Xiaojing Zheng

List of Publications by Year
in descending order

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117 papers	2,099 citations	257450 24 h-index	315739 38 g-index
119 all docs	119 docs citations	119 times ranked	1100 citing authors

#	Article	IF	Citations
1	Turbulent/Synoptic Separation and Coherent Structures in the Atmospheric Surface Layer for a Range of Surface Roughness. Boundary-Layer Meteorology, 2022, 182, 75-93.	2.3	6
2	A mathematical conjecture associates Martian TARs with sand ripples. Open Geosciences, 2022, 14, 178-184.	1.7	0
3	Particle resolved simulation of sediment transport by a hybrid parallel approach. International Journal of Multiphase Flow, 2022, 152, 104072.	3.4	7
4	Scale-dependent inclination angle of turbulent structures in stratified atmospheric surface layers. Journal of Fluid Mechanics, 2022, 942, .	3.4	8
5	Experimental investigation of the effects of particle near-wall motions on turbulence statistics in particle-laden flows. Journal of Fluid Mechanics, 2022, 943, .	3.4	11
6	Evolution of turbulent kinetic energy during the entire sandstorm process. Atmospheric Chemistry and Physics, 2022, 22, 8787-8803.	4.9	5
7	A new beginning for Acta Mechanica Sinica. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 1-1.	3.4	6
8	Large-scale structures of wall-bounded turbulence in single- and two-phase flows: advancing understanding of the atmospheric surface layer during sandstorms. Flow, 2021, 1, .	2.6	18
9	Experimental study on the effects of particleâ€“wall interactions on VLSM in sand-laden flows. Journal of Fluid Mechanics, 2021, 914, .	3.4	15
10	A scaling improved innerâ€“outer decomposition of near-wall turbulent motions. Physics of Fluids, 2021, 33, .	4.0	14
11	Modulation of turbulence by saltating particles on erodible bed surface. Journal of Fluid Mechanics, 2021, 918, .	3.4	18
12	Study of coherent structures and heat flux transportation under different stratification stability conditions in the atmospheric surface layer. Physics of Fluids, 2021, 33, .	4.0	6
13	Characterization of Windâ€Blown Sand With Nearâ€Wall Motions and Turbulence: From Grainâ€Scale Distributions to Sediment Transport. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2021JF006234.	2.8	4
14	The effect of gravity on turbulence modulation in particle-laden horizontal open channel flow. Physics of Fluids, 2021, 33, .	4.0	10
15	Logarithmic energy profile of the streamwise velocity for wall-attached eddies along the spanwise direction in turbulent boundary layer. Physics of Fluids, 2021, 33, 105119.	4.0	3
16	An investigation of particles effects on wall-normal velocity fluctuations in sand-laden atmospheric surface layer flows. Physics of Fluids, 2021, 33, .	4.0	7
17	Differences of turbulence modulation by heavy particles on solid wall and erodible bed surface. Physics of Fluids, 2021, 33, 113305.	4.0	4
18	High-frequency observation during sand and dust storms at the Qingtu Lake Observatory. Earth System Science Data, 2021, 13, 5819-5830.	9.9	1

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19	Large eddy simulation of high-Reynolds-number atmospheric boundary layer flow with improved near-wall correction. Applied Mathematics and Mechanics (English Edition), 2020, 41, 33-50.	3.6	11
20	Wall-attached and wall-detached eddies in wall-bounded turbulent flows. Journal of Fluid Mechanics, 2020, 885, .	3.4	45
21	Large scale structures of turbulent flows in the atmospheric surface layer with and without sand. Physics of Fluids, 2020, 32, .	4.0	26
22	A comparative study on the large-scale-resolving capability of wall-modeled large-eddy simulation. Physics of Fluids, 2020, 32, .	4.0	20
23	The Influence of Surface Stress Fluctuation on Saltation Sand Transport Around Threshold. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005246.	2.8	11
24	The model of active vibration control based on giant magnetostrictive materials. Smart Materials and Structures, 2019, 28, 085028.	3.5	14
25	Threeâ€Dimensional Representation of Largeâ€Scale Structures Based on Observations in Atmospheric Surface Layers. Journal of Geophysical Research D: Atmospheres, 2019, 124, 10753-10771.	3.3	8
26	An investigation for influence of intense thermal convection events on wall turbulence in the near-neutral atmospheric surface layer. Physics of Fluids, 2019, 31, 105106.	4.0	4
27	The Scale Characteristics and Formation Mechanism of Aeolian Sand Streamers Based on Large Eddy Simulation. Journal of Geophysical Research D: Atmospheres, 2019, 124, 11372-11388.	3.3	23
28	An anisotropic magneto-mechanical model of ferromagnetic materials for the magnetic memory testing method. Journal of Applied Physics, 2019, 125, .	2.5	17
29	Gusty wind disturbances and large-scale turbulent structures in the neutral atmospheric surface layer. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	5.1	7
30	Applicability of Taylorâ€™s Hypothesis for Estimating the Mean Streamwise Length Scale of Large-Scale Structures in the Near-Neutral Atmospheric Surface Layer. Boundary-Layer Meteorology, 2019, 172, 215-237.	2.3	8
31	Amplitude modulation between multi-scale turbulent motions in high-Reynolds-number atmospheric surface layers. Journal of Fluid Mechanics, 2019, 861, 585-607.	3.4	35
32	Multiscale Computational Method for Dynamic Thermo-Mechanical Problems of Composite Structures with Diverse Periodic Configurations in Different Subdomains. Journal of Scientific Computing, 2019, 79, 1630-1666.	2.3	3
33	Large-scale coherent structures of suspended dust concentration in the neutral atmospheric surface layer: A large-eddy simulation study. Physics of Fluids, 2018, 30, .	4.0	38
34	Thermo-magneto-elastoplastic coupling model of metal magnetic memory testing method for ferromagnetic materials. Journal of Applied Physics, 2018, 123, .	2.5	47
35	Quantifying the large-scale electrification equilibrium effects in dust storms using field observations at Qingtu Lake Observatory. Atmospheric Chemistry and Physics, 2018, 18, 17087-17097.	4.9	16
36	Effect of packing fraction on dynamic characteristics of granular materials under oblique impact. Powder Technology, 2018, 339, 211-222.	4.2	3

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37	Application of High-Order Compact Difference Scheme in the Computation of Incompressible Wall-Bounded Turbulent Flows. Computation, 2018, 6, 31.	2.0	6
38	Quantitative Inversion of Stress and Crack in Ferromagnetic Materials Based on Metal Magnetic Memory Method. IEEE Transactions on Magnetics, 2018, 54, 1-11.	2.1	27
39	Energy contributions by inner and outer motions in turbulent channel flows. Physical Review Fluids, 2018, 3, .	2.5	17
40	Evaluation of the electrical properties of dust storms by multi-parameter observations and theoretical calculations. Earth and Planetary Science Letters, 2017, 461, 141-150.	4.4	20
41	An electromagnetic method for removing the communication blackout with a space vehicle upon re-entry into the atmosphere. Journal of Applied Physics, 2017, 121, .	2.5	27
42	Aerodynamic Analysis of an Airfoil With Leading Edge Pitting Erosion. Journal of Solar Energy Engineering, Transactions of the ASME, 2017, 139, .	1.8	14
43	A visoelastic constitutive model for magneto-mechanical coupling of magnetorheological elastomers. Smart Materials and Structures, 2017, 26, 115017.	3.5	7
44	On dust concentration profile above an area source in a neutral atmospheric surface layer. Environmental Fluid Mechanics, 2017, 17, 1171-1188.	1.6	3
45	Very large scale motions and PM10 concentration in a high-Re boundary layer. Physics of Fluids, 2017, 29, .	4.0	32
46	Spatial length scales of large-scale structures in atmospheric surface layers. Physical Review Fluids, 2017, 2, .	2.5	22
47	Effects of Leading Edge Defect on the Aerodynamic and Flow Characteristics of an S809 Airfoil. PLoS ONE, 2016, 11, e0163443.	2.5	9
48	A general nonlinear magnetomechanical model for ferromagnetic materials under a constant weak magnetic field. Journal of Applied Physics, 2016, 119, .	2.5	67
49	Very large scale motions in the atmospheric surfaceÂlayer: a field investigation. Journal of Fluid Mechanics, 2016, 802, 464-489.	3.4	111
50	Criticality of post-impact motions of a projectile obliquely impacting a granular medium. Powder Technology, 2016, 301, 1044-1053.	4.2	6
51	Field Observations on the Turbulent Features of the Near-surface Flow Fields and Dust Transport During Dust Storms. Procedia IUTAM, 2015, 17, 13-19.	1.2	0
52	Numerical investigation on transverse heat transfer properties in cross section of full size Nb3Sn CICC ITER conductor. AIP Advances, 2015, 5, 057124.	1.3	2
53	Effects of density ratio and diameter ratio on penetration of rotation projectile obliquely impacting a granular medium. Engineering Computations, 2015, 32, 1025-1040.	1.4	3
54	Theoretical and experimental investigations on the resonance frequency shift characteristic of a ferromagnetic plate. European Journal of Mechanics, A/Solids, 2015, 50, 112-119.	3.7	1

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55	Unsteady saltation on Mars. Icarus, 2015, 260, 161-166.	2.5	15
56	Radial and Hoop Compressive Stresses in a Long Cylindrical Superconductor with Viscous Flux Flow. Journal of Superconductivity and Novel Magnetism, 2015, 28, 2255-2258.	1.8	10
57	Multi-contact behaviors among Nb3Sn strands associated with load cycles in a CS1 cable cross section. Physica C: Superconductivity and Its Applications, 2015, 508, 56-61.	1.2	9
58	Transition region where the large-scale and very large scale motions coexist in atmospheric surface layer: wind tunnel investigation. Journal of Turbulence, 2014, 15, 172-185.	1.4	3
59	The critical frequency of the large-scale vortices and the background turbulence in desert area. Atmospheric Research, 2014, 143, 293-300.	4.1	2
60	Numerical Simulation of the Mechanical Properties of the $hbox{Nb}_{3}hbox{Sn}$ CICCs Under Transverse Cyclic Loads. IEEE Transactions on Applied Superconductivity, 2014, 24, 134-139.	1.7	4
61	Numerical modeling of wind-blown sand on Mars. European Physical Journal E, 2014, 37, 36.	1.6	12
62	Saltation transport rate in unsteady wind variations. European Physical Journal E, 2014, 37, 40.	1.6	10
63	Micromechanics of magnetostrictive composites. International Journal of Engineering Science, 2014, 81, 82-99.	5.0	24
64	Theoretical modeling of relative humidity on contact electrification of sand particles. Scientific Reports, 2014, 4, 4399.	3.3	25
65	A simple phenomenological model for characterizing the coupled effect of strain states and temperature on the normal-state electrical resistivity in Nb3Sn superconductors. Journal of Applied Physics, 2013, 114, 033905.	2.5	4
66	Investigation on very large scale motions (VLSMs) and their influence in a dust storm. Science China: Physics, Mechanics and Astronomy, 2013, 56, 306-314.	5.1	34
67	Experimental study of morphology scaling of a projectile obliquely impacting into loose granular media. Granular Matter, 2013, 15, 725-734.	2.2	7
68	Effect of surface stress on the stiffness of micro/nanocantilevers: Nanowire elastic modulus measured by nano-scale tensile and vibrational techniques. Journal of Applied Physics, 2013, 113, 013508.	2.5	17
69	Theoretical prediction of electric fields in windâ€blown sand. Journal of Geophysical Research D: Atmospheres, 2013, 118, 4494-4502.	3.3	10
70	Influence of particle rotation on the oblique penetration in granular media. Physical Review E, 2012, 86, 061304.	2.1	18
71	The resonance frequency shift characteristic of Terfenol-D rods for magnetostrictive actuators. Smart Materials and Structures, 2012, 21, 045020.	3.5	21
72	Charging efficiency improvement by structuring lithium battery electrodes. Journal of Applied Physics, 2012, 111, .	2.5	2

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73	A three-dimensional strain model for the superconducting properties of strained International Thermonuclear Experimental Reactor Nb3Sn strands. Journal of Applied Physics, 2012, 112, .	2.5	13
74	The scaling and dynamics of a projectile obliquely impacting a granular medium. European Physical Journal E, 2012, 35, 7.	1.6	18
75	The comparison between the Mie theory and the Rayleigh approximation to calculate the EM scattering by partially charged sand. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 251-258.	2.3	34
76	A nonlinear magneto-thermo-elastic coupled hysteretic constitutive model for magnetostrictive alloys. Journal of Magnetism and Magnetic Materials, 2012, 324, 1954-1961.	2.3	55
77	Simulation of the electrification of wind-blown sand. European Physical Journal E, 2012, 35, 1-8.	1.6	17
78	Evolution of windblown sand flux and dune field â€" Trans-scale modeling and simulation. Theoretical and Applied Mechanics Letters, 2011, 1, 042001.	2.8	1
79	Effects of hysteresis losses on dynamic behavior of magnetostrictive actuators. Journal of Applied Physics, 2011, 110, 093908.	2.5	14
80	MAGNETIC FORCE MODELS FOR MAGNETIZABLE ELASTIC BODIES IN THE MAGNETIC FIELD. , 2011, , 353-383.		1
81	Influence of interface energy and grain boundary on the elastic modulus of nanocrystalline materials. Acta Mechanica, 2010, 213, 223-234.	2.1	29
82	Characteristics of near-surface turbulence during a dust storm passing Minqin on March 19, 2010. Science Bulletin, 2010, 55, 3107-3112.	1.7	10
83	Modification of the elastic properties of nanostructures with surface charges in applied electric fields. European Journal of Mechanics, A/Solids, 2010, 29, 337-347.	3.7	9
84	Multiscale mechanical behaviors in discrete materials: a review. Acta Mechanica Solida Sinica, 2010, 23, 579-591.	1.9	16
85	Attenuation of an electromagnetic wave by charged dust particles in a sandstorm. Applied Optics, 2010, 49, 6756.	2.1	39
86	A Dynamic Hysteresis Constitutive Relation for Giant Magnetostrictive Materials. Mechanics of Advanced Materials and Structures, 2009, 16, 516-521.	2.6	15
87	Mechanics of Wind-blown Sand Movements. Environmental Science and Engineering, 2009, , .	0.2	107
88	Electric field effects on Young's molulus of nanowires. Acta Mechanica Solida Sinica, 2009, 22, 511-523.	1.9	6
89	DPTM simulation of aeolian sand ripple. Science in China Series G: Physics, Mechanics and Astronomy, 2008, 51, 328-336.	0.2	9
90	A probability density function of liftoff velocities in mixed-size wind sand flux. Science in China Series G: Physics, Mechanics and Astronomy, 2008, 51, 976-985.	0.2	10

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91	Saltation and suspension of wind-blown particle movement. Science in China Series G: Physics, Mechanics and Astronomy, 2008, 51, 1586-1596.	0.2	6
92	Monte Carlo simulation of the electromagnetic wave propagation in the duststorm. Science in China Series G: Physics, Mechanics and Astronomy, 2008, 51, 1001-1009.	0.2	0
93	Effects of the mid-air collision on sand saltation. Science in China Series G: Physics, Mechanics and Astronomy, 2008, 51, 1416-1426.	0.2	8
94	A threeâ€dimensional analysis on liftâ€off velocities of sand grains in windâ€blown sand flux. Earth Surface Processes and Landforms, 2008, 33, 1824-1838.	2.5	8
95	Transverse surface mechanical behavior and modified elastic modulus for charged nanostructures. Europhysics Letters, 2008, 83, 66007.	2.0	8
96	Elastic property of fcc metal nanowires via an atomic-scale analysis. Applied Physics Letters, 2008, 92, 231908.	3.3	8
97	Numerical simulations of a dust devil and the electric field in it. Journal of Geophysical Research, 2008, 113, .	3.3	17
98	Transition Cooling Height of High-Temperature Superconductor Levitation System. IEEE Transactions on Applied Superconductivity, 2007, 17, 3862-3866.	1.7	29
99	Laboratory measurement of saltating sand particles' angular velocities and simulation of its effect on saltation trajectory. Journal of Geophysical Research, 2007, 112, .	3.3	15
100	Molecular dynamics simulation of the elastic properties of metal nanowires in a transverse electric field. Nanotechnology, 2007, 18, 385703.	2.6	10
101	A one-dimension coupled hysteresis model for giant magnetostrictive materials. Journal of Magnetism and Magnetic Materials, 2007, 309, 263-271.	2.3	57
102	Experimental researches on magneto-thermo-mechanical characterization of Terfenol-D. Acta Mechanica Solida Sinica, 2007, 20, 283-288.	1.9	47
103	Probability of rebound and eject of sand particles in wind-blown sand movement. Acta Mechanica Sinica/Lixue Xuebao, 2007, 23, 471-475.	3.4	3
104	Theoretical prediction of liftoff angular velocity distributions of sand particles in windblown sand flux. Journal of Geophysical Research, 2006, 111, .	3.3	20
105	Electric field in windblown sand flux with thermal diffusion. Journal of Geophysical Research, 2006, 111, .	3.3	14
106	Numerical simulation on coupling behavior of Terfenol-D rods. International Journal of Solids and Structures, 2006, 43, 1613-1623.	2.7	44
107	Experimental analysis of sand particles' lift-off and incident velocities in wind-blown sand flux. Acta Mechanica Sinica/Lixue Xuebao, 2006, 21, 564-573.	3.4	20
108	Multi-field coupling behavior of simply-supported conductive plate under the condition of a transverse strong impulsive magnetic field. Acta Mechanica Solida Sinica, 2006, 19, 203-211.	1.9	4

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109	Optimal track seeking control of dual-stage actuator for high density hard disk drives. Acta Mechanica Solida Sinica, 2006, 19, 297-306.	1.9	0
110	Effects of charged sand on electromagnetic wave propagation and its scattering field. Science in China Series G: Physics, Mechanics and Astronomy, 2006, 49, 77-87.	0.2	9
111	Theoretical analysis of electric field effect on Youngâ€™s modulus of nanowires. Applied Physics Letters, 2006, 89, 153110.	3.3	25
112	Dynamic stability of a cantilever conductive plate in transverse impulsive magnetic field. International Journal of Solids and Structures, 2005, 42, 2417-2430.	2.7	24
113	A nonlinear constitutive model for magnetostrictive materials. Acta Mechanica Sinica/Lixue Xuebao, 2005, 21, 278-285.	3.4	86
114	Vertical profiles of mass flux for windblown sand movement at steady state. Journal of Geophysical Research, 2004, 109, .	3.3	49
115	Theoretical model of the electric field produced by charged particles in windblown sand flux. Journal of Geophysical Research, 2004, 109, .	3.3	24
116	A laboratory test of the electrification phenomenon in wind-blown sand flux. Science Bulletin, 2001, 46, 417-420.	1.7	14
117	A general expression of magnetic force for soft ferromagnetic plates in complex magnetic fields. International Journal of Engineering Science, 1997, 35, 1405-1417.	5.0	67