Clinton P Conrad

List of Publications by Citations

83 papers	4,132 citations	37 h-index	63 g-index
101 ext. papers	4,667 ext. citations	6.1 avg, IF	5.84 L-index

#	Paper	IF	Citations
83	How mantle slabs drive plate tectonics. *Science*, **2002**, 298, 207-9	33.3	316
82	Effects of plate bending and fault strength at subduction zones on plate dynamics. *Journal of Geophysical Research*, **1999**, 104, 17551-17571		203
81	Reassessment of 20th century global mean sea level rise. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 5946-5951	11.5	188
80	Influence of continental roots and asthenosphere on plate-mantle coupling. *Geophysical Research Letters*, **2006**, 33,	4.9	148
79	Detection of upper mantle flow associated with the African Superplume. *Earth and Planetary Science Letters*, **2004**, 224, 259-274	5.3	139
78	The growth of Rayleigh-Taylor-type instabilities in the lithosphere for various rheological and density structures. *Geophysical Journal International*, **1997**, 129, 95-112	2.6	137
77	Global mantle flow and the development of seismic anisotropy: Differences between the oceanic and continental upper mantle. *Journal of Geophysical Research*, **2007**, 112,		120
76	The solid Earth's influence on sea level. *Bulletin of the Geological Society of America*, **2013**, 125, 1027-1052	3.9	117
75	Rayleigh-Taylor instability and convective thinning of mechanically thickened lithosphere: effects of non-linear viscosity decreasing exponentially with depth and of horizontal shortening of the layer. *Geophysical Journal International*, **1998**, 133, 568-584	2.6	113
74	Constraints on lithosphere net rotation and asthenospheric viscosity from global mantle flow models and seismic anisotropy. *Geochemistry, Geophysics, Geosystems*, **2010**, 11, n/a-n/a	3.6	111
73	Seismic tomography, surface uplift, and the breakup of Gondwanaland: Integrating mantle convection backwards in time. *Geochemistry, Geophysics, Geosystems*, **2003**, 4,	3.6	106
72	Patterns of intraplate volcanism controlled by asthenospheric shear. *Nature Geoscience*, **2011**, 4, 317-321	18.3	104
71	The temporal evolution of plate driving forces: Importance of "slab suction" versus "slab pull" during the Cenozoic. *Journal of Geophysical Research*, **2004**, 109,		98
70	Relation between subduction megathrust earthquakes, trench sediment thickness and upper plate strain. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	95
69	Influence of dynamic topography on sea level and its rate of change. *Lithosphere*, **2009**, 1, 110-120	2.7	94
68	Review: Short-term sea-level changes in a greenhouse world – A view from the Cretaceous. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **2016**, 441, 393-411	2.9	93
67	Great earthquakes and slab pull: interaction between seismic coupling and plate–slab coupling. *Earth and Planetary Science Letters*, **2004**, 218, 109-122	5.3	92

66	Reconciling strong slab pull and weak plate bending: The plate motion constraint on the strength of mantle slabs. *Earth and Planetary Science Letters*, **2008**, 272, 412-421	5.3	87
65	Mountain building and mantle dynamics. *Tectonics*, **2013**, 32, 80-93	4.3	74
64	Evidence of earthquake triggering by the solid earth tides. *Earth and Planetary Science Letters*, **2009** , 278, 370-375	5.3	74
63	The thermal evolution of an Earth with strong subduction zones. *Geophysical Research Letters*, **1999** , 26, 3041-3044	4.9	74
62	Origin of azimuthal seismic anisotropy in oceanic plates and mantle. *Earth and Planetary Science Letters*, **2014**, 401, 236-250	5.3	73
61	Mantle convection with strong subduction zones. *Geophysical Journal International*, **2001**, 144, 271-288	2.6	70
60	Shear-driven upwelling induced by lateral viscosity variations and asthenospheric shear: A mechanism for intraplate volcanism. *Physics of the Earth and Planetary Interiors*, **2010**, 178, 162-175	2.3	67
59	THERMODYNAMIC LIMITS ON MAGNETODYNAMOS IN ROCKY EXOPLANETS. *Astrophysical Journal*, **2010**, 718, 596-609	4.7	66
58	Plate motions, Andean orogeny, and volcanism above the South Atlantic convection cell. *Earth and Planetary Science Letters*, **2012**, 317-318, 126-135	5.3	60
57	Faster seafloor spreading and lithosphere production during the mid-Cenozoic. *Geology*, **2007**, 35, 29	5	60
56	Iceland, the Farallon slab, and dynamic topography of the North Atlantic. *Geology*, **2004**, 32, 177	5	59
55	Stability of active mantle upwelling revealed by net characteristics of plate tectonics. *Nature*, **2013**, 498, 479-82	50.4	58
54	Convective instability of a boundary layer with temperature-and strain-rate-dependent viscosity in terms of 'available buoyancy'. *Geophysical Journal International*, **1999**, 139, 51-68	2.6	54
53	Spatial variations in the rate of sea level rise caused by the present-day melting of glaciers and ice sheets. *Geophysical Research Letters*, **1997**, 24, 1503-1506	4.9	53
52	Pacific-Panthalassic Reconstructions: Overview, Errata and the Way Forward. *Geochemistry, Geophysics, Geosystems*, **2019**, 20, 3659-3689	3.6	49
51	Toward a generalized plate motion reference frame. *Geophysical Research Letters*, **2015**, 42, 3188-3196	4.9	46
50	MANTLE CONVECTION, PLATE TECTONICS, AND VOLCANISM ON HOT EXO-EARTHS. *Astrophysical Journal Letters*, **2011**, 736, L15	7.9	45
49	Past and present seafloor age distributions and the temporal evolution of plate tectonic heat transport. *Earth and Planetary Science Letters*, **2009**, 278, 233-242	5.3	42

48	Tethyan closure, Andean orogeny, and westward drift of the Pacific Basin. *Earth and Planetary Science Letters*, **2008**, 271, 303-310	5.3	37
47	A plate tectonic mechanism for methane hydrate release along subduction zones. *Earth and Planetary Science Letters*, **2005**, 236, 691-704	5.3	37
46	Non-hotspot volcano chains produced by migration of shear-driven upwelling toward the East Pacific Rise. *Geology*, **2013**, 41, 479-482	5	36
45	Convective instability of thickening mantle lithosphere. *Geophysical Journal International*, **2000**, 143, 52-70	2.6	35
44	Global reconstructions of Cenozoic seafloor ages: Implications for bathymetry and sea level. *Earth and Planetary Science Letters*, **2006**, 243, 552-564	5.3	34
43	Spatial variability of sea level rise due to water impoundment behind dams. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	31
42	Andean growth and the deceleration of South American subduction: Time evolution of a coupled orogen-subduction system. *Earth and Planetary Science Letters*, **2008**, 275, 93-101	5.3	30
41	The importance of slab pull and a global asthenosphere to plate motions. *Geochemistry, Geophysics, Geosystems*, **2012**, 13, n/a-n/a	3.6	28
40	The role of Poiseuille flow in creating depth-variation of asthenospheric shear. *Geophysical Journal International*, **2012**, 190, 1297-1310	2.6	27
39	Intraplate volcanism at the edges of the Colorado Plateau sustained by a combination of triggered edge-driven convection and shear-driven upwelling. *Geochemistry, Geophysics, Geosystems*, **2015**, 16, 366-379	3.6	26
38	Time variability in Cenozoic reconstructions of mantle heat flow: plate tectonic cycles and implications for Earth's thermal evolution. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 14266-71	11.5	25
37	Plume generation in natural thermal convection at high Rayleigh and Prandtl numbers. *Journal of Fluid Mechanics*, **2001**, 434, 1-21	3.7	25
36	Does the mantle control the maximum thickness of cratons?. *Lithosphere*, **2009**, 1, 67-72	2.7	24
35	Aquifer-eustasy as the main driver of short-term sea-level fluctuations during Cretaceous hothouse climate phases. *Geological Society Special Publication*, **2020**, 498, 9-38	1.7	24
34	On the amplitude of dynamic topography at spherical harmonic degree two. *Tectonophysics*, **2019**, 760, 221-228	3.1	24
33	Modification of the lithospheric stress field by lateral variations in plate-mantle coupling. *Geophysical Research Letters*, **2009**, 36,	4.9	22
32	In quest of Paleocene global-scale transgressions and regressions: constraints from a synthesis of regional trends. *Proceedings of the Geologists Association*, **2012**, 123, 7-18	1.1	20
31	The dynamic life of an oceanic plate. *Tectonophysics*, **2019**, 760, 107-135	3.1	20

30	Deep Water Cycling and Sea Level Change Since the Breakup of Pangea. *Geochemistry, Geophysics, Geosystems*, **2019**, 20, 2919-2935	3.6	18
29	Tectonic velocities, dynamic topography, and relative sea level. *Geophysical Research Letters*, **2006**, 33, n/a-n/a	4.9	18
28	The impact of groundwater depletion on spatial variations in sea level change during the past century. *Geophysical Research Letters*, **2016**, 43, 3351-3359	4.9	17
27	No global-scale transgressive–regressive cycles in the Thanetian (Paleocene): Evidence from interregional correlation. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **2010**, 295, 226-235	2.9	17
26	Body tides of a convecting, laterally heterogeneous, and aspherical Earth. *Journal of Geophysical Research*, **2008**, 113,		17
25	Stabilizing Effect of Compositional Viscosity Contrasts on Thermochemical Piles. *Geophysical Research Letters*, **2018**, 45, 7523-7532	4.9	16
24	Slab pull, slab weakening, and their relation to deep intra-slab seismicity. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.9	14
23	Constraints on dynamic topography from asymmetric subsidence of the mid-ocean ridges. *Earth and Planetary Science Letters*, **2018**, 484, 264-275	5.3	12
22	Does active mantle upwelling help drive plate motions?. *Physics of the Earth and Planetary Interiors*, **2007**, 161, 103-114	2.3	12
21	On the location of hotspots in the framework of mantle convection. *Geophysical Research Letters*, **2012**, 39, n/a-n/a	4.9	11
20	Magnetodynamo lifetimes for rocky, Earth-mass exoplanets with contrasting mantle convection regimes. *Journal of Geophysical Research E: Planets*, **2013**, 118, 938-951	4.1	10
19	Time dependence of intraplate volcanism caused by shear-driven upwelling of low-viscosity regions within the asthenosphere. *Journal of Geophysical Research*, **2011**, 116, n/a-n/a		10
18	Traction and strain-rate at the base of the lithosphere: an insight into cratonic survival. *Geophysical Journal International*, **2019**, 217, 1024-1033	2.6	9
17	Viscous anisotropy of textured olivine aggregates: 2. Micromechanical model. *Journal of Geophysical Research: Solid Earth*, **2016**, 121, 7137-7160	3.6	9
16	The elastic response of the Earth to interannual variations in Antarctic precipitation. *Geophysical Research Letters*, **1995**, 22, 3183-3186	4.9	7
15	Long-term eustatic cyclicity in the Paleogene: a critical assessment. *Proceedings of the Geologists Association*, **2016**, 127, 425-434	1.1	7
14	A tracer-based algorithm for automatic generation of seafloor age grids from plate tectonic reconstructions. *Computers and Geosciences*, **2020**, 140, 104508	4.5	6
13	Constraints on volumes and patterns of asthenospheric melt from the space-time distribution of seamounts. *Geophysical Research Letters*, **2017**, 44, 7203-7210	4.9	6

12	How Thermochemical Piles Can (Periodically) Generate Plumes at Their Edges. *Journal of Geophysical Research: Solid Earth*, **2020**, 125, e2019JB018726	3.6	5
11	Oceans. How climate influences sea-floor topography. *Science*, **2015**, 347, 1204-5	33.3	5
10	Evolving Viscous Anisotropy in the Upper Mantle and Its Geodynamic Implications. *Geochemistry, Geophysics, Geosystems*, **2020**, 21, e2020GC009159	3.6	5
9	Core-mantle boundary topography and its relation to the viscosity structure of the lowermost mantle. *Earth and Planetary Science Letters*, **2020**, 543, 116358	5.3	4
8	Multiagent simulation of evolutive plate tectonics applied to the thermal evolution of the Earth. *Geochemistry, Geophysics, Geosystems*, **2012**, 13,	3.6	3
7	Assessing Models for Pacific Absolute Plate and Plume Motions. *Geochemistry, Geophysics, Geosystems*, **2019**, 20, 6016-6032	3.6	2
6	On the relation between basal erosion of the lithosphere and surface heat flux for continental plume tracks. *Geophysical Research Letters*,	4.9	1
5	Late Silurian–Middle Devonian long-term shoreline shifts on the northern Gondwanan margin: eustatic versus tectonic controls. *Proceedings of the Geologists Association*, **2013**, 124, 883-892	1.1	0
4	Spatiotemporal Variations in Surface Heat Loss Imply a Heterogeneous Mantle Cooling History. *Geophysical Research Letters*, **2021**, 48, e2020GL092119	4.9	0
3	Conrad et al. reply. *Nature*, **2013**, 503, E4	50.4	
2	What is the lithosphere-asthenosphere boundary?. *Eos*, **2011**, 92, 481-481	1.5	
1	Plate Tectonics **2019**,		