

Alan Rempel

List of Publications by Year in descending order

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Version: 2024-02-01

34
papers

1,987
citations

393982

19
h-index

377514

34
g-index

39
all docs

39
docs citations

39
times ranked

2330
citing authors

#	ARTICLE	IF	CITATIONS
1	The physics of premelted ice and its geophysical consequences. <i>Reviews of Modern Physics</i> , 2006, 78, 695-741.	16.4	593
2	Premelting dynamics in a continuum model of frost heave. <i>Journal of Fluid Mechanics</i> , 2004, 498, 227-244.	1.4	194
3	Formation and accumulation of gas hydrate in porous media. <i>Journal of Geophysical Research</i> , 1997, 102, 10151-10164.	3.3	165
4	Possible displacement of the climate signal in ancient ice by premelting and anomalous diffusion. <i>Nature</i> , 2001, 411, 568-571.	13.7	124
5	Interfacial Premelting and the Thermomolecular Force: Thermodynamic Buoyancy. <i>Physical Review Letters</i> , 2001, 87, 088501.	2.9	86
6	A theory for ice-till interactions and sediment entrainment beneath glaciers. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	86
7	Mega-earthquakes rupture flat megathrusts. <i>Science</i> , 2016, 354, 1027-1031.	6.0	86
8	Frost for the trees: Did climate increase erosion in unglaciated landscapes during the late Pleistocene?. <i>Science Advances</i> , 2015, 1, e1500715.	4.7	70
9	Frost heave. <i>Journal of Glaciology</i> , 2010, 56, 1122-1128.	1.1	64
10	Initiation and growth of martian ice lenses. <i>Icarus</i> , 2015, 251, 191-210.	1.1	52
11	Modeling relative frost weathering rates at geomorphic scales. <i>Earth and Planetary Science Letters</i> , 2016, 453, 87-95.	1.8	49
12	A model for the diffusive growth of hydrate saturation anomalies in layered sediments. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	43
13	Dehydration-induced porosity waves and episodic tremor and slip. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 442-469.	1.0	41
14	Hydromechanical Processes in Freezing Soils. <i>Vadose Zone Journal</i> , 2012, 11, vzt2012.0045.	1.3	36
15	Rocks, Clays, Water, and Salts: Highly Durable, Infinitely Rechargeable, Eminently Controllable Thermal Batteries for Buildings. <i>Geosciences (Switzerland)</i> , 2013, 3, 63-101.	1.0	33
16	Glacier sliding, seismicity and sediment entrainment. <i>Annals of Glaciology</i> , 2019, 60, 182-192.	2.8	31
17	Anomalous diffusion of multiple impurity species: Predicted implications for the ice core climate records. <i>Journal of Geophysical Research</i> , 2002, 107, ECV 3-1-ECV 3-12.	3.3	29
18	Submarine landslides triggered by destabilization of high-saturation hydrate anomalies. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 2429-2445.	1.0	28

#	ARTICLE	IF	CITATIONS
19	Characteristics of secondary slip fronts associated with slow earthquakes in Cascadia. <i>Earth and Planetary Science Letters</i> , 2017, 463, 212-220.	1.8	23
20	Freeze-on limits bed strength beneath sliding glaciers. <i>Nature Communications</i> , 2018, 9, 3242.	5.8	19
21	Extensive Frost Weathering Across Unglaciaded North America During the Last Glacial Maximum. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL090305.	1.5	19
22	Intrinsic Evaporative Cooling by Hygroscopic Earth Materials. <i>Geosciences (Switzerland)</i> , 2016, 6, 38.	1.0	18
23	On the Importance of Advective Versus Diffusive Transport in Controlling the Distribution of Methane Hydrate in Heterogeneous Marine Sediments. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 5394-5411.	1.4	18
24	Isotopic diffusion in polycrystalline ice. <i>Journal of Glaciology</i> , 2003, 49, 397-406.	1.1	16
25	Comment on "Friction at the bed does not control fast glacier flow". <i>Science</i> , 2019, 363, .	6.0	13
26	Frost Resilience of Stabilized Earth Building Materials. <i>Geosciences (Switzerland)</i> , 2019, 9, 328.	1.0	12
27	A Monte Carlo Approach to Approximating the Effects of Pore Geometry on the Phase Behavior of Soil Freezing. <i>Journal of Advances in Modeling Earth Systems</i> , 2020, 12, e2020MS002117.	1.3	10
28	Imaging Shear Strength Along Subduction Faults. <i>Geophysical Research Letters</i> , 2017, 44, 11,329.	1.5	9
29	Improving the passive survivability of residential buildings during extreme heat events in the Pacific Northwest. <i>Applied Energy</i> , 2022, 321, 119323.	5.1	8
30	Indirect measurement of interfacial melting from macroscopic ice observations. <i>Physical Review E</i> , 2014, 89, 060401.	0.8	5
31	Diurnal expansion and contraction of englacial fracture networks revealed by seismic shear wave splitting. <i>Communications Earth & Environment</i> , 2021, 2, .	2.6	3
32	Estimating Permeability of Partially Frozen Soil Using Floating Random Walks. <i>Water Resources Research</i> , 2021, 57, e2021WR030598.	1.7	2
33	A Monte Carlo Model of Gas-Liquid-Hydrate Three-phase Coexistence Constrained by Pore Geometry in Marine Sediments. <i>Frontiers in Earth Science</i> , 2021, 8, .	0.8	1
34	NMR Characterization of unfrozen brine vein distribution and structure in model packed beds. <i>Cold Regions Science and Technology</i> , 2022, 199, 103572.	1.6	1