

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	Topographic disequilibrium, landscape dynamics and active tectonics: an example from the Bhutan Himalaya. <i>Earth Surface Dynamics</i> , 2021, 9, 895-921.	2.4	4
2	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. <i>Physics and Chemistry of the Earth</i> , 2021, 123, 103002.	2.9	3
3	Morphotectonic Evolution of an Alluvial Fan: Results of a Joint Analog and Numerical Modeling Approach. <i>Geosciences (Switzerland)</i> , 2021, 11, 412.	2.2	3
4	Earthquake statistics changed by typhoon-driven erosion. <i>Scientific Reports</i> , 2020, 10, 10899.	3.3	15
5	A 2600-year-long paleoseismic record for the Himalayan Main Frontal Thrust (western Bhutan). <i>Solid Earth</i> , 2020, 11, 2359-2375.	2.8	13
6	New analytical solution and associated software for computing full-tensor gravitational field due to irregularly shaped bodies. <i>Journal of Geodesy</i> , 2019, 93, 2481-2497.	3.6	12
7	Estimating the disequilibrium in denudation rates due to divide migration at the scale of river basins. <i>Earth Surface Dynamics</i> , 2019, 7, 1041-1057.	2.4	8
8	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. <i>Geophysical Journal International</i> , 2018, 212, 1315-1330.	2.4	8
9	Stress transfer and connectivity between the Bhutan Himalaya and the Shillong Plateau. <i>Tectonophysics</i> , 2018, 744, 322-332.	2.2	13
10	Relationships between along-fault heterogeneous normal stress and fault slip patterns during the seismic cycle: Insights from a strike-slip fault laboratory model. <i>Earth and Planetary Science Letters</i> , 2017, 480, 147-157.	4.4	17
11	Evidence of interseismic coupling variations along the Bhutan Himalayan arc from new GPS data. <i>Geophysical Research Letters</i> , 2016, 43, 12,399.	4.0	44
12	First paleoseismic evidence for great surface rupturing earthquakes in the Bhutan Himalayas. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 7271-7283.	3.4	46
13	A new approach to assess isostatic compensation of topography in continental domain from GOCE gravity gradients. <i>Geophysical Journal International</i> , 2016, 207, 645-654.	2.4	5
14	Joint approach combining damage and paleoseismology observations constrains the 1714 A.D. Bhutan earthquake at magnitude 8 ± 0.5 . <i>Geophysical Research Letters</i> , 2016, 43, 10,695.	4.0	48
15	Segmentation of the Himalayas as revealed by arc-parallel gravity anomalies. <i>Scientific Reports</i> , 2016, 6, 33866.	3.3	63
16	Evidence for a wide and gently dipping Main Himalayan Thrust in western Bhutan. <i>Geophysical Research Letters</i> , 2015, 42, 3257-3265.	4.0	37
17	A new multilayered visco-elasto-plastic experimental model to study strike-slip fault seismic cycle. <i>Tectonics</i> , 2015, 34, 232-264.	2.8	18
18	GravProcess: An easy-to-use MATLAB software to process campaign gravity data and evaluate the associated uncertainties. <i>Computers and Geosciences</i> , 2015, 81, 20-27.	4.2	25

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19	Clockwise rotation of the Brahmaputra Valley relative to India: Tectonic convergence in the eastern Himalaya, Naga Hills, and Shillong Plateau. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 6558-6571.	3.4	162
20	Erosion influences the seismicity of active thrust faults. <i>Nature Communications</i> , 2014, 5, 5564.	12.8	66
21	Active tectonics of the eastern Himalaya: New constraints from the first tectonic geomorphology study in southern Bhutan. <i>Geology</i> , 2014, 42, 427-430.	4.4	62
22	Lateral uniformity of India Plate strength over central and eastern Nepal. <i>Geophysical Journal International</i> , 2013, 195, 1481-1493.	2.4	23
23	Flexure of the India plate underneath the Bhutan Himalaya. <i>Geophysical Research Letters</i> , 2013, 40, 4225-4230.	4.0	35
24	Erosion-induced isostatic rebound triggers extension in low convergent mountain ranges. <i>Geology</i> , 2013, 41, 467-470.	4.4	81
25	April 2012 intra-oceanic seismicity off Sumatra boosted by the Banda-Aceh megathrust. <i>Nature</i> , 2012, 490, 240-244.	27.8	97
26	Mesozoic-Cenozoic tectonothermal evolution of the eastern part of the Tibetan Plateau (Songpan-GarzÅ, Longmen Shan area): insights from thermochronological data and simple thermal modelling. <i>Geological Society Special Publication</i> , 2011, 353, 9-25.	1.3	54
27	Present-day interseismic surface deformation along the Longitudinal Valley, eastern Taiwan, from a PS-InSAR analysis of the ERS satellite archives. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	23
28	Incorporating metamorphism in geodynamic models: the mass conservation problem. <i>Geophysical Journal International</i> , 2011, 186, 6-10.	2.4	15
29	Towards the hydrologic and bed load monitoring from high-frequency seismic noise in a braided river: The "torrent de St Pierre", French Alps. <i>Journal of Hydrology</i> , 2011, 408, 43-53.	5.4	77
30	In-situ characterization of the effective elasticity of a fault zone, and its relationship to fracture spacing. <i>Journal of Structural Geology</i> , 2011, 33, 1541-1553.	2.3	21
31	Surface Lagrangian Remeshing: A new tool for studying long term evolution of continental lithosphere from 2D numerical modelling. <i>Computers and Geosciences</i> , 2011, 37, 1067-1074.	4.2	10
32	Discontinuous low-velocity zones in southern Tibet question the viability of the channel flow model. <i>Geological Society Special Publication</i> , 2011, 353, 99-108.	1.3	30
33	Spatial distribution of denudation in Eastern Tibet and regressive erosion of plateau margins. <i>Tectonophysics</i> , 2010, 491, 253-274.	2.2	94
34	Crustal structures in the area of the 2008 Sichuan earthquake from seismologic and gravimetric data. <i>Tectonophysics</i> , 2010, 491, 205-210.	2.2	70
35	Structural and thermal characters of the Longmen Shan (Sichuan, China). <i>Tectonophysics</i> , 2010, 491, 165-173.	2.2	84
36	Seismic cycle stress change in western Taiwan over the last 270 years. <i>Geophysical Research Letters</i> , 2010, 37, .	4.0	10

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37	Erosional control on the dynamics of low-convergence rate continental plateau margins. <i>Geophysical Journal International</i> , 2009, 179, 763-777.	2.4	39
38	Expected temporal absolute gravity change across the Taiwanese Orogen, a modeling approach. <i>Journal of Geodynamics</i> , 2009, 48, 284-291.	1.6	15
39	Stress change and effective friction coefficient along the Sumatra-Andaman-Sagaing fault system after the 26 December 2004 ($M_w = 9.2$) and the 28 March 2005 ($M_w = 8.7$) earthquakes. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	2.5	48
40	Spatiotemporal sequence of Himalayan debris flow from analysis of high-frequency seismic noise. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	55
41	Late Cenozoic evolution of the central Longmen Shan, eastern Tibet: Insight from (U-Th)/He thermochronometry. <i>Tectonics</i> , 2009, 28, .	2.8	209
42	Thin-plate modeling of interseismic deformation and asymmetry across the Altyn Tagh fault zone. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	67
43	Spectral analysis of seismic noise induced by rivers: A new tool to monitor spatiotemporal changes in stream hydrodynamics. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	128
44	Structure of the crust and the lithosphere in the Himalaya-Tibet region and implications on the rheology and eclogitization of the India plate. <i>Himalayan Journal of Sciences</i> , 2008, 5, 65-66.	0.3	1
45	Density distribution of the India plate beneath the Tibetan plateau: Geophysical and petrological constraints on the kinetics of lower-crustal eclogitization. <i>Earth and Planetary Science Letters</i> , 2007, 264, 226-244.	4.4	168
46	Twenty-five years of geodetic measurements along the Tadjoura-Asal rift system, Djibouti, East Africa. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	43
47	The effective elastic thickness of the India Plate from receiver function imaging, gravity anomalies and thermomechanical modelling. <i>Geophysical Journal International</i> , 2006, 167, 1106-1118.	2.4	90
48	Numerical modelling of erosion processes in the Himalayas of Nepal: effects of spatial variations of rock strength and precipitation. <i>Geological Society Special Publication</i> , 2006, 253, 341-358.	1.3	15
49	Numerical modelling of quaternary deformation and post-rifting displacement in the Asal-Ghoubbet rift (Djibouti, Africa). <i>Earth and Planetary Science Letters</i> , 2005, 239, 352-367.	4.4	61
50	Coseismic slip resolution and post-seismic relaxation time of the 1999 Chi-Chi, Taiwan, earthquake as constrained by geological observations, geodetic measurements and seismicity. <i>Geophysical Journal International</i> , 2004, 158, 310-326.	2.4	21
51	Stress buildup in the Himalaya. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	148
52	The Sumatra subduction zone: A case for a locked fault zone extending into the mantle. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	86
53	Numerical modeling of mountain building: Interplay between erosion law and crustal rheology. <i>Geophysical Research Letters</i> , 2004, 31, .	4.0	27
54	Why does the co-seismic slip of the 1999 Chi-Chi (Taiwan) earthquake increase progressively northwestward on the plane of rupture?. <i>Tectonophysics</i> , 2004, 386, 67-80.	2.2	10

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55	Seismic cycle in Taiwan derived from GPS measurements. Comptes Rendus De L'Académie Des Sciences Earth & Planetary Sciences Série II, Sciences De La Terre Et Des Planètes =, 2001, 333, 57-64.	0.2	5
56	Le cycle sismique en Himalaya. Comptes Rendus De L'Académie Des Sciences Earth & Planetary Sciences Série II, Sciences De La Terre Et Des Planètes =, 2001, 333, 513-529.	0.2	16
57	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
58	Gravity anomalies, crustal structure and thermo-mechanical support of the Himalaya of Central Nepal. Geophysical Journal International, 2001, 147, 381-392.	2.4	83
59	Modeling mountain building and the seismic cycle in the Himalaya of Nepal. Journal of Geophysical Research, 2000, 105, 13389-13407.	3.3	312
60	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
61	Quantification of interplate coupling in subduction zones and forearc topography. Geophysical Research Letters, 1997, 24, 1563-1566.	4.0	34
62	Title is missing!. Journal of Seismology, 1997, 1, 131-150.	1.3	205
63	A convective model of water flow in Mururoa basalts. Geochimica Et Cosmochimica Acta, 1996, 60, 2087-2109.	3.9	10
64	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