

Philippe Davy

List of Publications by Year in descending order

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138
papers

10,633
citations

22153

59
h-index

32842

100
g-index

141
all docs

141
docs citations

141
times ranked

7286
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydroâ€œGeomorphic Metrics for High Resolution Fluvial Landscape Analysis. Journal of Geophysical Research F: Earth Surface, 2022, 127, .	2.8	10
2	Autogenic knickpoints in laboratory landscape experiments. Earth Surface Dynamics, 2022, 10, 229-246.	2.4	6
3	Performance of automated methods for flash flood inundation mapping: a comparison of a digital terrain model (DTM) filling and two hydrodynamic methods. Hydrology and Earth System Sciences, 2021, 25, 2979-2995.	4.9	19
4	GPR-inferred fracture aperture widening in response to a high-pressure tracer injection test at the Å,,spÅ¶ Hard Rock Laboratory, Sweden. Engineering Geology, 2021, 292, 106249.	6.3	3
5	A particle-tracking formulation of advectiveâ€œdiffusive heat transport in deformable fracture networks. Journal of Hydrology, 2021, 603, 127157.	5.4	1
6	Graph-based flow modeling approach adapted to multiscale discrete-fracture-network models. Physical Review E, 2020, 102, 053312.	2.1	11
7	Which fractures are imaged with Ground Penetrating Radar? Results from an experiment in the Å,,spÅ¶ Hardrock Laboratory, Sweden. Engineering Geology, 2020, 273, 105674.	6.3	13
8	A Discrete Fracture Network Model With Stress-Driven Nucleation: Impact on Clustering, Connectivity, and Topology. Frontiers in Physics, 2020, 8, .	2.1	12
9	Landscape dynamics revealed by luminescence signals of feldspars from fluvial terraces. Scientific Reports, 2019, 9, 8569.	3.3	16
10	Seismic cycles, earthquakes, landslides and sediment fluxes: Linking tectonics to surface processes using a reduced-complexity model. Geomorphology, 2019, 339, 87-103.	2.6	47
11	Coulomb Mechanics and Relief Constraints Explain Landslide Size Distribution. Geophysical Research Letters, 2019, 46, 4258-4266.	4.0	42
12	Channel Widening Downstream of Valley Gorges Influenced by Flood Frequency and Floodplain Roughness. Journal of Geophysical Research F: Earth Surface, 2019, 124, 154-174.	2.8	10
13	Unexpected spatial stability of water chemistry in headwater stream networks. Ecology Letters, 2018, 21, 296-308.	6.4	149
14	OZCAR: The French Network of Critical Zone Observatories. Vadose Zone Journal, 2018, 17, 1-24.	2.2	126
15	Shear Flows Accelerate Mixing Dynamics in Hyporheic Zones and Hillslopes. Geophysical Research Letters, 2018, 45, 11,659.	4.0	18
16	Elastic Properties of Fractured Rock Masses With Frictional Properties and Power Law Fracture Size Distributions. Journal of Geophysical Research: Solid Earth, 2018, 123, 6521-6539.	3.4	24
17	A precipitonâ€œbased approach to model hydroâ€œsedimentary hazards induced by large sediment supplies in alluvial fans. Earth Surface Processes and Landforms, 2017, 42, 2054-2067.	2.5	14
18	Advanced DFN Models from Multi-Support Data for Underground Facilities. Procedia Engineering, 2017, 191, 1015-1022.	1.2	3

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19	A precipiton method to calculate river hydrodynamics, with applications to flood prediction, landscape evolution models, and braiding instabilities. <i>Journal of Geophysical Research F: Earth Surface</i> , 2017, 122, 1491-1512.	2.8	29
20	Rapid post-seismic landslide evacuation boosted by dynamic river width. <i>Nature Geoscience</i> , 2017, 10, 680-684.	12.9	86
21	Understanding the Hydromechanical Behavior of a Fault Zone From Transient Surface Tilt and Fluid Pressure Observations at Hourly Time Scales. <i>Water Resources Research</i> , 2017, 53, 10558-10582.	4.2	10
22	Connectivity, permeability, and channeling in randomly distributed and kinematically defined discrete fracture network models. <i>Water Resources Research</i> , 2016, 52, 8526-8545.	4.2	133
23	Impact of climate changes during the last 5 million years on groundwater in basement aquifers. <i>Scientific Reports</i> , 2015, 5, 14132.	3.3	49
24	Timescales of regional circulation of saline fluids in continental crystalline rock aquifers (Armorican Massif, western France). <i>Hydrology and Earth System Sciences</i> , 2015, 19, 1413-1426.	4.9	27
25	Topological impact of constrained fracture growth. <i>Frontiers in Physics</i> , 2015, 3, .	2.1	22
26	Modeling preasymptotic transport in flows with significant inertial and trapping effects – The importance of velocity correlations and a spatial Markov model. <i>Advances in Water Resources</i> , 2014, 70, 89-103.	3.8	63
27	Is the Dupuit assumption suitable for predicting the groundwater seepage area in hillslopes?. <i>Water Resources Research</i> , 2014, 50, 2394-2406.	4.2	24
28	Evidence for a Saline Component at Shallow Depth in the Crystalline Armorican Basement (W France). <i>Procedia Earth and Planetary Science</i> , 2013, 7, 19-22.	0.6	9
29	Flow Intermittency, Dispersion, and Correlated Continuous Time Random Walks in Porous Media. <i>Physical Review Letters</i> , 2013, 110, 184502.	7.8	184
30	Impact of permafrost development on groundwater flow patterns: a numerical study considering freezing cycles on a two-dimensional vertical cut through a generic river-plain system. <i>Hydrogeology Journal</i> , 2013, 21, 257-270.	2.1	34
31	A model of fracture nucleation, growth and arrest, and consequences for fracture density and scaling. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 1393-1407.	3.4	82
32	Temporal and spatial scaling of hydraulic response to recharge in fractured aquifers: Insights from a frequency domain analysis. <i>Water Resources Research</i> , 2013, 49, 3007-3023.	4.2	68
33	Partitioning a regional groundwater flow system into shallow local and deep regional flow compartments. <i>Water Resources Research</i> , 2013, 49, 2274-2286.	4.2	78
34	Topology of fracture networks. <i>Frontiers in Physics</i> , 2013, 1, .	2.1	45
35	The impact of inertial effects on solute dispersion in a channel with periodically varying aperture. <i>Physics of Fluids</i> , 2012, 24, .	4.0	46
36	Connecting source and transport: Suspended sediments in the Nepal Himalayas. <i>Earth and Planetary Science Letters</i> , 2012, 351-352, 158-170.	4.4	70

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37	Sediment transfer and the hydrological cycle of Himalayan rivers in Nepal. <i>Comptes Rendus - Geoscience</i> , 2012, 344, 627-635.	1.2	27
38	Impact of transient groundwater storage on the discharge of Himalayan rivers. <i>Nature Geoscience</i> , 2012, 5, 127-132.	12.9	242
39	A finite volume approach with local adaptation scheme for the simulation of free surface flow in porous media. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2012, 36, 1574-1591.	3.3	24
40	A modified Lagrangian-volumes method to simulate nonlinearly and kinetically sorbing solute transport in heterogeneous porous media. <i>Journal of Contaminant Hydrology</i> , 2011, 120-121, 89-98.	3.3	7
41	Horizontal pre-asymptotic solute transport in a plane fracture with significant density contrasts. <i>Journal of Contaminant Hydrology</i> , 2011, 120-121, 184-197.	3.3	13
42	A methodology for using borehole temperature-depth profiles under ambient, single and cross-borehole pumping conditions to estimate fracture hydraulic properties. <i>Journal of Hydrology</i> , 2011, , .	5.4	17
43	Persistence of incomplete mixing: A key to anomalous transport. <i>Physical Review E</i> , 2011, 84, 015301.	2.1	65
44	Anomalous kinetics in diffusion limited reactions linked to non-Gaussian concentration probability distribution function. <i>Journal of Chemical Physics</i> , 2011, 135, 174104.	3.0	18
45	Statistical characteristics of flow as indicators of channeling in heterogeneous porous and fractured media. <i>Advances in Water Resources</i> , 2010, 33, 257-269.	3.8	47
46	An inverse problem methodology to identify flow channels in fractured media using synthetic steady-state head and geometrical data. <i>Advances in Water Resources</i> , 2010, 33, 782-800.	3.8	20
47	Non-Fickian mixing: Temporal evolution of the scalar dissipation rate in heterogeneous porous media. <i>Advances in Water Resources</i> , 2010, 33, 1468-1475.	3.8	147
48	A likely universal model of fracture scaling and its consequence for crustal hydromechanics. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	113
49	Connectivity-consistent mapping method for 2D discrete fracture networks. <i>Water Resources Research</i> , 2010, 46, .	4.2	15
50	Use of power averaging for quantifying the influence of structure organization on permeability upscaling in on-lattice networks under mean parallel flow. <i>Water Resources Research</i> , 2010, 46, .	4.2	15
51	Mechanics of the transition from localized to distributed fracturing in layered brittle-ductile systems. <i>Tectonophysics</i> , 2010, 484, 48-59.	2.2	17
52	Fluvial erosion/transport equation of landscape evolution models revisited. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	120
53	Gravity influenced brittle-ductile deformation and growth faulting in the lithosphere during collision: Results from laboratory experiments. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	14
54	Compartmentalization of physical and chemical properties in hard-rock aquifers deduced from chemical and groundwater age analyses. <i>Applied Geochemistry</i> , 2008, 23, 2686-2707.	3.0	105

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55	Characterization of the velocity field organization in heterogeneous media by conditional correlation. <i>Water Resources Research</i> , 2007, 43, .	4.2	44
56	Relation between fractional flow models and fractal or long-range 2-D permeability fields. <i>Water Resources Research</i> , 2007, 43, .	4.2	15
57	Characterizing flow in natural fracture networks. , 2007, , 437-449.		2
58	Flow in multiscale fractal fracture networks. <i>Geological Society Special Publication</i> , 2006, 261, 31-45.	1.3	54
59	A note on the angular correction applied to fracture intensity profiles along drill core. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	24
60	Mesoscale fluvial erosion parameters deduced from modeling the Mediterranean sea level drop during the Messinian (late Miocene). <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	50
61	Oxido-reduction sequence related to flux variations of groundwater from a fractured basement aquifer (Ploemeur area, France). <i>Applied Geochemistry</i> , 2006, 21, 29-47.	3.0	42
62	Did the Ebro basin connect to the Mediterranean before the Messinian salinity crisis?. <i>Geomorphology</i> , 2006, 81, 155-165.	2.6	45
63	General Database for Ground Water Site Information. <i>Ground Water</i> , 2006, 44, 060515055722002-???.	1.3	33
64	How did the Messinian Salinity Crisis end?. <i>Terra Nova</i> , 2005, 17, 414-419.	2.1	49
65	How to model shallow water-table depth variations: the case of the Kervidy-Naizin catchment, France. <i>Hydrological Processes</i> , 2005, 19, 901-920.	2.6	43
66	Brittle-ductile coupling: Role of ductile viscosity on brittle fracturing. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	20
67	Discharge, discharge variability, and the bedrock channel profile. <i>Journal of Geophysical Research</i> , 2005, 110, n/a-n/a.	3.3	223
68	Anomalous diffusion exponents in continuous two-dimensional multifractal media. <i>Physical Review E</i> , 2004, 70, 016306.	2.1	16
69	Backarc extension and collision: an experimental approach to the tectonics of Asia. <i>Geophysical Journal International</i> , 2004, 157, 871-889.	2.4	60
70	Reply to comment on "How plausible are high-frequency sediment supply-driven cycles in the stratigraphic record?" by Jasper Knight. <i>Sedimentary Geology</i> , 2004, 164, 331-334.	2.1	2
71	Influence of spatial correlation of fracture centers on the permeability of two-dimensional fracture networks following a power law length distribution. <i>Water Resources Research</i> , 2004, 40, .	4.2	75
72	Equivalent mean flow models for fractured aquifers: Insights from a pumping tests scaling interpretation. <i>Water Resources Research</i> , 2004, 40, .	4.2	87

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73	Porosity and fluid velocities in the upper continental crust (2 to 4 km) inferred from injection tests at the Soultz-sous-Forets geothermal site. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 2405-2415.	3.9	42
74	Laboratory experiments simulating the geomorphic response to tectonic uplift. <i>Journal of Geophysical Research</i> , 2003, 108, ETG 3-1-ETG 3-20.	3.3	128
75	Constraints on the long-term colluvial erosion law by analyzing slope-area relationships at various tectonic uplift rates in the Siwaliks Hills (Nepal). <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	109
76	Stereological analysis of fractal fracture networks. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	50
77	Cross-correlation between length and position in real fracture networks. <i>Geophysical Research Letters</i> , 2003, 30, .	4.0	25
78	Connectivity properties of two-dimensional fracture networks with stochastic fractal correlation. <i>Water Resources Research</i> , 2003, 39, .	4.2	155
79	A statistical scaling model for fracture network geometry, with validation on a multiscale mapping of a joint network (Hornelen Basin, Norway). <i>Journal of Geophysical Research</i> , 2002, 107, ETG 4-1.	3.3	137
80	Cataclastic slip band distribution in normal fault damage zones, Nubian sandstones, Suez rift. <i>Journal of Geophysical Research</i> , 2002, 107, ETG 6-1-ETG 6-12.	3.3	61
81	Hydraulic properties of two-dimensional random fracture networks following power law distributions of length and aperture. <i>Water Resources Research</i> , 2002, 38, 12-1-12-9.	4.2	132
82	Evolution of soil surface roughness and flowpath connectivity in overland flow experiments. <i>Catena</i> , 2002, 46, 125-139.	5.0	160
83	Effect of depression storage capacity on overland-flow generation for rough horizontal surfaces: water transfer distance and scaling. <i>Earth Surface Processes and Landforms</i> , 2002, 27, 177-191.	2.5	38
84	Effects of surface water storage by soil roughness on overland-flow generation. <i>Earth Surface Processes and Landforms</i> , 2002, 27, 223-233.	2.5	60
85	Mechanisms of Nitrate Transfer from Soil to Stream in an Agricultural Watershed of French Brittany. <i>Water, Air, and Soil Pollution</i> , 2002, 133, 161-183.	2.4	81
86	Scaling of fracture systems in geological media. <i>Reviews of Geophysics</i> , 2001, 39, 347-383.	23.0	1,047
87	Hydraulic properties of two-dimensional random fracture networks following a power law length distribution: 2. Permeability of networks based on lognormal distribution of apertures. <i>Water Resources Research</i> , 2001, 37, 2079-2095.	4.2	177
88	Hydraulic properties of two-dimensional random fracture networks following a power law length distribution: 1. Effective connectivity. <i>Water Resources Research</i> , 2001, 37, 2065-2078.	4.2	199
89	A stochastic "precipitation" model for simulating erosion/sedimentation dynamics. <i>Computers and Geosciences</i> , 2001, 27, 815-827.	4.2	91
90	Advective transport in the percolation backbone in two dimensions. <i>Physical Review E</i> , 2001, 64, 056305.	2.1	6

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91	Spectral and cross-spectral analysis of three hydrological systems. <i>Physics and Chemistry of the Earth</i> , 2000, 25, 391-397.	0.3	13
92	Percolation parameter and percolation-threshold estimates for three-dimensional random ellipses with widely scattered distributions of eccentricity and size. <i>Physical Review E</i> , 2000, 62, 5948-5952.	2.1	84
93	Upscaling local-scale transport processes in large-scale relief dynamics. <i>Physics and Chemistry of the Earth</i> , 2000, 25, 533-541.	0.6	49
94	Estimating uplift rate and erodibility from the area-slope relationship: Examples from Brittany (France) and numerical modelling. <i>Physics and Chemistry of the Earth</i> , 2000, 25, 543-548.	0.6	47
95	Analogue modelling of relief dynamics. <i>Physics and Chemistry of the Earth</i> , 2000, 25, 549-553.	0.6	30
96	Scaling of fracture connectivity in geological formations. <i>Geophysical Research Letters</i> , 2000, 27, 2061-2064.	4.0	105
97	Continental collision, gravity spreading, and kinematics of Aegea and Anatolia. <i>Tectonics</i> , 2000, 19, 290-299.	2.8	50
98	Study of three subsurface hydrologic systems based on spectral and cross-spectral analysis of time series. <i>Journal of Hydrology</i> , 1999, 222, 152-164.	5.4	69
99	Initiation of subduction at Atlantic-type margins: Insights from laboratory experiments. <i>Journal of Geophysical Research</i> , 1999, 104, 2749-2766.	3.3	110
100	Clustering and size distributions of fault patterns: Theory and measurements. <i>Geophysical Research Letters</i> , 1999, 26, 2001-2004.	4.0	114
101	The Namche Barwa syntaxis: evidence for exhumation related to compressional crustal folding. <i>Journal of Asian Earth Sciences</i> , 1998, 16, 239-252.	2.3	240
102	On the connectivity of three-dimensional fault networks. <i>Water Resources Research</i> , 1998, 34, 2611-2622.	4.2	168
103	Connectivity of random fault networks following a power law fault length distribution. <i>Water Resources Research</i> , 1997, 33, 1567-1583.	4.2	320
104	Scaling relationships of channel networks at large scales: Examples from two large-magnitude watersheds in Brittany, France. <i>Tectonophysics</i> , 1997, 269, 91-111.	2.2	31
105	Exhumation during crustal folding in the Namche-Barwa syntaxis. <i>Terra Nova</i> , 1997, 9, 53-56.	2.1	164
106	Modes of continental lithospheric extension: experimental verification of strain localization processes. <i>Tectonophysics</i> , 1996, 254, 69-87.	2.2	79
107	Non-Newtonian effects during injection in partially crystallised magmas. <i>Journal of Volcanology and Geothermal Research</i> , 1996, 71, 31-44.	2.1	31
108	The dynamics of back-arc extension: an experimental approach to the opening of the Tyrrhenian Sea. <i>Geophysical Journal International</i> , 1996, 126, 781-795.	2.4	222

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109	The influence of pre-existing thrust faults on normal fault geometry in nature and in experiments. <i>Journal of Structural Geology</i> , 1995, 17, 1139-1149.	2.3	85
110	Localization and fault growth in layered brittle-ductile systems: Implications for deformations of the continental lithosphere. <i>Journal of Geophysical Research</i> , 1995, 100, 6281-6294.	3.3	67
111	New injection experiments in non-Newtonian fluids. <i>Terra Nova</i> , 1994, 6, 274-281.	2.1	11
112	Periodic instabilities during compression of the lithosphere: 2. Analogue experiments. <i>Journal of Geophysical Research</i> , 1994, 99, 12057-12069.	3.3	72
113	Shortening of analogue models of the continental lithosphere: New hypothesis for the formation of the Tibetan plateau. <i>Tectonics</i> , 1994, 13, 475-483.	2.8	96
114	Sedimentary basins and crustal thickening. <i>Sedimentary Geology</i> , 1993, 86, 77-89.	2.1	124
115	Fault growth in brittle-ductile experiments and the mechanics of continental collisions. <i>Journal of Geophysical Research</i> , 1993, 98, 12111-12139.	3.3	80
116	On the frequency-length distribution of the San Andreas Fault System. <i>Journal of Geophysical Research</i> , 1993, 98, 12141-12151.	3.3	149
117	Experimental discovery of scaling laws relating fractal dimensions and the length distribution exponent of fault systems. <i>Geophysical Research Letters</i> , 1992, 19, 361-363.	4.0	32
118	Periodic instabilities during compression or extension of the lithosphere 1. Deformation modes from an analytical perturbation method. <i>Journal of Geophysical Research</i> , 1992, 97, 1999-2014.	3.3	116
119	Buckling of the oceanic lithosphere from geophysical data and experiments. <i>Tectonics</i> , 1992, 11, 537-548.	2.8	32
120	Fractal fault patterns as a dual DLA problem. <i>International Journal of Rock Mechanics and Mining Sciences</i> , 1992, 29, A74.	0.0	1
121	Gravity instabilities in magma chambers: rheological modelling. <i>Earth and Planetary Science Letters</i> , 1991, 105, 319-329.	4.4	15
122	On the tectonic significance of retrograde P-T paths in eclogites of the French Massif Central. <i>Tectonics</i> , 1991, 10, 131-140.	2.8	45
123	Lateral extrusion in the eastern Alps, Part 1: Boundary conditions and experiments scaled for gravity. <i>Tectonics</i> , 1991, 10, 245-256.	2.8	316
124	Fault growth model and the universal fault length distribution. <i>Geophysical Research Letters</i> , 1991, 18, 1079-1081.	4.0	53
125	Experiments on shortening of a 4-layer model of the continental lithosphere. <i>Tectonophysics</i> , 1991, 188, 1-25.	2.2	363
126	Hypotheses mecaniques de deformation de la lithosphere appliquees a la formation des Pyrenees. <i>Bulletin - Societe Geologique De France</i> , 1990, VI, 219-228.	2.2	14

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127	Some consequences of a proposed fractal nature of continental faulting. <i>Nature</i> , 1990, 348, 56-58.	27.8	165
128	Growth of fractal fault patterns. <i>Physical Review Letters</i> , 1990, 65, 2266-2269.	7.8	96
129	Right-lateral shear along the Northwest Pacific Margin and the India-Eurasia Collision. <i>Tectonics</i> , 1990, 9, 1409-1419.	2.8	122
130	Structuration of the lithosphere in plate tectonics as a self-organized critical phenomenon. <i>Journal of Geophysical Research</i> , 1990, 95, 17353-17361.	3.3	104
131	Thermal constraints on the tectonic evolution of a metamorphic core complex (Santa Catalina). <i>Tectonics</i> , 1989, 8, 107-114.	4.4	25
132	Symetrie et asymetrie des rifts et mecanismes d'amincissement de la lithosphere. <i>Bulletin - Societe Geologique De France</i> , 1989, V, 445-451.	2.2	56
133	Some Experiments on Block Rotation in the Brittle Upper Crust. , 1989, , 145-155.		8
134	Physical models of extensional tectonics at various scales. <i>Geological Society Special Publication</i> , 1987, 28, 95-107.	1.3	99
135	Thickening history of the Western Alps. <i>Earth and Planetary Science Letters</i> , 1986, 78, 44-52.	4.4	26
136	The stacking of thrust slices in collision zones and its thermal consequences. <i>Tectonics</i> , 1986, 5, 913-929.	2.8	123
137	Contribution d'un modele hydrogeologique a fractures discretises a l'etude des aquiferes fracturés du socle Archéen de Touba (Nord-Ouest, Côte d'Ivoire). <i>Revue Des Sciences De L'Eau</i> , 0, 23, 41-56.	0.2	7
138	On the Density Variability of Poissonian Discrete Fracture Networks, with application to power-law fracture size distributions. <i>Advances in Geosciences</i> , 0, 49, 77-83.	12.0	4