Ferenc Kun

List of Publications by Year
in descending order

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121 papers	3,078 citations	159585 30 h-index	182427 51 g-index
123 all docs	123 docs citations	123 times ranked	1622 citing authors

#	Article	IF	Citations
1	Approach to failure through record breaking avalanches in a heterogeneous stress field. Physica A: Statistical Mechanics and Its Applications, 2022, 594, 127015.	2.6	4
2	Transition from localized to mean field behaviour of cascading failures in the fiber bundle model on complex networks. Chaos, Solitons and Fractals, 2022, 159, 112190.	5.1	6
3	Temporal evolution of failure avalanches of the fiber bundle model on complex networks. Chaos, 2022, 32, 063121.	2.5	1
4	Evolution of anisotropic crack patterns in shrinking material layers. Soft Matter, 2021, 17, 10005-10015.	2.7	2
5	Stick-Slip Dynamics in Fiber Bundle Models with Variable Stiffness and Slip Number. Frontiers in Physics, 2021, 9, .	2.1	1
6	Curvature flows, scaling laws and the geometry of attrition under impacts. Scientific Reports, 2021, 11, 20661.	3.3	4
7	Editorial: The Fiber Bundle. Frontiers in Physics, 2021, 9, .	2.1	1
8	Platoâ€™s cube and the natural geometry of fragmentation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18178-18185.	7.1	30
9	Impact-induced transition from damage to perforation. Physical Review E, 2020, 102, 042116.	2.1	0
10	Record statistics of bursts signals the onset of acceleration towards failure. Scientific Reports, 2020, 10, 2508.	3.3	11
11	System-size-dependent avalanche statistics in the limit of high disorder. Physical Review E, 2019, 100, 053001.	2.1	8
12	Effect of disorder on the spatial structure of damage in slowly compressed porous rocks. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20170393.	3.4	7
13	Avalanche dynamics in higher-dimensional fiber bundle models. Physical Review E, 2018, 98, .	2.1	7
14	Time-dependent fracture under unloading in a fiber bundle model. Physical Review E, 2018, 98, 023004.	2.1	1
15	Effect of disorder on shrinkage-induced fragmentation of a thin brittle layer. Physical Review E, 2017, 96, 033006.	2.1	13
16	Size scaling of failure strength with fat-tailed disorder in a fiber bundle model. Physical Review E, 2017, 96, 033001.	2.1	12
17	Crackling Noise in Digital and Real Rocksâ€“Implications for Forecasting Catastrophic Failure in Porous Granular Media. Understanding Complex Systems, 2017, , 77-97.	0.6	1
18	Mass-velocity correlation in impact induced fragmentation of heterogeneous solids. Granular Matter, 2016, 18, 1.	2.2	2

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19	Blending stiffness and strength disorder can stabilize fracture. Physical Review E, 2016, 93, 033002.	2.1	1
20	Record-breaking events during the compressive failure of porous materials. Physical Review E, 2016, 93, 033006.	2.1	11
21	Fragmentation and shear band formation by slow compression of brittle porous media. Physical Review E, 2016, 94, 053003.	2.1	12
22	Fracture process of a fiber bundle with strong disorder. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 073211.	2.3	15
23	Universality of fragment shapes. Scientific Reports, 2015, 5, 9147.	3.3	79
24	Fractal frontiers of bursts and cracks in a fiber bundle model of creep rupture. Physical Review E, 2015, 92, 062402.	2.1	4
25	Kinetic Monte Carlo algorithm for thermally induced breakdown of fiber bundles. Physical Review E, 2015, 91, 033305.	2.1	8
26	Statistical features of magnetic noise in mixed-type impact fracture. Applied Physics Letters, 2015, 106, 064102.	3.3	3
27	Record breaking bursts in a fiber bundle model of creep rupture. Frontiers in Physics, 2014, 2, .	2.1	10
28	From fracture to fragmentation: Discrete element modeling. European Physical Journal: Special Topics, 2014, 223, 2369-2382.	2.6	15
29	Emergence of energy dependence in the fragmentation of heterogeneous materials. Physical Review E, 2014, 90, 062811.	2.1	12
30	Rupture Cascades in a Discrete Element Model of a Porous Sedimentary Rock. Physical Review Letters, 2014, 112, 065501.	7.8	62
31	Temporal and Spacial Evolution of Bursts in Creep Rupture. Physical Review Letters, 2013, 111, 084302.	7.8	23
32	Approach to failure in porous granular materials under compression. Physical Review E, 2013, 88, 062207.	2.1	55
33	Creep rupture due to thermally induced cracking. Materials Research Society Symposia Proceedings, 2013, 1535, 5701.	0.1	0
34	Brittle-to-ductile transition in a fiber bundle with strong heterogeneity. Physical Review E, 2013, 87, 042816.	2.1	20
35	Time evolution of damage due to environmentally assisted aging in a fiber bundle model. Physical Review E, 2013, 88, 032802.	2.1	12
36	Creep rupture as a non-homogeneous Poissonian process. Scientific Reports, 2013, 3, 2688.	3.3	10

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37	Damage growth in fibre bundle models with localized load sharing and environmentally-assisted ageing. Journal of Physics: Conference Series, 2013, 410, 012064.	0.4	3
38	Time evolution of damage in thermally induced creep rupture. Europhysics Letters, 2012, 97, 26006.	2.0	7
39	Competition of strength and stress disorder in creep rupture. Physical Review E, 2012, 85, 016116.	2.1	26
40	Scaling laws for impact fragmentation of spherical solids. Physical Review E, 2012, 86, 016113.	2.1	44
41	Percolation-induced conductor-insulator transition in a system of metal spheres in a dielectric fluid. Physical Review E, 2011, 83, 041405.	2.1	4
42	Size distribution and waiting times for the avalanches of the Cell Network Model of Fracture. Computer Physics Communications, 2011, 182, 1824-1827.	7.5	0
43	Disorder-induced brittleâ€“toâ€“quasi-brittle transition in fiber bundles. Europhysics Letters, 2011, 95, 16004.	2.0	12
44	Effect of disorder on temporal fluctuations in drying-induced cracking. Physical Review E, 2011, 84, 041114.	2.1	4
45	Attraction-driven aggregation of dipolar particles in an external magnetic field. Physical Review E, 2011, 83, 061504.	2.1	14
46	Competition of information channels in the spreading of innovations. Physical Review E, 2011, 84, 026111.	2.1	13
47	Crackling noise in three-point bending of heterogeneous materials. Physical Review E, 2011, 83, 046115.	2.1	7
48	Microstructure of damage in thermally activated fracture of Lennard-Jones systems. Physical Review E, 2011, 83, 066108.	2.1	7
49	Fibre bundle models for creep rupture analysis of polymer matrix composites. , 2011, , 327-349.		1
50	The Effect of Disorder on Crackling Noise in Fracture Phenomena. Progress of Theoretical Physics Supplement, 2010, 184, 385-399.	0.1	2
51	Slip avalanches in a fiber bundle model. Europhysics Letters, 2010, 89, 26008.	2.0	14
52	New Universality Class for the Fragmentation of Plastic Materials. Physical Review Letters, 2010, 104, 095502.	7.8	67
53	KertÃ©sz line of thermally activated breakdown phenomena. Physical Review E, 2010, 82, 055102.	2.1	12
54	Fiber bundle model with stick-slip dynamics. Physical Review E, 2009, 80, 027102.	2.1	21

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55	Avalanche dynamics of fiber bundle models. Physical Review E, 2009, 80, 051108.	2.1	40
56	Cluster-cluster aggregation of Ising dipolar particles under thermal noise. Physical Review E, 2009, 80, 021402.	2.1	3
57	Crackling noise in sub-critical fracture of heterogeneous materials. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P01021.	2.3	18
58	111 Lifetime and burst size in thermally activated breakdown. The Proceedings of the Computational Mechanics Conference, 2009, 2009.22, 384-385.	0.0	0
59	Mechanisms in impact fragmentation. International Journal of Fracture, 2008, 154, 105-117.	2.2	60
60	Fragmentation processes in impact of spheres. Physical Review E, 2008, 77, 051302.	2.1	107
61	Damage process of a fiber bundle with a strain gradient. Physical Review E, 2008, 77, 016608.	2.1	7
62	Universality class of fiber bundles with strong heterogeneities. Europhysics Letters, 2008, 81, 54005.	2.0	27
63	The effect of network topologies on the spreading of technological developments. Journal of Statistical Mechanics: Theory and Experiment, 2008, 2008, P10014.	2.3	21
64	Size Scaling and Bursting Activity in Thermally Activated Breakdown of Fiber Bundles. Physical Review Letters, 2008, 101, 145502.	7.8	19
65	Thermodynamics of a binary monolayer of Ising dipolar particles. II. Effect of relative moment. Physical Review E, 2008, 78, 041118.	2.1	0
66	Continuous damage fiber bundle model for strongly disordered materials. Physical Review E, 2008, 77, 046102.	2.1	24
67	Universality behind Basquinâ€™s Law of Fatigue. Physical Review Letters, 2008, 100, 094301.	7.8	131
68	Critical ruptures in a bundle of slowly relaxing fibers. Physical Review E, 2008, 77, 036102.	2.1	20
69	Molecular crystalline states in dipolar monolayers. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P11014-P11014.	2.3	0
70	Fatigue failure of disordered materials. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P02003-P02003.	2.3	31
71	Thermodynamics of a binary monolayer of Ising dipolar particles. Physical Review E, 2007, 76, 051116.	2.1	4
72	Structure and kinetics of heteroaggregation in binary dipolar monolayers. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P09015-P09015.	2.3	3

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73	Computer simulation of fatigue under diametrical compression. Physical Review E, 2007, 75, 046115.	2.1	25
74	Fibre Models. AIP Conference Proceedings, 2007, , .	0.4	0
75	Cellular automata for the spreading of technologies in socio-economic systems. Physica A: Statistical Mechanics and Its Applications, 2007, 383, 660-670.	2.6	11
76	Local load sharing fiber bundles with a lower cutoff of strength disorder. Physical Review E, 2006, 74, 035104.	2.1	45
77	Pattern formation in binary colloids. Philosophical Magazine, 2006, 86, 2011-2031.	1.6	7
78	Fragmentation. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 59-66.	2.6	24
79	Extension of fibre bundle models for creep rupture and interface failure. International Journal of Fracture, 2006, 140, 255-265.	2.2	24
80	Study on the fragmentation of shells. International Journal of Fracture, 2006, 140, 243-254.	2.2	3
81	Scaling Behavior of Fragment Shapes. Physical Review Letters, 2006, 96, 025504.	7.8	32
82	Failure process of a bundle of plastic fibers. Physical Review E, 2006, 73, 066101.	2.1	43
83	A Stochastic Interface Model for the Fracture of Bars. , 2006, , 517-518.		0
84	Slow relaxation of fiber composites, variable range of interaction approach. Physica A: Statistical Mechanics and Its Applications, 2005, 347, 402-410.	2.6	10
85	Fragmentation of a circular disc by impact on a frictionless plate. Journal of Physics Condensed Matter, 2005, 17, S2439-S2456.	1.8	35
86	Breakup of shells under explosion and impact. Physical Review E, 2005, 71, 016108.	2.1	31
87	Structure formation in a binary monolayer of dipolar particles. Physical Review E, 2005, 71, 051405.	2.1	22
88	Attraction-limited cluster-cluster aggregation of Ising dipolar particles. Physical Review E, 2005, 72, 061403.	2.1	12
89	Simple beam model for the shear failure of interfaces. Physical Review E, 2005, 72, 046126.	2.1	16
90	Structure of Magnetic Noise in Dynamic Fracture. Physical Review Letters, 2004, 93, 227204.	7.8	21

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91	Structure formation in binary colloids. Physical Review E, 2004, 69, 030501.	2.1	25
92	Fragmentation of Shells. Physical Review Letters, 2004, 93, 035504.	7.8	90
93	Restructuring of Force Networks. , 2004, , 327-340.		0
94	Size dependency of tension strength in natural fiber composites. Physica A: Statistical Mechanics and Its Applications, 2003, 325, 547-560.	2.6	30
95	A study of transverse ply cracking using a discrete element method. Computational Materials Science, 2003, 28, 608-619.	3.0	23
96	Discrete element simulation of transverse cracking during the pyrolysis of carbon fibre reinforced plastics to carbon/carbon composites. Computational Materials Science, 2003, 28, 1-15.	3.0	27
97	Time evolution of damage under variable ranges of load transfer. Physical Review E, 2003, 68, 026116.	2.1	21
98	Scaling laws of creep rupture of fiber bundles. Physical Review E, 2003, 67, 061802.	2.1	34
99	Creep rupture has two universality classes. Europhysics Letters, 2003, 63, 347-353.	2.0	48
100	Creep rupture of viscoelastic fiber bundles. Physical Review E, 2002, 65, 032502.	2.1	54
101	Evolution of Percolating Force Chains in Compressed Granular Media. Physical Review Letters, 2002, 89, 205501.	7.8	71
102	Fracture model with variable range of interaction. Physical Review E, 2002, 65, 046148.	2.1	119
103	On the application of a discrete model to the fracture process of cohesive granular materials. Granular Matter, 2002, 4, 77-90.	2.2	152
104	Restructuring of force networks. European Physical Journal E, 2002, 9, 261-264.	1.6	3
105	From solids to granulates - Discrete element simulations of fracture and fragmentation processes in geomaterials. Lecture Notes in Physics, 2001, , 231-258.	0.7	33
106	Bursts in a fiber bundle model with continuous damage. Physical Review E, 2001, 64, 066122.	2.1	72
107	Breakup of dipolar rings under a perpendicular magnetic field. Physical Review E, 2001, 64, 061503.	2.1	41
108	Break-up of dipolar rings under an external magnetic field. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 277, 287-293.	2.1	10

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109	Damage development under gradual loading of composites. Journal of Materials Science, 2000, 35, 4685-4693.	3.7	16
110	Damage in fiber bundle models. European Physical Journal B, 2000, 17, 269-279.	1.5	122
111	Aggregation kinetics and stability of structures formed by magnetic microspheres. Physical Review E, 1999, 59, R4758-R4761.	2.1	80
112	Transition from damage to fragmentation in collision of solids. Physical Review E, 1999, 59, 2623-2632.	2.1	167
113	Simulating fractal pattern formation in metal-oil electrorheological fluids. Physical Review E, 1998, 57, 3216-3220.	2.1	7
114	Internal anisotropy of collision cascades. Physical Review E, 1997, 56, 2019-2024.	2.1	0
115	Fractal dimension of collision cascades. Physical Review E, 1997, 55, 1508-1513.	2.1	9
116	A study of fragmentation processes using a discrete element method. Computer Methods in Applied Mechanics and Engineering, 1996, 138, 3-18.	6.6	132
117	FRAGMENTATION OF COLLIDING DISCS. International Journal of Modern Physics C, 1996, 07, 837-855.	1.7	34
118	Multifractality and multiscaling in collision cascades. Physical Review E, 1994, 50, 2639-2645.	2.1	10
119	Temporal and Spatial Evolution of Bursts in a Fiber Bundle Model of Creep Rupture. Key Engineering Materials, 0, 592-593, 773-776.	0.4	0
120	Mass-Velocity Correlation in Impact Fragmentation. Key Engineering Materials, 0, 592-593, 141-144.	0.4	0
121	Transition from Straight to Fractal Cracks due to Projectile Penetration. Key Engineering Materials, 0, 592-593, 765-768.	0.4	0