Susan M Ellis

List of Publications by Year
in descending order

77 papers	3,549 citations	109321 35 h-index	138484 58 g-index
78 all docs	78 docs citations	78 times ranked	2837 citing authors

#	Article	IF	Citations
1	Mechanical model for subduction-collision tectonics of Alpine-type compressional orogens. Geology, 1996, 24, 675.	4.4	177
2	Crustal flow modes in large hot orogens. Geological Society Special Publication, 2006, 268, 91-145.	1.3	168
3	Collision tectonics in the Swiss Alps: Insight from geodynamic modeling. Tectonics, 2000, 19, 1065-1094.	2.8	145
4	Characterizing the seismogenic zone of a major plate boundary subduction thrust: Hikurangi Margin, New Zealand. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	142
5	Diapiric exhumation of Earth's youngest (UHP) eclogites in the gneiss domes of the D'Entrecasteaux Islands, Papua New Guinea. Tectonophysics, 2011, 510, 39-68.	2.2	141
6	Dynamics of sediment subduction-accretion at convergent margins: Short-term modes, long-term deformation, and tectonic implications. Journal of Geophysical Research, 1999, 104, 17573-17601.	3.3	120
7	Comparisons between analogue and numerical models of thrust wedge development. Journal of Structural Geology, 2004, 26, 1659-1675.	2.3	118
8	Establishing a Versatile 3-D Seismic Velocity Model for New Zealand. Seismological Research Letters, 2010, 81, 992-1000.	1.9	115
9	Rapid microplate rotations and backarc rifting at the transition between collision and subduction. Geology, 2005, 33, 857.	4.4	113
10	Collisional model for rapid foreâ€arc block rotations, arc curvature, and episodic backâ€arc rifting in subduction settings. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	96
11	Elevated stresses and creep rates beneath the brittle-ductile transition caused by seismic faulting in the upper crust. Journal of Geophysical Research, 2004, 109, .	3.3	93
12	The numerical sandbox: comparison of model results for a shortening and an extension experiment. Geological Society Special Publication, 2006, 253, 29-64.	1.3	84
13	Do great earthquakes occur on the Alpine Fault in central South Island, New Zealand?. Geophysical Monograph Series, 2007, , 235-251.	0.1	84
14	Continental collision including a weak zone: the vise model and its application to the Newfoundland Appalachians. Canadian Journal of Earth Sciences, 1998, 35, 1323-1346.	1.3	78
15	Enigmatic, highly active left-lateral shear zone in southwest Japan explained by aseismic ridge collision. Geology, 2009, 37, 143-146.	4.4	77
16	Mechanical and hydrological effects of seamount subduction on megathrust stress and slip. Nature Geoscience, 2020, 13, 249-255.	12.9	74
17	Triggered Slow Slip and Afterslip on the Southern Hikurangi Subduction Zone Following the KaikÅura Earthquake. Geophysical Research Letters, 2018, 45, 4710-4718.	4.0	73
18	Feedback between rifting and diapirism can exhume ultrahigh-pressure rocks. Earth and Planetary Science Letters, 2011, 311, 427-438.	4.4	72

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19	Conductive heat flow variations from bottom-simulating reflectors on the Hikurangi margin, New Zealand. Geophysical Research Letters, 2003, 30, .	4.0	64
20	Erosion of the seafloor at the top of the gas hydrate stability zone on the Hikurangi Margin, New Zealand. Geophysical Research Letters, 2005, 32, .	4.0	64
21	Fluid budgets along the northern Hikurangi subduction margin, New Zealand: the effect of a subducting seamount on fluid pressure. Geophysical Journal International, 2015, 202, 277-297.	2.4	62
22	Geodynamic models of crustal-scale episodic tectonic accretion and underplating in subduction zones. Journal of Geophysical Research, 1999, 104, 15169-15190.	3.3	60
23	On factors controlling the depth of interseismic coupling on the Hikurangi subduction interface, New Zealand. Earth and Planetary Science Letters, 2009, 278, 120-130.	4.4	60
24	The Darfield (Canterbury) earthquake. Bulletin of the New Zealand Society for Earthquake Engineering, 2010, 43, 228-235.	0.5	60
25	Insights into subduction-related uplift along the Hikurangi Margin, New Zealand, using numerical modeling. Journal of Geophysical Research, 2007, 112, .	3.3	58
26	New Zealand GPS velocity field: 1995â€“2013. New Zealand Journal of Geology, and Geophysics, 2016, 59, 5-14.	1.8	57
27	Simplified models of the Alpine Fault seismic cycle: stress transfer in the mid-crust. Geophysical Journal International, 2006, 166, 386-402.	2.4	54
28	Continental breakup and UHP rock exhumation in action: GPS results from the <scp>W</scp>oodlark <scp>R</scp>ift, <scp>P</scp>apua <scp>N</scp>ew <scp>G</scp>uinea. Geochemistry, Geophysics, Geosystems, 2014, 15, 4267-4290.	2.5	54
29	Rapid Evolution of Subductionâ€Related Continental Intraarc Rifts: The Taupo Rift, New Zealand. Tectonics, 2017, 36, 2250-2272.	2.8	52
30	Strength of Strained Twoâ€Phase Mixtures: Application to Rapid Creep and Stress Amplification in Subduction Zone MÃ©lange. Geophysical Research Letters, 2019, 46, 169-178.	4.0	49
31	The role of boundary conditions in numerical models of subduction zone dynamics. Tectonophysics, 2011, 497, 57-70.	2.2	48
32	Forces driving continental collision: Reconciling indentation and mantle subduction tectonics. Geology, 1996, 24, 699.	4.4	47
33	The last 2 Myr of accretionary wedge construction in the central Hikurangi margin (North Island,) Tj ETQq1 1 0.784314 rgBT /Overloc 2661-2686.	2.5	47
34	Crustal deformation and stress transfer during a propagating earthquake sequence: The 2013 Cook Strait sequence, central New Zealand. Journal of Geophysical Research: Solid Earth, 2014, 119, 6080-6092.	3.4	45
35	Oblique convergence of the crust driven by basal forcing: implications for length-scales of deformation and strain partitioning in orogens. Geophysical Journal International, 1995, 120, 24-44.	2.4	42
36	The role of protothrusts in frontal accretion and accommodation of plate convergence, Hikurangi subduction margin, New Zealand. , 2018, 14, 440-468.		38

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37	Kinematic constraints from GPS on oblique convergence of the Pacific and Australian Plates, central South Island, New Zealand. Geophysical Monograph Series, 2007, , 75-94.	0.1	37
38	Imposed strain localization in the lower crust on seismic timescales. Earth, Planets and Space, 2004, 56, 1103-1109.	2.5	32
39	Testing proposed mechanisms for seafloor weakening at the top of gas hydrate stability on an uplifted submarine ridge (Rock Garden), New Zealand. Marine Geology, 2010, 272, 127-140.	2.1	32
40	Upper plate tectonic stress state may influence interseismic coupling on subduction megathrusts. Geology, 2012, 40, 895-898.	4.4	31
41	A future magma inflation event under the rhyolitic Taupo volcano, New Zealand: Numerical models based on constraints from geochemical, geological, and geophysical data. Journal of Volcanology and Geothermal Research, 2007, 168, 1-27.	2.1	30
42	Strain localization as a key to reconciling experimentally derived flow-law data with dynamic models of continental collision. International Journal of Earth Sciences, 2001, 90, 168-180.	1.8	27
43	â€œVirtual shear boxâ€•experiments of stress and slip cycling within a subduction interface mÃ©lange. Earth and Planetary Science Letters, 2018, 488, 27-35.	4.4	27
44	Complex states of stress during the normal faulting seismic cycle: Role of midcrustal postseismic creep. Journal of Geophysical Research, 2010, 115, .	3.3	26
45	Imaging P and S attenuation in the termination region of the Hikurangi subduction zone, New Zealand. Geophysical Journal International, 2014, 198, 516-536.	2.4	23
46	Fracture and Weakening of Jammed Subduction Shear Zones, Leading to the Generation of Slow Slip Events. Geochemistry, Geophysics, Geosystems, 2019, 20, 4869-4884.	2.5	23
47	Fault damage zones in mechanically layered rocks: The effects of planar anisotropy. Journal of Geophysical Research: Solid Earth, 2015, 120, 5432-5452.	3.4	22
48	Volcanic Unrest at TaupÅ•Volcano in 2019: Causes, Mechanisms and Implications. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009803.	2.5	21
49	A phenomenological numerical approach for investigating grain size evolution in ductiley deforming rocks. Journal of Structural Geology, 2015, 76, 22-34.	2.3	19
50	Numerical models of Alpine-type cover nappes. Tectonophysics, 2003, 367, 145-172.	2.2	18
51	Bounds on the width of mantle lithosphere flow derived from surface geodetic measurements: application to the central Southern Alps, New Zealand. Geophysical Journal International, 2006, 166, 403-417.	2.4	18
52	Coupled Evolution of Deformation, Pore Fluid Pressure, and Fluid Flow in Shallow Subduction Forearcs. Journal of Geophysical Research: Solid Earth, 2020, 125, e2019JB019101.	3.4	16
53	Energetics of normal earthquakes on dip-slip faults. Geology, 2012, 40, 279-282.	4.4	15
54	Mechanical Implications of Creep and Partial Coupling on the World's Fastest Slipping Lowâ€Angle Normal Fault in Southeastern Papua New Guinea. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020117.	3.4	15

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55	The effect of crustal melt on rift dynamics: case study of the Taupo Volcanic Zone. New Zealand Journal of Geology, and Geophysics, 2014, 57, 453-458.	1.8	13
56	Detecting hazardous New Zealand faults at depth using seismic velocity gradients. Earth and Planetary Science Letters, 2017, 463, 333-343.	4.4	13
57	Three-dimensional mantle lithosphere deformation at collisional plate boundaries: A subduction scissor across the South Island of New Zealand. Earth and Planetary Science Letters, 2010, 289, 334-346.	4.4	12
58	Mid-crustal controls on episodic stress-field rotation around major reverse, normal and strike-slip faults. Geological Society Special Publication, 2011, 359, 187-201.	1.3	11
59	Tectonic Inheritance Following Failed Continental Subduction: A Model for Core Complex Formation in Cold, Strong Lithosphere. Tectonics, 2019, 38, 1742-1763.	2.8	9
60	Convective Flows in a TVZ-like Setting with a Brittle/Ductile Transition. Transport in Porous Media, 2009, 77, 335-355.	2.6	8
61	The role of frictional plasticity in the evolution of normal fault systems. Journal of Structural Geology, 2012, 39, 122-137.	2.3	8
62	Hydrological effects of dipâ€slip fault rupture on a hydrothermal plume. Journal of Geophysical Research: Solid Earth, 2013, 118, 195-211.	3.4	8
63	Induced Seismicity; Observations, Risks and Mitigation Measures at CO2 Storage Sites. Energy Procedia, 2013, 37, 4749-4756.	1.8	7
64	Modelling of hydrothermal fluid flow and structural architecture in an extensional basin, Ngakuru Graben, Taupo Rift, New Zealand. Journal of Volcanology and Geothermal Research, 2018, 357, 134-151.	2.1	7
65	Heterogeneous material propertiesâ€"as inferred from seismic attenuationâ€"influenced multiple fault rupture and ductile creep of the KaikouraMw 7.8 earthquake, New Zealand. Geophysical Journal International, 2021, 227, 1204-1227.	2.4	7
66	Rheological constraints on quartz derived from scaling relationships and numerical models of sheared brittle-ductile quartz veins, central Southern Alps, New Zealand. Journal of Structural Geology, 2012, 37, 200-222.	2.3	6
67	The contemporary force balance in a wide accretionary wedge: numerical models of the southcentral Hikurangi margin of New Zealand. Geophysical Journal International, 2019, 219, 776-795.	2.4	6
68	Stretching, Shaking, Inflating: Volcanic-Tectonic Interactions at a Rifting Silicic Caldera. Frontiers in Earth Science, 2022, 10, .	1.8	6
69	TaupÅinflate: illustrating detection limits of magmatic inflation below Lake TaupÅ. New Zealand Journal of Geology, and Geophysics, 2023, 66, 571-588.	1.8	6
70	A Modified Terzaghi Consolidation Factor for First-Order Estimation of Overpressure Resulting From Sedimentation: Review and Synthesis. Mathematical Geosciences, 2005, 37, 115-123.	0.9	5
71	Modeling strain and anisotropy along the Alpine Fault, South Island, New Zealand. Geophysical Monograph Series, 2007, , 289-305.	0.1	5
72	Subduction Systems Revealed: Studies of the Hikurangi Margin. Eos, 2010, 91, 417-418.	0.1	5

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73	Calculating regional stresses for northern Canterbury: the effect of the 2010 Darfield earthquake. New Zealand Journal of Geology, and Geophysics, 2016, 59, 202-212.	1.8	5
74	Paleomagnetic evidence for verticalâ€axis rotations of crustal blocks in the <scp>W</scp>oodlark <scp>R</scp>ift, <scp>SE</scp><scp>P</scp>apua <scp>N</scp>ew <scp>G</scp>uinea: Miocene to presentâ€day kinematics in one of the world's most rapidly extending plate boundary zones. Geochemistry, Geophysics, Geosystems, 2015, 16, 2058-2081.	2.5	4
75	On the Coupling of Geodynamic and Resistivity Models: A Progress Report and the Way Forward. Surveys in Geophysics, 2016, 37, 81-107.	4.6	4
76	Contrasting pressure regimes in sedimentary basins associatedwith a plate boundary, New Zealand. Journal of Geochemical Exploration, 2003, 78-79, 149-152.	3.2	1
77	Sounding out the nest: Unobtrusive localisation of North Island brown kiwi (Apteryx mantelli) incubation burrows. New Zealand Journal of Ecology, 0, , .	1.1	1