

# Yi-Feng Chen

## List of Publications by Year in descending order

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98  
papers

3,591  
citations

117453

34  
h-index

155451

55  
g-index

99  
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docs citations

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times ranked

1901  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of Forchheimer equation coefficients for non-Darcy flow in deformable rough-walled fractures. <i>Journal of Hydrology</i> , 2015, 529, 993-1006.	2.3	238
2	Influence of surface roughness on nonlinear flow behaviors in 3D self-affine rough fractures: Lattice Boltzmann simulations. <i>Advances in Water Resources</i> , 2016, 96, 373-388.	1.7	202
3	Nonlinear flow behavior at low Reynolds numbers through rough-walled fractures subjected to normal compressive loading. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2015, 80, 202-218.	2.6	184
4	Estimating hydraulic conductivity of fractured rocks from high-pressure packer tests with an Izbash's law-based empirical model. <i>Water Resources Research</i> , 2015, 51, 2096-2118.	1.7	109
5	Bivariate simulation using copula and its application to probabilistic pile settlement analysis. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2013, 37, 597-617.	1.7	108
6	Visualizing and quantifying the crossover from capillary fingering to viscous fingering in a rough fracture. <i>Water Resources Research</i> , 2017, 53, 7756-7772.	1.7	108
7	Modeling coupled THM processes of geological porous media with multiphase flow: Theory and validation against laboratory and field scale experiments. <i>Computers and Geotechnics</i> , 2009, 36, 1308-1329.	2.3	106
8	Wettability and Flow Rate Impacts on Immiscible Displacement: A Theoretical Model. <i>Geophysical Research Letters</i> , 2018, 45, 3077-3086.	1.5	97
9	Experimental characterization and micromechanical modeling of damage-induced permeability variation in Beishan granite. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2014, 71, 64-76.	2.6	95
10	A numerical solution to seepage problems with complex drainage systems. <i>Computers and Geotechnics</i> , 2008, 35, 383-393.	2.3	89
11	Experimental study on two-phase flow in rough fracture: Phase diagram and localized flow channel. <i>International Journal of Heat and Mass Transfer</i> , 2018, 122, 1298-1307.	2.5	69
12	Formulation of strain-dependent hydraulic conductivity for a fractured rock mass. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2007, 44, 981-996.	2.6	68
13	Characteristics of shear-induced asperity degradation of rock fractures and implications for solute retardation. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2018, 105, 53-61.	2.6	65
14	Kinetic Energy Dissipation and Convergence Criterion of Discontinuous Deformations Analysis (DDA) for Geotechnical Engineering. <i>Rock Mechanics and Rock Engineering</i> , 2013, 46, 1443-1460.	2.6	64
15	Non-Darcy's law-based analytical models for data interpretation of high-pressure packer tests in fractured rocks. <i>Engineering Geology</i> , 2015, 199, 91-106.	2.9	62
16	Evaluation of Groundwater Leakage into a Drainage Tunnel in Jinping-I Arch Dam Foundation in Southwestern China: A Case Study. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 961-979.	2.6	62
17	Experimental Characterization and Micromechanical Modelling of Anisotropic Slates. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 3541-3557.	2.6	61
18	The Friction Factor in the Forchheimer Equation for Rock Fractures. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 3055-3068.	2.6	61

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19	Inverse modeling of leakage through a rockfill dam foundation during its construction stage using transient flow model, neural network and genetic algorithm. <i>Engineering Geology</i> , 2015, 187, 183-195.	2.9	58
20	Phase diagram of quasi-static immiscible displacement in disordered porous media. <i>Journal of Fluid Mechanics</i> , 2019, 875, 448-475.	1.4	58
21	A new parabolic variational inequality formulation of Signorini's condition for non-steady seepage problems with complex seepage control systems. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2011, 35, 1034-1058.	1.7	57
22	Modeling of coupled deformation, water flow and gas transport in soil slopes subjected to rain infiltration. <i>Science China Technological Sciences</i> , 2011, 54, 2561-2575.	2.0	56
23	Universal Relationship Between Viscous and Inertial Permeability of Geologic Porous Media. <i>Geophysical Research Letters</i> , 2019, 46, 1441-1448.	1.5	54
24	Mass Transfer Between Recirculation and Main Flow Zones: Is Physically Based Parameterization Possible?. <i>Water Resources Research</i> , 2019, 55, 345-362.	1.7	52
25	A numerical procedure for modeling the seepage field of water-sealed underground oil and gas storage caverns. <i>Tunnelling and Underground Space Technology</i> , 2017, 66, 56-63.	3.0	50
26	Emergence of Nonlinear Laminar Flow in Fractures During Shear. <i>Rock Mechanics and Rock Engineering</i> , 2018, 51, 3635-3643.	2.6	48
27	A constitutive model for unsaturated soils with consideration of inter-particle bonding. <i>Computers and Geotechnics</i> , 2014, 59, 127-144.	2.3	44
28	Micromechanical analysis of anisotropic damage and its influence on effective thermal conductivity in brittle rocks. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2012, 50, 102-116.	2.6	41
29	Statistical distribution of hydraulic conductivity of rocks in deep-incised valleys, Southwest China. <i>Journal of Hydrology</i> , 2018, 566, 216-226.	2.3	41
30	Excavation-induced relaxation effects and hydraulic conductivity variations in the surrounding rocks of a large-scale underground powerhouse cavern system. <i>Tunnelling and Underground Space Technology</i> , 2015, 49, 253-267.	3.0	40
31	Inverse modeling of saturated-unsaturated flow in site-scale fractured rocks using the continuum approach: A case study at Baihetan dam site, Southwest China. <i>Journal of Hydrology</i> , 2020, 584, 124693.	2.3	40
32	Transitions of Fluid Invasion Patterns in Porous Media. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL089682.	1.5	39
33	Performance assessment and optimization of seepage control system: A numerical case study for Kala underground powerhouse. <i>Computers and Geotechnics</i> , 2014, 55, 306-315.	2.3	38
34	Hydraulic properties of partially saturated rock fractures subjected to mechanical loading. <i>Engineering Geology</i> , 2014, 179, 24-31.	2.9	37
35	Energy Conversion Reveals Regime Transition of Imbibition in a Rough Fracture. <i>Geophysical Research Letters</i> , 2018, 45, 8993-9002.	1.5	36
36	System reliability analysis of rock slope stability involving correlated failure modes. <i>KSCE Journal of Civil Engineering</i> , 2011, 15, 1349-1359.	0.9	34

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37	Roughness Control on Multiphase Flow in Rock Fractures. <i>Geophysical Research Letters</i> , 2019, 46, 12002-12011.	1.5	34
38	Plane-strain consolidation theory with distributed drainage boundary. <i>Acta Geotechnica</i> , 2020, 15, 489-508.	2.9	34
39	A new classification of seepage control mechanisms in geotechnical engineering. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2010, 2, 209-222.	3.7	33
40	Non-Darcian flow effect on discharge into a tunnel in karst aquifers. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2020, 130, 104319.	2.6	33
41	Estimating effective thermal conductivity of unsaturated bentonites with consideration of coupled thermo-hydro-mechanical effects. <i>International Journal of Heat and Mass Transfer</i> , 2014, 72, 656-667.	2.5	30
42	Micromechanical Modeling of Anisotropic Damage-Induced Permeability Variation in Crystalline Rocks. <i>Rock Mechanics and Rock Engineering</i> , 2014, 47, 1775-1791.	2.6	30
43	Modeling Immiscible Two-Phase Flow in Rough Fractures From Capillary to Viscous Fingering. <i>Water Resources Research</i> , 2019, 55, 2033-2056.	1.7	28
44	Role of Pore-Scale Disorder in Fluid Displacement: Experiments and Theoretical Model. <i>Water Resources Research</i> , 2021, 57, .	1.7	25
45	Variation in hydraulic conductivity of fractured rocks at a dam foundation during operation. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2021, 13, 351-367.	3.7	25
46	Inverse modelling of groundwater flow around a large-scale underground cavern system considering the excavation-induced hydraulic conductivity variation. <i>Computers and Geotechnics</i> , 2017, 81, 346-359.	2.3	24
47	Improving Performance of Matrix Multiplication and FFT on GPU. , 2009, , .		23
48	Reliability analysis of serviceability performance for an underground cavern using a non-intrusive stochastic method. <i>Environmental Earth Sciences</i> , 2014, 71, 1169-1182.	1.3	23
49	Interpretation of high pressure pack tests for design of impervious barriers under high-head conditions. <i>Engineering Geology</i> , 2018, 234, 112-121.	2.9	23
50	An Effective Approach for Separating Carbazole and Its Derivates from Coal-Tar-Derived Anthracene Oil Using Ionic Liquids. <i>Energy &amp; Fuels</i> , 2019, 33, 513-522.	2.5	22
51	Numerical investigation on immiscible displacement in 3D rough fracture: Comparison with experiments and the role of viscous and capillary forces. <i>Advances in Water Resources</i> , 2018, 118, 39-48.	1.7	21
52	Effect of Solid-Liquid Interactions on Substrate Wettability and Dynamic Spreading of Nanodroplets: A Molecular Dynamics Study. <i>Journal of Physical Chemistry C</i> , 2020, 124, 23260-23269.	1.5	21
53	Evaluation of hydrogeological impact of tunnel engineering in a karst aquifer by coupled discrete-continuum numerical simulations. <i>Journal of Hydrology</i> , 2021, 597, 125765.	2.3	21
54	A homogenization-based model for the effective thermal conductivity of bentonite-sand-based buffer material. <i>International Communications in Heat and Mass Transfer</i> , 2015, 68, 43-49.	2.9	20

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55	Film entrainment and microplastic particles retention during gas invasion in suspension-filled microchannels. <i>Water Research</i> , 2021, 194, 116919.	5.3	20
56	Characterization of transient groundwater flow through a high arch dam foundation during reservoir impounding. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2016, 8, 462-471.	3.7	19
57	Coupled hydro-mechanical analysis of a dam foundation with thick fluvial deposits: a case study of the Danba Hydropower Project, Southwestern China. <i>European Journal of Environmental and Civil Engineering</i> , 2016, 20, 19-44.	1.0	19
58	Dissolution Hotspots in Fractures. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094118.	1.5	18
59	A coupled stress-strain and hydraulic hysteresis model for unsaturated soils: Thermodynamic analysis and model evaluation. <i>Computers and Geotechnics</i> , 2015, 63, 159-170.	2.3	17
60	A generalized non-Darcian radial flow model for constant rate test. <i>Water Resources Research</i> , 2016, 52, 9325-9343.	1.7	17
61	A coupled two-phase fluid flow and elastoplastic deformation model for unsaturated soils: theory, implementation, and application. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2016, 40, 1023-1058.	1.7	17
62	Towards an optimization design of seepage control: A case study in dam engineering. <i>Science China Technological Sciences</i> , 2017, 60, 1903-1916.	2.0	17
63	Disentangling the Simultaneous Effects of Inertial Losses and Fracture Dilation on Permeability of Pressurized Fractured Rocks. <i>Geophysical Research Letters</i> , 2019, 46, 8862-8871.	1.5	17
64	Partitioning Dynamics of Gravity-Driven Unsaturated Flow Through Simple T-Shaped Fracture Intersections. <i>Water Resources Research</i> , 2019, 55, 7130-7142.	1.7	17
65	Hydraulic hysteresis effects on the coupled flow-deformation processes in unsaturated soils: Numerical formulation and slope stability analysis. <i>Applied Mathematical Modelling</i> , 2018, 54, 221-245.	2.2	16
66	Effect of aperture field anisotropy on two-phase flow in rough fractures. <i>Advances in Water Resources</i> , 2019, 132, 103390.	1.7	16
67	Gas migration and residual trapping in bimodal heterogeneous media during geological storage of CO <sub>2</sub> . <i>Advances in Water Resources</i> , 2020, 142, 103608.	1.7	16
68	Transitions of Dissolution Patterns in Rough Fractures. <i>Water Resources Research</i> , 2022, 58, e2021WR030456.	1.7	16
69	Acidic-Basic Bifunctional Magnetic Mesoporous CoFe <sub>2</sub> O <sub>4</sub> @(CaO-ZnO) for the Synthesis of Glycerol Carbonate. <i>Catalysis Letters</i> , 2020, 150, 2863-2872.	1.4	13
70	Impact of translation approach for modelling correlated non-normal variables on parallel system reliability. <i>Structure and Infrastructure Engineering</i> , 2013, 9, 969-982.	2.0	12
71	Effect of seepage control on stability of a tailings dam during its staged construction with a stepwise-coupled hydro-mechanical model. <i>International Journal of Mining, Reclamation and Environment</i> , 2015, 29, 125-140.	1.2	12
72	A numerical formulation with unified unilateral boundary condition for unsaturated flow problems in porous media. <i>Acta Geotechnica</i> , 2017, 12, 277-291.	2.9	12

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73	Interpretation of gas transient pulse tests on low-porosity rocks. <i>Geophysical Journal International</i> , 2017, 210, 1845-1857.	1.0	12
74	A homogenization-based model for estimating effective thermal conductivity of unsaturated compacted bentonites. <i>International Journal of Heat and Mass Transfer</i> , 2015, 83, 731-740.	2.5	11
75	A two-step homogenization-based permeability model for deformable fractured rocks with consideration of coupled damage and friction effects. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2016, 89, 212-226.	2.6	11
76	A generalized Forchheimer radial flow model for constant-rate tests. <i>Advances in Water Resources</i> , 2017, 107, 317-325.	1.7	11
77	Splitting Dynamics of Liquid Slugs at a Junction. <i>Water Resources Research</i> , 2020, 56, e2020WR027730.	1.7	11
78	Semi-Analytical Solution for Consolidation of Ground with Partially Penetrating PVDs under the Free-Strain Condition. <i>Journal of Engineering Mechanics - ASCE</i> , 2021, 147, .	1.6	11
79	Modeling unsaturated flow in fractured rocks with scaling relationships between hydraulic parameters. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2022, 14, 1697-1709.	3.7	11
80	Auto-tuning Dense Matrix Multiplication for GPGPU with Cache. , 2010, , .		10
81	Assessing the impact of tunnelling on karst groundwater balance by using lumped parameter models. <i>Journal of Hydrology</i> , 2021, 599, 126375.	2.3	10
82	A Forchheimer's law-based analytical model for constant-rate tests with linear flow pattern. <i>Advances in Water Resources</i> , 2019, 128, 1-12.	1.7	8
83	Morphological patterns and interface instability during withdrawal of liquid-particle mixtures. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 1598-1607.	5.0	8
84	A relative permeability model for deformable soils and its impact on coupled unsaturated flow and elasto-plastic deformation processes. <i>Science China Technological Sciences</i> , 2015, 58, 1971-1982.	2.0	7
85	Roles of energy dissipation and asymmetric wettability in spontaneous imbibition dynamics in a nanochannel. <i>Journal of Colloid and Interface Science</i> , 2022, 607, 1023-1035.	5.0	7
86	An effective thermal conductivity model for unsaturated compacted bentonites with consideration of bimodal shape of pore size distribution. <i>Science China Technological Sciences</i> , 2015, 58, 369-380.	2.0	6
87	The effect of permeability on Darcy-to-Forchheimer flow transition. <i>Journal of Hydrology</i> , 2022, 610, 127836.	2.3	6
88	Direct Prediction of Fluid-Fluid Displacement Efficiency in Ordered Porous Media Using the Pore Structure. <i>Water Resources Research</i> , 2022, 58, .	1.7	5
89	A generalized non-Darcian model for packer tests considering groundwater level and borehole inclination. <i>Engineering Geology</i> , 2021, 286, 106091.	2.9	4
90	A threshold stresses-based permeability variation model for microcracked porous rocks. <i>European Journal of Environmental and Civil Engineering</i> , 2020, 24, 787-813.	1.0	3

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91	Experimental Observation of Two Distinct Finger Regimes During Miscible Displacement in Fracture. Transport in Porous Media, 2022, 144, 175-188.	1.2	3
92	Liquid Breakthrough Time in an Unsaturated Fracture Network. Water Resources Research, 2022, 58, .	1.7	3
93	Optimization design of a large-scale seepage control system at a high arch dam site. IOP Conference Series: Earth and Environmental Science, 2021, 861, 072093.	0.2	1
94	Control of non-Darcian flow by consolidation grouting in the surrounding rocks of a concrete-lined pressure tunnel. IOP Conference Series: Earth and Environmental Science, 2021, 861, 072081.	0.2	0
95	Modelling transient discharge into deep-buried tunnels in karst area based on a coupled discrete-continuum model. IOP Conference Series: Earth and Environmental Science, 2021, 861, 072079.	0.2	0
96	Numerical analysis of groundwater flow behaviour at a dam site in Karst area during its reservoir impoundment. IOP Conference Series: Earth and Environmental Science, 2021, 861, 072091.	0.2	0
97	Comprehensive Evaluation of Hydrogeological Impact of Tunnel Construction in Karst Aquifers by 3D Numerical Simulations and Water Balance Models. IOP Conference Series: Earth and Environmental Science, 2021, 861, 032011.	0.2	0
98	Scaling Relationships between van Genuchten Model Parameters and Hydraulic Conductivity. IOP Conference Series: Earth and Environmental Science, 2021, 861, 072076.	0.2	0