Arshad A Kudrolli

List of Publications by Year
in descending order

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Version: 2024-02-01

87 papers	4,829 citations	101543 36 h-index	91884 69 g-index
97 all docs	97 docs citations	97 times ranked	3295 citing authors

#	Article	IF	Citations
1	Nonadditive drag of tandem rods drafting in granular sediments. Physical Review E, 2022, 105, 034901.	2.1	2
2	Tensional twist-folding of sheets into multilayered scrolled yarns. Science Advances, 2022, 8, eabi8818.	10.3	5
3	Mitigating exhalation puffs during oxygen therapy for respiratory disease. Physics of Fluids, 2021, 33, 081903.	4.0	1
4	Drag anisotropy of cylindrical solids in fluid-saturated granular beds. Physical Review Fluids, 2021, 6, .	2.5	3
5	Unstable Invasion of Sedimenting Granular Suspensions. Physical Review Letters, 2020, 125, 054501.	7.8	3
6	Aerial mucosalivary droplet dispersal distributions with implications for disease mitigation. Physical Review Research, 2020, 2, .	3.6	4
7	Effective drag of a rod in fluid-saturated granular beds. Physical Review E, 2019, 100, 022901.	2.1	10
8	Birth and decay of tensional wrinkles in hyperelastic sheets. Physical Review E, 2019, 100, 053003.	2.1	6
9	Burrowing dynamics of aquatic worms in soft sediments. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 25569-25574.	7.1	16
10	Corner singularities and shape of stretched elastic sheets. Physical Review E, 2018, 98, .	2.1	4
11	Persistence of Perfect Packing in Twisted Bundles of Elastic Filaments. Physical Review Letters, 2018, 120, 248002.	7.8	15
12	Granular bed consolidation, creep, and armoring under subcritical fluid flow. Physical Review Fluids, 2018, 3, .	2.5	18
13	Micromechanics of intruder motion in wet granular medium. Physical Review Fluids, 2018, 3, .	2.5	16
14	Drag law for an intruder in granular sediments. Physical Review E, 2017, 95, 032901.	2.1	16
15	Measuring geometric frustration in twisted inextensible filament bundles. Physical Review E, 2017, 95, 052503.	2.1	10
16	Dynamic Wrinkling and Strengthening of an Elastic Filament in a Viscous Fluid. Physical Review Letters, 2017, 119, 088001.	7.8	16
17	Headward growth and branching in subterranean channels. Physical Review E, 2017, 96, 052904.	2.1	0
18	Depth resolved granular transport driven by shearing fluid flow. Physical Review Fluids, 2017, 2, .	2.5	16

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19	Critical shear rate and torque stability condition for a particle resting on a surface in a fluid flow. Journal of Fluid Mechanics, 2016, 808, 397-409.	3.4	17
20	Disclinations, e-cones, and their interactions in extensible sheets. Soft Matter, 2016, 12, 4457-4462.	2.7	19
21	Evolution of Porosity and Channelization of an Erosive Medium Driven by Fluid Flow. Physical Review Letters, 2016, 117, 028001.	7.8	20
22	Pearling and arching instabilities of a granular suspension on a super-absorbing surface. Soft Matter, 2015, 11, 659-664.	2.7	2
23	Onset of erosion of a granular bed in a channel driven by fluid flow. Physics of Fluids, 2015, 27, 013301.	4.0	25
24	Epitaxial growth of ordered and disordered granular sphere packings. Physical Review E, 2014, 90, 032203.	2.1	12
25	Helicoids, Wrinkles, and Loops in Twisted Ribbons. Physical Review Letters, 2013, 111, 174302.	7.8	79
26	Effect of aspect ratio on the development of order in vibrated granular rods. Physical Review E, 2013, 88, 052203.	2.1	19
27	Speed of a swimming sheet in Newtonian and viscoelastic fluids. Physical Review E, 2013, 87, 013015.	2.1	56
28	Shape and dynamics of seepage erosion in a horizontal granular bed. Physical Review E, 2012, 86, 041304.	2.1	39
29	Flow-induced channelization in a porous medium. Europhysics Letters, 2012, 98, 58003.	2.0	27
30	Four remarks on the growth of channel networks. Comptes Rendus - Geoscience, 2012, 344, 33-40.	1.2	10
31	Nucleation and Crystal Growth in Sheared Granular Sphere Packings. Physical Review Letters, 2012, 108, 108001.	7.8	65
32	Geometry of valley growth. Journal of Fluid Mechanics, 2011, 673, 245-254.	3.4	32
33	Aggregation of frictional particles due to capillary attraction. Physical Review E, 2011, 83, 051403.	2.1	42
34	Building Designed Granular Towers One Drop at a Time. Physical Review Letters, 2011, 107, 208304.	7.8	12
35	Tumbling Dynamics of Passive Flexible Wings. Physical Review Letters, 2010, 104, 184504.	7.8	20
36	Heterogeneous Structure of Granular Aggregates with Capillary Interactions. Physical Review Letters, 2010, 105, 098002.	7.8	30

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37	Introduction: Seventh Annual Gallery of Nonlinear Images (Portland, Oregon 2010). Chaos, 2010, 20, 041101.	2.5	0
38	Concentration Dependent Diffusion of Self-Propelled Rods. Physical Review Letters, 2010, 104, 088001.	7.8	58
39	Experimental Investigation of Cyclically Sheared Granular Particles with Direct Particle Tracking. Progress of Theoretical Physics Supplement, 2010, 184, 100-109.	0.1	7
40	Shear induced diffusion in dense granular flows. , 2010, , .		0
41	Spatial distribution functions of random packed granular spheres obtained by direct particle imaging. Physical Review E, 2010, 81, 060301.	2.1	17
42	Maximum and minimum stable random packings of Platonic solids. Physical Review E, 2010, 82, 061304.	2.1	101
43	Growth laws for channel networks incised byÂgroundwater flow. Nature Geoscience, 2009, 2, 193-196.	12.9	88
44	Structure and dynamics of vibrated granular chains: Comparison to equilibrium polymers. Physical Review E, 2009, 79, 061304.	2.1	34
45	Physical test of a particle simulation model in a sheared granular system. Physical Review E, 2009, 80, 031305.	2.1	32
46	Introduction: Sixth Annual Gallery of Nonlinear Images (Pittsburgh, Pennsylvania, 2009). Chaos, 2009, 19, 041101.	2.5	0
47	Sticky sand. Nature Materials, 2008, 7, 174-175.	27.5	68
48	Fast decay of the velocity autocorrelation function in dense shear flow of inelastic hard spheres. Europhysics Letters, 2008, 84, 64003.	2.0	20
49	Introduction: Fifth Annual Gallery of Nonlinear Images (New Orleans, Louisiana, 2008). Chaos, 2008, 18, .	2.5	0
50	Swarming and Swirling in Self-Propelled Polar Granular Rods. Physical Review Letters, 2008, 100, 058001.	7.8	319
51	Erosion of a granular bed driven by laminar fluid flow. Journal of Fluid Mechanics, 2008, 605, 47-58.	3.4	58
52	Channel erosion due to subsurface flow. Chaos, 2008, 18, 041105.	2.5	3
53	Curvature Condensation and Bifurcation in an Elastic Shell. Physical Review Letters, 2007, 98, 014301.	7.8	28
54	Lubrication effects on the flow of wet granular materials. Physical Review E, 2007, 76, 031302.	2.1	30

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55	Introduction: Fourth Annual Gallery of Nonlinear Images (Denver, Colorado, 2007). Chaos, 2007, 17, 041101.	2.5	0
56	Velocity Correlations in Dense Granular Flows Observed with Internal Imaging. Physical Review Letters, 2007, 98, 238001.	7.8	53
57	Erosive dynamics of channels incised by subsurface water flow. Journal of Geophysical Research, 2007, 112, .	3.3	54
58	Friction of a slider on a granular layer: Nonmonotonic thickness dependence and effect of boundary conditions. Physical Review E, 2006, 73, 010301.	2.1	48
59	Maximum angle of stability of a wet granular pile. Nature Physics, 2005, 1, 50-52.	16.7	128
60	Failure of a granular step. Physical Review E, 2005, 71, 051302.	2.1	50
61	Geometry of Crumpled Paper. Physical Review Letters, 2005, 94, 166107.	7.8	114
62	Velocity profile of granular flows inside silos and hoppers. Journal of Physics Condensed Matter, 2005, 17, S2533-S2548.	1.8	102
63	Anisotropy-driven dynamics in vibrated granular rods. Physical Review E, 2004, 70, 051312.	2.1	59
64	Threshold phenomena in erosion driven by subsurface flow. Journal of Geophysical Research, 2004, 109, .	3.3	88
65	Spontaneous channelization in permeable ground: theory, experiment, and observation. Journal of Fluid Mechanics, 2004, 503, 357-374.	3.4	94
66	Diffusion and Mixing in Gravity-Driven Dense Granular Flows. Physical Review Letters, 2004, 92, 174301.	7.8	105
67	Size separation in vibrated granular matter. Reports on Progress in Physics, 2004, 67, 209-247.	20.1	293
68	Periodic orbit analysis of an elastodynamic resonator using shape deformation. Europhysics Letters, 2002, 57, 341-347.	2.0	4
69	Shocks in sand flowing in a silo. Journal of Fluid Mechanics, 2002, 452, 293-301.	3.4	17
70	Swarming Ring Patterns in Bacterial Colonies Exposed to Ultraviolet Radiation. Physical Review Letters, 2001, 87, 158102.	7.8	31
71	Non-Gaussian velocity distributions in excited granular matter in the absence of clustering. Physical Review E, 2000, 62, R1489-R1492.	2.1	137
72	Extinction transition in bacterial colonies under forced convection. Physical Review E, 2000, 62, 1059-1062.	2.1	28

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73	Segregation Transitions in Wet Granular Matter. Physical Review Letters, 2000, 85, 5102-5105.	7.8	98
74	Experimental investigation of universal parametric correlators using a vibrating plate. Physical Review E, 1999, 60, R3479-R3482.	2.1	25
75	Size segregation of granular matter in silo discharges. Physical Review E, 1999, 60, 7203-7209.	2.1	95
76	Superlattice patterns in surface waves. Physica D: Nonlinear Phenomena, 1998, 123, 99-111.	2.8	162
77	Time-resolved studies of stick-slip friction in sheared granular layers. Physical Review E, 1998, 58, 2161-2171.	2.1	183
78	Friction in Granular Layers: Hysteresis and Precursors. Physical Review Letters, 1997, 79, 949-952.	7.8	208
79	Cluster Formation due to Collisions in Granular Material. Physical Review Letters, 1997, 78, 1383-1386.	7.8	222
80	Patterns and spatiotemporal chaos in parametrically forced surface waves: a systematic survey at large aspect ratio. Physica D: Nonlinear Phenomena, 1996, 97, 133-154.	2.8	176
81	Comment on â€œGaussian Orthogonal Ensemble Statistics in a Microwave Stadium Billiard with Chaotic Dynamics: Porter-Thomas Distribution and Algebraic Decay of Time Correlationsâ€• Physical Review Letters, 1996, 76, 3036-3036.	7.8	5
82	Localized spatiotemporal chaos in surface waves. Physical Review E, 1996, 54, R1052-R1055.	2.1	48
83	Spatial Correlation in Quantum Chaotic Systems with Time-Reversal Symmetry: Theory and Experiment. Physical Review Letters, 1995, 75, 2392-2395.	7.8	51
84	Experimental Studies of Chaos and Localization in Quantum Wave Functions. Physical Review Letters, 1995, 75, 822-825.	7.8	129
85	Signatures of chaos in quantum billiards: Microwave experiments. Physical Review E, 1994, 49, R11-R14.	2.1	364
86	Experiments on not â€˜â€˜hearing the shapeâ€™â€™ of drums. Physical Review Letters, 1994, 72, 2175-2178.	7.8	98
87	Alcove formation in dissolving cliffs driven by density inversion instability. Physics of Fluids, 0, , .	4.0	3