Lou Kondic

List of Publications by Year
in descending order

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155 papers	3,780 citations	134610 34 h-index	175968 55 g-index
157 all docs	157 docs citations	157 times ranked	2710 citing authors

#	Article	IF	Citations
1	Understanding slow compression and decompression of frictionless soft granular matter by network analysis. Soft Matter, 2022, 18, 1868-1884.	1.2	7
2	On intermittency in sheared granular systems. Soft Matter, 2022, 18, 3583-3593.	1.2	3
3	Universal features of the stick-slip dynamics of an intruder moving through a confined granular medium. Physical Review E, 2022, 105, L042902.	0.8	2
4	A Graphical Representation of Membrane Filtration. SIAM Journal on Applied Mathematics, 2022, 82, 950-975.	0.8	3
5	Network-based membrane filters: Influence of network and pore size variability on filtration performance. Journal of Membrane Science, 2022, 657, 120668.	4.1	3
6	Influence of thermal effects on the breakup of thin films of nanometric thickness. Physical Review Fluids, 2022, 7, .	1.0	2
7	Filtration with Multiple Species of Particles. Transport in Porous Media, 2022, 144, 401-427.	1.2	1
8	Correlating the force network evolution and dynamics in slider experiments. EPJ Web of Conferences, 2021, 249, 02007.	0.1	2
9	Simultaneous Decomposition and Dewetting of Nanoscale Alloys: A Comparison of Experiment and Theory. Langmuir, 2021, 37, 2575-2585.	1.6	8
10	The Role of Phase Separation on Rayleigh-Plateau Type Instabilities in Alloys. Journal of Physical Chemistry C, 2021, 125, 5723-5731.	1.5	4
11	Quantitative measure of memory loss in complex spatiotemporal systems. Chaos, 2021, 31, 033126.	1.0	2
12	How Frost Forms and Grows on Lubricated Micro- and Nanostructured Surfaces. ACS Nano, 2021, 15, 4658-4668.	7.3	23
13	Dielectrowetting of a thin nematic liquid crystal layer. Physical Review E, 2021, 103, 032702.	0.8	3
14	On efficient asymptotic modelling of thin films on thermally conductive substrates. Journal of Fluid Mechanics, 2021, 915, .	1.4	3
15	Thin liquid films in a funnel. Journal of Fluid Mechanics, 2021, 924, .	1.4	5
16	Instabilities of nematic liquid crystal films. Current Opinion in Colloid and Interface Science, 2021, 55, 101478.	3.4	2
17	Two Approaches to Quantification of Force Networks in Particulate Systems. Journal of Engineering Mechanics - ASCE, 2021, 147, 04021100.	1.6	2
18	Frost spreading and pattern formation on microstructured surfaces. Physical Review E, 2021, 104, 044901.	0.8	8

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19	Role of diffusion in crystallization of hard-sphere colloids. Physical Review E, 2021, 104, 054607.	0.8	2
20	Liquid-State Dewetting of Pulsed-Laser-Heated Nanoscale Metal Films and Other Geometries. Annual Review of Fluid Mechanics, 2020, 52, 235-262.	10.8	42
21	Effects of spatially-varying substrate anchoring on instabilities and dewetting of thin nematic liquid crystal films. Soft Matter, 2020, 16, 10187-10197.	1.2	3
22	Failure of confined granular media due to pullout of an intruder: from force networks to a system wide response. Soft Matter, 2020, 16, 7685-7695.	1.2	5
23	On the influence of pore connectivity on performance of membrane filters. Journal of Fluid Mechanics, 2020, 902, .	1.4	11
24	Intruder in a two-dimensional granular system: Effects of dynamic and static basal friction on stick-slip and clogging dynamics. Physical Review E, 2020, 101, 012909.	0.8	14
25	Interaction network analysis in shear thickening suspensions. Physical Review Fluids, 2020, 5, .	1.0	32
26	Modeling and design optimization for pleated membrane filters. Physical Review Fluids, 2020, 5, .	1.0	15
27	Surface, Interface, and Temperature Effects on the Phase Separation and Nanoparticle Self Assembly of Bi-Metallic Ni0.5Ag0.5: A Molecular Dynamics Study. Nanomaterials, 2019, 9, 1040.	1.9	7
28	Energy propagation through dense granular systems. Granular Matter, 2019, 21, 1.	1.1	1
29	Dynamics of a grain-scale intruder in a two-dimensional granular medium with and without basal friction. Physical Review E, 2019, 100, 032905.	0.8	14
30	Thin viscoelastic dewetting films of Jeffreys type subjected to gravity and substrate interactions. European Physical Journal E, 2019, 42, 12.	0.7	5
31	Oscillatory thermocapillary instability of a film heated by a thick substrate. Journal of Fluid Mechanics, 2019, 872, 928-962.	1.4	8
32	Computing dynamics of thin films via large scale GPU-based simulations. Journal of Computational Physics: X, 2019, 2, 100001.	1.1	4
33	Stability of thin fluid films characterised by a complex form of effective disjoining pressure. Journal of Fluid Mechanics, 2018, 841, 925-961.	1.4	11
34	Characterizing granular networks using topological metrics. Physical Review E, 2018, 97, 042903.	0.8	15
35	Granular response to impact: Topology of the force networks. Physical Review E, 2018, 97, 012906.	0.8	25
36	Influence of thermal effects on stability of nanoscale films and filaments on thermally conductive substrates. Physics of Fluids, 2018, 30, .	1.6	10

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37	Director gliding in a nematic liquid crystal layer: Quantitative comparison with experiments. Physical Review E, 2018, 97, 032704.	0.8	1
38	Direct numerical simulation of variable surface tension flows using a Volume-of-Fluid method. Journal of Computational Physics, 2018, 352, 615-636.	1.9	29
39	Energy dissipation in sheared wet granular assemblies. Physical Review E, 2018, 98, .	0.8	7
40	Self-assembly of a drop pattern from a two-dimensional grid of nanometric metallic filaments. Physical Review E, 2018, 98, .	0.8	3
41	Effects of flexoelectricity and weak anchoring on a Freedericksz transition cell. Physical Review E, 2017, 95, 012701.	0.8	5
42	Substrate melting during laser heating of nanoscale metal films. International Journal of Heat and Mass Transfer, 2017, 113, 237-245.	2.5	14
43	Exploiting the Marangoni Effect To Initiate Instabilities and Direct the Assembly of Liquid Metal Filaments. Langmuir, 2017, 33, 8123-8128.	1.6	12
44	Evolution of force networks in dense granular matter close to jamming. EPJ Web of Conferences, 2017, 140, 15014.	0.1	4
45	A numerical approach for the direct computation of flows including fluid-solid interaction: Modeling contact angle, film rupture, and dewetting. Physics of Fluids, 2016, 28, .	1.6	18
46	Interfacial dynamics of thin viscoelastic films and drops. Journal of Non-Newtonian Fluid Mechanics, 2016, 237, 26-38.	1.0	13
47	Scaling properties of force networks for compressed particulate systems. Physical Review E, 2016, 93, 042903.	0.8	13
48	Structure of force networks in tapped particulate systems of disks and pentagons. I. Clusters and loops. Physical Review E, 2016, 93, 062902.	0.8	26
49	Steady flow dynamics during granular impact. Physical Review E, 2016, 93, 050901.	0.8	24
50	Structure of force networks in tapped particulate systems of disks and pentagons. II. Persistence analysis. Physical Review E, 2016, 93, 062903.	0.8	19
51	Instability of nanometric fluid films on a thermally conductive substrate. Physical Review Fluids, 2016, 1, .	1.0	9
52	Three-dimensional coating flow of nematic liquid crystal on an inclined substrate. European Journal of Applied Mathematics, 2015, 26, 647-669.	1.4	5
53	Percolation and jamming transitions in particulate systems with and without cohesion. Physical Review E, 2015, 92, 032204.	0.8	6
54	Substrate-induced gliding in a nematic liquid crystal layer. Physical Review E, 2015, 92, 062513.	0.8	3

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55	Fully nonlinear dynamics of stochastic thin-film dewetting. Physical Review E, 2015, 92, 061002.	0.8	22
56	On the influence of initial geometry on the evolution of fluid filaments. Physics of Fluids, 2015, 27, .	1.6	10
57	Capillary focusing close to a topographic step: shape and instability of confined liquid filaments. Microfluidics and Nanofluidics, 2015, 18, 911-917.	1.0	8
58	Modeling flow of nematic liquid crystal down an incline. Journal of Engineering Mathematics, 2015, 94, 97-113.	0.6	10
59	Granular Impact. , 2015, , 319-351.		1
60	A volume of fluid method for simulating fluid/fluid interfaces in contact with solid boundaries. Journal of Computational Physics, 2015, 294, 243-257.	1.9	36
61	Instabilities of nanoscale patterned metal films. European Physical Journal: Special Topics, 2015, 224, 369-378.	1.2	3
62	Dynamics of thin fluid films controlled by thermal fluctuations. European Physical Journal: Special Topics, 2015, 224, 379-387.	1.2	12
63	Transitions in Poiseuille flow of nematic liquid crystal. International Journal of Non-Linear Mechanics, 2015, 75, 15-21.	1.4	19
64	Nonlinear Force Propagation During Granular Impact. Physical Review Letters, 2015, 114, 144502.	2.9	85
65	Dense granular flow â€" A collaborative study. Powder Technology, 2015, 284, 571-584.	2.1	32
66	Instability of Nano- and Microscale Liquid Metal Filaments: Transition from Single Droplet Collapse to Multidroplet Breakup. Langmuir, 2015, 31, 13609-13617.	1.6	15
67	On the dewetting of liquefied metal nanostructures. Journal of Engineering Mathematics, 2015, 94, 5-18.	0.6	3
68	Interfacial instability of thin ferrofluid films under a magnetic field. Journal of Fluid Mechanics, 2014, 755, .	1.4	22
69	Simulations of two dimensional hopper flow. Granular Matter, 2014, 16, 235-242.	1.1	35
70	Evolution of force networks in dense particulate media. Physical Review E, 2014, 90, 052203.	0.8	35
71	Electric-field variations within a nematic-liquid-crystal layer. Physical Review E, 2014, 90, 012503.	0.8	5
72	Hierarchical Nanoparticle Ensembles Synthesized by Liquid Phase Directed Self-Assembly. Nano Letters, 2014, 14, 774-782.	4.5	40

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73	Directed Liquid Phase Assembly of Highly Ordered Metallic Nanoparticle Arrays. ACS Applied Materials & Interfaces, 2014, 6, 5835-5843.	4.0	35
74	Quantifying force networks in particulate systems. Physica D: Nonlinear Phenomena, 2014, 283, 37-55.	1.3	48
75	Note on the hydrodynamic description of thin nematic films: Strong anchoring model. Physics of Fluids, 2013, 25, .	1.6	21
76	Bifurcation properties of nematic liquid crystals exposed to an electric field: Switchability, bistability, and multistability. Physical Review E, 2013, 88, 012509.	0.8	5
77	Numerical Simulation of Ejected Molten Metal Nanoparticles Liquified by Laser Irradiation: Interplay of Geometry and Dewetting. Physical Review Letters, 2013, 111, 034501.	2.9	33
78	Instability of Liquid Cu Films on a SiO₂ Substrate. Langmuir, 2013, 29, 9378-9387.	1.6	36
79	Modelling spreading dynamics of nematic liquid crystals in three spatial dimensions. Journal of Fluid Mechanics, 2013, 729, 214-230.	1.4	22
80	Towards an optimal model for a bistable nematic liquid crystal display device. Journal of Engineering Mathematics, 2013, 80, 21-38.	0.6	7
81	Stability of a liquid ring on a substrate. Journal of Fluid Mechanics, 2013, 718, 246-279.	1.4	19
82	Persistence of force networks in compressed granular media. Physical Review E, 2013, 87, 042207.	0.8	80
83	Directed Assembly of One- and Two-Dimensional Nanoparticle Arrays from Pulsed Laser Induced Dewetting of Square Waveforms. ACS Applied Materials & Interfaces, 2013, 5, 4450-4456.	4.0	26
84	Comparison of Navier-Stokes simulations with long-wave theory: Study of wetting and dewetting. Physics of Fluids, 2013, 25, 112103.	1.6	18
85	Granular impact dynamics: Fluctuations at short time-scales. , 2013, , .		3
86	Thin films flowing down inverted substrates: Three-dimensional flow. Physics of Fluids, 2012, 24, 022105.	1.6	46
87	Instability of a transverse liquid rivulet on an inclined plane. Physics of Fluids, 2012, 24, .	1.6	22
88	Particle Scale Dynamics in Granular Impact. Physical Review Letters, 2012, 109, 238302.	2.9	146
89	Defect modeling in spreading nematic droplets. Physical Review E, 2012, 85, 012702.	0.8	4
90	Competition between Collapse and Breakup in Nanometer-Sized Thin Rings Using Molecular Dynamics and Continuum Modeling. Langmuir, 2012, 28, 13960-13967.	1.6	25

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91	Parallel assembly of particles and wires on substrates by dictating instability evolution in liquid metal films. Nanoscale, 2012, 4, 7376.	2.8	16
92	Microstructure evolution during impact on granular matter. Physical Review E, 2012, 85, 011305.	0.8	63
93	Topology of force networks in compressed granular media. Europhysics Letters, 2012, 97, 54001.	0.7	73
94	On evaporation of sessile drops with moving contact lines. Journal of Fluid Mechanics, 2011, 679, 219-246.	1.4	95
95	Competing Liquid Phase Instabilities during Pulsed Laser Induced Self-Assembly of Copper Rings into Ordered Nanoparticle Arrays on SiO₂. Langmuir, 2011, 27, 13314-13323.	1.6	47
96	Evolution of droplets of perfectly wetting liquid under the influence of thermocapillary forces. Physical Review E, 2011, 83, 046302.	0.8	10
97	Self-Assembly versus Directed Assembly of Nanoparticles via Pulsed Laser Induced Dewetting of Patterned Metal Films. Nano Letters, 2011, 11, 2478-2485.	4.5	144
98	Modeling and simulations of the spreading and destabilization of nematic droplets. Physics of Fluids, 2011, 23, .	1.6	15
99	Thin films flowing down inverted substrates: Two dimensional flow. Physics of Fluids, 2010, 22, .	1.6	40
100	Temporal Dynamics in Density Relaxation. , 2010, , .		2
101	On the Breakup of Patterned Nanoscale Copper Rings into Droplets via Pulsed-Laser-Induced Dewetting: Competing Liquid-Phase Instability and Transport Mechanisms. Langmuir, 2010, 26, 11972-11979.	1.6	71
102	Microstructure evolution in density relaxation by tapping. Physical Review E, 2010, 81, 061301.	0.8	25
103	10.1063/1.3428753.1. , 2010, , .		1
104	Nanoparticle assembly via the dewetting of patterned thin metal lines: Understanding the instability mechanisms. Physical Review E, 2009, 79, 026302.	0.8	79
105	Probing dense granular materials by space-time dependent perturbations. Physical Review E, 2009, 79, 041304.	0.8	4
106	On the breakup of fluid rivulets. Physics of Fluids, 2009, 21, .	1.6	62
107	Energy Transport Through Dense Granular Matter. , 2009, , .		0
108	Density Relaxation of Granular Matter through Monte Carlo Simulations. , 2009, , .		0

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109	Stability of a finite-length rivulet under partial wetting conditions. Journal of Physics: Conference Series, 2009, 166, 012009.	0.3	6
110	On modeling evaporation. Annali Dell'Universita Di Ferrara, 2008, 54, 277-286.	0.7	1
111	Modeling evaporation of sessile drops with moving contact lines. Physical Review E, 2008, 78, 065301.	0.8	33
112	Instabilities and Taylor dispersion in isothermal binary thin fluid films. Physics of Fluids, 2008, 20, 102103.	1.6	0
113	On the breakup of fluid films of finite and infinite extent. Physics of Fluids, 2007, 19, .	1.6	74
114	Stability study of a constant-volume thin film flow. Physical Review E, 2007, 76, 046308.	0.8	16
115	Breakup of finite fluid films. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1090601-1090602.	0.2	0
116	Octopusâ€shaped instabilities of evaporating drops. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2100039-2100040.	0.2	0
117	Signal propagation through dense granular systems. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1090607-1090608.	0.2	0
118	On velocity profiles and stresses in sheared and vibrated granular systems under variable gravity. Physics of Fluids, 2006, 18, 121509.	1.6	13
119	Long-wave linear stability theory for two-fluid channel flow including compressibility effects. IMA Journal of Applied Mathematics, 2006, 71, 715-739.	0.8	5
120	Dynamic Structure Formation at the Fronts of Volatile Liquid Drops. Physical Review Letters, 2006, 97, 186101.	2.9	42
121	Unstable spreading of a fluid filament on a vertical plane: Experiments and simulations. Physica D: Nonlinear Phenomena, 2005, 209, 49-61.	1.3	7
122	On nontrivial traveling waves in thin film flows including contact lines. Physica D: Nonlinear Phenomena, 2005, 209, 135-144.	1.3	9
123	On undercompressive shocks in constrained two-layer flows. Physica D: Nonlinear Phenomena, 2005, 209, 245-259.	1.3	4
124	Velocity profiles, stresses, and Bagnold scaling of sheared granular system in zero gravity. Physics of Fluids, 2005, 17, 073304.	1.6	12
125	Velocity Profiles in Repulsive Athermal Systems under Shear. Physical Review Letters, 2005, 94, 016001.	2.9	26
126	Stabilization of nonlinear velocity profiles in athermal systems undergoing planar shear flow. Physical Review E, 2005, 72, 041504.	0.8	15

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127	On undercompressive shocks and flooding in countercurrent two-layer flows. Journal of Fluid Mechanics, 2005, 532, 217-242.	1.4	23
128	Elastic energy, fluctuations and temperature for granular materials. Europhysics Letters, 2004, 67, 205-211.	0.7	22
129	Spreading of a thin two-dimensional strip of fluid on a vertical plane: Experiments and modeling. Physical Review E, 2004, 70, 026309.	0.8	21
130	Instabilities in the flow of thin films on heterogeneous surfaces. Physics of Fluids, 2004, 16, 3341-3360.	1.6	16
131	Flow of thin films on patterned surfaces. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2003, 214, 1-11.	2.3	14
132	Instabilities in Gravity Driven Flow of Thin Fluid Films. SIAM Review, 2003, 45, 95-115.	4.2	90
133	Segregation by friction. Europhysics Letters, 2003, 61, 742-748.	0.7	23
134	Flow of thin films on patterned surfaces: Controlling the instability. Physical Review E, 2002, 65, 045301.	0.8	31
135	Granular friction, Coulomb failure, and the fluid-solid transition for horizontally shaken granular materials. Physical Review E, 2002, 65, 031302.	0.8	51
136	Computing Three-Dimensional Thin Film Flows Including Contact Lines. Journal of Computational Physics, 2002, 183, 274-306.	1.9	98
137	Pattern formation in non-Newtonian Heleâ€“Shaw flow. Physics of Fluids, 2001, 13, 1191-1212.	1.6	77
138	Pattern formation in the flow of thin films down an incline: Constant flux configuration. Physics of Fluids, 2001, 13, 3168-3184.	1.6	88
139	Contact Line Instabilities of Thin Liquid Films. Physical Review Letters, 2001, 86, 632-635.	2.9	69
140	Instabilities In The Flow Of Thin Liquid Films. Fluid Mechanics and Its Applications, 2001, , 161-168.	0.1	0
141	Dependence of single-bubble sonoluminescence on ambient pressure. Ultrasonics, 2000, 38, 566-569.	2.1	14
142	Friction and Flow in Granular Materials. Materials Research Society Symposia Proceedings, 2000, 627, 1.	0.1	0
143	Global models for moving contact lines. Physical Review E, 2000, 63, 011208.	0.8	88
144	Onset of flow in a horizontally vibrated granular bed: Convection by horizontal shearing. Europhysics Letters, 1999, 45, 470-475.	0.7	41

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145	Dynamics of spherical particles on a surface: Collision-induced sliding and other effects. Physical Review E, 1999, 60, 751-770.	0.8	63
146	Ambient Pressure Effect on Single-Bubble Sonoluminescence. Physical Review Letters, 1999, 83, 1870-1873.	2.9	26
147	Predictability and granular materials. Physica D: Nonlinear Phenomena, 1999, 133, 1-17.	1.3	69
148	Nonlinear dynamics and transient growth of driven contact lines. Physics of Fluids, 1999, 11, 3560-3562.	1.6	22
149	Ambient pressure and single-bubble sonoluminescence. Physical Review E, 1998, 57, R32-R35.	0.8	30
150	Non-Newtonian Hele-Shaw Flow and the Saffman-Taylor Instability. Physical Review Letters, 1998, 80, 1433-1436.	2.9	134
151	About Computations of Hele-Shaw Flow of Non-Newtonian Fluids. Materials Research Society Symposia Proceedings, 1998, 543, 207.	0.1	0
152	Thin Liquid Films: Instabilities of Driven Coating Flows on a Rough Surface. Materials Research Society Symposia Proceedings, 1998, 543, 213.	0.1	1
153	Friction Based Segregation Of 2D Granular Assembly. Materials Research Society Symposia Proceedings, 1998, 543, 357.	0.1	1
154	Models of non-Newtonian Hele-Shaw flow. Physical Review E, 1996, 54, R4536-R4539.	0.8	86
155	Theoretical studies of sonoluminescence radiation: Radiative transfer and parametric dependence. Physical Review E, 1995, 52, 4976-4990.	0.8	65