

# 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	Stability and tip streaming of a surfactant-loaded drop in an extensional flow. Influence of surface viscosity. <i>Journal of Fluid Mechanics</i> , 2022, 934, .	1.4	17
2	Global stability analysis of flexible channel flow with a hyperelastic wall. <i>Journal of Fluid Mechanics</i> , 2022, 934, .	1.4	2
3	Regular and complex singularities of the generalized thin film equation in two dimensions. <i>Journal of Fluid Mechanics</i> , 2021, 917, .	1.4	2
4	Theory of bubble tips in strong viscous flows. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	4
5	Motion of a tightly fitting axisymmetric object through a lubricated elastic tube. <i>Journal of Fluid Mechanics</i> , 2021, 926, .	1.4	3
6	Elastic Rayleigh–Plateau instability: dynamical selection of nonlinear states. <i>Soft Matter</i> , 2021, 17, 5148-5161.	1.2	7
7	Stability of similarity solutions of viscous thread pinch-off. <i>Physical Review Fluids</i> , 2021, 6, .	1.0	3
8	Self-similarity in the breakup of very dilute viscoelastic solutions. <i>Journal of Fluid Mechanics</i> , 2020, 904, .	1.4	28
9	Cox–Voinov theory with slip. <i>Journal of Fluid Mechanics</i> , 2020, 900, .	1.4	15
10	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
11	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
12	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
13	Selection of singular solutions in non-local transport equations. <i>Nonlinearity</i> , 2020, 33, 325-340.	0.6	1
14	Self-similar breakup of polymeric threads as described by the Oldroyd-B model. <i>Journal of Fluid Mechanics</i> , 2020, 887, .	1.4	35
15	The relationship between viscoelasticity and elasticity. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20200419.	1.0	31
16	Curvature Regularization near Contacts with Stretched Elastic Tubes. <i>Physical Review Letters</i> , 2019, 123, 168002.	2.9	2
17	Exact results for sheared polar active suspensions with variable liquid crystalline order. <i>Journal of Chemical Physics</i> , 2019, 150, 104902.	1.2	3
18	Tractionless Self-Propulsion of Active Drops. <i>Physical Review Letters</i> , 2019, 123, 248006.	2.9	18

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19	Dynamic drying transition via free-surface cusps. <i>Journal of Fluid Mechanics</i> , 2019, 858, 760-786.	1.4	12
20	Pair creation, motion, and annihilation of topological defects in two-dimensional nematic liquid crystals. <i>Physical Review E</i> , 2018, 97, 022704.	0.8	25
21	Spreading dynamics and contact angle of completely wetting volatile drops. <i>Journal of Fluid Mechanics</i> , 2018, 844, 817-830.	1.4	21
22	Thermal rupture of a free liquid sheet. <i>Journal of Fluid Mechanics</i> , 2018, 840, 555-578.	1.4	6
23	Opposed flow focusing: evidence of a second order jetting transition. <i>Soft Matter</i> , 2018, 14, 8344-8351.	1.2	7
24	Viscous Effects on Inertial Drop Formation. <i>Physical Review Letters</i> , 2018, 121, 254501.	2.9	41
25	Bubble Bursting: Universal Cavity and Jet Profiles. <i>Physical Review Letters</i> , 2018, 121, 144501.	2.9	60
26	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
27	Active Suspensions have Nonmonotonic Flow Curves and Multiple Mechanical Equilibria. <i>Physical Review Letters</i> , 2018, 121, 018001.	2.9	31
28	Axisymmetric simulation of viscoelastic filament thinning with the Oldroyd-B model. <i>Journal of Fluid Mechanics</i> , 2018, 851, .	1.4	33
29	Role of singularities in hydrodynamics. <i>Physical Review Fluids</i> , 2018, 3, .	1.0	9
30	Spatial structure of shock formation. <i>Journal of Fluid Mechanics</i> , 2017, 820, 208-231.	1.4	10
31	Singularity theory of plane curves and its applications. <i>European Journal of Mechanics, B/Fluids</i> , 2017, 65, 107-131.	1.2	39
32	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
33	Cusp-Shaped Elastic Creases and Furrows. <i>Physical Review Letters</i> , 2017, 119, 198001.	2.9	15
34	Arrested Bubble Rise in a Narrow Tube. <i>Journal of Statistical Physics</i> , 2017, 167, 656-682.	0.5	18
35	Evaporation of water: evaporation rate and collective effects. <i>Journal of Fluid Mechanics</i> , 2016, 798, 774-786.	1.4	117
36	Nonlinear spontaneous symmetry breaking in active polar films. <i>Europhysics Letters</i> , 2016, 115, 28002.	0.7	1

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37	Shock formation in the dispersionless Kadomtsevâ€“Petviashvili equation. Nonlinearity, 2016, 29, 1384-1416.	0.6	12
38	Probing Colloidal Gels at Multiple Length Scales: The Role of Hydrodynamics. Physical Review Letters, 2015, 114, 258302.	2.9	42
39	Post-breakup solutions of Navier-Stokes and Stokes threads. Physics of Fluids, 2014, 26, .	1.6	13
40	Instability of a polymeric thread. Physics of Fluids, 2014, 26, .	1.6	33
41	The Explicitâ€“Implicitâ€“Null method: Removing the numerical instability of PDEs. Journal of Computational Physics, 2014, 263, 37-52.	1.9	27
42	Getting the drops in. Nature Physics, 2014, 10, 548-549.	6.5	0
43	Lifetimes and lengthscales of structural motifs in a model glassformer. Faraday Discussions, 2013, 167, 405.	1.6	57
44	Drop Formation in Non-Newtonian Fluids. Physical Review Letters, 2013, 110, 034501.	2.9	62
45	Delayed Capillary Breakup of Falling Viscous Jets. Physical Review Letters, 2013, 110, 144501.	2.9	33
46	Identification of long-lived clusters and their link to slow dynamics in a model glass former. Journal of Chemical Physics, 2013, 138, 12A535.	1.2	106
47	Similarity theory of lubricated Hertzian contacts. Physics of Fluids, 2013, 25, .	1.6	48
48	Identification of structure in condensed matter with the topological cluster classification. Journal of Chemical Physics, 2013, 139, 234506.	1.2	112
49	Investigating isomorphs with the topological cluster classification. Journal of Chemical Physics, 2013, 139, 234505.	1.2	26
50	Balancing a cylinder on a thin vertical layer of viscous fluid. Physical Review E, 2013, 87, 065001.	0.8	3
51	The final stages of capillary break-up of polymer solutions. Physics of Fluids, 2012, 24, .	1.6	96
52	Stability of a viscous pinching thread. Physics of Fluids, 2012, 24, 072103.	1.6	10
53	Theory of the forced wetting transition. Physics of Fluids, 2012, 24, .	1.6	35
54	10.1063/1.3684750.1. , 2012, , .		0

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55	Local structure of liquid–vapour interfaces. <i>Molecular Physics</i> , 2011, 109, 1393-1402.	0.8	10
56	The Spatial Structure of Bubble Pinch-Off. <i>SIAM Journal on Applied Mathematics</i> , 2011, 71, 1696-1716.	0.8	7
57	The effect of inter-cluster interactions on the structure of colloidal clusters. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 760-766.	1.5	21
58	The subtle dynamics of liquid sheets. <i>Journal of Fluid Mechanics</i> , 2011, 672, 1-4.	1.4	13
59	General Mechanism for the Meandering Instability of Rivulets of Newtonian Fluids. <i>Physical Review Letters</i> , 2011, 106, 184501.	2.9	19
60	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
61	Wavelength selection in the crown splash. <i>Physics of Fluids</i> , 2010, 22, .	1.6	118
62	Drop dynamics after impact on a solid wall: Theory and simulations. <i>Physics of Fluids</i> , 2010, 22, .	1.6	326
63	Nonlocal description of evaporating drops. <i>Physics of Fluids</i> , 2010, 22, .	1.6	75
64	Free streamline flows with singularities. <i>Journal of Fluid Mechanics</i> , 2010, 647, 187-200.	1.4	2
65	Asymptotic analysis of the dewetting rim. <i>Physical Review E</i> , 2010, 82, 056314.	0.8	42
66	Numerical analysis of tips in viscous flow. <i>Physical Review E</i> , 2009, 79, 066311.	0.8	23
67	Geometric frustration in small colloidal clusters. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 425103.	0.7	36
68	Motion of a drop driven by substrate vibrations. <i>European Physical Journal: Special Topics</i> , 2009, 166, 11-14.	1.2	64
69	Film transitions of receding contact lines. <i>European Physical Journal: Special Topics</i> , 2009, 166, 177-180.	1.2	28
70	Wetting and spreading. <i>Reviews of Modern Physics</i> , 2009, 81, 739-805.	16.4	2,278
71	The role of self-similarity in singularities of partial differential equations. <i>Nonlinearity</i> , 2009, 22, R1-R44.	0.6	118
72	Flow separation from a stationary meniscus. <i>Journal of Fluid Mechanics</i> , 2009, 633, 137-145.	1.4	7

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73	Physics of liquid jets. Reports on Progress in Physics, 2008, 71, 036601.	8.1	1,384
74	Thick Films of Viscous Fluid Coating a Plate Withdrawn from a Liquid Reservoir. Physical Review Letters, 2008, 100, 244502.	2.9	91
75	Blistering Pattern and Formation of Nanofibers in Capillary Thinning of Polymer Solutions. Physical Review Letters, 2008, 100, 164502.	2.9	105
76	Solvability condition for the moving contact line. Physical Review E, 2008, 78, 056304.	0.8	30
77	Cornered drops and rivulets. Physics of Fluids, 2007, 19, 042104.	1.6	57
78	Dripping of a crystal. Physical Review E, 2007, 75, 041606.	0.8	8
79	Vibration-Induced Climbing of Drops. Physical Review Letters, 2007, 99, 144501.	2.9	162
80	Theory of the Collapsing Axisymmetric Cavity. Physical Review Letters, 2007, 98, 094502.	2.9	99
81	Coupling the large and the small. Nature Physics, 2007, 3, 145-146.	6.5	6
82	A Brief History of Drop Formation. , 2006, , 163-172.		9
83	The beads-on-string structure of viscoelastic threads. Journal of Fluid Mechanics, 2006, 556, 283.	1.4	222
84	Sink Flow Deforms the Interface Between a Viscous Liquid and Air into a Tip Singularity. Physical Review Letters, 2006, 96, 034501.	2.9	46
85	Drop Formation by Thermal Fluctuations at an Ultralow Surface Tension. Physical Review Letters, 2006, 97, 244502.	2.9	57
86	Drop formation - an overview. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2005, 85, 400-410.	0.9	70
87	Existence of receding and advancing contact lines. Physics of Fluids, 2005, 17, 082106.	1.6	102
88	Contact line motion for partially wetting fluids. Physical Review E, 2005, 72, 061605.	0.8	47
89	Droplet Detachment and Satellite Bead Formation in Viscoelastic Fluids. Physical Review Letters, 2005, 95, 164504.	2.9	121
90	Isolated inertialess drops cannot break up. Journal of Fluid Mechanics, 2005, 530, 177-180.	1.4	18

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91	Breakup and Coalescence of Free Surface Flows. , 2005, , 1403-1416.		2
92	Breakup and Coalescence of Free Surface Flows. , 2005, , 1403-1416.		0
93	Hydrodynamic Theory of Forced Dewetting. Physical Review Letters, 2004, 93, 094502.	2.9	134
94	Air Entrainment by a Viscous Jet Plunging into a Bath. Physical Review Letters, 2004, 93, 254501.	2.9	49
95	Toward a description of contact line motion at higher capillary numbers. Physics of Fluids, 2004, 16, 3491-3494.	1.6	53
96	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
97	Characteristic lengths at moving contact lines for a perfectly wetting fluid: the influence of speed on the dynamic contact angle. Journal of Fluid Mechanics, 2004, 505, 309-321.	1.4	119
98	Inviscid coalescence of drops. Journal of Fluid Mechanics, 2003, 487, 167-178.	1.4	213
99	Dynamics of Liquid Nanojets. Physical Review Letters, 2002, 89, 084502.	2.9	134
100	Air Entrainment through Free-Surface Cusps. Physical Review Letters, 2001, 86, 4290-4293.	2.9	81
101	Two Fluid Drop Snap-Off Problem: Experiments and Theory. Physical Review Letters, 1999, 83, 1147-1150.	2.9	148
102	Coalescence of liquid drops. Journal of Fluid Mechanics, 1999, 401, 293-310.	1.4	554
103	Coalescence of Spheres by Surface Diffusion. Physical Review Letters, 1998, 80, 2634-2637.	2.9	71
104	Breakdown of scaling in droplet fission at high Reynolds number. Physics of Fluids, 1997, 9, 1573-1590.	1.6	120
105	Nonlinear dynamics and breakup of free-surface flows. Reviews of Modern Physics, 1997, 69, 865-930.	16.4	1,543
106	Theory of drop formation. Physics of Fluids, 1995, 7, 941-953.	1.6	151
107	Drop formation in a one-dimensional approximation of the Navier-Stokes equation. Journal of Fluid Mechanics, 1994, 262, 205-221.	1.4	456
108	Universal pinching of 3D axisymmetric free-surface flow. Physical Review Letters, 1993, 71, 3458-3460.	2.9	510