Rodolphe Cattin

List of Publications by Year
in descending order

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64 papers	3,441 citations	117625 34 h-index	138484 58 g-index
65 all docs	65 docs citations	65 times ranked	3176 citing authors

#	Article	IF	Citations
1	Modeling mountain building and the seismic cycle in the Himalaya of Nepal. Journal of Geophysical Research, 2000, 105, 13389-13407.	3.3	312
2	Late Cenozoic evolution of the central Longmen Shan, eastern Tibet: Insight from (Uâ€Th)/He thermochronometry. Tectonics, 2009, 28, .	2.8	209
3	Title is missing!. Journal of Seismology, 1997, 1, 131-150.	1.3	205
4	Density distribution of the India plate beneath the Tibetan plateau: Geophysical and petrological constraints on the kinetics of lower-crustal eclogitization. Earth and Planetary Science Letters, 2007, 264, 226-244.	4.4	168
5	Clockwise rotation of the Brahmaputra Valley relative to India: Tectonic convergence in the eastern Himalaya, Naga Hills, and Shillong Plateau. Journal of Geophysical Research: Solid Earth, 2014, 119, 6558-6571.	3.4	162
6	Stress buildup in the Himalaya. Journal of Geophysical Research, 2004, 109, .	3.3	148
7	Spectral analysis of seismic noise induced by rivers: A new tool to monitor spatiotemporal changes in stream hydrodynamics. Journal of Geophysical Research, 2008, 113, .	3.3	128
8	April 2012 intra-oceanic seismicity off Sumatra boosted by the Banda-Aceh megathrust. Nature, 2012, 490, 240-244.	27.8	97
9	Spatial distribution of denudation in Eastern Tibet and regressive erosion of plateau margins. Tectonophysics, 2010, 491, 253-274.	2.2	94
10	The effective elastic thickness of the India Plate from receiver function imaging, gravity anomalies and thermomechanical modelling. Geophysical Journal International, 2006, 167, 1106-1118.	2.4	90
11	The Sumatra subduction zone: A case for a locked fault zone extending into the mantle. Journal of Geophysical Research, 2004, 109, .	3.3	86
12	Structural and thermal characters of the Longmen Shan (Sichuan, China). Tectonophysics, 2010, 491, 165-173.	2.2	84
13	Gravity anomalies, crustal structure and thermo-mechanical support of the Himalaya of Central Nepal. Geophysical Journal International, 2001, 147, 381-392.	2.4	83
14	Erosion-induced isostatic rebound triggers extension in low convergent mountain ranges. Geology, 2013, 41, 467-470.	4.4	81
15	Towards the hydrologic and bed load monitoring from high-frequency seismic noise in a braided river: The â€œtorrent de St Pierreâ€, French Alps. Journal of Hydrology, 2011, 408, 43-53.	5.4	77
16	Crustal structures in the area of the 2008 Sichuan earthquake from seismologic and gravimetric data. Tectonophysics, 2010, 491, 205-210.	2.2	70
17	Thinâ€plate modeling of interseismic deformation and asymmetry across the Altyn Tagh fault zone. Geophysical Research Letters, 2008, 35, .	4.0	67
18	Erosion influences the seismicity of active thrust faults. Nature Communications, 2014, 5, 5564.	12.8	66

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19	Effects of superficial layers on coseismic displacements for a dip-slip fault and geophysical implications. Geophysical Journal International, 1999, 137, 149-158.	2.4	63
20	Segmentation of the Himalayas as revealed by arc-parallel gravity anomalies. Scientific Reports, 2016, 6, 33866.	3.3	63
21	Active tectonics of the eastern Himalaya: New constraints from the first tectonic geomorphology study in southern Bhutan. Geology, 2014, 42, 427-430.	4.4	62
22	Numerical modelling of quaternary deformation and post-rifting displacement in the Asalâ€“Ghoubbet rift (Djibouti, Africa). Earth and Planetary Science Letters, 2005, 239, 352-367.	4.4	61
23	On the use of dislocations to model interseismic strain and stress build-up at intracontinental thrust faults. Geophysical Journal International, 2001, 147, 155-162.	2.4	59
24	Spatiotemporal sequence of Himalayan debris flow from analysis of highâ€frequency seismic noise. Journal of Geophysical Research, 2009, 114, .	3.3	55
25	Mesozoic-Cenozoic tectonothermal evolution of the eastern part of the Tibetan Plateau (Songpan-GarzÃª, Longmen Shan area): insights from thermochronological data and simple thermal modelling. Geological Society Special Publication, 2011, 353, 9-25.	1.3	54
26	Stress change and effective friction coefficient along the Sumatraâ€Andamanâ€Sagaing fault system after the 26 December 2004 (M_w = 9.2) and the 28 March 2005 (M_w = 8.7) earthquakes. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	48
27	Joint approach combining damage and paleoseismology observations constrains the 1714â€‰A.D. Bhutan earthquake at magnitude 8â€‰Â±â€‰0.5. Geophysical Research Letters, 2016, 43, 10,695.	4.0	48
28	First paleoseismic evidence for great surfaceâ€rupturing earthquakes in the Bhutan Himalayas. Journal of Geophysical Research: Solid Earth, 2016, 121, 7271-7283.	3.4	46
29	Evidence of interseismic coupling variations along the Bhutan Himalayan arc from new GPS data. Geophysical Research Letters, 2016, 43, 12,399.	4.0	44
30	Twenty-five years of geodetic measurements along the Tadjoura-Asal rift system, Djibouti, East Africa. Journal of Geophysical Research, 2007, 112, .	3.3	43
31	Erosional control on the dynamics of low-convergence rate continental plateau margins. Geophysical Journal International, 2009, 179, 763-777.	2.4	39
32	Evidence for a wide and gently dipping Main Himalayan Thrust in western Bhutan. Geophysical Research Letters, 2015, 42, 3257-3265.	4.0	37
33	Flexure of the India plate underneath the Bhutan Himalaya. Geophysical Research Letters, 2013, 40, 4225-4230.	4.0	35
34	Quantification of interplate coupling in subduction zones and forearc topography. Geophysical Research Letters, 1997, 24, 1563-1566.	4.0	34
35	Discontinuous low-velocity zones in southern Tibet question the viability of the channel flow model. Geological Society Special Publication, 2011, 353, 99-108.	1.3	30
36	Numerical modeling of mountain building: Interplay between erosion law and crustal rheology. Geophysical Research Letters, 2004, 31, .	4.0	27

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37	The Kozani-Grevena (Greece) Earthquake of May 13, 1995, Ms = 6.6. Preliminary Results of a Field Multidisciplinary Survey. Seismological Research Letters, 1995, 66, 61-70.	1.9	26
38	GravProcess: An easy-to-use MATLAB software to process campaign gravity data and evaluate the associated uncertainties. Computers and Geosciences, 2015, 81, 20-27.	4.2	25
39	Present-day interseismic surface deformation along the Longitudinal Valley, eastern Taiwan, from a PS-InSAR analysis of the ERS satellite archives. Journal of Geophysical Research, 2011, 116, .	3.3	23
40	Lateral uniformity of India Plate strength over central and eastern Nepal. Geophysical Journal International, 2013, 195, 1481-1493.	2.4	23
41	Coseismic slip resolution and post-seismic relaxation time of the 1999 Chi-Chi, Taiwan, earthquake as constrained by geological observations, geodetic measurements and seismicity. Geophysical Journal International, 2004, 158, 310-326.	2.4	21
42	In-situ characterization of the effective elasticity of a fault zone, and its relationship to fracture spacing. Journal of Structural Geology, 2011, 33, 1541-1553.	2.3	21
43	A new multilayered visco-elasto-plastic experimental model to study strike-slip fault seismic cycle. Tectonics, 2015, 34, 232-264.	2.8	18
44	Relationships between along-fault heterogeneous normal stress and fault slip patterns during the seismic cycle: Insights from a strike-slip fault laboratory model. Earth and Planetary Science Letters, 2017, 480, 147-157.	4.4	17
45	Le cycle sismique en Himalaya. Comptes Rendus De L'AcadÃ©mie Des Sciences Earth & Planetary Sciences SÃ©rie Ii, Sciences De La Terre Et Des PlanÃ¨tes =, 2001, 333, 513-529.	0.2	16
46	Numerical modelling of erosion processes in the Himalayas of Nepal: effects of spatial variations of rock strength and precipitation. Geological Society Special Publication, 2006, 253, 341-358.	1.3	15
47	Expected temporal absolute gravity change across the Taiwanese Orogen, a modeling approach. Journal of Geodynamics, 2009, 48, 284-291.	1.6	15
48	Incorporating metamorphism in geodynamic models: the mass conservation problem. Geophysical Journal International, 2011, 186, 6-10.	2.4	15
49	Earthquake statistics changed by typhoon-driven erosion. Scientific Reports, 2020, 10, 10899.	3.3	15
50	Stress transfer and connectivity between the Bhutan Himalaya and the Shillong Plateau. Tectonophysics, 2018, 744, 322-332.	2.2	13
51	A 2600-year-long paleoseismic record for the Himalayan Main Frontal Thrust (western Bhutan). Solid Earth, 2020, 11, 2359-2375.	2.8	13
52	New analytical solution and associated software for computing full-tensor gravitational field due to irregularly shaped bodies. Journal of Geodesy, 2019, 93, 2481-2497.	3.6	12
53	A convective model of water flow in Mururoa basalts. Geochimica Et Cosmochimica Acta, 1996, 60, 2087-2109.	3.9	10
54	Why does the co-seismic slip of the 1999 Chi-Chi (Taiwan) earthquake increase progressively northwestward on the plane of rupture?. Tectonophysics, 2004, 386, 67-80.	2.2	10

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55	Seismic cycle stress change in western Taiwan over the last 270 years. Geophysical Research Letters, 2010, 37, .	4.0	10
56	Surface Lagrangian Remeshing: A new tool for studying long term evolution of continental lithosphere from 2D numerical modelling. Computers and Geosciences, 2011, 37, 1067-1074.	4.2	10
57	Impact of near-surface fault geometry on secular slip rate assessment derived from uplifted river terraces: implications for convergence accommodation across the frontal thrust in southern Central Bhutan. Geophysical Journal International, 2018, 212, 1315-1330.	2.4	8
58	Estimating the disequilibrium in denudation rates due to divide migration at the scale of river basins. Earth Surface Dynamics, 2019, 7, 1041-1057.	2.4	8
59	Seismic cycle in Taiwan derived from GPS measurements. Comptes Rendus De L'AcadÃ©mie Des Sciences Earth & Planetary Sciences SÃ©rie II, Sciences De La Terre Et Des PlanÃ¨tes =, 2001, 333, 57-64.	0.2	5
60	A new approach to assess isostatic compensation of topography in continental domain from GOCE gravity gradients. Geophysical Journal International, 2016, 207, 645-654.	2.4	5
61	Topographic disequilibrium, landscape dynamics and active tectonics: an example from the Bhutan Himalaya. Earth Surface Dynamics, 2021, 9, 895-921.	2.4	4
62	Joint inversion of ground gravity data and satellite gravity gradients between Nepal and Bhutan: New insights on structural and seismic segmentation of the Himalayan arc. Physics and Chemistry of the Earth, 2021, 123, 103002.	2.9	3
63	Morphotectonic Evolution of an Alluvial Fan: Results of a Joint Analog and Numerical Modeling Approach. Geosciences (Switzerland), 2021, 11, 412.	2.2	3
64	Structure of the crust and the lithosphere in the Himalaya-Tibet region and implications on the rheology and eclogitization of the India plate. Himalayan Journal of Sciences, 2008, 5, 65-66.	0.3	1