Rahul Pandit

List of Publications by Year
in descending order

73 papers	1,794 citations	293460 24 h-index	325983 40 g-index
73 all docs	73 docs citations	73 times ranked	1245 citing authors

#	Article	IF	Citations
1	Rotating self-gravitating Bose-Einstein condensates with a crust: A model for pulsar glitches. Physical Review Research, 2022, 4, .	1.3	3
2	An In Silico Study of Electrophysiological Parameters That Affect the Spiral-Wave Frequency in Mathematical Models for Cardiac Tissue. Frontiers in Physics, 2022, 9, .	1.0	1
3	Formation of compact objects at finite temperatures in a dark-matter-candidate self-gravitating bosonic system. Physical Review Research, 2021, 3, .	1.3	3
4	The effects of inhomogeneities on scroll-wave dynamics in an anatomically realistic mathematical model for canine ventricular tissue. Physics Open, 2021, 9, 100090.	0.7	1
5	One-dimensional Kardar-Parisi-Zhang and Kuramoto-Sivashinsky universality class: Limit distributions. Physical Review E, 2020, 101, 030103.	0.8	12
6	Anisotropic shortening in the wavelength of electrical waves promotes onset of electrical turbulence in cardiac tissue: An in silico study. PLoS ONE, 2020, 15, e0230214.	1.1	3
7	Machine learning strategies for path-planning microswimmers in turbulent flows. Physical Review E, 2020, 101, 043110.	0.8	46
8	Deep-learning-assisted detection and termination of spiral and broken-spiral waves in mathematical models for cardiac tissue. Physical Review Research, 2020, 2, .	1.3	10
9	First-passage-time problem for tracers in turbulent flows applied to virus spreading. Physical Review Research, 2020, 2, .	1.3	5
10	Comparisons of wave dynamics in Hodgkin-Huxley and Markov-state formalisms for the sodium (Na) channel in some mathematical models for human cardiac tissue. Physical Review Research, 2020, 2, .	1.3	1
11	Two-dimensional magnetohydrodynamic turbulence with large and small energy-injection length scales. Physics of Fluids, 2019, 31, 065111.	1.6	7
12	Heavy inertial particles in turbulent flows gain energy slowly but lose it rapidly. Physical Review E, 2018, 97, 033102.	0.8	12
13	Particles and fields in superfluids: Insights from the two-dimensional Gross-Pitaevskii equation. Physical Review A, 2018, 97, .	1.0	15
14	Exotic multifractal conductance fluctuations in graphene. Communications Physics, 2018, 1, .	2.0	57
15	The role of BKM-type theorems in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="mml93" display="inline" overflow="scroll" altimg="si25.gif"><mml:mn>3</mml:mn><mml:mi>D</mml:mi></mml:math> Euler, Navierâ€“Stokes and Cahnâ€“Hilliardâ€“Navierâ€“Stokes analysis. Physica D: Nonlinear Phenomena, 2018, 376-377, 60-68.	1.3	7
16	Spiral-wave dynamics in a mathematical model of human ventricular tissue with myocytes and Purkinje fibers. Physical Review E, 2017, 95, 022405.	0.8	22
17	Two-dimensional Turbulence in Symmetric Binary-Fluid Mixtures: Coarsening Arrest by the Inverse Cascade. Scientific Reports, 2017, 7, 44589.	1.6	56
18	An overview of the statistical properties of two-dimensional turbulence in fluids with particles, conducting fluids, fluids with polymer additives, binary-fluid mixtures, and superfluids. Physics of Fluids, 2017, 29, 111112.	1.6	27

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19	Melting of a nonequilibrium vortex crystal in a fluid film with polymers: Elastic versus fluid turbulence. Physical Review E, 2017, 95, 033119.	0.8	12
20	Reentry via high-frequency pacing in a mathematical model for human-ventricular cardiac tissue with a localized fibrotic region. Scientific Reports, 2017, 7, 15350.	1.6	8
21	THE EFFECTS OF FIBROBLASTS ON WAVE DYNAMICS IN A MATHEMATICAL MODEL FOR HUMAN VENTRICULAR TISSUE. , 2016, , .		0
22	Regularity criterion for solutions of the three-dimensional Cahn-Hilliard-Navier-Stokes equations and associated computations. Physical Review E, 2016, 94, 063103.	0.8	6
23	Deviation-angle and trajectory statistics for inertial particles in turbulence. Physical Review E, 2016, 94, 063112.	0.8	6
24	Multiscaling in superfluid turbulence: A shell-model study. Physical Review E, 2016, 94, 043101.	0.8	15
25	How long do particles spend in vortical regions in turbulent flows?. Physical Review E, 2016, 94, 053119.	0.8	11
26	Binary-fluid turbulence: Signatures of multifractal droplet dynamics and dissipation reduction. Physical Review E, 2016, 93, 063115.	0.8	12
27	Sticking transition in a minimal model for the collisions of active particles in quantum fluids. Physical Review A, 2016, 94, .	1.0	14
28	Dynamic multiscaling in magnetohydrodynamic turbulence. Physical Review E, 2016, 94, 053101.	0.8	2
29	Turbulent states and their transitions in mathematical models for ventricular tissue: The effects of random interstitial fibroblasts. Physical Review E, 2015, 92, 032720.	0.8	5
30	Homogeneous isotropic superfluid turbulence in two dimensions: Inverse and forward cascades in the Hall-Vinen-Bekharevich-Khalatnikov model. Physical Review B, 2015, 92, .	1.1	10
31	A Comparative Study of Early Afterdepolarization-Mediated Fibrillation in Two Mathematical Models for Human Ventricular Cells. PLoS ONE, 2015, 10, e0130632.	1.1	26
32	A Computational Study of the Factors Influencing the PVC-Triggering Ability of a Cluster of Early Afterdepolarization-Capable Myocytes. PLoS ONE, 2015, 10, e0144979.	1.1	16
33	Two-dimensional homogeneous isotropic fluid turbulence with polymer additives. Physical Review E, 2015, 91, 033013.	0.8	16
34	A Study of Early Afterdepolarizations in a Model for Human Ventricular Tissue. PLoS ONE, 2014, 9, e84595.	1.1	64
35	Turbulent electrical activity at sharp-edged inexcitable obstacles in a model for human cardiac tissue. American Journal of Physiology - Heart and Circulatory Physiology, 2014, 307, H1024-H1035.	1.5	15
36	Spiral-wave dynamics in ionically realistic mathematical models for human ventricular tissue: the effects of periodic deformation. Frontiers in Physiology, 2014, 5, 207.	1.3	9

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37	Elliptical tracers in two-dimensional, homogeneous, isotropic fluid turbulence: The statistics of alignment, rotation, and nematic order. Physical Review E, 2014, 89, 021001.	0.8	9
38	Statistics of the inverse-cascade regime in two-dimensional magnetohydrodynamic turbulence. Physical Review E, 2014, 90, 013018.	0.8	8
39	Structure-function hierarchies and von KÃ¡rmÃ¡nâ€“Howarth relations for turbulence in magnetohydrodynamical equations. Physical Review E, 2014, 89, 012117.	0.8	4
40	Vorticity moments in four numerical simulations of the 3D Navierâ€“Stokes equations. Journal of Fluid Mechanics, 2013, 732, 316-331.	1.4	25
41	Real-Space Manifestations of Bottlenecks in Turbulence Spectra. Physical Review Letters, 2013, 110, 064501.	2.9	21
42	Turbulence in the two-dimensional Fourier-truncated Grossâ€“Pitaevskii equation. New Journal of Physics, 2013, 15, 113025.	1.2	36
43	Systematics of the magnetic-Prandtl-number dependence of homogeneous, isotropic magnetohydrodynamic turbulence. New Journal of Physics, 2011, 13, 013036.	1.2	41
44	Dynamic Multiscaling in Two-Dimensional Fluid Turbulence. Physical Review Letters, 2011, 107, 184503.	2.9	16
45	Persistence Problem in Two-Dimensional Fluid Turbulence. Physical Review Letters, 2011, 106, 054501.	2.9	41
46	Turbulence-induced melting of a nonequilibrium vortex crystal in a forced thin fluid film. New Journal of Physics, 2010, 12, 023033.	1.2	8
47	Direct numerical simulations of statistically steady, homogeneous, isotropic fluid turbulence with polymer additives. Physical Review E, 2010, 82, 066313.	0.8	35
48	Spiral-Wave Turbulence and Its Control in the Presence of Inhomogeneities in Four Mathematical Models of Cardiac Tissue. PLoS ONE, 2009, 4, e4738.	1.1	65
49	Statistically steady turbulence in thin films: direct numerical simulations with Ekman friction. New Journal of Physics, 2009, 11, 073003.	1.2	24
50	Statistical properties of turbulence: An overview. Pramana - Journal of Physics, 2009, 73, 157-191.	0.9	48
51	Dynamic multiscaling in turbulence. European Physical Journal B, 2008, 64, 463-469.	0.6	11
52	The universality of dynamic multiscaling in homogeneous, isotropic Navierâ€“Stokes and passive-scalar turbulence. New Journal of Physics, 2008, 10, 033003.	1.2	29
53	Hyperviscosity, Galerkin Truncation, and Bottlenecks in Turbulence. Physical Review Letters, 2008, 101, 144501.	2.9	157
54	Spiral-wave dynamics depend sensitively on inhomogeneities in mathematical models of ventricular tissue. Physical Review E, 2007, 75, 011929.	0.8	55

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55	Manifestations of Drag Reduction by Polymer Additives in Decaying, Homogeneous, Isotropic Turbulence. Physical Review Letters, 2006, 97, 264501.	2.9	97
56	Mean Field Theory for Interacting Spin-1 Bosons on a Lattice. , 2006, , .		0
57	Is Multiscaling an Artifact in the Stochastically Forced Burgers Equation?. Physical Review Letters, 2005, 94, 194501.	2.9	52
58	Drag reduction by polymer additives in decaying turbulence. Physical Review E, 2005, 72, 017301.	0.8	58
59	Dynamics of Passive-Scalar Turbulence. Physical Review Letters, 2005, 95, 144501.	2.9	20
60	Varieties of Dynamic Multiscaling in Fluid Turbulence. Physical Review Letters, 2004, 93, 024501.	2.9	26
61	The Statistical Mechanics of Semiflexible Equilibrium Polymers. Journal of Statistical Physics, 2003, 110, 1219-1248.	0.5	5
62	The one-dimensional extended Bose-Hubbard model. Journal of Chemical Sciences, 2003, 115, 721-726.	0.7	0
63	VENTRICULAR FIBRILLATION IN A SIMPLE EXCITABLE MEDIUM MODEL OF CARDIAC TISSUE. International Journal of Modern Physics B, 2003, 17, 5645-5654.	1.0	6
64	Defibrillation via the Elimination of Spiral Turbulence in a Model for Ventricular Fibrillation. Physical Review Letters, 2001, 86, 3678-3681.	2.9	103
65	Spatiotemporal chaos and nonequilibrium transitions in a model excitable medium. Physical Review E, 2000, 61, 6448-6460.	0.8	13
66	Inequivalence of dynamical ensembles in a generalized driven diffusive lattice gas. Physical Review E, 2000, 61, 1139-1143.	0.8	3
67	Multiscaling in Models of Magnetohydrodynamic Turbulence. Physical Review Letters, 1998, 81, 2687-2690.	2.9	76
68	Turbulence and Multiscaling in the Randomly Forced Navier-Stokes Equation. Physical Review Letters, 1998, 81, 4377-4380.	2.9	40
69	Some recent advances in the theory of homogeneous isotropic turbulence. Pramana - Journal of Physics, 1997, 48, 325-364.	0.9	17
70	THE EXOTIC BARIUM BISMUTHATES. International Journal of Modern Physics B, 1996, 10, 863-955.	1.0	27
71	Sponge Phase Transitions from a Lattice Mode. Molecular Crystals and Liquid Crystals, 1996, 288, 93-104.	0.3	0
72	Universal properties of the two-dimensional Kuramoto-Sivashinsky equation. Physical Review Letters, 1993, 71, 12-15.	2.9	68

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73	Hysteresis in model spin system. Journal of Applied Physics, 1990, 67, 5451-5453.	1.1	15