Christoph E Schrank

List of Publications by Year
in descending order

40 papers	807 citations	567281 15 h-index	526287 27 g-index
60 all docs	60 docs citations	60 times ranked	1104 citing authors

#	Article	IF	Citations
1	A brief guide to synchrotron radiation-based microtomography in (structural) geology and rock mechanics. Journal of Structural Geology, 2014, 65, 1-16.	2.3	93
2	Earth's oldest stable crust in the Pilbara Craton formed by cyclic gravitational overturns. Nature Geoscience, 2018, 11, 357-361.	12.9	86
3	Multiscaling of shear zones and the evolution of the brittleâ€toâ€viscous transition in continental crust. Journal of Geophysical Research, 2008, 113, .	3.3	55
4	The timing of the Cape Orogeny: New 40 Ar/ 39 Ar age constraints on deformation and cooling of the Cape Fold Belt, South Africa. Gondwana Research, 2016, 32, 122-137.	6.0	52
5	Pore formation during dehydration of a polycrystalline gypsum sample observed and quantified in a time-series synchrotron X-ray micro-tomography experiment. Solid Earth, 2012, 3, 71-86.	2.8	49
6	Power-law viscous materials for analogue experiments: New data on the rheology of highly-filled silicone polymers. Journal of Structural Geology, 2008, 30, 341-353.	2.3	48
7	Multiscale coupling and multiphysics approaches in earth sciences: Theory. Journal of Coupled Systems and Multiscale Dynamics, 2013, 1, 49-73.	0.2	42
8	The analogue shear zone: From rheology to associated geometry. Journal of Structural Geology, 2008, 30, 177-193.	2.3	40
9	Multiscale coupling and multiphysics approaches in earth sciences: Applications. Journal of Coupled Systems and Multiscale Dynamics, 2013, 1, 281-323.	0.2	34
10	The causes of sinuous crustal-scale deformation patterns in hot orogens: Evidence from scaled analogue experiments and the southern Central Andes. Journal of Structural Geology, 2012, 37, 65-74.	2.3	29
11	A multi-scaling approach to predict hydraulic damage of poromaterials. International Journal of Mechanical Sciences, 2014, 78, 1-7.	6.7	24
12	Lithostratigraphy and structure of the early Archaean Doolena Gap greenstone belt, East Pilbara Terrane, Western Australia. Precambrian Research, 2016, 282, 121-138.	2.7	20
13	Cross-diffusion waves in hydro-poro-mechanics. Journal of the Mechanics and Physics of Solids, 2020, 135, 103632.	4.8	20
14	Role of kilometer-scale weak circular heterogeneities on upper crustal deformation patterns: Evidence from scaled analogue modeling and the Sudbury Basin, Canada. Earth and Planetary Science Letters, 2010, 297, 587-597.	4.4	17
15	Thermalâ€elastic stresses and the criticality of the continental crust. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	16
16	Numerical simulation of a high-temperature aquifer thermal energy storage system coupled with heating and cooling of a thermal plant in a cold region, China. Energy, 2016, 112, 443-456.	8.8	16
17	2-D finite displacements and strain from particle imaging velocimetry (PIV) analysis of tectonic analogue models with TecPIV. Solid Earth, 2019, 10, 1123-1139.	2.8	16
18	Structural and chemical resetting processes in white mica and their effect on K-Ar data during low temperature metamorphism. Tectonophysics, 2021, 800, 228708.	2.2	15

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19	Deep geothermal: The â€˜Moon Landingâ€™ mission in the unconventional energy and minerals space. Journal of Earth Science (Wuhan, China), 2015, 26, 2-10.	3.2	13
20	Cross-diffusion waves resulting from multiscale, multi-physics instabilities: theory. Solid Earth, 2021, 12, 869-883.	2.8	12
21	A parallel computing tool for large-scale simulation of massive fluid injection in thermo-poro-mechanical systems. Philosophical Magazine, 2015, 95, 3078-3102.	1.6	11
22	Compaction control of topography and fault network structure along strike-slip faults in sedimentary basins. Journal of Structural Geology, 2010, 32, 184-191.	2.3	10
23	3D modelling of the effect of thermal-elastic stress on grain-boundary opening in quartz grain aggregates. Tectonophysics, 2020, 774, 228242.	2.2	10
24	The evolution of slate microfabrics during progressive accretion of foreland basin sediments. Journal of Structural Geology, 2021, 150, 104404.	2.3	8
25	Distribution, microphysical properties, and tectonic controls of deformation bands in the Miocene subduction wedge (Whakataki Formation) of the Hikurangi subduction zone. Solid Earth, 2021, 12, 141-170.	2.8	7
26	Cross-diffusion waves resulting from multiscale, multiphysics instabilities: application to earthquakes. Solid Earth, 2021, 12, 1829-1849.	2.8	7
27	Permeability estimation conditioned to geophysical downhole log data in sandstones of the northern Galilee Basin, Queensland: Methods and application. Journal of Applied Geophysics, 2013, 93, 43-51.	2.1	6
28	Heat-producing crust regulation of subsurface temperatures: A stochastic model re-evaluation of the geothermal potential in southwestern Queensland, Australia. Geothermics, 2014, 51, 182-200.	3.4	6
29	Micro-scale dissolution seams mobilise carbon in deep-sea limestones. Communications Earth & Environment, 2021, 2, .	6.8	6
30	High-speed free-run ptychography at the Australian Synchrotron. Journal of Synchrotron Radiation, 2022, 29, 480-487.	2.4	6
31	Cross-scale dynamic interactions in compacting porous media as a trigger to pattern formation. Geophysical Journal International, 2022, 230, 1280-1291.	2.4	6
32	Tracking Metamorphic Dehydration Reactions in Real Time with Transmission Small- and Wide-Angle Synchrotron X-ray Scattering: the Case of Gypsum Dehydration. Journal of Petrology, 2020, 61, .	2.8	5
33	Sedimentology and stratigraphy of syn-subduction Miocene fine-grained turbidites deposited in first stages of trench-slope basin development: Whakataki Formation, North Island, New Zealand. Sedimentary Geology, 2021, 414, 105819.	2.1	5
34	Entropic Bounds for Multi-Scale and Multi-Physics Coupling in Earth Sciences. Understanding Complex Systems, 2014, , 323-335.	0.6	5
35	Characterization of alluvial formation by stochastic modelling of paleo-fluvial processes: The concept and method. Journal of Hydrology, 2015, 524, 367-377.	5.4	3
36	Regular spacing of deformation bands in sandstone: Layer-thickness control or constitutive instability?. Journal of Structural Geology, 2021, 147, 104335.	2.3	2

#	Article	IF	Citations
37	Mapping the hydraulic connection between a coalbed and adjacent aquifer: example of the coal-seam gas resource area, north Galilee Basin, Australia. Hydrogeology Journal, 2016, 24, 2143-2155.	2.1	1
38	A comparative study of Maxwell viscoelasticity at large strains and rotations. Geophysical Journal International, 2017, 211, 252-262.	2.4	1
39	Rock physics for multiscale, multiphysics data assimilation from molecular to laboratory scale. ASEG Extended Abstracts, 2019, 2019, 1-4.	0.1	0
40	Active learning in the time of the pandemic: Report from the eye of the storm. , 0, , .		0