

Vittorio Di Federico

List of Publications by Year in descending order

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105
papers

1,848
citations

236925

25
h-index

315739

38
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113
all docs

113
docs citations

113
times ranked

1202
citing authors

#	ARTICLE	IF	CITATIONS
1	Combined Management of Groundwater Resources and Water Supply Systems at Basin Scale Under Climate Change. <i>Water Resources Management</i> , 2022, 36, 915-930.	3.9	5
2	Drainage of power-law fluids from fractured or porous finite domains. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2022, 305, 104832.	2.4	4
3	Effective Forchheimer Coefficient for Layered Porous Media. <i>Transport in Porous Media</i> , 2022, 144, 459-480.	2.6	11
4	A Lubrication-Based Solver for Shear-Thinning Flow in Rough Fractures. <i>Water Resources Research</i> , 2022, 58, .	4.2	7
5	Converging gravity currents of power-law fluid. <i>Journal of Fluid Mechanics</i> , 2021, 918, .	3.4	5
6	Relaxation-induced flow in a smooth fracture for Ellis rheology. <i>Advances in Water Resources</i> , 2021, 152, 103914.	3.8	10
7	Experimental investigation on backflow of power-law fluids in planar fractures. <i>Physics of Fluids</i> , 2021, 33, .	4.0	9
8	A Channel Model for Bi-viscous Fluid Flow in Fractures. <i>Transport in Porous Media</i> , 2020, 134, 97-116.	2.6	6
9	Dispersion induced by non-Newtonian gravity flow in a layered fracture or formation. <i>Journal of Fluid Mechanics</i> , 2020, 903, .	3.4	6
10	Shear-Thinning Fluid Flow in Variable-Aperture Channels. <i>Proceedings (mdpi)</i> , 2020, 48, 28.	0.2	0
11	Onset of Darcy-Bénard convection under throughflow of a shear-thinning fluid. <i>Journal of Fluid Mechanics</i> , 2020, 889, .	3.4	11
12	Shear-Thinning Fluid Flow in Variable-Aperture Channels. <i>Water (Switzerland)</i> , 2020, 12, 1152.	2.7	3
13	Sustainability Analysis of Alternative Long-Term Management Strategies for Water Supply Systems: A Case Study in Reggio Emilia (Italy). <i>Water (Switzerland)</i> , 2019, 11, 450.	2.7	2
14	Non-Boussinesq gravity currents and surface waves generated by lock release in a circular-section channel: theoretical and experimental investigation. <i>Journal of Fluid Mechanics</i> , 2019, 869, 610-633.	3.4	5
15	Green Smart Technology for Water (GST4Water): Life Cycle Analysis of Urban Water Consumption. <i>Water (Switzerland)</i> , 2019, 11, 389.	2.7	16
16	Non-Newtonian Backflow in an Elastic Fracture. <i>Water Resources Research</i> , 2019, 55, 10144-10158.	4.2	15
17	Suspended sediment assessment by combining sound attenuation and backscatter measurements – analytical method and experimental validation. <i>Advances in Water Resources</i> , 2018, 113, 167-179.	3.8	18
18	Critical regime of gravity currents flowing in non-rectangular channels with density stratification. <i>Journal of Fluid Mechanics</i> , 2018, 840, 579-612.	3.4	5

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19	Metabolic Modelling: A Strategic Planning Tool for Water Supply Systems Management. Proceedings (mdpi), 2018, 2, .	0.2	2
20	A Multi-disciplinary Modelling Approach for Discharge Reconstruction in Irrigation Canals: The Canale Emiliano Romagnolo (Northern Italy) Case Study. Water (Switzerland), 2018, 10, 1017.	2.7	9
21	Sustainability Assessment of Urban Water Use from Building to Urban Scale in the GST4Water Project. Proceedings (mdpi), 2018, 2, .	0.2	1
22	Gravity currents produced by lock-release: Theory and experiments concerning the effect of a free top in non-Boussinesq systems. Advances in Water Resources, 2018, 121, 456-471.	3.8	12
23	Impact of uncertainty in soil texture parameters on estimation of soil moisture through radio waves transmission. Advances in Water Resources, 2018, 122, 131-138.	3.8	5
24	Flow of truncated power-law fluid in fracture channels of variable aperture. Advances in Water Resources, 2018, 122, 317-327.	3.8	18
25	Porous gravity currents: Axisymmetric propagation in horizontally graded medium and a review of similarity solutions. Advances in Water Resources, 2018, 115, 136-150.	3.8	9
26	Thermal Instability of a Power-Law Fluid Flowing in a Horizontal Porous Layer with an Open Boundary: A Two-Dimensional Analysis. Transport in Porous Media, 2017, 118, 449-471.	2.6	12
27	Gravity-driven flow of Herschel-Bulkley fluid in a fracture and in a 2D porous medium. Journal of Fluid Mechanics, 2017, 821, 59-84.	3.4	43
28	On the propagation of particulate gravity currents in circular and semi-circular channels partially filled with homogeneous or stratified ambient fluid. Physics of Fluids, 2017, 29, 106605.	4.0	8
29	Impact of Hydrogeological Uncertainty on Estimation of Environmental Risks Posed by Hydrocarbon Transportation Networks. Water Resources Research, 2017, 53, 8686-8697.	4.2	21
30	Metabolism-based modelling for performance assessment of a water supply system: a case study of Reggio Emilia, Italy. Water Science and Technology: Water Supply, 2016, 16, 1221-1230.	2.1	2
31	Gravity currents in a linearly stratified ambient fluid created by lock release and influx in semi-circular and rectangular channels. Physics of Fluids, 2016, 28, .	4.0	15
32	On the propagation of viscous gravity currents of non-Newtonian fluids in channels with varying cross section and inclination. Journal of Non-Newtonian Fluid Mechanics, 2016, 235, 95-108.	2.4	10
33	Porous gravity currents: A survey to determine the joint influence of fluid rheology and variations of medium properties. Advances in Water Resources, 2016, 92, 105-115.	3.8	34
34	Gravity currents produced by constant and time varying inflow in a circular cross-section channel: Experiments and theory. Advances in Water Resources, 2016, 90, 10-23.	3.8	13
35	The propagation of gravity currents in a circular cross-section channel: experiments and theory. Journal of Fluid Mechanics, 2015, 764, 513-537.	3.4	17
36	A dipole solution for power-law gravity currents in porous formations. Journal of Fluid Mechanics, 2015, 778, 534-551.	3.4	33

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37	Data-driven models of groundwater salinization in coastal plains. <i>Journal of Hydrology</i> , 2015, 531, 187-197.	5.4	7
38	Porous Gravity Currents of Non-Newtonian Fluids within Confining Boundaries. <i>Procedia Environmental Sciences</i> , 2015, 25, 58-65.	1.4	2
39	Stability Analysis of Gravity Currents of a Power-Law Fluid in a Porous Medium. <i>Mathematical Problems in Engineering</i> , 2015, 2015, 1-11.	1.1	4
40	Propagation of viscous gravity currents inside confining boundaries: the effects of fluid rheology and channel geometry. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015, 471, 20150070.	2.1	12
41	Temperature fields induced by geothermal devices. <i>Energy</i> , 2015, 93, 1896-1903.	8.8	16
42	Non-Newtonian power-law gravity currents propagating in confining boundaries. <i>Environmental Fluid Mechanics</i> , 2015, 15, 515-535.	1.6	27
43	Combined effect of rheology and confining boundaries on spreading of gravity currents in porous media. <i>Advances in Water Resources</i> , 2015, 79, 140-152.	3.8	26
44	Uncertainty-based Analysis of Variations in Subsurface Thermal Field Due to Horizontal Flat-panel Heat Exchangers. <i>Procedia Environmental Sciences</i> , 2015, 25, 50-57.	1.4	4
45	Unsteady Flow of Shear-Thinning Fluids in Porous Media with Pressure-Dependent Properties. <i>Transport in Porous Media</i> , 2015, 110, 429-447.	2.6	29
46	GROUND HEAT TRANSFER FROM A DRAINAGE TRENCH. <i>Special Topics and Reviews in Porous Media</i> , 2015, 6, 185-195.	1.1	0
47	Evaluation of Reliability Indicators for WDNs with Demand-Driven and Pressure-Driven Models. <i>Water Resources Management</i> , 2014, 28, 1201-1217.	3.9	22
48	Axisymmetric gravity currents within porous media: First order solution and experimental validation. <i>Journal of Hydrology</i> , 2014, 519, 238-247.	5.4	9
49	Radial gravity currents in vertically graded porous media: Theory and experiments for Newtonian and power-law fluids. <i>Advances in Water Resources</i> , 2014, 70, 65-76.	3.8	43
50	Performance of a Drainage Trench Employed as Ground Heat Exchanger. , 2014, , .		0
51	On shear thinning fluid flow induced by continuous mass injection in porous media with variable conductivity. <i>Mechanics Research Communications</i> , 2013, 52, 101-107.	1.8	17
52	On the axisymmetric spreading of non-Newtonian power-law gravity currents of time-dependent volume: An experimental and theoretical investigation focused on the inference of rheological parameters. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 201, 69-79.	2.4	37
53	Polynomial chaos expansion for global sensitivity analysis applied to a model of radionuclide migration in a randomly heterogeneous aquifer. <i>Stochastic Environmental Research and Risk Assessment</i> , 2013, 27, 945-954.	4.0	74
54	Experimental verification of power-law non-Newtonian axisymmetric porous gravity currents. <i>Journal of Fluid Mechanics</i> , 2013, 731, .	3.4	35

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55	Effect of variable permeability on the propagation of thin gravity currents in porous media. <i>International Journal of Non-Linear Mechanics</i> , 2013, 57, 168-175.	2.6	15
56	Analysis of a benchmark solution for non-Newtonian radial displacement in porous media. <i>International Journal of Non-Linear Mechanics</i> , 2013, 52, 46-57.	2.6	5
57	Calibration of a 2-D morphodynamic model using water-sediment flux maps derived from an ADCP recording. <i>Journal of Hydroinformatics</i> , 2013, 15, 813-828.	2.4	31
58	Comparative analysis of formulations for conservative transport in porous media through sensitivity-based parameter calibration. <i>Water Resources Research</i> , 2013, 49, 5206-5220.	4.2	29
59	Saltwater Intrusion in Coastal Aquifers: A Primary Case Study along the Adriatic Coast Investigated within a Probabilistic Framework. <i>Water (Switzerland)</i> , 2013, 5, 1830-1847.	2.7	34
60	Numerical comparison between two advanced HGHEs. <i>International Journal of Low-Carbon Technologies</i> , 2012, 7, 75-81.	2.6	13
61	Similarity solutions for flow of non-Newtonian fluids in porous media revisited under parameter uncertainty. <i>Advances in Water Resources</i> , 2012, 43, 38-51.	3.8	28
62	Spreading of axisymmetric non-Newtonian power-law gravity currents in porous media. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 189-190, 31-39.	2.4	29
63	Generalized Solution for 1-D Non-Newtonian Flow in a Porous Domain due to an Instantaneous Mass Injection. <i>Transport in Porous Media</i> , 2012, 93, 63-77.	2.6	10
64	Similarity solutions for spreading of a two-dimensional non-Newtonian gravity current in a porous layer. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 177-178, 46-53.	2.4	25
65	Estimates of effective permeability for non-Newtonian fluid flow in randomly heterogeneous porous media. <i>Stochastic Environmental Research and Risk Assessment</i> , 2010, 24, 1067-1076.	4.0	32
66	Letter to the Editor: Comments on the Paper "Inertia Effects in High-Rate Flow Through Heterogeneous Porous Media" by M. Fourar, R. Lenormand, M. Karimi-Fard, and R. Horne, <i>Transport in Porous Media</i> , DOI 10.1007/s11242-004-6800-6, 2005. <i>Transport in Porous Media</i> , 2010, 85, 269-271.	2.6	0
67	Historical analysis of blockages in wastewater pipelines in Oslo and diagnosis of causative pipeline characteristics. <i>Urban Water Journal</i> , 2010, 7, 335-343.	2.1	18
68	Optimal Scheduling of Replacement and Rehabilitation in Wastewater Pipeline Networks. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2010, 136, 348-356.	2.6	19
69	Asset Management for Urban Wastewater Pipeline Networks. <i>Journal of Infrastructure Systems</i> , 2010, 16, 112-121.	1.8	39
70	Statistical analysis and definition of blockages-prediction formulae for the wastewater network of Oslo by evolutionary computing. <i>Water Science and Technology</i> , 2009, 59, 1457-1470.	2.5	25
71	Comment on "Yamada H, Nakamura F, Watanabe Y, Murakami M and Nogami T. 2005. Measuring hydraulic permeability in a streambed using the packer test. <i>Hydrological Processes</i> 19: 2507-2524". <i>Hydrological Processes</i> , 2008, 22, 3543-3544.	2.6	1
72	Displacement of non-Newtonian compressible fluids in plane porous media flow. , 2008, , .		0

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73	Transition from supercritical to subcritical regime in free surface flow of yield stress fluids. Geophysical Research Letters, 2007, 34, .	4.0	5
74	Viscous Spreading of Non-Newtonian Gravity Currents on a Plane. Meccanica, 2006, 41, 207-217.	2.0	23
75	WASTEWATER NETWORK CHALLENGES AND SOLUTIONS. , 2006, , 147-158.		4
76	Viscous spreading of non-Newtonian gravity currents in radial geometry. WIT Transactions on Engineering Sciences, 2006, , .	0.0	4
77	Scaling Effects on Finite-Domain Fractional Brownian Motion. , 2005, , 75-86.		0
78	The hydraulic capacity of deteriorating sewer systems. Water Science and Technology, 2005, 52, 207-214.	2.5	4
79	Generating and scaling fractional Brownian motion on finite domains. Geophysical Research Letters, 2005, 32, .	4.0	13
80	The hydraulic capacity of deteriorating sewer systems. Water Science and Technology, 2005, 52, 207-14.	2.5	1
81	Title is missing!. Transport in Porous Media, 2003, 52, 111-115.	2.6	0
82	Multifaceted nature of hydrogeologic scaling and its interpretation. Reviews of Geophysics, 2003, 41, .	23.0	205
83	Computer-aided rehabilitation of water networks (CARE-W). Water Science and Technology: Water Supply, 2003, 3, 19-27.	2.1	3
84	Multiple manifestations of hydrogeologic scaling and their joint theoretical interpretation. , 2003, , .		0
85	Theoretical interpretation of a pronounced permeability scale effect in unsaturated fractured tuff. Water Resources Research, 2002, 38, 28-1-28-8.	4.2	49
86	On non-Newtonian fluid flow in rough fractures. Water Resources Research, 2001, 37, 2425-2430.	4.2	13
87	Effective hydraulic conductivity in multiscale random fields with truncated power variograms. , 2000, , .		1
88	Nonergodic solution transport in heterogeneous porous media: Influence of multiscale structure. , 2000, , .		3
89	Free-surface flow of hyperconcentrations. Fluid Dynamics Research, 1999, 24, 23-36.	1.3	3
90	Solute transport in heterogeneous porous media with long-range correlations. Water Resources Research, 1999, 35, 3185-3191.	4.2	10

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91	Anisotropy, lacunarity, and upscaled conductivity and its autocovariance in multiscale random fields with truncated power variograms. <i>Water Resources Research</i> , 1999, 35, 2891-2908.	4.2	58
92	Non-Newtonian Flow in a Variable Aperture Fracture. <i>Transport in Porous Media</i> , 1998, 30, 75-86.	2.6	26
93	Permanent Waves in Slow Free-Surface Flow of a Herschel-Bulkley fluid. <i>Meccanica</i> , 1998, 33, 127-137.	2.0	10
94	Flow in multiscale log conductivity fields with truncated power variograms. <i>Water Resources Research</i> , 1998, 34, 975-987.	4.2	46
95	Transport in multiscale log conductivity fields with truncated power variograms. <i>Water Resources Research</i> , 1998, 34, 963-973.	4.2	56
96	Solute transport in three-dimensional heterogeneous media with a Gaussian covariance of log hydraulic conductivity. <i>Water Resources Research</i> , 1998, 34, 1929-1934.	4.2	17
97	Reply [to "Comment on "Scaling of random fields by means of truncated power variograms and associated spectra" by Vittorio Di Federico and Shlomo P. Neuman]. <i>Water Resources Research</i> , 1998, 34, 3209-3210.	4.2	0
98	Correlation, Flow, and Transport in Multiscale Permeability Fields. , 1998, , 354-397.		8
99	Multiscale Permeability and Dispersion in Randomly Heterogeneous Geologic Media. , 1998, , 419-453.		0
100	Scaling of random fields by means of truncated power variograms and associated spectra. <i>Water Resources Research</i> , 1997, 33, 1075-1085.	4.2	120
101	An Analytical Solution for Contaminant Transport in nonuniform Flow. <i>Transport in Porous Media</i> , 1997, 27, 85-97.	2.6	11
102	Estimates of equivalent aperture for non-Newtonian flow in a rough-walled fracture. <i>International Journal of Rock Mechanics and Mining Sciences</i> , 1997, 34, 1133-1137.	5.8	34
103	Estimates of equivalent aperture for non-Newtonian flow in a rough-walled fracture. <i>International Journal of Rock Mechanics and Mining Sciences</i> , 1997, 34, 1133-1137.	0.0	0
104	An exact solution for one-dimensional unsteady nonlinear groundwater flow. <i>Meccanica</i> , 1991, 26, 129-133.	2.0	0
105	Analytical modeling of spherical displacement for power-law fluids in porous media. <i>Applied Mathematical Sciences</i> , 0, 7, 2993-3005.	0.1	0