transformation to versal deformations of matrices. Linear Algebra and Its Applications, 2001, 337, 87-108.	0.9	15
23	Asymptotic approximation of long-time solution for low-temperature filtration combustion. Computational Geosciences, 2012, 16, 799-808.	2.4	15
24	Recovery of light oil by air injection at medium temperature: Experiments. Journal of Petroleum Science and Engineering, 2015, 133, 29-39.	4.2	15
25	Spontaneous Stochasticity of Velocity in Turbulence Models. Multiscale Modeling and Simulation, 2016, 14, 96-112.	1.6	15
26	Resonance in Low-Temperature Oxidation Waves for Porous Media. SIAM Journal on Mathematical Analysis, 2011, 43, 2230-2252.	1.9	14
27	Blowup as a driving mechanism of turbulence in shell models. Physical Review E, 2013, 87, 053011.	2.1	14
28	Optimal subgrid scheme for shell models of turbulence. Physical Review E, 2017, 95, 043108.	2.1	14
29	Paradox of Nicolai and related effects. Zeitschrift Fur Angewandte Mathematik Und Physik, 2011, 62, 539-548.	1.4	13
30	Renormalization and universality of blowup in hydrodynamic flows. Physical Review E, 2012, 85, 066317.	2.1	13
31	Recovery of Light Oil by Medium Temperature Oxidation. Transport in Porous Media, 2013, 97, 317-343.	2.6	12
32	Stabilization of statically unstable systems by parametric excitation. Journal of Sound and Vibration, 2009, 323, 1016-1031.	3.9	11
33	Continuous representation for shell models of turbulence. Nonlinearity, 2015, 28, 2497-2514.	1.4	11
34	Hidden scale invariance of intermittent turbulence in a shell model. Physical Review Fluids, 2021, 6, .	2.5	11
35	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
36	Berry phase around degeneracies. Doklady Mathematics, 2006, 73, 129-133.	0.6	9

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37	Hyperbolicity singularities in Rarefaction Waves. Journal of Dynamics and Differential Equations, 2008, 20, 1-29.	1.9	9
38	Bifurcations of blowup in inviscid shell models of convective turbulence. Nonlinearity, 2013, 26, 1105-1124.	1.4	9
39	COMPOSITIONAL EFFECTS IN LIGHT/MEDIUM OIL RECOVERY BY AIR INJECTION: VAPORIZATION VS. COMBUSTION. Journal of Porous Media, 2014, 17, 937-952.	1.9	9
40	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
41	Toward analytic theory of the Rayleighâ€"Taylor instability: lessons from a toy model. Nonlinearity, 2017, 30, 2466-2484.	1.4	8
42	Solvable Intermittent Shell Model of Turbulence. Communications in Mathematical Physics, 0, , 1.	2.2	8
43	Hidden scale invariance in Navierâ€"Stokes intermittency. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2022, 380, 20210098.	3.4	8
44	Conditions revisited for asymptotic stability of pervasive damped linear systems. Journal of Sound and Vibration, 2006, 298, 471-474.	3.9	7
45	Diffusive Effects on Recovery of Light Oil by Medium Temperature Oxidation. Transport in Porous Media, 2014, 105, 191-209.	2.6	7
46	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
47	Chaotic and regular instantons in helical shell models of turbulence. Physical Review Fluids, 2017, 2, .	2.5	7
48	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
49	Computation of anomalous scaling exponents of turbulence from self-similar instanton dynamics. Physical Review E, 2012, 86, 025301.	2.1	6
50	â€˜Life after deathâ€™ in ordinary differential equations with a non-Lipschitz singularity. Nonlinearity, 2021, 34, 2296-2326.	1.4	6
51	On stability domains of nonconservative systems under small parametric excitation. Acta Mechanica, 2002, 154, 11-30.	2.1	5
52	Explosive ripple instability due to incipient waveÂbreaking. Journal of Fluid Mechanics, 2019, 863, 876-892.	3.4	5
53	Fluid dynamics on logarithmic lattices. Nonlinearity, 2021, 34, 4684-4715.	1.4	5
54	Hidden spatiotemporal symmetries and intermittency in turbulence. Nonlinearity, 2022, 35, 3630-3679.	1.4	5

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55	Uncontrollability for Linear Autonomous Multi-input Dynamical Systems Depending on Parameters. SIAM Journal on Control and Optimization, 2003, 42, 1431-1450.	2.1	4
56	Bifurcations of Equilibria in Potential Systems at Bimodal Critical Points. Journal of Applied Mechanics, Transactions ASME, 2008, 75, .	2.2	4
57	Instability of a general rotating system with small axial asymmetry and damping. Journal of Sound and Vibration, 2013, 332, 346-360.	3.9	4
58	Multicomponent effects in liquid–gas filtration combustion. Combustion and Flame, 2016, 169, 51-62.	5.2	4
59	Shell model intermittency is the hidden self-similarity. Physical Review Fluids, 2022, 7, .	2.5	4
60	LAX SHOCKS IN MIXED-TYPE SYSTEMS OF CONSERVATION LAWS. Journal of Hyperbolic Differential Equations, 2008, 05, 295-315.	0.5	3
61	Stabilization of statically unstable columns by axial vibration of arbitrary frequency. Journal of Sound and Vibration, 2009, 328, 203-212.	3.9	3
62	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
63	Parametric resonance in systems with weak dissipation. Doklady Physics, 2001, 46, 434-439.	0.7	2
64	Singularities of energy surfaces under non-Hermitian perturbations. Doklady Physics, 2005, 50, 577-582.	0.7	2
65	Oxidation wave structure and oxygen breakthrough for air injection into light oil reservoirs. Computational Geosciences, 2016, 20, 1095-1107.	2.4	2
66	Strong and weak coupling of eigenvalues of complex matrices. , 0, , .		1
67	Vibrational stabilization of statically unstable systems. Doklady Physics, 2009, 54, 294-300.	0.7	1
68	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
69	Uncontrollability set for multi-input dynamical systems depending on parameters. , 0, , .		0
70	On eigenvalue surfaces near a diabolic point. , 0, , .		0
71	Bimodal bifurcations of equilibria in symmetric potential systems. Doklady Physics, 2007, 52, 600-606.	0.7	0
72	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

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73	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