# Jens Eggers

List of Publications by Year
in descending order

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|---|---|---|---|
| 108 papers | 11,689 citations | 66343 42 h-index | 30087 103 g-index |
| 110 all docs | 110 docs citations | 110 times ranked | 7484 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Wetting and spreading. Reviews of Modern Physics, 2009, 81, 739-805. | 45.6 | 2,278 |
| 2 | Nonlinear dynamics and breakup of free-surface flows. Reviews of Modern Physics, 1997, 69, 865-930. | 45.6 | 1,543 |
| 3 | Physics of liquid jets. Reports on Progress in Physics, 2008, 71, 036601. | 20.1 | 1,384 |
| 4 | Coalescence of liquid drops. Journal of Fluid Mechanics, 1999, 401, 293-310. | 3.4 | 554 |
| 5 | Universal pinching of 3D axisymmetric free-surface flow. Physical Review Letters, 1993, 71, 3458-3460. | 7.8 | 510 |
| 6 | Drop formation in a one-dimensional approximation of the Navierâ€“Stokes equation. Journal of Fluid Mechanics, 1994, 262, 205-221. | 3.4 | 456 |
| 7 | Drop dynamics after impact on a solid wall: Theory and simulations. Physics of Fluids, 2010, 22, . | 4.0 | 326 |
| 8 | The beads-on-string structure of viscoelastic threads. Journal of Fluid Mechanics, 2006, 556, 283. | 3.4 | 222 |
| 9 | Inviscid coalescence of drops. Journal of Fluid Mechanics, 2003, 487, 167-178. | 3.4 | 213 |
| 10 | Vibration-Induced Climbing of Drops. Physical Review Letters, 2007, 99, 144501. | 7.8 | 162 |
| 11 | Theory of drop formation. Physics of Fluids, 1995, 7, 941-953. | 4.0 | 151 |
| 12 | Two Fluid Drop Snap-Off Problem: Experiments and Theory. Physical Review Letters, 1999, 83, 1147-1150. | 7.8 | 148 |
| 13 | Dynamics of Liquid Nanojets. Physical Review Letters, 2002, 89, 084502. | 7.8 | 134 |
| 14 | Hydrodynamic Theory of Forced Dewetting. Physical Review Letters, 2004, 93, 094502. | 7.8 | 134 |
| 15 | Droplet Detachment and Satellite Bead Formation in Viscoelastic Fluids. Physical Review Letters, 2005, 95, 164504. | 7.8 | 121 |
| 16 | Breakdown of scaling in droplet fission at high Reynolds number. Physics of Fluids, 1997, 9, 1573-1590. | 4.0 | 120 |
| 17 | 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. | 3.4 | 119 |
| 18 | The role of self-similarity in singularities of partial differential equations. Nonlinearity, 2009, 22, R1-R44. | 1.4 | 118 |

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|---|---|---|---|
| 19 | Wavelength selection in the crown splash. Physics of Fluids, 2010, 22, . | 4.0 | 118 |
| 20 | Evaporation of water: evaporation rate and collective effects. Journal of Fluid Mechanics, 2016, 798, 774-786. | 3.4 | 117 |
| 21 | Identification of structure in condensed matter with the topological cluster classification. Journal of Chemical Physics, 2013, 139, 234506. | 3.0 | 112 |
| 22 | Identification of long-lived clusters and their link to slow dynamics in a model glass former. Journal of Chemical Physics, 2013, 138, 12A535. | 3.0 | 106 |
| 23 | Blistering Pattern and Formation of Nanofibers in Capillary Thinning of Polymer Solutions. Physical Review Letters, 2008, 100, 164502. | 7.8 | 105 |
| 24 | Existence of receding and advancing contact lines. Physics of Fluids, 2005, 17, 082106. | 4.0 | 102 |
| 25 | Theory of the Collapsing Axisymmetric Cavity. Physical Review Letters, 2007, 98, 094502. | 7.8 | 99 |
| 26 | The final stages of capillary break-up of polymer solutions. Physics of Fluids, 2012, 24, . | 4.0 | 96 |
| 27 | Thick Films of Viscous Fluid Coating a Plate Withdrawn from a Liquid Reservoir. Physical Review Letters, 2008, 100, 244502. | 7.8 | 91 |
| 28 | Air Entrainment through Free-Surface Cusps. Physical Review Letters, 2001, 86, 4290-4293. | 7.8 | 81 |
| 29 | Nonlocal description of evaporating drops. Physics of Fluids, 2010, 22, . | 4.0 | 75 |
| 30 | Coalescence of Spheres by Surface Diffusion. Physical Review Letters, 1998, 80, 2634-2637. | 7.8 | 71 |
| 31 | Drop formation - an overview. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2005, 85, 400-410. | 1.6 | 70 |
| 32 | Motion of a drop driven by substrate vibrations. European Physical Journal: Special Topics, 2009, 166, 11-14. | 2.6 | 64 |
| 33 | Drop Formation in Non-Newtonian Fluids. Physical Review Letters, 2013, 110, 034501. | 7.8 | 62 |
| 34 | Bubble Bursting: Universal Cavity and Jet Profiles. Physical Review Letters, 2018, 121, 144501. | 7.8 | 60 |
| 35 | Drop Formation by Thermal Fluctuations at an Ultralow Surface Tension. Physical Review Letters, 2006, 97, 244502. | 7.8 | 57 |
| 36 | Cornered drops and rivulets. Physics of Fluids, 2007, 19, 042104. | 4.0 | 57 |

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|---|---|---|---|
| 37 | Lifetimes and lengthscales of structural motifs in a model glassformer. Faraday Discussions, 2013, 167, 405. | 3.2 | 57 |
| 38 | Toward a description of contact line motion at higher capillary numbers. Physics of Fluids, 2004, 16, 3491-3494. | 4.0 | 53 |
| 39 | Air Entrainment by a Viscous Jet Plunging into a Bath. Physical Review Letters, 2004, 93, 254501. | 7.8 | 49 |
| 40 | Similarity theory of lubricated Hertzian contacts. Physics of Fluids, 2013, 25, . | 4.0 | 48 |
| 41 | Contact line motion for partially wetting fluids. Physical Review E, 2005, 72, 061605. | 2.1 | 47 |
| 42 | Sink Flow Deforms the Interface Between a Viscous Liquid and Air into a Tip Singularity. Physical Review Letters, 2006, 96, 034501. | 7.8 | 46 |
| 43 | Asymptotic analysis of the dewetting rim. Physical Review E, 2010, 82, 056314. | 2.1 | 42 |
| 44 | Probing Colloidal Gels at Multiple Length Scales: The Role of Hydrodynamics. Physical Review Letters, 2015, 114, 258302. | 7.8 | 42 |
| 45 | Viscous Effects on Inertial Drop Formation. Physical Review Letters, 2018, 121, 254501. | 7.8 | 41 |
| 46 | Singularity theory of plane curves and its applications. European Journal of Mechanics, B/Fluids, 2017, 65, 107-131. | 2.5 | 39 |
| 47 | Geometric frustration in small colloidal clusters. Journal of Physics Condensed Matter, 2009, 21, 425103. | 1.8 | 36 |
| 48 | Theory of the forced wetting transition. Physics of Fluids, 2012, 24, . | 4.0 | 35 |
| 49 | Self-similar breakup of polymeric threads as described by the Oldroyd-B model. Journal of Fluid Mechanics, 2020, 887, . | 3.4 | 35 |
| 50 | Comment on â€œDynamic wetting by liquids of different viscosity,â€•by T.D. Blake and Y.D. Shikhmurzaev. Journal of Colloid and Interface Science, 2004, 280, 537-538. | 9.4 | 33 |
| 51 | Delayed Capillary Breakup of Falling Viscous Jets. Physical Review Letters, 2013, 110, 144501. | 7.8 | 33 |
| 52 | Instability of a polymeric thread. Physics of Fluids, 2014, 26, . | 4.0 | 33 |
| 53 | Axisymmetric simulation of viscoelastic filament thinning with the Oldroyd-B model. Journal of Fluid Mechanics, 2018, 851, . | 3.4 | 33 |
| 54 | Active Suspensions have Nonmonotonic Flow Curves and Multiple Mechanical Equilibria. Physical Review Letters, 2018, 121, 018001. | 7.8 | 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. | 2.1 | 31 |
| 56 | Solvability condition for the moving contact line. Physical Review E, 2008, 78, 056304. | 2.1 | 30 |
| 57 | Film transitions of receding contact lines. European Physical Journal: Special Topics, 2009, 166, 177-180. | 2.6 | 28 |
| 58 | Self-similarity in the breakup of very dilute viscoelastic solutions. Journal of Fluid Mechanics, 2020, 904, . | 3.4 | 28 |
| 59 | The Explicitâ€“Implicitâ€“Null method: Removing the numerical instability of PDEs. Journal of Computational Physics, 2014, 263, 37-52. | 3.8 | 27 |
| 60 | Investigating isomorphs with the topological cluster classification. Journal of Chemical Physics, 2013, 139, 234505. | 3.0 | 26 |
| 61 | Pair creation, motion, and annihilation of topological defects in two-dimensional nematic liquid crystals. Physical Review E, 2018, 97, 022704. | 2.1 | 25 |
| 62 | Numerical analysis of tips in viscous flow. Physical Review E, 2009, 79, 066311. | 2.1 | 23 |
| 63 | The effect of inter-cluster interactions on the structure of colloidal clusters. Journal of Non-Crystalline Solids, 2011, 357, 760-766. | 3.1 | 21 |
| 64 | Spreading dynamics and contact angle of completely wetting volatile drops. Journal of Fluid Mechanics, 2018, 844, 817-830. | 3.4 | 21 |
| 65 | General Mechanism for the Meandering Instability of Rivulets of Newtonian Fluids. Physical Review Letters, 2011, 106, 184501. | 7.8 | 19 |
| 66 | Isolated inertialess drops cannot break up. Journal of Fluid Mechanics, 2005, 530, 177-180. | 3.4 | 18 |
| 67 | Arrested Bubble Rise in a Narrow Tube. Journal of Statistical Physics, 2017, 167, 656-682. | 1.2 | 18 |
| 68 | Tractionless Self-Propulsion of Active Drops. Physical Review Letters, 2019, 123, 248006. | 7.8 | 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, . | 3.4 | 17 |
| 70 | Cusp-Shaped Elastic Creases and Furrows. Physical Review Letters, 2017, 119, 198001. | 7.8 | 15 |
| 71 | Coxâ€“Voinov theory with slip. Journal of Fluid Mechanics, 2020, 900, . | 3.4 | 15 |
| 72 | The subtle dynamics of liquid sheets. Journal of Fluid Mechanics, 2011, 672, 1-4. | 3.4 | 13 |

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| 73 | Post-breakup solutions of Navier-Stokes and Stokes threads. Physics of Fluids, 2014, 26, . | 4.0 | 13 |
| 74 | Shock formation in the dispersionless Kadomtsevâ€“Petviashvili equation. Nonlinearity, 2016, 29, 1384-1416. | 1.4 | 12 |
| 75 | Dynamic drying transition via free-surface cusps. Journal of Fluid Mechanics, 2019, 858, 760-786. | 3.4 | 12 |
| 76 | Influence of the surface viscous stress on the pinch-off of free surfaces loaded with nearly-inviscid surfactants. Scientific Reports, 2020, 10, 16065. | 3.3 | 12 |
| 77 | How many ways a cell can move: the modes of self-propulsion of an active drop. Soft Matter, 2020, 16, 3106-3124. | 2.7 | 12 |
| 78 | Local structure of liquidâ€“vapour interfaces. Molecular Physics, 2011, 109, 1393-1402. | 1.7 | 10 |
| 79 | Stability of a viscous pinching thread. Physics of Fluids, 2012, 24, 072103. | 4.0 | 10 |
| 80 | Spatial structure of shock formation. Journal of Fluid Mechanics, 2017, 820, 208-231. | 3.4 | 10 |
| 81 | Time-dependent motion of a confined bubble in a tube: transition between two steady states. Journal of Fluid Mechanics, 2018, 857, . | 3.4 | 10 |
| 82 | Fluid interfaces with very sharp tips in viscous flow. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 32238-32243. | 7.1 | 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. Soft Matter, 2017, 13, 788-794. | 2.7 | 9 |
| 85 | Role of singularities in hydrodynamics. Physical Review Fluids, 2018, 3, . | 2.5 | 9 |
| 86 | Dripping of a crystal. Physical Review E, 2007, 75, 041606. | 2.1 | 8 |
| 87 | Flow separation from a stationary meniscus. Journal of Fluid Mechanics, 2009, 633, 137-145. | 3.4 | 7 |
| 88 | The Spatial Structure of Bubble Pinch-Off. SIAM Journal on Applied Mathematics, 2011, 71, 1696-1716. | 1.8 | 7 |
| 89 | Opposed flow focusing: evidence of a second order jetting transition. Soft Matter, 2018, 14, 8344-8351. | 2.7 | 7 |
| 90 | Elastic Rayleighâ€“Plateau instability: dynamical selection of nonlinear states. Soft Matter, 2021, 17, 5148-5161. | 2.7 | 7 |

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| 91 | Coupling the large and the small. Nature Physics, 2007, 3, 145-146. | 16.7 | 6 |
| 92 | Comment on â€œForce Balance at the Transition from Selective Withdrawal to Viscous Entrainmentâ€. Physical Review Letters, 2010, 105, 089401; author reply 089402. | 7.8 | 6 |
| 93 | Thermal rupture of a free liquid sheet. Journal of Fluid Mechanics, 2018, 840, 555-578. | 3.4 | 6 |
| 94 | Theory of bubble tips in strong viscous flows. Physical Review Fluids, 2021, 6, . | 2.5 | 4 |
| 95 | Balancing a cylinder on a thin vertical layer of viscous fluid. Physical Review E, 2013, 87, 065001. | 2.1 | 3 |
| 96 | Exact results for sheared polar active suspensions with variable liquid crystalline order. Journal of Chemical Physics, 2019, 150, 104902. | 3.0 | 3 |
| 97 | Motion of a tightly fitting axisymmetric object through a lubricated elastic tube. Journal of Fluid Mechanics, 2021, 926, . | 3.4 | 3 |
| 98 | Stability of similarity solutions of viscous thread pinch-off. Physical Review Fluids, 2021, 6, . | 2.5 | 3 |
| 99 | Free streamline flows with singularities. Journal of Fluid Mechanics, 2010, 647, 187-200. | 3.4 | 2 |
| 100 | Curvature Regularization near Contacts with Stretched Elastic Tubes. Physical Review Letters, 2019, 123, 168002. | 7.8 | 2 |
| 101 | Regular and complex singularities of the generalized thin film equation in two dimensions. Journal of Fluid Mechanics, 2021, 917, . | 3.4 | 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. Journal of Fluid Mechanics, 2022, 934, . | 3.4 | 2 |
| 104 | Nonlinear spontaneous symmetry breaking in active polar films. Europhysics Letters, 2016, 115, 28002. | 2.0 | 1 |
| 105 | Selection of singular solutions in non-local transport equations. Nonlinearity, 2020, 33, 325-340. | 1.4 | 1 |
| 106 | Getting the drops in. Nature Physics, 2014, 10, 548-549. | 16.7 | 0 |
| 107 | 10.1063/1.3684750.1. , 2012, , . | | 0 |
| 108 | Breakup and Coalescence of Free Surface Flows. , 2005, , 1403-1416. | | 0 |