Harihar Rajaram

List of Publications by Year
in descending order

102 papers	4,576 citations	94433 37 h-index	106344 65 g-index
109 all docs	109 docs citations	109 times ranked	4307 citing authors

#	Article	IF	Citations
1	Importance and vulnerability of the worldâ€™s water towers. Nature, 2020, 577, 364-369.	27.8	885
2	Saturated flow in a single fracture: evaluation of the Reynolds Equation in measured aperture fields. Water Resources Research, 1999, 35, 3361-3373.	4.2	157
3	Solute transport in variable-aperture fractures: An investigation of the relative importance of Taylor dispersion and macrodispersion. Water Resources Research, 2000, 36, 1611-1625.	4.2	146
4	Cryoâ€hydrologic warming: A potential mechanism for rapid thermal response of ice sheets. Geophysical Research Letters, 2010, 37, .	4.0	135
5	Influence of aperture variability on dissolutional growth of fissures in Karst Formations. Water Resources Research, 1998, 34, 2843-2853.	4.2	133
6	Glacier crevasses: Observations, models, and mass balance implications. Reviews of Geophysics, 2016, 54, 119-161.	23.0	126
7	Hydraulic fracturing fluid migration in the subsurface: A review and expanded modeling results. Water Resources Research, 2015, 51, 7159-7188.	4.2	121
8	Predicting dissolution patterns in variable aperture fractures: Evaluation of an enhanced depth-averaged computational model. Water Resources Research, 2007, 43, .	4.2	91
9	Stochastic fractal-based models of heterogeneity in subsurface hydrology: Origins, applications, limitations, and future research questions. Reviews of Geophysics, 2004, 42, .	23.0	90
10	Three-dimensional spatial moments analysis of the Borden Tracer Test. Water Resources Research, 1991, 27, 1239-1251.	4.2	87
11	Plume scale-dependent dispersion in heterogeneous aquifers: 2. Eulerian analysis and three-dimensional aquifers. Water Resources Research, 1993, 29, 3261-3276.	4.2	81
12	Plume-Scale Dependent Dispersion in Aquifers with a Wide Range of Scales of Heterogeneity. Water Resources Research, 1995, 31, 2469-2482.	4.2	75
13	Imbibition of hydraulic fracturing fluids into partially saturated shale. Water Resources Research, 2015, 51, 6787-6796.	4.2	75
14	Plume scale-dependent dispersion in heterogeneous aquifers: 1. Lagrangian analysis in a stratified aquifer. Water Resources Research, 1993, 29, 3249-3260.	4.2	74
15	Differences in the scale-dependence of dispersivity estimated from temporal and spatial moments in chemically and physically heterogeneous porous media. Advances in Water Resources, 2005, 28, 745-759.	3.8	71
16	An increase in crevasse extent, West Greenland: Hydrologic implications. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	69
17	Prediction of relative permeabilities for unconsolidated soils using pore-scale network models. Water Resources Research, 1997, 33, 43-52.	4.2	63
18	Predictive modeling of flow and transport in a two-dimensional intermediate-scale, heterogeneous porous medium. Water Resources Research, 2001, 37, 2503-2512.	4.2	62

#	Article	IF	Citations
19	Intermediate-scale experiments and numerical simulations of transport under radial flow in a two-dimensional heterogeneous porous medium. Water Resources Research, 2000, 36, 2869-2884.	4.2	61
20	Investigation of permeability alteration of fractured limestone reservoir due to geothermal heat extraction using three-dimensional thermo-hydro-chemical (THC) model. Geothermics, 2014, 51, 46-62.	3.4	61
21	From Fluid Flow to Coupled Processes in Fractured Rock: Recent Advances and New Frontiers. Reviews of Geophysics, 2022, 60, e2021RG000744.	23.0	61
22	Evaluation of cryoâ€hydrologic warming as an explanation for increased ice velocities in the wet snow zone, Sermeq Avannarleq, West Greenland. Journal of Geophysical Research F: Earth Surface, 2013, 118, 1241-1256.	2.8	60
23	Fracture transmissivity evolution due to silica dissolution/precipitation during geothermal heat extraction. Geothermics, 2015, 57, 111-126.	3.4	58
24	Time and scale dependent effective retardation factors in heterogeneous aquifers. Advances in Water Resources, 1997, 20, 217-230.	3.8	55
25	Monte Carlo ice flow modeling projects a new stable configuration for Columbia Glacier, Alaska, c. 2020. Cryosphere, 2012, 6, 1395-1409.	3.9	52
26	A generalized soft water acidification model. Water Resources Research, 1988, 24, 1983-1996.	4.2	50
27	Dissolution of limestone fractures by cooling waters: Early development of hypogene karst systems. Water Resources Research, 2005, 41, .	4.2	50
28	Basal crevasses and associated surface crevassing on the Larsen C ice shelf, Antarctica, and their role in ice-shelf instability. Annals of Glaciology, 2012, 53, 10-18.	1.4	50
29	Surface Casing Pressure As an Indicator of Well Integrity Loss and Stray Gas Migration in the Wattenberg Field, Colorado. Environmental Science & Technology, 2017, 51, 3567-3574.	10.0	47
30	Conservative and sorptive forced-gradient and uniform flow tracer tests in a three-dimensional laboratory test aquifer. Water Resources Research, 2004, 40, .	4.2	45
31	The annual glaciohydrology cycle in the ablation zone of the Greenland ice sheet: Part 1. Hydrology model. Journal of Glaciology, 2011, 57, 697-709.	2.2	44
32	Impact of variable reservoir releases on management of downstream water temperatures. Water Resources Research, 2001, 37, 1733-1743.	4.2	43
33	Alteration of fractures by precipitation and dissolution in gradient reaction environments: Computational results and stochastic analysis. Water Resources Research, 2008, 44, .	4.2	43
34	Differences in the scale dependence of dispersivity and retardation factors estimated from forced-gradient and uniform flow tracer tests in three-dimensional physically and chemically heterogeneous porous media. Water Resources Research, 2005, 41, .	4.2	41
35	A reflection on the first 50 years of <i>Water Resources Research</i>. Water Resources Research, 2015, 51, 7829-7837.	4.2	40
36	Continent-wide estimates of Antarctic strain rates from Landsat 8-derived velocity grids. Journal of Glaciology, 2018, 64, 321-332.	2.2	40

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37	Dissolution finger growth in variable aperture fractures: Role of the tip-region flow field. Geophysical Research Letters, 2002, 29, 32-1-32-4.	4.0	39
38	Factors controlling satiated relative permeability in a partially-saturated horizontal fracture. Geophysical Research Letters, 2000, 27, 393-396.	4.0	38
39	Nonaqueous-phase-liquid dissolution in variable-aperture fractures: Development of a depth-averaged computational model with comparison to a physical experiment. Water Resources Research, 2001, 37, 3115-3129.	4.2	37
40	A new tracer-density criterion for heterogeneous porous media. Water Resources Research, 2001, 37, 21-31.	4.2	36
41	Assessment of the predictive capabilities of stochastic theories in a three-dimensional laboratory test aquifer: Effective hydraulic conductivity and temporal moments of breakthrough curves. Water Resources Research, 2005, 41, .	4.2	36
42	Interphase mass transfer in variable aperture fractures: Controlling parameters and proposed constitutive relationships. Water Resources Research, 2009, 45, .	4.2	36
43	Modeling moulin distribution on Sermeq Avannarleq glacier using ASTER and WorldView imagery and fuzzy set theory. Remote Sensing of Environment, 2011, 115, 2292-2301.	11.0	35
44	Early-stage hypogene karstification in a mountain hydrologic system: A coupled thermohydrochemical model incorporating buoyant convection. Water Resources Research, 2013, 49, 5880-5899.	4.2	35
45	Climate driven coevolution of weathering profiles and hillslope topography generates dramatic differences in critical zone architecture. Hydrological Processes, 2019, 33, 4-19.	2.6	35
46	Recursive parameter estimation of hydrologic models. Water Resources Research, 1989, 25, 281-294.	4.2	30
47	Performance of different types of time domain reflectometry probes for water content measurement in partially saturated rocks. Water Resources Research, 2006, 42, .	4.2	30
48	Matrix Diffusion in Fractured Media: New Insights Into Power Law Scaling of Breakthrough Curves. Geophysical Research Letters, 2019, 46, 13785-13795.	4.0	30
49	Unsaturated flow through fracture networks: Evolution of liquid phase structure, dynamics, and the critical importance of fracture intersections. Water Resources Research, 2003, 39, .	4.2	29
50	Fifty years of<i>Water Resources Research</i>: Legacy and perspectives for the science of hydrology. Water Resources Research, 2015, 51, 6797-6803.	4.2	28
51	Public data from three US states provide new insights into well integrity. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	28
52	The interaction of two fluid phases in fractured media. Current Opinion in Colloid and Interface Science, 2001, 6, 223-235.	7.4	27
53	The annual glaciohydrology cycle in the ablation zone of the Greenland ice sheet: Part 2. Observed and modeled ice flow. Journal of Glaciology, 2012, 58, 51-64.	2.2	27
54	Numerical Study of Solute Transport in Heterogeneous Beach Aquifers Subjected to Tides. Water Resources Research, 2020, 56, e2019WR026430.	4.2	27

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55	"Identification of large-scale spatial trends in hydrologic data. Water Resources Research, 1990, 26, 2411-2423.	4.2	27
56	On the anisotropy of the aperture correlation and effective transmissivity in fractures generated by sliding between identical self-affine surfaces. Geophysical Research Letters, 2005, 32, .	4.0	25
57	Debatesâ€"Stochastic subsurface hydrology from theory to practice: Introduction. Water Resources Research, 2016, 52, 9215-9217.	4.2	25
58	SHAKTI: Subglacial Hydrology and Kinetic, Transient Interactions v1.0. Geoscientific Model Development, 2018, 11, 2955-2974.	3.6	24
59	Buoyant convection resulting from dissolution and permeability growth in vertical limestone fractures. Geophysical Research Letters, 2009, 36, .	4.0	23
60	Modeling the influence of preferential flow on the spatial variability and timeâ€dependence of mineral weathering rates. Water Resources Research, 2016, 52, 9344-9366.	4.2	23
61	A multi-scale computational model for multiphase flow in porous media. Advances in Water Resources, 1993, 16, 81-92.	3.8	22
62	Considering thermalâ€viscous collapse of the Greenland ice sheet. Earth's Future, 2015, 3, 252-267.	6.3	21
63	Incorporating Groundwater-Surface Water Interaction into River Management Models. Ground Water, 2010, 48, 661-673.	1.3	20
64	An improved twoâ€dimensional depthâ€integrated flow equation for roughâ€walled fractures. Water Resources Research, 2010, 46, .	4.2	20
65	Modeling the WorldView-derived seasonal velocity evolution of Kennicott Glacier, Alaska. Journal of Glaciology, 2016, 62, 763-777.	2.2	20
66	Modeling Gas Migration, Sustained Casing Pressure, and Surface Casing Vent Flow in Onshore Oil and Gas Wells. Water Resources Research, 2019, 55, 298-323.	4.2	19
67	Topographic Correction of Geothermal Heat Flux in Greenland and Antarctica. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2020JF005598.	2.8	19
68	Highâ€resolution experiments on chemical oxidation of DNAPL in variableâ€aperture fractures. Water Resources Research, 2015, 51, 2317-2335.	4.2	16
69	Experimental and simulated solute transport in a partially-saturated, variable-aperture fracture. Geophysical Research Letters, 2002, 29, 113-1-113-4.	4.0	15
70	Fracture alteration by precipitation resulting from thermal gradients: Upscaled mean apertureâ€effective transmissivity relationship. Water Resources Research, 2012, 48, .	4.2	15
71	A generalized poroelastic model using FEniCS with insights into the Noordbergum effect. Computers and Geosciences, 2020, 135, 104399.	4.2	15
72	The effect of entrapped nonaqueous phase liquids on tracer transport in heterogeneous porous media: laboratory experiments at the intermediate scale. Journal of Contaminant Hydrology, 2003, 67, 247-268.	3.3	13

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73	Editorial: Toward 50 years of Water Resources Research. Water Resources Research, 2013, 49, 7841-7842.	4.2	11
74	Transport with spatially variable kinetic sorption: recursion formulation. Advances in Water Resources, 1999, 22, 549-555.	3.8	9
75	Transport With Bimolecular Reactions in a Fractureâ€Matrix System: Analytical Solutions With Applications to In Situ Chemical Oxidation. Water Resources Research, 2019, 55, 3904-3924.	4.2	9
76	Evaluation of Pleistocene groundwater flow through fractured tuffs using a U-series disequilibrium approach, Pahute Mesa, Nevada, USA. Chemical Geology, 2013, 358, 101-118.	3.3	8
77	A similarity solution for reaction front propagation in a fractureâ€"matrix system. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150424.	3.4	8
78	Development of slender transport pathways in unsaturated fractured rock: Simulation with modified invasion percolation. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	7
79	Coarse-scale particle tracking approaches for contaminant transport in fractured rock. Applied Mathematical Modelling, 2017, 41, 549-561.	4.2	7
80	On the Representation of the Porosityâ€Pressure Relationship in General Subsurface Flow Codes. Water Resources Research, 2018, 54, 1382-1388.	4.2	7
81	A transition in the spatially integrated reaction rate of bimolecular reaction-diffusion systems. Water Resources Research, 2015, 51, 7798-7810.	4.2	6
82	Seismic Diffusivity and the Influence of Heterogeneity on Injectionâ€Induced Seismicity. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021768.	3.4	6
83	Soluble Microbial Products Decrease Pyrite Oxidation by Ferric Iron at pH < 2. Environmental Science & Technology, 2013, 47, 130710132117003.	10.0	5
84	Matrix Diffusion as a Mechanism Contributing to Fractal Stream Chemistry and Longâ€Tailed Transit Time Distributions. Geophysical Research Letters, 2021, 48, e2021GL094292.	4.0	5
85	Energy Transfer by Turbulent Dissipation in Glacial Conduits. Journal of Geophysical Research F: Earth Surface, 2020, 125, e2019JF005502.	2.8	3
86	Modeling Aspectâ€Controlled Evolution of Ground Thermal Regimes on Montane Hillslopes. Journal of Geophysical Research F: Earth Surface, 2021, 126, e2021JF006126.	2.8	3
87	Geoscientists, Who Have Documented the Rapid and Accelerating Climate Crisis for Decades, Are Now Pleading for Immediate Collective Action. Geophysical Research Letters, 2021, 48, e2021GL096644.	4.0	3
88	Barometric Pumping Through Fractured Rock: A Mechanism for Venting Deep Methane to Mars' Atmosphere. Geophysical Research Letters, 2022, 49, .	4.0	3
89	Exploring basal sliding with a fluidityâ€based, iceâ€sheet model using FOSLS. Numerical Linear Algebra With Applications, 2018, 25, e2161.	1.6	2
90	Mitigating injection-induced seismicity to reduce seismic risk. Earthquake Spectra, 2021, 37, 2687-2713.	3.1	2

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91	Fractosphere, the Site of Hydrogeological-microbial Interaction: Current and Future Perspectives.. Journal of Geography (Chigaku Zasshi), 2003, 112, 288-301.	0.3	1
92	Drying of a partially saturated rock matrix by fracture ventilation: Experiments and modeling in a single fractureâ€matrix system. Water Resources Research, 2009, 45, .	4.2	1
93	A Fluidity-Based First-Order System Least-Squares Method for Ice Sheets. SIAM Journal of Scientific Computing, 2017, 39, B352-B374.	2.8	1
94	Appreciation of peer reviewers for 2014. Water Resources Research, 2015, 51, 5869-5887.	4.2	0
95	A vision for Water Resources Research. Water Resources Research, 2017, 53, 4530-4532.	4.2	0
96	Appreciation of peer reviewers for 2016. Water Resources Research, 2017, 53, 4542-4561.	4.2	0
97	Appreciation for <i>Water Resources Research</i> Reviewers. Water Resources Research, 2018, 54, 7114-7137.	4.2	0
98	Thank You to Our 2018 Peer Reviewers. Geophysical Research Letters, 2019, 46, 12608-12636.	4.0	0
99	Thank You to Our 2019 Peer Reviewers. Geophysical Research Letters, 2020, 47, e2020GL088048.	4.0	0
100	Thank You to Our 2020 Peer Reviewers. Geophysical Research Letters, 2021, 48, e2021GL093126.	4.0	0
101	Appreciation of peer reviewers for 2015. Water Resources Research, 2016, 52, 2380-2398.	4.2	0
102	Thank You to Our 2021 Peer Reviewers. Geophysical Research Letters, 2022, 49, .	4.0	0