Emily S C Ching

List of Publications by Year
in descending order

94 papers	2,295 citations	257450 24 h-index	243625 44 g-index
99 all docs	99 docs citations	99 times ranked	1156 citing authors

#	Article	IF	Citations
1	Heterogeneous Responses to Changes in Inhibitory Synaptic Strength in Networks of Spiking Neurons. Frontiers in Cellular Neuroscience, 2022, 16, 785207.	3.7	1
2	Revealing directed effective connectivity of cortical neuronal networks from measurements. Physical Review E, 2022, 105, 044406.	2.1	4
3	Heat flux in turbulent Rayleigh-BÃ©nard convection: Predictions derived from a boundary layer theory. Physical Review Fluids, 2021, 6, .	2.5	7
4	Velocity and thermal boundary layer equations for turbulent Rayleigh-BÃ©nard convection. Physical Review Research, 2019, 1, .	3.6	18
5	Reconstructing networks from dynamics with correlated noise. Physica A: Statistical Mechanics and Its Applications, 2018, 502, 106-122.	2.6	17
6	Polymers in Fluid Flows. Annual Review of Condensed Matter Physics, 2018, 9, 163-181.	14.5	74
7	Effects of hidden nodes on the reconstruction of bidirectional networks. Physical Review E, 2018, 98, .	2.1	13
8	Reconstructing links in directed networks from noisy dynamics. Physical Review E, 2017, 95, 010301.	2.1	47
9	Fluctuating Thermal Boundary Layers and Heat Transfer in Turbulent Rayleighâ€"BÃ©nard Convection. Journal of Statistical Physics, 2017, 167, 626-635.	1.2	10
10	Mean temperature profiles in turbulent thermal convection. Physical Review Fluids, 2017, 2, .	2.5	21
11	Turbulent Rayleigh-BÃ©nard convection with polymers: Understanding how heat flux is modified. Physical Review E, 2016, 94, 063110.	2.1	8
12	Heat transport modification by finitely extensible polymers in laminar boundaryÂlayerÂflow. Journal of Fluid Mechanics, 2016, 788, 337-357.	3.4	15
13	Reconstructing weighted networks from dynamics. Physical Review E, 2015, 91, 030801.	2.1	41
14	Thermal Boundary Layer Equation for Turbulent Rayleighâ€"BÃ©nard Convection. Physical Review Letters, 2015, 114, 114302.	7.8	72
15	Polymer-induced change in scaling behavior in two-dimensional homogeneous turbulent thermal convection. Physical Review E, 2014, 89, 053001.	2.1	3
16	Observed Scaling Behavior. SpringerBriefs in Applied Sciences and Technology, 2014, , 51-59.	0.4	0
17	Phenomenology and Scaling Theories. SpringerBriefs in Applied Sciences and Technology, 2014, , 37-50.	0.4	0
18	Scaling behavior in turbulent Rayleigh-BÃ©nard convection revealed by conditional structure functions. Physical Review E, 2013, 87, 013005.	2.1	12

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19	Extracting connectivity from dynamics of networks with uniform bidirectional coupling. Physical Review E, 2013, 88, 042817.	2.1	37
20	Heat transport by laminar boundary layer flow with polymers. Journal of Fluid Mechanics, 2012, 696, 330-344.	3.4	23
21	Locally averaged thermal dissipation rate in turbulent thermal convection: A decomposition into contributions from different temperature gradient components. Physics of Fluids, 2011, 23, .	4.0	22
22	Studying anomalous scaling and heat transport of turbulent thermal convection using a dynamical model. Physica D: Nonlinear Phenomena, 2010, 239, 1346-1352.	2.8	5
23	Effect of Polymer Additives on Heat Transport in Turbulent Thermal Convection. Physical Review Letters, 2010, 104, 024502.	7.8	40
24	Effects of particle-size ratio on jamming of binary mixtures at zero temperature. Soft Matter, 2010, 6, 2944.	2.7	35
25	Statistics of the locally averaged thermal dissipation rate in turbulent Rayleighâ€"BÃ©nard convection. Journal of Turbulence, 2010, 11, N35.	1.4	10
26	Relations between material mechanical parameters and interparticle potential in amorphous solids. Physical Review B, 2009, 79, .	3.2	6
27	Understanding the different scaling behavior in various shell models proposed for turbulent thermal convection. Physica D: Nonlinear Phenomena, 2008, 237, 2009-2014.	2.8	10
28	Ultimate-state scaling in a shell model for homogeneous turbulent convection. Physical Review E, 2008, 78, 036309.	2.1	12
29	Anomalous scaling and refined similarity of an active scalar in a shell model of homogeneous turbulent convection. Physical Review E, 2008, 77, 015303.	2.1	22
30	Comparison of theory and direct numerical simulations of drag reduction by rodlike polymers in turbulent channel flows. Physical Review E, 2008, 77, 046309.	2.1	16
31	Refined similarity hypotheses in shell models of homogeneous turbulence and turbulent convection. Physical Review E, 2008, 78, 026303.	2.1	13
32	EFFECTS OF A LARGE-SCALE MEAN FLOW IN A SHELL MODEL OF TURBULENT CONVECTION. International Journal of Modern Physics B, 2007, 21, 4178-4183.	2.0	1
33	Scaling laws in the central region of confined turbulent thermal convection. Physical Review E, 2007, 75, 056302.	2.1	12
34	Multifractality and scale invariance in human heartbeat dynamics. Physical Review E, 2007, 76, 041910.	2.1	18
35	Aspect-ratio dependence of heat transport by turbulent Rayleighâ€"BÃ©nard convection. Journal of Turbulence, 2006, 7, N72.	1.4	13
36	Turbulent drag reduction by flexible and rodlike polymers: Crossover effects at small concentrations. Physical Review E, 2006, 74, 026301.	2.1	4

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37	Additive equivalence in turbulent drag reduction by flexible and rodlike polymers. Physical Review E, 2005, 72, 016305.	2.1	18
38	Drag reduction in homogeneous turbulence by scale-dependent effective viscosity. Physical Review E, 2004, 70, 026304.	2.1	10
39	Extraction of Plumes in Turbulent Thermal Convection. Physical Review Letters, 2004, 93, 124501.	7.8	39
40	Hierarchical structure in healthy and diseased human heart rate variability. Physical Review E, 2004, 69, 051919.	2.1	6
41	Theory of Concentration Dependence in Drag Reduction by Polymers and of the Maximum Drag Reduction Asymptote. Physical Review Letters, 2004, 92, 078302.	7.8	29
42	Velocity and temperature cross-scaling in turbulent thermal convection. Journal of Turbulence, 2004, 5, .	1.4	12
43	Intermittency and scaling in turbulent convection. Acta Mechanica Sinica/Lixue Xuebao, 2003, 19, 385-393.	3.4	3
44	Active and passive fields in turbulent transport: The role of statistically preserved structures. Physical Review E, 2003, 67, 016304.	2.1	17
45	Intermittency of velocity fluctuations in turbulent thermal convection. Physical Review E, 2003, 68, 026307.	2.1	14
46	EXTENDED SELF-SIMILARITY AND THE MOST INTENSE VELOCITY STRUCTURES IN TURBULENT RAYLEIGHâ€“BÃ‰NARD CONVECTION. Modern Physics Letters B, 2003, 17, 131-139.	1.9	1
47	EXTENDED SELF-SIMILARITY AND THE MOST INTENSE VELOCITY STRUCTURES IN TURBULENT RAYLEIGH-BÃ‰NARD CONVECTION. , 2003, , .		0
48	Extended self-similarity and hierarchical structure in turbulence. Physical Review E, 2002, 65, 066303.	2.1	13
49	Statistically preserved structures and anomalous scaling in turbulent active scalar advection. Europhysics Letters, 2002, 60, 369-375.	2.0	7
50	Dependence of heat transport on the strength and shear rate of prescribed circulating flows. European Physical Journal B, 2002, 27, 559-564.	1.5	4
51	Regular and chaotic streamlines of two vortex rings. Fluid Dynamics Research, 2001, 29, 295-311.	1.3	2
52	Classification of Multiscaling in Fracture and Fragmentation. Journal of Statistical Physics, 2001, 104, 49-57.	1.2	2
53	Heat transport by fluid flows with prescribed velocity fields. Physical Review E, 2001, 64, 046302.	2.1	4
54	Conditional statistics of temperature fluctuations in turbulent convection. Physical Review E, 2001, 63, 047303.	2.1	12

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55	Multifractality of mass distribution in fragmentation. Physica A: Statistical Mechanics and Its Applications, 2000, 288, 402-408.	2.6	6
56	Energy dependence of impact fragmentation of long glass rods. Physica A: Statistical Mechanics and Its Applications, 2000, 287, 83-90.	2.6	29
57	A discussion about scale invariants for tensor functions. Acta Mechanica Sinica/Lixue Xuebao, 2000, 16, 35-40.	3.4	1
58	Two vortex rings produce chaos. Europhysics Letters, 2000, 52, 399-405.	2.0	4
59	Statistics of local temperature dissipation in high Rayleigh number convection. Physical Review E, 2000, 62, R7587-R7590.	2.1	15
60	Intermittency of temperature field in turbulent convection. Physical Review E, 2000, 61, R33-R36.	2.1	26
61	Characterization of stationary distributions using conditional expectations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 255, 11-16.	2.1	8
62	Energy dependence of mass distributions in fragmentation. Physica A: Statistical Mechanics and Its Applications, 1999, 265, 119-128.	2.6	18
63	Intermittency of a passive scalar advected by a quasifrozen velocity field. Physics of Fluids, 1999, 11, 2263-2268.	4.0	1
64	Exact Results for Conditional Means of a Passive Scalar in Certain Statistically Homogeneous Flows. Journal of Statistical Physics, 1998, 93, 787-795.	1.2	8
65	Quasinormal-mode expansion for waves in open systems. Reviews of Modern Physics, 1998, 70, 1545-1554.	45.6	219
66	Effects of a large-scale mean circulating flow on passive scalar statistics in a model of random advection. Physical Review E, 1998, 58, 1948-1954.	2.1	6
67	Mode-III Fracture Propagation in a Two-Dimensional Continuum Model with Frictional Dissipation. Materials Research Society Symposia Proceedings, 1998, 539, 75.	0.1	0
68	Refined Similarity Hypothesis for a Randomly Advected Passive Scalar. Physical Review Letters, 1997, 79, 3644-3647.	7.8	9
69	Heat flux and shear rate in turbulent convection. Physical Review E, 1997, 55, 1189-1192.	2.1	19
70	Passive scalar conditional statistics in a model of random advection. Physics of Fluids, 1997, 9, 1353-1361.	4.0	14
71	Dynamic Instabilities in Fracture. Physical Review Letters, 1996, 76, 1087-1090.	7.8	38
72	Linear stability analysis for propagating fracture. Physical Review E, 1996, 53, 2864-2880.	2.1	21

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73	Wave propagation in gravitational systems: Completeness of quasinormal modes. Physical Review D, 1996, 54, 3778-3791.	4.7	34
74	General formula for stationary or statistically homogeneous probability density functions. Physical Review E, 1996, 53, 5899-5903.	2.1	23
75	Conditional statistics in scalar turbulence: Theory versus experiment. Physical Review E, 1996, 54, 6364-6371.	2.1	14
76	Fusion rules and conditional statistics in turbulent advection. Physical Review E, 1996, 54, R4520-R4523.	2.1	13
77	Model study of fracture propagation â€" solutions of steady-state propagation and their stability. Physica A: Statistical Mechanics and Its Applications, 1995, 221, 134-142.	2.6	4
78	Dynamic stability of one-dimensional models of fracture. Physical Review E, 1995, 52, 4414-4420.	2.1	13
79	Quasinormal Mode Expansion for Linearized Waves in Gravitational Systems. Physical Review Letters, 1995, 74, 4588-4591.	7.8	40
80	Late-Time Tail of Wave Propagation on Curved Spacetime. Physical Review Letters, 1995, 74, 2414-2417.	7.8	109
81	Wave propagation in gravitational systems: Late time behavior. Physical Review D, 1995, 52, 2118-2132.	4.7	177
82	Passive scalar fluctuations with and without a mean gradient: A numerical study. Physical Review E, 1994, 49, 1278-1282.	2.1	23
83	Dynamic stresses at a moving crack tip in a model of fracture propagation. Physical Review E, 1994, 49, 3382-3388.	2.1	35
84	The break-up of a heteroclinic connection in a volume preserving mapping. Physica D: Nonlinear Phenomena, 1993, 62, 51-65.	2.8	10
85	Probability densities of turbulent temperature fluctuations. Physical Review Letters, 1993, 70, 283-286.	7.8	50
86	Stationary probability density functions: An exact result. Physics of Fluids A, Fluid Dynamics, 1993, 5, 1529-1531.	1.6	67
87	Microphase Separation of Grafted Copolymers on Curved Substrates: Layering Preempts Rippling. Europhysics Letters, 1992, 19, 687-692.	2.0	2
88	Beyond all orders: Singular perturbations in a mapping. Journal of Nonlinear Science, 1992, 2, 9-67.	2.1	24
89	Turbulent convection in helium gas. Physica D: Nonlinear Phenomena, 1992, 58, 414-422.	2.8	3
90	Transitions in convective turbulence: The role of thermal plumes. Physical Review A, 1991, 44, 8091-8102.	2.5	53

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91	Probabilities for temperature differences in Rayleigh-BÃ©nard convection. Physical Review A, 1991, 44, 3622-3629.	2.5	59
92	Spontaneous Brillouin scattering in a microdroplet. Physical Review A, 1990, 41, 5026-5038.	2.5	10
93	Dielectric microspheres as optical cavities: thermal spectrum and density of states. Journal of the Optical Society of America B: Optical Physics, 1987, 4, 1995.	2.1	113
94	Dielectric microspheres as optical cavities: Einstein A and B coefficients and level shift. Journal of the Optical Society of America B: Optical Physics, 1987, 4, 2004.	2.1	102