Wim Spakman

List of Publications by Year
in descending order

115 papers	16,690 citations	19657 61 h-index	21540 114 g-index
120 all docs	120 docs citations	120 times ranked	9381 citing authors

#	Article	IF	Citations
1	Post-collisional mantle delamination in the Dinarides implied from staircases of Oligo-Miocene uplifted marine terraces. Scientific Reports, 2021, 11, 2685.	3.3	17
2	Subduction initiation in the Scotia Sea region and opening of the Drake Passage: When and why?. Earth-Science Reviews, 2021, 215, 103551.	9.1	40
3	A record of plume-induced plate rotation triggering subduction initiation. Nature Geoscience, 2021, 14, 626-630.	12.9	50
4	Reconstructing Jurassicâ€Cretaceous Intraâ€Oceanic Subduction Evolution in the Northwestern Panthalassa Ocean Using Ocean Plate Stratigraphy From Hokkaido, Japan. Tectonics, 2021, 40, e2019TC005673.	2.8	10
5	Reconstructing lost plates of the Panthalassa Ocean through paleomagnetic data from circum-Pacific accretionary orogens. Numerische Mathematik, 2021, 321, 907-954.	1.4	9
6	Orogenic architecture of the Mediterranean region and kinematic reconstruction of its tectonic evolution since the Triassic. Gondwana Research, 2020, 81, 79-229.	6.0	334
7	Mantle resistance against Gibraltar slab dragging as a key cause of the Messinian Salinity Crisis. Terra Nova, 2020, 32, 141-150.	2.1	20
8	Arcâ€Type Magmatism Due to Continentalâ€Edge Plowing Through Ancient Subductionâ€Enriched Mantle. Geophysical Research Letters, 2020, 47, e2020GL087484.	4.0	15
9	Coupled Crustâ€Mantle Response to Slab Tearing, Bending, and Rollback Along the Dinarideâ€Hellenide Orogen. Tectonics, 2019, 38, 2803-2828.	2.8	52
10	Efficient and practical Newton solvers for non-linear Stokes systems in geodynamic problems. Geophysical Journal International, 2019, 218, 873-894.	2.4	21
11	Reconstructing Greater India: Paleogeographic, kinematic, and geodynamic perspectives. Tectonophysics, 2019, 760, 69-94.	2.2	129
12	The Geodynamic World Builder: a solution for complex initial conditions in numerical modeling. Solid Earth, 2019, 10, 1785-1807.	2.8	11
13	Puzzling features of western Mediterranean tectonics explained by slab dragging. Nature Geoscience, 2018, 11, 211-216.	12.9	73
14	Mantle flow influence on subduction evolution. Earth and Planetary Science Letters, 2018, 489, 258-266.	4.4	14
15	Atlas of the underworld: Slab remnants in the mantle, their sinking history, and a new outlook on lower mantle viscosity. Tectonophysics, 2018, 723, 309-448.	2.2	263
16	The Dynamic History of 220ÂMillion Years of Subduction Below Mexico: A Correlation Between Slab Geometry and Overriding Plate Deformation Based on Geology, Paleomagnetism, and Seismic Tomography. Geochemistry, Geophysics, Geosystems, 2018, 19, 4649-4672.	2.5	24
17	Nonlinear viscoplasticity in ASPECT: benchmarking and applications to subduction. Solid Earth, 2018, 9, 267-294.	2.8	70
18	Southwest Pacific Absolute Plate Kinematic Reconstruction Reveals Major Cenozoic Tongaâ€Kermadec Slab Dragging. Tectonics, 2018, 37, 2647-2674.	2.8	36

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19	Cenozoic Rotation History of Borneo and Sundaland, SE Asia Revealed by Paleomagnetism, Seismic Tomography, and Kinematic Reconstruction. Tectonics, 2018, 37, 2486-2512.	2.8	36
20	South-American plate advance and forced Andean trench retreat as drivers for transient flat subduction episodes. Nature Communications, 2017, 8, 15249.	12.8	60
21	Pacific plate motion change caused the Hawaiian-Emperor Bend. Nature Communications, 2017, 8, 15660.	12.8	68
22	Reconstructing subducted oceanic lithosphere by â€œreverseâ€engineeringâ€•slab geometries: The northern Philippine Sea Plate. Tectonics, 2017, 36, 1814-1834.	2.8	9
23	Comment on â€œAssessing Discrepancies Between Previous Plate Kinematic Models of Mesozoic Iberia and Their Constraintsâ€•by Barnettâ€Moore Et Al.. Tectonics, 2017, 36, 3277-3285.	2.8	13
24	On the use of sensitivity tests in seismic tomography. Geophysical Journal International, 2016, 205, 1221-1243.	2.4	129
25	Thermal modeling of the SW Ryukyu forearc (Taiwan): Implications for the seismogenic zone and the age of the subducting Philippine Sea Plate (Huatung Basin). Tectonophysics, 2016, 692, 131-142.	2.2	10
26	Cretaceous slab break-off in the Pyrenees: Iberian plate kinematics in paleomagnetic and mantle reference frames. Gondwana Research, 2016, 34, 49-59.	6.0	47
27	Global correlation of lower mantle structure and past subduction. Geophysical Research Letters, 2016, 43, 4945-4953.	4.0	68
28	Evidence for slab material under Greenland and links to Cretaceous High Arctic magmatism. Geophysical Research Letters, 2016, 43, 3717-3726.	4.0	15
29	Latest Jurassicâ€“earliest Cretaceous closure of the Mongol-Okhotsk Ocean: A paleomagnetic and seismological-tomographic analysis. Special Paper of the Geological Society of America, 2015, , 589-606.	0.5	103
30	A community benchmark for viscoplastic thermal convection in a 2â€D square box. Geochemistry, Geophysics, Geosystems, 2015, 16, 2175-2196.	2.5	69
31	Dynamics of intraoceanic subduction initiation: 1. Oceanic detachment fault inversion and the formation of supraâ€subduction zone ophiolites. Geochemistry, Geophysics, Geosystems, 2015, 16, 1753-1770.	2.5	107
32	Dynamics of intraoceanic subduction initiation: 2. Suprasubduction zone ophiolite formation and metamorphic sole exhumation in context of absolute plate motions. Geochemistry, Geophysics, Geosystems, 2015, 16, 1771-1785.	2.5	97
33	Tectonic interactions between India and Arabia since the Jurassic reconstructed from marine geophysics, ophiolite geology, and seismic tomography. Tectonics, 2015, 34, 875-906.	2.8	104
34	A Paleolatitude Calculator for Paleoclimate Studies. PLoS ONE, 2015, 10, e0126946.	2.5	376
35	Australian plate motion and topography linked to fossil New Guinea slab below Lake Eyre. Earth and Planetary Science Letters, 2015, 421, 107-116.	4.4	38
36	Mantle structure and tectonic history of SE Asia. Tectonophysics, 2015, 658, 14-45.	2.2	253

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37	The key role of global solidâ€Earth processes in preconditioning Greenland's glaciation since the Pliocene. Terra Nova, 2015, 27, 1-8.	2.1	38
38	Using the level set method in geodynamical modeling of multi-material flows and Earth's free surface. Solid Earth, 2014, 5, 1087-1098.	2.8	20
39	Plate tectonic controls on atmospheric CO ₂ levels since the Triassic. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 4380-4385.	7.1	122
40	Absolute plate motions and regional subduction evolution. Geochemistry, Geophysics, Geosystems, 2014, 15, 3780-3792.	2.5	19
41	Origin and consequences of western Mediterranean subduction, rollback, and slab segmentation. Tectonics, 2014, 33, 393-419.	2.8	258
42	Slab detachment in laterally varying subduction zones: 3-D numerical modeling. Geophysical Research Letters, 2014, 41, 1951-1956.	4.0	82
43	Kinematic reconstruction of the Caribbean region since the Early Jurassic. Earth-Science Reviews, 2014, 138, 102-136.	9.1	211
44	Constraints on the Origin and Evolution of Magmas in the PayÃºn MatrÃº Volcanic Field, Quaternary Andean Back-arc of Western Argentina. Journal of Petrology, 2014, 55, 209-239.	2.8	22
45	Underpinning tectonic reconstructions of the western Mediterranean region with dynamic slab evolution from 3â€D numerical modeling. Journal of Geophysical Research: Solid Earth, 2014, 119, 5876-5902.	3.4	99
46	Tectonic evolution and mantle structure of the Caribbean. Journal of Geophysical Research: Solid Earth, 2013, 118, 3019-3036.	3.4	93
47	Using open sidewalls for modelling self-consistent lithosphere subduction dynamics. Solid Earth, 2012, 3, 313-326.	2.8	39
48	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
49	Reply to Aitchison and Ali: Reconciling Himalayan ophiolite and Asian magmatic arc records with a two-stage India-Asia collision model. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, E2646-E2646.	7.1	10
50	The viscosity of Earthâ€™s lower mantle inferred from sinking speed of subducted lithosphere. Physics of the Earth and Planetary Interiors, 2012, 200-201, 56-62.	1.9	99
51	Intra-Panthalassa Ocean subduction zones revealed by fossil arcs and mantle structure. Nature Geoscience, 2012, 5, 215-219.	12.9	106
52	Greater India Basin hypothesis and a two-stage Cenozoic collision between India and Asia. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7659-7664.	7.1	548
53	Zagros orogeny: a subduction-dominated process. Geological Magazine, 2011, 148, 692-725.	1.5	742
54	Tectono-magmatic response to major convergence changes in the North Patagonian suprasubduction system; the Paleogene subductionâ€“transcurrent plate margin transition. Tectonophysics, 2011, 509, 218-237.	2.2	68

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55	Europe from the bottom up: A statistical examination of the central and northern European lithosphereâ€“asthenosphere boundary from comparing seismological and electromagnetic observations. Lithos, 2010, 120, 14-29.	1.4	84
56	Towards absolute plate motions constrained by lower-mantle slab remnants. Nature Geoscience, 2010, 3, 36-40.	12.9	339
57	Surface deformation and slabâ€“mantle interaction during Banda arc subduction rollback. Nature Geoscience, 2010, 3, 562-566.	12.9	260
58	Reconciling the geological history of western Turkey with plate circuits and mantle tomography. Earth and Planetary Science Letters, 2010, 297, 674-686.	4.4	155
59	Plate reconstructions and tomography reveal a fossil lower mantle slab below the Tasman Sea. Earth and Planetary Science Letters, 2009, 278, 143-151.	4.4	50
60	Continental Collision and the STEP-wise Evolution of Convergent Plate Boundaries: From Structure to Dynamics. Frontiers in Earth Sciences, 2009, , 47-59.	0.1	32
61	A map-view restoration of the Alpine-Carpathian-Dinaridic system for the Early Miocene. Swiss Journal of Geosciences, 2008, 101, 273-294.	1.2	231
62	A new absolute arrival time data set for Europe. Geophysical Journal International, 2008, 173, 465-472.	2.4	20
63	Impact of Indiaâ€“Asia collision on SE Asia: The record in Borneo. Tectonophysics, 2008, 451, 366-389.	2.2	207
64	A map-view restoration of the Alpine-Carpathian-Dinaridic system for the Early Miocene. , 2008, , S273-S294.		2
65	TOPO-EUROPE: The geoscience of coupled deep Earth-surface processes. Global and Planetary Change, 2007, 58, 1-118.	3.5	137
66	Delay-time tomography of the upper mantle below Europe, the Mediterranean, and Asia Minor. Geophysical Journal International, 2007, 107, 309-332.	2.4	114
67	Microblock rotations and fault coupling in SE Asia triple junction (Sulawesi, Indonesia) from GPS and earthquake slip vector data. Journal of Geophysical Research, 2006, 111, .	3.3	134
68	Nappe stacking resulting from subduction of oceanic and continental lithosphere below Greece. Geology, 2005, 33, 325.	4.4	296
69	Observation of present-day tectonic motions in the Southeastern Carpathians: Results of the ISES/CRC-461 GPS measurements. Earth and Planetary Science Letters, 2005, 239, 177-184.	4.4	47
70	Kinematics of the southwestern U.S. deformation zone inferred from GPS motion data. Journal of Geophysical Research, 2005, 110, .	3.3	13
71	A joint analysis of GPS motions and InSAR to infer the coseismic surface deformation of the Izmit, Turkey earthquake. Geophysical Journal International, 2004, 158, 849-863.	2.4	21
72	Pyrenean orogeny and plate kinematics. Journal of Geophysical Research, 2004, 109, .	3.3	269

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73	GPS probes the kinematics of the Vrancea Seismogenic Zone. Eos, 2004, 85, 185.	0.1	10
74	A Tomographic View on Western Mediterranean Geodynamics. , 2004, , 31-52.		243
75	Angular velocities of Nubia and Somalia from continuous GPS data: implications on present-day relative kinematics. Earth and Planetary Science Letters, 2004, 222, 197-208.	4.4	103
76	Thermo-mechanical controls on the mode of continental collision in the SE Carpathians (Romania). Earth and Planetary Science Letters, 2004, 218, 57-76.	4.4	143
77	The TRANSMED Atlas: geological-geophysical fabric of the Mediterranean region â€"Final report of the project. Episodes, 2004, 27, 244-254.	1.2	11
78	The Influence of Path Corrections and a Three-dimensional Global P -wave Velocity Model on Seismic Event Location in Kazakhstan. Pure and Applied Geophysics, 2003, 160, 2239-2255.	1.9	2
79	Surface deformation and tectonic setting of Taiwan inferred from a GPS velocity field. Journal of Geophysical Research, 2003, 108, .	3.3	63
80	The resolving power of coseismic surface displacement data for fault slip distribution at depth. Geophysical Research Letters, 2003, 30, .	4.0	17
81	Evidence for active subduction beneath Gibraltar: Comment and Reply. Geology, 2003, 31, e23-e23.	4.4	2
82	Evidence for active subduction beneath Gibraltar. Geology, 2002, 30, 1071.	4.4	423
83	Subducted slabs beneath the eastern Indonesiaâ€"Tonga region: insights from tomography. Earth and Planetary Science Letters, 2002, 201, 321-336.	4.4	163
84	Inversion of relative motion data for estimates of the velocity gradient field and fault slip. Earth and Planetary Science Letters, 2002, 203, 577-591.	4.4	31
85	Shear velocity structure of central Eurasia from inversion of surface wave velocities. Physics of the Earth and Planetary Interiors, 2001, 123, 169-184.	1.9	132
86	Modelling the seismic velocity structure beneath Indonesia: a comparison with tomography. Tectonophysics, 2001, 333, 35-46.	2.2	49
87	Optimization of Cell Parameterizations for Tomographic Inverse Problems. , 2001, , 1401-1423.		6
88	Non-linear globalP-wave tomography by iterated linearized inversion. Geophysical Journal International, 2000, 141, 71-82.	2.4	273
89	Effects of arrival time errors on traveltime tomography. Geophysical Journal International, 2000, 142, 270-276.	2.4	11
90	Neogene evolution of the Aegean arc: paleomagnetic and geodetic evidence for a rapid and young rotation phase. Earth and Planetary Science Letters, 2000, 176, 509-525.	4.4	110

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91	Subduction and Slab Detachment in the Mediterranean-Carpathian Region. Science, 2000, 290, 1910-1917.	12.6	1,379
92	Geodynamics of flat subduction: Seismicity and tomographic constraints from the Andean margin. Tectonics, 2000, 19, 814-833.	2.8	573
93	Fast kinematic ray tracing of first- and later-arriving global seismic phases. Geophysical Journal International, 1999, 139, 359-369.	2.4	35
94	Mesozoic subducted slabs under Siberia. Nature, 1999, 397, 246-249.	27.8	295
95	A Lower Mantle Source for Central European Volcanism. Science, 1999, 286, 1928-1931.	12.6	210
96	Tomographic evidence for a narrow whole mantle plume below Iceland. Earth and Planetary Science Letters, 1999, 166, 121-126.	4.4	277
97	Numerical tests on the seismic visibility of metastable minerals in subduction zones. Earth and Planetary Science Letters, 1999, 170, 335-349.	4.4	11
98	Tethyan subducted slabs under India. Earth and Planetary Science Letters, 1999, 171, 7-20.	4.4	479
99	Scientific objectives of current and future WEGENER activities. Tectonophysics, 1998, 294, 177-223.	2.2	13
100	The role of slab detachment processes in the opening of the westernâ€“central Mediterranean basins: some geological and geophysical evidence. Earth and Planetary Science Letters, 1998, 160, 651-665.	4.4	320
101	Late Cenozoic mineralization, orogenic collapse and slab detachment in the European Alpine Belt. Earth and Planetary Science Letters, 1998, 164, 569-575.	4.4	151
102	Closing the gap between regional and global travel time tomography. Journal of Geophysical Research, 1998, 103, 30055-30078.	3.3	913
103	Interpretation of tomographic images of uppermost mantle structure: Examples from the western and central alps. Journal of Geodynamics, 1996, 21, 97-111.	1.6	32
104	Thermal structure of the continental lithosphere: constraints from seismic tomography. Tectonophysics, 1995, 244, 107-117.	2.2	33
105	Tomographic inversion ofPandpPdata for aspherical mantle structure below the northwest Pacific region. Geophysical Journal International, 1993, 115, 264-302.	2.4	98
106	The P-wave velocity structure of the mantle below the Iberian Peninsula: evidence for subducted lithosphere below southern Spain. Tectonophysics, 1993, 221, 13-34.	2.2	233
107	From tectonic reconstruction to upper mantle model: An application to the Alpine-Mediterranean region. Tectonophysics, 1993, 223, 53-65.	2.2	23
108	Travel-time tomography of the European-Mediterranean mantle down to 1400 km. Physics of the Earth and Planetary Interiors, 1993, 79, 3-74.	1.9	460

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109	Tomographic imaging of subducted lithosphere below northwest Pacific island arcs. Nature, 1991, 353, 37-43.	27.8	519
110	Tomographic images of the upper mantle below central Europe and the Mediterranean. Terra Nova, 1990, 2, 542-553.	2.1	192
111	Structure and seismicity of the Aegean subduction zone. Terra Nova, 1990, 2, 554-562.	2.1	39
112	Importance of the reference model in linearized tomography and images of subduction below the Caribbean Plate. Geophysical Research Letters, 1989, 16, 1093-1096.	4.0	73
113	Resolution experiments for NW Pacific subduction zone tomography. Geophysical Research Letters, 1989, 16, 1097-1100.	4.0	48
114	The Hellenic Subduction Zone: A tomographic image and its geodynamic implications. Geophysical Research Letters, 1988, 15, 60-63.	4.0	367
115	On the Hellenic subduction zone and the geodynamic evolution of Crete since the late Middle Miocene. Tectonophysics, 1988, 146, 203-215.	2.2	290