Wouter P Schellart

List of Publications by Year
in descending order

51	3,039	218677	161849
papers	citations	26 h-index	54 g-index

69	69	69	2201
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Evolution and diversity of subduction zones controlled by slab width. Nature, 2007, 446, 308-311.	27.8	494
2	Influence of trench width on subduction hinge retreat rates in 3-D models of slab rollback. Geochemistry, Geophysics, Geosystems, 2006, 7, n/a-n/a.	2.5	276
3	Kinematics of subduction and subduction-induced flow in the upper mantle. Journal of Geophysical Research, 2004, 109, .	3.3	225
4	Quantifying the net slab pull force as a driving mechanism for plate tectonics. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	147
5	A new driving mechanism for backarc extension and backarc shortening through slab sinking induced toroidal and poloidal mantle flow: Results from dynamic subduction models with an overriding plate. Journal of Geophysical Research: Solid Earth, 2013, 118, 3221-3248.	3.4	138
6	Are subduction zones invading the Atlantic? Evidence from the southwest Iberia margin. Geology, 2013, 41, 839-842.	4.4	128
7	Kinematics and flow patterns in deep mantle and upper mantle subduction models: Influence of the mantle depth and slab to mantle viscosity ratio. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	127
8	A review of analogue modelling of geodynamic processes: Approaches, scaling, materials and quantification, with an application to subduction experiments. Journal of Geodynamics, 2016, 100, 7-32.	1.6	107
9	Cenozoic Tectonics of Western North America Controlled by Evolving Width of Farallon Slab. Science, 2010, 329, 316-319.	12.6	81
10	Asymmetric deformation in the backarc region of the Kuril arc, northwest Pacific: New insights from analogue modeling. Tectonics, 2003, 22, n/a-n/a.	2.8	77
11	Three-dimensional dynamic laboratory models of subduction with an overriding plate and variable interplate rheology. Geophysical Journal International, 2013, 195, 47-66.	2.4	71
12	Andean mountain building and magmatic arc migration driven by subduction-induced whole mantle flow. Nature Communications, 2017, 8, 2010.	12.8	71
13	Does subduction-induced mantle flow drive backarc extension?. Earth and Planetary Science Letters, 2016, 441, 200-210.	4.4	67
14	Pacific subduction control on Asian continental deformation including Tibetan extension and eastward extrusion tectonics. Nature Communications, 2019, 10, 4480.	12.8	65
15	Evolution of 3-D subduction-induced mantle flow around lateral slab edges in analogue models of free subduction analysed by stereoscopic particle image velocimetry technique. Earth and Planetary Science Letters, 2014, 403, 368-379.	4.4	63
16	Benchmarking analogue models of brittle thrust wedges. Journal of Structural Geology, 2016, 92, 116-139.	2.3	58
17	Influence of lateral slab edge distance on plate velocity, trench velocity, and subduction partitioning. Journal of Geophysical Research, 2011, 116, .	3.3	55
18	How weak is the subduction zone interface?. Geophysical Research Letters, 2015, 42, 2664-2673.	4.0	52

#	Article	IF	Citations
19	Threeâ€dimensional dynamic models of subducting plateâ€overriding plateâ€upper mantle interaction. Journal of Geophysical Research: Solid Earth, 2013, 118, 775-790.	3.4	50
20	Mantle constraints on the plate tectonic evolution of the Tongaâ€“Kermadecâ€“Hikurangi subduction zone and the South Fiji Basin region. Australian Journal of Earth Sciences, 2012, 59, 933-952.	1.0	49
21	Evolution of Subduction Zone Curvature and its Dependence on the Trench Velocity and the Slab to Upper Mantle Viscosity Ratio. Journal of Geophysical Research, 2010, 115, .	3.3	46
22	The Black Sea back-arc basin: insights to its origin from geodynamic models of modern analogues. Geological Society Special Publication, 2010, 340, 11-21.	1.3	44
23	Tracking the Australian plate motion through the Cenozoic: Constraints from ⁴⁰Ar/³⁹Ar geochronology. Tectonics, 2013, 32, 1371-1383.	2.8	37
24	Rheology of petrolatumâ€“paraffin oil mixtures: Applications to analogue modelling of geological processes. Journal of Structural Geology, 2014, 63, 1-11.	2.3	31
25	A subduction zone reference frame based on slab geometry and subduction partitioning of plate motion and trench migration. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	28
26	The development of sheath folds in viscously stratified materials in simple shear conditions: An analogue approach. Journal of Structural Geology, 2013, 56, 129-141.	2.3	28
27	The future of Earth's oceans: consequences of subduction initiation in the Atlantic and implications for supercontinent formation. Geological Magazine, 2018, 155, 45-58.	1.5	27
28	Analogue modelling of asymmetrical back-arc extension. Journal of the Virtual Explorer, 0, 07, .	0.0	27
29	Overriding plate deformation and variability of foreâ€arc deformation during subduction: Insight from geodynamic models and application to the <scp>C</scp>alabria subduction zone. Geochemistry, Geophysics, Geosystems, 2015, 16, 3697-3715.	2.5	26
30	Control of slab width on subductionâ€induced upper mantle flow and associated upwellings: Insights from analog models. Journal of Geophysical Research: Solid Earth, 2016, 121, 4641-4654.	3.4	26
31	Geodynamic models of continental subduction and obduction of overriding plate forearc oceanic lithosphere on top of continental crust. Tectonics, 2015, 34, 1494-1515.	2.8	24
32	Polarity-reversal subduction zone initiation triggered by buoyant plateau obstruction. Earth and Planetary Science Letters, 2022, 577, 117195.	4.4	22
33	Effect of plate thickness on bending radius and energy dissipation at the subduction zone hinge. Journal of Geophysical Research, 2012, 117, .	3.3	20
34	A subduction and mantle plume origin for Samoan volcanism. Scientific Reports, 2018, 8, 10424.	3.3	20
35	Impact of Aseismic Ridges on Subduction Systems: Insights From Analog Modeling. Journal of Geophysical Research: Solid Earth, 2019, 124, 5951-5969.	3.4	18
36	Geodynamic models of short-lived, long-lived and periodic flat slab subduction. Geophysical Journal International, 2021, 226, 1517-1541.	2.4	18

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37	A twoâ€way interaction between the Hainan plume and the Manila subduction zone. Geophysical Research Letters, 2015, 42, 5796-5802.	4.0	17
38	Thermoâ€Mechanical Numerical Modeling of the South American Subduction Zone: A Multiâ€Parametric Investigation. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021527.	3.4	15
39	A geological map of the Scotia Sea area constrained by bathymetry, geological data, geophysical data and seismic tomography models from the deep mantle. Earth-Science Reviews, 2020, 210, 103391.	9.1	14
40	Overriding Plate Deformation and Topography During Slab Rollback and Slab Rollover: Insights From Subduction Experiments. Tectonics, 2022, 41, .	2.8	14
41	3D evolution of a pop-up structure above a double basement strike-slip fault: some insights from analogue modelling. Geological Society Special Publication, 2003, 212, 169-179.	1.3	13
42	Quantifying the energy dissipation of overriding plate deformation in threeâ€dimensional subduction models. Journal of Geophysical Research: Solid Earth, 2015, 120, 519-536.	3.4	13
43	Topography of the Overriding Plate During Progressive Subduction: A Dynamic Model to Explain Forearc Subsidence. Geophysical Research Letters, 2017, 44, 9632-9643.	4.0	13
44	Analogue modelling of large-scale tectonic processes: an introduction. Journal of the Virtual Explorer, 0, 07, .	0.0	13
45	Effect of Plate Length on Subduction Kinematics and Slab Geometry: Insights From Buoyancyâ€Driven Analog Subduction Models. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020514.	3.4	9
46	Comment on â€œThe thermal structure of subduction zone back arcsâ€•by Claire A. Currie and Roy D. Hyndman. Journal of Geophysical Research, 2007, 112, .	3.3	8
47	The variation of crustal stretching and different modes of rifting along the Australian southern continental margin. Australian Journal of Earth Sciences, 2016, 63, 159-174.	1.0	7
48	Fitting Northland, New Caledonia and dlEntrecasteaux geology into the Late Cretaceous-Cenozoic Southwest Pacific tectonic framework. ASEG Extended Abstracts, 2006, 2006, 1-4.	0.1	7
49	Introduction to the thematic issue on the evolution and dynamics of the Indo-Australian plate. Australian Journal of Earth Sciences, 2012, 59, 807-808.	1.0	4
50	Effects of multi-seamount subduction on accretionary wedge deformation: Insights from analogue modelling. Journal of Geodynamics, 2021, 145, 101842.	1.6	4
51	Are subduction zones invading the Atlantic? Evidence from the southwest Iberia margin: REPLY. Geology, 2014, 42, e329-e329.	4.4	2