Cristiano Collettini

List of Publications by Year
in descending order

93 papers	5,954 citations	61857 43 h-index	74018 75 g-index
95 all docs	95 docs citations	95 times ranked	3618 citing authors

#	Article	IF	Citations
1	Frictional controls on the seismogenic zone: Insights from the Apenninic basement, Central Italy. Earth and Planetary Science Letters, 2022, 583, 117444.	1.8	10
2	The Role of Fault Rock Fabric in the Dynamics of Laboratory Faults. Journal of Geophysical Research: Solid Earth, 2022, 127, .	1.4	4
3	The role of shale content and pore-water saturation on frictional properties of simulated carbonate faults. Tectonophysics, 2021, 807, 228811.	0.9	15
4	Frictional properties of basalt experimental faults and implications for volcano-tectonic settings and geo-energy sites. Tectonophysics, 2021, 811, 228883.	0.9	6
5	Complex geometry and kinematics of subsidiary faults within a carbonate-hosted relay ramp. Journal of Structural Geology, 2020, 130, 103915.	1.0	17
6	Modelling fluid flow in complex natural fault zones: Implications for natural and human-induced earthquake nucleation. Earth and Planetary Science Letters, 2020, 530, 115869.	1.8	10
7	Frictional Strengthening Explored During Nonâ€Steady State Shearing: Implications for Fault Stability and Slip Event Recurrence Time. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020015.	1.4	3
8	The Role of Shear Fabric in Controlling Breakdown Processes During Laboratory Slowâ€Slip Events. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020405.	1.4	19
9	Bifurcations at the Stability Transition of Earthquake Faulting. Geophysical Research Letters, 2020, 47, e2020GL087985.	1.5	17
10	Lithological and structural control on fracture frequency distribution within a carbonate-hosted relay ramp. Journal of Structural Geology, 2020, 137, 104085.	1.0	10
11	Slow-to-fast transition of giant creeping rockslides modulated by undrained loading in basal shear zones. Nature Communications, 2020, 11, 1352.	5.8	52
12	Beyond Byerlee friction, weak faults and implications for slip behavior. Earth and Planetary Science Letters, 2019, 519, 245-263.	1.8	98
13	Experimental Insights Into Fault Reactivation in Gougeâ€Filled Fault Zones. Journal of Geophysical Research: Solid Earth, 2019, 124, 4189-4204.	1.4	13
14	Stabilization of fault slip by fluid injection in the laboratory and in situ. Science Advances, 2019, 5, eaau4065.	4.7	149
15	From mapped faults to fault-length earthquake magnitude (FLEM): a test on Italy with methodological implications. Solid Earth, 2019, 10, 1555-1579.	1.2	24
16	Do scaly clays control seismicity on faulted shale rocks?. Earth and Planetary Science Letters, 2018, 488, 59-67.	1.8	14
17	Frictional Properties of Opalinus Clay: Implications for Nuclear Waste Storage. Journal of Geophysical Research: Solid Earth, 2018, 123, 157-175.	1.4	31
18	Strength evolution of simulated carbonate-bearing faults: The role of normal stress and slip velocity. Journal of Structural Geology, 2018, 109, 1-9.	1.0	7

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19	Fluid Injection and the Mechanics of Frictional Stability of Shaleâ€Bearing Faults. Journal of Geophysical Research: Solid Earth, 2018, 123, 8364-8384.	1.4	59
20	Structural disorder of graphite and implications for graphite thermometry. Solid Earth, 2018, 9, 223-231.	1.2	33
21	Deformation Processes, Textural Evolution and Weakening in Retrograde Serpentinites. Minerals (Basel, Switzerland), 2018, 8, 241.	0.8	25
22	Friction of Mineralogically Controlled Serpentinites and Implications for Fault Weakness. Journal of Geophysical Research: Solid Earth, 2018, 123, 6976-6991.	1.4	23
23	Frictional Behavior of Input Sediments to the Hikurangi Trench, New Zealand. Geochemistry, Geophysics, Geosystems, 2018, 19, 2973-2990.	1.0	41
24	Friction and scale-dependent deformation processes of large experimental carbonate faults. Journal of Structural Geology, 2017, 100, 12-23.	1.0	22
25	Reactivation of normal faults as high-angle reverse faults due to low frictional strength: Experimental data from the Moonlight Fault Zone, New Zealand. Journal of Structural Geology, 2017, 105, 34-43.	1.0	16
26	Frictional stability and earthquake triggering during fluid pressure stimulation of an experimental fault. Earth and Planetary Science Letters, 2017, 477, 84-96.	1.8	120
27	The role of rheology, crustal structures and lithology in the seismicity distribution of the northern Apennines. Tectonophysics, 2017, 694, 280-291.	0.9	18
28	Physical and Transport Property Variations Within Carbonateâ€Bearing Fault Zones: Insights From the Monte Maggio Fault (Central Italy). Geochemistry, Geophysics, Geosystems, 2017, 18, 4027-4042.	1.0	30
29	Fault-surface geometry controlled by faulting mechanisms: Experimental observations in limestone faults. Geology, 2017, 45, 851-854.	2.0	13
30	On the evolution of elastic properties during laboratory stickâ€slip experiments spanning the transition from slow slip to dynamic rupture. Journal of Geophysical Research: Solid Earth, 2016, 121, 8569-8594.	1.4	61
31	The role of fluid pressure in induced vs. triggered seismicity: insights from rock deformation experiments on carbonates. Scientific Reports, 2016, 6, 24852.	1.6	143
32	Fault geometry and mechanics of marly carbonate multilayers: An integrated field and laboratory study from the Northern Apennines, Italy. Journal of Structural Geology, 2016, 93, 1-16.	1.0	20
33	Precursory changes in seismic velocity for the spectrum of earthquake failure modes. Nature Geoscience, 2016, 9, 695-700.	5.4	134
34	The influence of normal stress and sliding velocity on the frictional behaviour of calcite at room temperature: insights from laboratory experiments and microstructural observations. Geophysical Journal International, 2016, 205, 548-561.	1.0	61
35	Frictional behavior of talcâ€calcite mixtures. Journal of Geophysical Research: Solid Earth, 2015, 120, 6614-6633.	1.4	61
36	Early weakening processes inside thrust fault. Tectonics, 2015, 34, 1396-1411.	1.3	16

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37	Fault strength in thin-skinned tectonic wedges across the smectite-illite transition: Constraints from friction experiments and critical tapers. Geology, 2015, 43, 923-926.	2.0	40
38	Can grain size sensitive flow lubricate faults during the initial stages of earthquake propagation?. Earth and Planetary Science Letters, 2015, 431, 48-58.	1.8	108
39	Influence of calcite decarbonation on the frictional behavior of carbonate-bearing gouge: Implications for the instability of volcanic flanks and fault slip. Tectonophysics, 2015, 658, 128-136.	0.9	9
40	A novel and versatile apparatus for brittle rock deformation. International Journal of Rock Mechanics and Minings Sciences, 2014, 66, 114-123.	2.6	59
41	Frictional Properties of a Low-Angle Normal Fault Under In Situ Conditions: Thermally-Activated Velocity Weakening. Pure and Applied Geophysics, 2014, 171, 2641-2664.	0.8	52
42	Pressure solution seams in carbonatic fault rocks: mineralogy, micro/nanostructures and deformation mechanism. Contributions To Mineralogy and Petrology, 2014, 167, 1.	1.2	36
43	Earthquakes and fault zone structure. Geology, 2014, 42, 343-346.	2.0	67
44	Heterogeneous strength and fault zone complexity of carbonate-bearing thrusts with possible implications for seismicity. Earth and Planetary Science Letters, 2014, 408, 307-318.	1.8	84
45	Fault structure and slip localization in carbonate-bearing normal faults: An example from the Northern Apennines of Italy. Journal of Structural Geology, 2014, 67, 154-166.	1.0	59
46	Frictional heterogeneities on carbonateâ€bearing normal faults: Insights from the Monte Maggio Fault, Italy. Journal of Geophysical Research: Solid Earth, 2014, 119, 9062-9076.	1.4	53
47	The Alto Tiberina Near Fault Observatory (northern Apennines, Italy). Annals of Geophysics, 2014, 57, .	0.5	24
48	Fault architecture and deformation mechanisms in exhumed analogues of seismogenic carbonate-bearing thrusts. Journal of Structural Geology, 2013, 55, 167-181.	1.0	73
49	Evolution of the elastic moduli of seismogenic Triassic Evaporites subjected to cyclic stressing. Tectonophysics, 2013, 592, 67-79.	0.9	66
50	A multidisciplinary study of a natural example of a CO2 geological reservoir in central Italy. International Journal of Greenhouse Gas Control, 2013, 12, 72-83.	2.3	57
51	Frictional properties and slip stability of active faults within carbonateâ€“evaporite sequences: The role of dolomite and anhydrite. Earth and Planetary Science Letters, 2013, 369-370, 220-232.	1.8	64
52	Thermal decomposition along natural carbonate faults during earthquakes. Geology, 2013, 41, 927-930.	2.0	94
53	Integrated Laboratories to Study Aseismic and Seismic Faulting. Eos, 2013, 94, 97-98.	0.1	1
54	Interactions between low-angle normal faults and plutonism in the upper crust: Insights from the Island of Elba, Italy: Reply. Bulletin of the Geological Society of America, 2012, 124, 1916-1917.	1.6	0

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55	Frictional strength and healing behavior of phyllosilicateâ€rich faults. Journal of Geophysical Research, 2012, 117, .	3.3	93
56	Faults smooth gradually as a function of slip. Earth and Planetary Science Letters, 2011, 302, 185-193.	1.8	148
57	Fault structure, frictional properties and mixed-mode fault slip behavior. Earth and Planetary Science Letters, 2011, 311, 316-327.	1.8	115
58	Interactions between low-angle normal faults and plutonism in the upper crust: Insights from the Island of Elba, Italy. Bulletin of the Geological Society of America, 2011, 123, 329-346.	1.6	35
59	The mechanical paradox of low-angle normal faults: Current understanding and open questions. Tectonophysics, 2011, 510, 253-268.	0.9	159
60	The microstructural character and mechanical significance of fault rocks associated with a continental low-angle normal fault: the Zuccale Fault, Elba Island, Italy. Geological Society Special Publication, 2011, 359, 97-113.	0.8	18
61	Laboratory measurements of the physical properties of Triassic Evaporites from Central Italy and correlation with geophysical data. Tectonophysics, 2010, 492, 121-132.	0.9	64
62	Development of interconnected talc networks and weakening of continental low-angle normal faults. Geology, 2009, 37, 567-570.	2.0	119
63	Chapter 4 Fault Zone Structure and Deformation Processes along an Exhumed Low-Angle Normal Fault. International Geophysics, 2009, 94, 69-85.	0.6	0
64	Comment on â€œStructural controls on a carbon dioxide-driven mud volcano field in the Northern Apennines (Pieve Santo Stefano, Italy): Relations with pre-existing steep discontinuities and seismicityâ€ Journal of Structural Geology, 2009, 31, 853-856.	1.0	2
65	Growth and deformation mechanisms of talc along a natural fault: a micro/nanostructural investigation. Contributions To Mineralogy and Petrology, 2009, 158, 529-542.	1.2	32
66	Fault zone fabric and fault weakness. Nature, 2009, 462, 907-910.	13.7	444
67	Insights on the geometry and mechanics of the Umbriaâ€“Marche earthquakes (Central Italy) from the integration of field and laboratory data. Tectonophysics, 2009, 476, 99-109.	0.9	31
68	Contemporary crustal extension in the Umbriaâ€“Marche Apennines from regional CGPS networks and comparison between geodetic and seismic deformation. Tectonophysics, 2009, 476, 3-12.	0.9	71
69	Brittle versus ductile deformation as the main control on the transport properties of lowâ€porosity anhydrite rocks. Journal of Geophysical Research, 2009, 114, .	3.3	46
70	Recognizing the seismic cycle along ancient faults: CO2-induced fluidization of breccias in the footwall of a sealing low-angle normal fault. Journal of Structural Geology, 2008, 30, 1034-1046.	1.0	58
71	The Internal Structure of Dilational Stepovers in Regional Transtension Zones. International Geology Review, 2008, 50, 291-304.	1.1	11
72	Fault zone architecture and deformation processes within evaporitic rocks in the upper crust. Tectonics, 2008, 27, .	1.3	104

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73	The internal structure of fault zones: fluid flow and mechanical properties. Geological Society Special Publication, 2008, 299, 1-3.	0.8	19
74	Fault weakening due to CO ₂ degassing in the Northern Apennines: short- and long-term processes. Geological Society Special Publication, 2008, 299, 175-194.	0.8	45
75	Frictional-viscous flow, seismicity and the geology of weak faults: a review and future directions. Geological Society Special Publication, 2008, 299, 151-173.	0.8	38
76	Using footwall structures to constrain the evolution of low-angle normal faults. Journal of the Geological Society, 2007, 164, 1187-1191.	0.9	29
77	A slip tendency analysis to test mechanical and structural control on aftershock rupture planes. Earth and Planetary Science Letters, 2007, 255, 402-413.	1.8	65
78	The structural evolution of dilational stepovers in regional transtensional zones. Geological Society Special Publication, 2007, 290, 433-445.	0.8	12
79	Architecture and mechanics of an active lowâ€angle normal fault: Alto Tiberina Fault, northern Apennines, Italy. Journal of Geophysical Research, 2007, 112, .	3.3	119
80	A mechanical model for complex fault patterns induced by evaporite dehydration and cyclic changes in fluid pressure. Journal of Structural Geology, 2007, 29, 1573-1584.	1.0	56
81	Switches in the minimum compressive stress direction induced by overpressure beneath a low-permeability fault zone. Terra Nova, 2006, 18, 224-231.	0.9	36
82	The development and behaviour of low-angle normal faults during Cenozoic asymmetric extension in the Northern Apennines, Italy. Journal of Structural Geology, 2006, 28, 333-352.	1.0	122
83	Looking at fault reactivation matching structural geology and seismological data. Journal of Structural Geology, 2005, 27, 937-942.	1.0	40
84	Connecting seismically active normal faults with Quaternary geological structures in a complex extensional environment: The Colfiorito 1997 case history (northern Apennines, Italy). Tectonics, 2005, 24, n/a-n/a.	1.3	66
85	Aftershocks driven by a high-pressure CO2 source at depth. Nature, 2004, 427, 724-727.	13.7	714
86	A comparison of structural data and seismic images for low-angle normal faults in the Northern Apennines (Central Italy): constraints on activity. Geological Society Special Publication, 2004, 224, 95-112.	0.8	19
87	Fault zone weakening and character of slip along low-angle normal faults: insights from the Zuccale fault, Elba, Italy. Journal of the Geological Society, 2004, 161, 1039-1051.	0.9	182
88	The Gubbio fault: can different methods give pictures of the same object?. Journal of Geodynamics, 2003, 36, 51-66.	0.7	52
89	A low-angle normal fault in the Umbria region (Central Italy): a mechanical model for the related microseismicity. Tectonophysics, 2002, 359, 97-115.	0.9	137
90	Normal faults, normal friction?. Geology, 2001, 29, 927.	2.0	229

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91	Seismic expression of active extensional faults in northern Umbria (Central Italy). Journal of Geodynamics, 2000, 29, 309-321.	0.7	35
92	Evolution of shear fabric in granular fault gouge from stable sliding to stick slip and implications for fault slip mode. Geology, 0, , G39033.1.	2.0	36
93	The shallow boreholes at The AltotiBerina near fault Observatory (TABOO; northern Apennines of) Tj ETQq1 1 0.784314 rgBT /Overlock	1.0	12