

Jens Eggers

List of Publications by Year in descending order

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108
papers

11,689
citations

66315

42
h-index

30058

103
g-index

110
all docs

110
docs citations

110
times ranked

7484
citing authors

#	ARTICLE	IF	CITATIONS
1	Wetting and spreading. <i>Reviews of Modern Physics</i> , 2009, 81, 739-805.	16.4	2,278
2	Nonlinear dynamics and breakup of free-surface flows. <i>Reviews of Modern Physics</i> , 1997, 69, 865-930.	16.4	1,543
3	Physics of liquid jets. <i>Reports on Progress in Physics</i> , 2008, 71, 036601.	8.1	1,384
4	Coalescence of liquid drops. <i>Journal of Fluid Mechanics</i> , 1999, 401, 293-310.	1.4	554
5	Universal pinching of 3D axisymmetric free-surface flow. <i>Physical Review Letters</i> , 1993, 71, 3458-3460.	2.9	510
6	Drop formation in a one-dimensional approximation of the Navier–Stokes equation. <i>Journal of Fluid Mechanics</i> , 1994, 262, 205-221.	1.4	456
7	Drop dynamics after impact on a solid wall: Theory and simulations. <i>Physics of Fluids</i> , 2010, 22, .	1.6	326
8	The beads-on-string structure of viscoelastic threads. <i>Journal of Fluid Mechanics</i> , 2006, 556, 283.	1.4	222
9	Inviscid coalescence of drops. <i>Journal of Fluid Mechanics</i> , 2003, 487, 167-178.	1.4	213
10	Vibration-Induced Climbing of Drops. <i>Physical Review Letters</i> , 2007, 99, 144501.	2.9	162
11	Theory of drop formation. <i>Physics of Fluids</i> , 1995, 7, 941-953.	1.6	151
12	Two Fluid Drop Snap-Off Problem: Experiments and Theory. <i>Physical Review Letters</i> , 1999, 83, 1147-1150.	2.9	148
13	Dynamics of Liquid Nanojets. <i>Physical Review Letters</i> , 2002, 89, 084502.	2.9	134
14	Hydrodynamic Theory of Forced Dewetting. <i>Physical Review Letters</i> , 2004, 93, 094502.	2.9	134
15	Droplet Detachment and Satellite Bead Formation in Viscoelastic Fluids. <i>Physical Review Letters</i> , 2005, 95, 164504.	2.9	121
16	Breakdown of scaling in droplet fission at high Reynolds number. <i>Physics of Fluids</i> , 1997, 9, 1573-1590.	1.6	120
17	Characteristic lengths at moving contact lines for a perfectly wetting fluid: the influence of speed on the dynamic contact angle. <i>Journal of Fluid Mechanics</i> , 2004, 505, 309-321.	1.4	119
18	The role of self-similarity in singularities of partial differential equations. <i>Nonlinearity</i> , 2009, 22, R1-R44.	0.6	118

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19	Wavelength selection in the crown splash. <i>Physics of Fluids</i> , 2010, 22, .	1.6	118
20	Evaporation of water: evaporation rate and collective effects. <i>Journal of Fluid Mechanics</i> , 2016, 798, 774-786.	1.4	117
21	Identification of structure in condensed matter with the topological cluster classification. <i>Journal of Chemical Physics</i> , 2013, 139, 234506.	1.2	112
22	Identification of long-lived clusters and their link to slow dynamics in a model glass former. <i>Journal of Chemical Physics</i> , 2013, 138, 12A535.	1.2	106
23	Blistering Pattern and Formation of Nanofibers in Capillary Thinning of Polymer Solutions. <i>Physical Review Letters</i> , 2008, 100, 164502.	2.9	105
24	Existence of receding and advancing contact lines. <i>Physics of Fluids</i> , 2005, 17, 082106.	1.6	102
25	Theory of the Collapsing Axisymmetric Cavity. <i>Physical Review Letters</i> , 2007, 98, 094502.	2.9	99
26	The final stages of capillary break-up of polymer solutions. <i>Physics of Fluids</i> , 2012, 24, .	1.6	96
27	Thick Films of Viscous Fluid Coating a Plate Withdrawn from a Liquid Reservoir. <i>Physical Review Letters</i> , 2008, 100, 244502.	2.9	91
28	Air Entrainment through Free-Surface Cusps. <i>Physical Review Letters</i> , 2001, 86, 4290-4293.	2.9	81
29	Nonlocal description of evaporating drops. <i>Physics of Fluids</i> , 2010, 22, .	1.6	75
30	Coalescence of Spheres by Surface Diffusion. <i>Physical Review Letters</i> , 1998, 80, 2634-2637.	2.9	71
31	Drop formation - an overview. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 2005, 85, 400-410.	0.9	70
32	Motion of a drop driven by substrate vibrations. <i>European Physical Journal: Special Topics</i> , 2009, 166, 11-14.	1.2	64
33	Drop Formation in Non-Newtonian Fluids. <i>Physical Review Letters</i> , 2013, 110, 034501.	2.9	62
34	Bubble Bursting: Universal Cavity and Jet Profiles. <i>Physical Review Letters</i> , 2018, 121, 144501.	2.9	60
35	Drop Formation by Thermal Fluctuations at an Ultralow Surface Tension. <i>Physical Review Letters</i> , 2006, 97, 244502.	2.9	57
36	Cornered drops and rivulets. <i>Physics of Fluids</i> , 2007, 19, 042104.	1.6	57

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37	Lifetimes and lengthscales of structural motifs in a model glassformer. Faraday Discussions, 2013, 167, 405.	1.6	57
38	Toward a description of contact line motion at higher capillary numbers. Physics of Fluids, 2004, 16, 3491-3494.	1.6	53
39	Air Entrainment by a Viscous Jet Plunging into a Bath. Physical Review Letters, 2004, 93, 254501.	2.9	49
40	Similarity theory of lubricated Hertzian contacts. Physics of Fluids, 2013, 25, .	1.6	48
41	Contact line motion for partially wetting fluids. Physical Review E, 2005, 72, 061605.	0.8	47
42	Sink Flow Deforms the Interface Between a Viscous Liquid and Air into a Tip Singularity. Physical Review Letters, 2006, 96, 034501.	2.9	46
43	Asymptotic analysis of the dewetting rim. Physical Review E, 2010, 82, 056314.	0.8	42
44	Probing Colloidal Gels at Multiple Length Scales: The Role of Hydrodynamics. Physical Review Letters, 2015, 114, 258302.	2.9	42
45	Viscous Effects on Inertial Drop Formation. Physical Review Letters, 2018, 121, 254501.	2.9	41
46	Singularity theory of plane curves and its applications. European Journal of Mechanics, B/Fluids, 2017, 65, 107-131.	1.2	39
47	Geometric frustration in small colloidal clusters. Journal of Physics Condensed Matter, 2009, 21, 425103.	0.7	36
48	Theory of the forced wetting transition. Physics of Fluids, 2012, 24, .	1.6	35
49	Self-similar breakup of polymeric threads as described by the Oldroyd-B model. Journal of Fluid Mechanics, 2020, 887, .	1.4	35
50	Comment on "Dynamic wetting by liquids of different viscosity," by T.D. Blake and Y.D. Shikhmurzaev. Journal of Colloid and Interface Science, 2004, 280, 537-538.	5.0	33
51	Delayed Capillary Breakup of Falling Viscous Jets. Physical Review Letters, 2013, 110, 144501.	2.9	33
52	Instability of a polymeric thread. Physics of Fluids, 2014, 26, .	1.6	33
53	Axisymmetric simulation of viscoelastic filament thinning with the Oldroyd-B model. Journal of Fluid Mechanics, 2018, 851, .	1.4	33
54	Active Suspensions have Nonmonotonic Flow Curves and Multiple Mechanical Equilibria. Physical Review Letters, 2018, 121, 018001.	2.9	31

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55	The relationship between viscoelasticity and elasticity. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200419.	1.0	31
56	Solvability condition for the moving contact line. Physical Review E, 2008, 78, 056304.	0.8	30
57	Film transitions of receding contact lines. European Physical Journal: Special Topics, 2009, 166, 177-180.	1.2	28
58	Self-similarity in the breakup of very dilute viscoelastic solutions. Journal of Fluid Mechanics, 2020, 904, .	1.4	28
59	The Explicitâ€œImplicitâ€œNull method: Removing the numerical instability of PDEs. Journal of Computational Physics, 2014, 263, 37-52.	1.9	27
60	Investigating isomorphs with the topological cluster classification. Journal of Chemical Physics, 2013, 139, 234505.	1.2	26
61	Pair creation, motion, and annihilation of topological defects in two-dimensional nematic liquid crystals. Physical Review E, 2018, 97, 022704.	0.8	25
62	Numerical analysis of tips in viscous flow. Physical Review E, 2009, 79, 066311.	0.8	23
63	The effect of inter-cluster interactions on the structure of colloidal clusters. Journal of Non-Crystalline Solids, 2011, 357, 760-766.	1.5	21
64	Spreading dynamics and contact angle of completely wetting volatile drops. Journal of Fluid Mechanics, 2018, 844, 817-830.	1.4	21
65	General Mechanism for the Meandering Instability of Rivulets of Newtonian Fluids. Physical Review Letters, 2011, 106, 184501.	2.9	19
66	Isolated inertialess drops cannot break up. Journal of Fluid Mechanics, 2005, 530, 177-180.	1.4	18
67	Arrested Bubble Rise in a Narrow Tube. Journal of Statistical Physics, 2017, 167, 656-682.	0.5	18
68	Tractionless Self-Propulsion of Active Drops. Physical Review Letters, 2019, 123, 248006.	2.9	18
69	Stability and tip streaming of a surfactant-loaded drop in an extensional flow. Influence of surface viscosity. Journal of Fluid Mechanics, 2022, 934, .	1.4	17
70	Cusp-Shaped Elastic Creases and Furrows. Physical Review Letters, 2017, 119, 198001.	2.9	15
71	Coxâ€œVoinov theory with slip. Journal of Fluid Mechanics, 2020, 900, .	1.4	15
72	The subtle dynamics of liquid sheets. Journal of Fluid Mechanics, 2011, 672, 1-4.	1.4	13

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73	Post-breakup solutions of Navier-Stokes and Stokes threads. <i>Physics of Fluids</i> , 2014, 26, .	1.6	13
74	Shock formation in the dispersionless Kadomtsevâ€“Petviashvili equation. <i>Nonlinearity</i> , 2016, 29, 1384-1416.	0.6	12
75	Dynamic drying transition via free-surface cusps. <i>Journal of Fluid Mechanics</i> , 2019, 858, 760-786.	1.4	12
76	Influence of the surface viscous stress on the pinch-off of free surfaces loaded with nearly-inviscid surfactants. <i>Scientific Reports</i> , 2020, 10, 16065.	1.6	12
77	How many ways a cell can move: the modes of self-propulsion of an active drop. <i>Soft Matter</i> , 2020, 16, 3106-3124.	1.2	12
78	Local structure of liquidâ€“vapour interfaces. <i>Molecular Physics</i> , 2011, 109, 1393-1402.	0.8	10
79	Stability of a viscous pinching thread. <i>Physics of Fluids</i> , 2012, 24, 072103.	1.6	10
80	Spatial structure of shock formation. <i>Journal of Fluid Mechanics</i> , 2017, 820, 208-231.	1.4	10
81	Time-dependent motion of a confined bubble in a tube: transition between two steady states. <i>Journal of Fluid Mechanics</i> , 2018, 857, .	1.4	10
82	Fluid interfaces with very sharp tips in viscous flow. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 32238-32243.	3.3	10
83	A Brief History of Drop Formation. , 2006, , 163-172.		9
84	Oil-in-water microfluidics on the colloidal scale: new routes to self-assembly and glassy packings. <i>Soft Matter</i> , 2017, 13, 788-794.	1.2	9
85	Role of singularities in hydrodynamics. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	9
86	Dripping of a crystal. <i>Physical Review E</i> , 2007, 75, 041606.	0.8	8
87	Flow separation from a stationary meniscus. <i>Journal of Fluid Mechanics</i> , 2009, 633, 137-145.	1.4	7
88	The Spatial Structure of Bubble Pinch-Off. <i>SIAM Journal on Applied Mathematics</i> , 2011, 71, 1696-1716.	0.8	7
89	Opposed flow focusing: evidence of a second order jetting transition. <i>Soft Matter</i> , 2018, 14, 8344-8351.	1.2	7
90	Elastic Rayleighâ€“Plateau instability: dynamical selection of nonlinear states. <i>Soft Matter</i> , 2021, 17, 5148-5161.	1.2	7

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91	Coupling the large and the small. <i>Nature Physics</i> , 2007, 3, 145-146.	6.5	6
92	Comment on "Force Balance at the Transition from Selective Withdrawal to Viscous Entrainment". <i>Physical Review Letters</i> , 2010, 105, 089401; author reply 089402.	2.9	6
93	Thermal rupture of a free liquid sheet. <i>Journal of Fluid Mechanics</i> , 2018, 840, 555-578.	1.4	6
94	Theory of bubble tips in strong viscous flows. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	4
95	Balancing a cylinder on a thin vertical layer of viscous fluid. <i>Physical Review E</i> , 2013, 87, 065001.	0.8	3
96	Exact results for sheared polar active suspensions with variable liquid crystalline order. <i>Journal of Chemical Physics</i> , 2019, 150, 104902.	1.2	3
97	Motion of a tightly fitting axisymmetric object through a lubricated elastic tube. <i>Journal of Fluid Mechanics</i> , 2021, 926, .	1.4	3
98	Stability of similarity solutions of viscous thread pinch-off. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	3
99	Free streamline flows with singularities. <i>Journal of Fluid Mechanics</i> , 2010, 647, 187-200.	1.4	2
100	Curvature Regularization near Contacts with Stretched Elastic Tubes. <i>Physical Review Letters</i> , 2019, 123, 168002.	2.9	2
101	Regular and complex singularities of the generalized thin film equation in two dimensions. <i>Journal of Fluid Mechanics</i> , 2021, 917, .	1.4	2
102	Breakup and Coalescence of Free Surface Flows. , 2005, , 1403-1416.		2
103	Global stability analysis of flexible channel flow with a hyperelastic wall. <i>Journal of Fluid Mechanics</i> , 2022, 934, .	1.4	2
104	Nonlinear spontaneous symmetry breaking in active polar films. <i>Europhysics Letters</i> , 2016, 115, 28002.	0.7	1
105	Selection of singular solutions in non-local transport equations. <i>Nonlinearity</i> , 2020, 33, 325-340.	0.6	1
106	Getting the drops in. <i>Nature Physics</i> , 2014, 10, 548-549.	6.5	0
107	10.1063/1.3684750.1. , 2012, , .		0
108	Breakup and Coalescence of Free Surface Flows. , 2005, , 1403-1416.		0