

Harold Auradou

List of Publications by Year in descending order

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64
papers

1,472
citations

304602

22
h-index

330025

37
g-index

66
all docs

66
docs citations

66
times ranked

1357
citing authors

#	ARTICLE	IF	CITATIONS
1	Turning Bacteria Suspensions into Superfluids. <i>Physical Review Letters</i> , 2015, 115, 028301.	2.9	249
2	Permeability anisotropy induced by the shear displacement of rough fracture walls. <i>Water Resources Research</i> , 2005, 41, .	1.7	102
3	Flow channeling in a single fracture induced by shear displacement. <i>Geothermics</i> , 2006, 35, 576-588.	1.5	87
4	Assessment of the two relaxation time Lattice-Boltzmann scheme to simulate Stokes flow in porous media. <i>Water Resources Research</i> , 2012, 48, .	1.7	87
5	Anisotropic self-affine properties of experimental fracture surfaces. <i>International Journal of Fracture</i> , 2006, 140, 27-37.	1.1	57
6	Failure mechanisms and surface roughness statistics of fractured Fontainebleau sandstone. <i>Physical Review E</i> , 2007, 76, 036108.	0.8	57
7	A combined rheometry and imaging study of viscosity reduction in bacterial suspensions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2326-2331.	3.3	42
8	Competition between correlated buoyancy and uncorrelated capillary effects during drainage. <i>Physical Review E</i> , 1999, 60, 7224-7234.	0.8	40
9	Low Self-Affine Exponents of Fractured Glass Ceramics Surfaces. <i>Physical Review Letters</i> , 2006, 97, 125501.	2.9	40
10	Experimental study of miscible displacement fronts in rough self-affine fractures. <i>Physical Review E</i> , 2001, 63, 066306.	0.8	35
11	Influence of wall roughness on the geometrical, mechanical and transport properties of single fractures. <i>Journal Physics D: Applied Physics</i> , 2009, 42, 214015.	1.3	35
12	Enhancement of velocity contrasts by shear-thinning solutions flowing in a rough fracture. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2008, 153, 53-61.	1.0	32
13	Autocatalytic Reaction Fronts Inside a Porous Medium of Glass Spheres. <i>Physical Review Letters</i> , 2013, 110, 148301.	2.9	32
14	Effect of motility on the transport of bacteria populations through a porous medium. <i>Physical Review Fluids</i> , 2019, 4, .	1.0	30
15	Swimming bacteria in Poiseuille flow: The quest for active Bretherton-Jeffery trajectories. <i>Europhysics Letters</i> , 2019, 126, 44003.	0.7	29
16	Self-Affine Fronts in Self-Affine Fractures: Large and Small-Scale Structure. <i>Physical Review Letters</i> , 2004, 92, 014501.	2.9	28
17	The Effect of Fracture Roughness on the Onset of Nonlinear Flow. <i>Water Resources Research</i> , 2020, 56, e2020WR028049.	1.7	28
18	Miscible displacement fronts of shear thinning fluids inside rough fractures. <i>Water Resources Research</i> , 2007, 43, .	1.7	27

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19	Bacterial suspensions under flow. <i>European Physical Journal: Special Topics</i> , 2016, 225, 2389-2406.	1.2	26
20	Permeability of self-affine aperture fields. <i>Physical Review E</i> , 2010, 82, 046108.	0.8	25
21	Influence of flow confinement on the drag force on a static cylinder. <i>Physics of Fluids</i> , 2009, 21, .	1.6	24
22	Permeability estimates of self-affine fracture faults based on generalization of the bottleneck concept. <i>Water Resources Research</i> , 2010, 46, .	1.7	23
23	<i>E. coli</i> Accumulation behind an Obstacle. <i>Advances in Microbiology</i> , 2018, 08, 451-464.	0.3	21
24	Effective rheology of Bingham fluids in a rough channel. <i>Frontiers in Physics</i> , 2014, 2, .	1.0	20
25	Geometrical and Taylor dispersion in a fracture with random obstacles: An experimental study with fluids of different rheologies. <i>Water Resources Research</i> , 2008, 44, .	1.7	19
26	Accurate measurement of curvilinear shapes by Virtual Image Correlation. <i>EPJ Applied Physics</i> , 2011, 56, 10701.	0.3	18
27	Geometry and dynamics of invasion percolation with correlated buoyancy. <i>Physical Review E</i> , 2000, 61, 3985-3995.	0.8	17
28	Drainage in a Rough Gouge-Filled Fracture. <i>Transport in Porous Media</i> , 2003, 50, 267-305.	1.2	16
29	Geometry of optimal path hierarchies. <i>Europhysics Letters</i> , 2013, 103, 30003.	0.7	14
30	Three-dimensional flow structures in X-shaped junctions: Effect of the Reynolds number and crossing angle. <i>Physics of Fluids</i> , 2019, 31, .	1.6	14
31	Viscometer using drag force measurements. <i>Review of Scientific Instruments</i> , 2011, 82, 023909.	0.6	13
32	Single Fiber Transport in a Fracture Slit: Influence of the Wall Roughness and of the Fiber Flexibility. <i>Transport in Porous Media</i> , 2010, 84, 389-408.	1.2	12
33	Run-to-Tumble Variability Controls the Surface Residence Times of <i>E. coli</i> Bacteria. <i>Physical Review Letters</i> , 2022, 128, .	2.9	12
34	New oscillatory instability of a confined cylinder in a flow below the vortex shedding threshold. <i>Journal of Fluid Mechanics</i> , 2012, 690, 345-365.	1.4	11
35	Using Microfluidic Set-Up to Determine the Adsorption Rate of <i>Sporosarcina pasteurii</i> Bacteria on Sandstone. <i>Transport in Porous Media</i> , 2020, 132, 283-297.	1.2	11
36	The influence of motility on bacterial accumulation in a microporous channel. <i>Soft Matter</i> , 2021, 17, 893-902.	1.2	11

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37	Pore scale mixing and macroscopic solute dispersion regimes in polymer flows inside two-dimensional model networks. <i>Physics of Fluids</i> , 2007, 19, 033103.	1.6	10
38	Identification of the Shape of Curvilinear Beams and Fibers. <i>Applied Mechanics and Materials</i> , 0, 24-25, 359-364.	0.2	10
39	Effect of the porosity on the fracture surface roughness of sintered materials: From anisotropic to isotropic self-affine scaling. <i>Physical Review E</i> , 2015, 91, 012406.	0.8	10
40	CHEMO-hydrodynamic coupling between forced advection in porous media and self-sustained chemical waves. <i>Chaos</i> , 2012, 22, 037108.	1.0	9
41	Influence of aspect ratio on vortex formation in X-junctions: Direct numerical simulations and eigenmode decomposition. <i>Physics of Fluids</i> , 2020, 32, 124105.	1.6	9
42	Miscible transfer of solute in different model fractures: From random to multiscale wall roughness. <i>Comptes Rendus - Geoscience</i> , 2010, 342, 644-652.	0.4	8
43	Stokes flow paths separation and recirculation cells in X-junctions of varying angle. <i>Physics of Fluids</i> , 2012, 24, .	1.6	8
44	Rheology of bacterial superfluids in viscous environments. <i>Soft Matter</i> , 2021, 17, 7004-7013.	1.2	7
45	Dispersion enhancement and damping by buoyancy driven flows in two-dimensional networks of capillaries. <i>Physics of Fluids</i> , 2008, 20, 034107.	1.6	6
46	Deformation of a flexible fiber in a viscous flow past an obstacle. <i>Physics of Fluids</i> , 2015, 27, 013102.	1.6	6
47	Influence of the disorder on solute dispersion in a flow channel. <i>EPJ Applied Physics</i> , 2007, 39, 267-274.	0.3	6
48	Quantification of tracer plume transport parameters in 2D saturated porous media by cross-borehole ERT imaging. <i>Journal of Applied Geophysics</i> , 2017, 139, 291-305.	0.9	5
49	Experimental evidence of the anisotropy of tracer dispersion in rough fractures with sheared walls. <i>Water Resources Research</i> , 2009, 45, .	1.7	4
50	Relation between first arrival time and permeability in self-affine fractures with areas in contact. <i>Europhysics Letters</i> , 2012, 97, 68009.	0.7	4
51	Oscillations and translation of a free cylinder in a viscous confined flow. <i>Physics of Fluids</i> , 2013, 25, 014102.	1.6	4
52	Experimental Study of ERT Monitoring Ability to Measure Solute Dispersion. <i>Ground Water</i> , 2012, 50, 285-295.	0.7	3
53	Time dependence and local structure of tracer dispersion in oscillating liquid Hele-Shaw flows. <i>Physics of Fluids</i> , 2015, 27, 103602.	1.6	3
54	Large scale flow visualization and anemometry applied to lab-on-a-chip models of porous media. <i>Lab on A Chip</i> , 2016, 16, 2851-2859.	3.1	3

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55	Single-trajectory characterization of active swimmers in a flow. <i>Physical Review E</i> , 2021, 103, 032608.	0.8	3
56	Numerical study of the temperature and porosity effects on the fracture propagation in a 2D network of elastic bonds. <i>European Physical Journal B</i> , 2005, 44, 365-372.	0.6	2
57	Flexible fiber transport by a fluid flow in fractures with smooth and rough walls. <i>Journal of Physics: Conference Series</i> , 2009, 166, 012001.	0.3	2
58	Influence of confinement on the oscillations of a free cylinder in a viscous flow. <i>Physics of Fluids</i> , 2014, 26, .	1.6	2
59	Sedimentation and fluttering of a cylinder in a confined liquid. <i>Physical Review Fluids</i> , 2017, 2, .	1.0	2
60	Motion of a ball dropped onto a one-dimensional self-affine surface. <i>Journal of Physics A</i> , 1997, 30, 4915-4924.	1.6	1
61	Characterization of fracture aperture field heterogeneity by electrical resistance measurement. <i>Journal of Contaminant Hydrology</i> , 2011, 123, 65-74.	1.6	1
62	Influence of rheology on buoyancy driven instabilities of miscible displacements in 2D micromodels. <i>Journal of Physics: Conference Series</i> , 2009, 166, 012005.	0.3	0
63	Shape determination of unidimensional objects: the virtual image correlation method. <i>EPJ Web of Conferences</i> , 2010, 6, 10004.	0.1	0
64	Reversible and Irreversible Tracer Dispersion in an Oscillating Flow Inside a Model Rough Fracture. <i>Transport in Porous Media</i> , 2018, 122, 421-436.	1.2	0