

# Manel Fernandez

## List of Publications by Year in descending order

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106  
papers

6,384  
citations

66343

42  
h-index

71685

76  
g-index

110  
all docs

110  
docs citations

110  
times ranked

4705  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the post-25 Ma geodynamic evolution of the western Mediterranean. <i>Tectonophysics</i> , 1998, 298, 259-269.	2.2	515
2	Catastrophic flood of the Mediterranean after the Messinian salinity crisis. <i>Nature</i> , 2009, 462, 778-781.	27.8	380
3	Tethysâ€™Atlantic interaction along the Iberiaâ€™Africa plate boundary: The Beticâ€™Rif orogenic system. <i>Tectonophysics</i> , 2012, 579, 144-172.	2.2	214
4	Integrated geophysicalâ€™petrological modeling of the lithosphere and sublithospheric upper mantle: Methodology and applications. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	2.5	200
5	The Pyrenean orogen: pre-, syn-, and post-collisional evolution. <i>Journal of the Virtual Explorer</i> , 0, 08, .	0.0	186
6	Heat flow, heat production, and lithospheric thermal regime in the Iberian Peninsula. <i>Tectonophysics</i> , 1998, 291, 29-53.	2.2	179
7	Crustal-scale cross-sections across the NW Zagros belt: implications for the Arabian margin reconstruction. <i>Geological Magazine</i> , 2011, 148, 739-761.	1.5	169
8	Radiogenic heat production variability of some common lithological groups and its significance to lithospheric thermal modeling. <i>Tectonophysics</i> , 2010, 490, 152-164.	2.2	168
9	Lithosphere structure underneath the Tibetan Plateau inferred from elevation, gravity and geoid anomalies. <i>Earth and Planetary Science Letters</i> , 2008, 267, 276-289.	4.4	167
10	Effects of mantle upwelling in a compressional setting: the Atlas Mountains of Morocco. <i>Terra Nova</i> , 2005, 17, 456-461.	2.1	162
11	The Western Mediterranean extensional basins and the Alpine orogen. <i>Terra Nova</i> , 1997, 9, 109-112.	2.1	154
12	Lithospheric Structure Beneath the Alboran Basin: Results from 3D Gravity Modeling and Tectonic Relevance. <i>Journal of Geophysical Research</i> , 2000, 105, 3209-3228.	3.3	142
13	Effective elastic thickness of Africa and its relationship to other proxies for lithospheric structure and surface tectonics. <i>Earth and Planetary Science Letters</i> , 2009, 287, 152-167.	4.4	142
14	Lithospheric structure under the western African-European plate boundary: A transect across the Atlas Mountains and the Gulf of Cadiz. <i>Tectonics</i> , 2005, 24, n/a-n/a.	2.8	141
15	Lithospheric boudinage in the Western Mediterranean backâ€™arc basin. <i>Terra Nova</i> , 1997, 9, 184-187.	2.1	139
16	Integrated lithospheric modeling combining thermal, gravity, and local isostasy analysis: Application to the NE Spanish Geotransect. <i>Journal of Geophysical Research</i> , 1994, 99, 18089-18102.	3.3	135
17	The structure and evolution of the lithosphereâ€™asthenosphere boundary beneath the Atlanticâ€™Mediterranean Transition Region. <i>Lithos</i> , 2010, 120, 74-95.	1.4	126
18	FA2BOUGâ€™A FORTRAN 90 code to compute Bouguer gravity anomalies from gridded free-air anomalies: Application to the Atlantic-Mediterranean transition zone. <i>Computers and Geosciences</i> , 2008, 34, 1665-1681.	4.2	116

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19	LitMod3D: An interactive 3D software to model the thermal, compositional, density, seismological, and rheological structure of the lithosphere and sublithospheric upper mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	2.5	107
20	A rapid method to map the crustal and lithospheric thickness using elevation, geoid anomaly and thermal analysis. Application to the Gibraltar Arc System, Atlas Mountains and adjacent zones. <i>Tectonophysics</i> , 2007, 430, 97-117.	2.2	106
21	Modeling the evolution of the Guadalquivir foreland basin (southern Spain). <i>Tectonics</i> , 2002, 21, 9-19-17.	2.8	102
22	The transition from linear to diffuse plate boundary in the Azores-Gibraltar region: results from a thin-sheet model. <i>Earth and Planetary Science Letters</i> , 2001, 192, 175-189.	4.4	91
23	Insights in the exhumation history of the NW Zagros from bedrock and detrital apatite fission-track analysis: evidence for a long-lived orogeny. <i>Basin Research</i> , 2010, 22, 659-680.	2.7	84
24	The structure of the Atlantic-Mediterranean transition zone from the Alboran Sea to the Horseshoe Abyssal Plain (Iberia-Africa plate boundary). <i>Marine Geology</i> , 2007, 243, 97-119.	2.1	82
25	A New Southern North Atlantic Isochron Map: Insights Into the Drift of the Iberian Plate Since the Late Cretaceous. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 9603-9626.	3.4	79
26	3-D lithospheric structure and regional/residual Bouguer anomalies in the Arabia-Eurasia collision (Iran). <i>Geophysical Journal International</i> , 2012, 190, 1311-1324.	2.4	78
27	Density structure and buoyancy of the oceanic lithosphere revisited. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	77
28	Heat flow in the Alboran Sea, western Mediterranean. <i>Tectonophysics</i> , 1996, 263, 191-218.	2.2	76
29	The role of rheology in extensional basin formation modelling. <i>Tectonophysics</i> , 1997, 282, 129-145.	2.2	75
30	Thermal expansivity and elastic properties of the lithospheric mantle: results from mineral physics of composites. <i>Physics of the Earth and Planetary Interiors</i> , 2005, 149, 279-306.	1.9	71
31	On the $V_p/V_s$ -Mg# correlation in mantle peridotites: Implications for the identification of thermal and compositional anomalies in the upper mantle. <i>Earth and Planetary Science Letters</i> , 2010, 289, 606-618.	4.4	68
32	Mantle unrooting in collisional settings. <i>Tectonophysics</i> , 1998, 296, 31-46.	2.2	64
33	Sediment supply from the Betic-Rif orogen to basins through Neogene. <i>Tectonophysics</i> , 2009, 475, 68-84.	2.2	64
34	New insights into the crust and lithospheric mantle structure of Africa from elevation, geoid, and thermal analysis. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 5389-5424.	3.4	57
35	Lithospheric structure of the Goringe Bank: Insights into its origin and tectonic evolution. <i>Tectonics</i> , 2010, 29, n/a-n/a.	2.8	53
36	Modelling Gravitational Instabilities: Slab Break-off and Rayleigh-Taylor Diapirism. <i>Pure and Applied Geophysics</i> , 2008, 165, 1491-1510.	1.9	52

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37	Geophysical-petrological modeling of the lithosphere beneath the Cantabrian Mountains and the North-Iberian margin: geodynamic implications. <i>Lithos</i> , 2015, 230, 46-68.	1.4	52
38	Lithospheric transition from the Variscan Iberian Massif to the Jurassic oceanic crust of the Central Atlantic. <i>Tectonophysics</i> , 2004, 386, 97-115.	2.2	51
39	Crust and mantle lithospheric structure of the Iberian Peninsula deduced from potential field modeling and thermal analysis. <i>Tectonophysics</i> , 2015, 663, 419-433.	2.2	51
40	The deep lithospheric structure of the Namibian volcanic margin. <i>Tectonophysics</i> , 2010, 481, 68-81.	2.2	47
41	Numerical modeling of foreland basin formation: a program relating thrusting, flexure, sediment geometry and lithosphere rheology. <i>Computers and Geosciences</i> , 1997, 23, 993-1003.	4.2	46
42	Effects of compositional and rheological stratifications on small-scale convection under the oceans: Implications for the thickness of oceanic lithosphere and seafloor flattening. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	45
43	Geophysical-petrological model of the crust and upper mantle in the India-Eurasia collision zone. <i>Tectonics</i> , 2016, 35, 1642-1669.	2.8	45
44	Lateral diapiric emplacement of Triassic evaporites at the southern margin of the Guadalquivir Basin, Spain. <i>Geological Society Special Publication</i> , 1998, 134, 49-68.	1.3	44
45	Lithospheric mantle heterogeneities beneath the Zagros Mountains and the Iranian Plateau: a petrological-geophysical study. <i>Geophysical Journal International</i> , 2014, 200, 596-614.	2.4	43
46	Crustal thickness and velocity structure across the Moroccan Atlas from long offset wide-angle reflection seismic data: The SIMA experiment. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 1698-1717.	2.5	42
47	Plio-Quaternary vertical motion of the Northern Apennines: Insights from dynamic modeling. <i>Tectonics</i> , 1999, 18, 703-718.	2.8	40
48	Laboratory measurements of seismic P-wave velocities on rocks from the Betic chain (southern Iberian)	2.2	40
49	Updated Bouguer anomalies of the Iberian Peninsula: a new perspective to interpret the regional geology. <i>Journal of Maps</i> , 2016, 12, 1089-1092.	2.0	39
50	Lithospheric structure in the Atlantic-Mediterranean transition zone (southern Spain, northern)	1.2	38
51	Geophysical model of the lithosphere across the Variscan Belt of SW-Iberia: Multidisciplinary assessment. <i>Tectonophysics</i> , 2011, 508, 42-51.	2.2	34
52	From the North-Iberian Margin to the Alboran Basin: A lithosphere geo-transect across the Iberian Plate. <i>Tectonophysics</i> , 2015, 663, 399-418.	2.2	34
53	Thermal structure of the crust in the Gibraltar Arc: Influence on active tectonics in the western Mediterranean. <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	2.5	33
54	Thin-shell modeling of neotectonics in the Azores-Gibraltar Region. <i>Geophysical Research Letters</i> , 2001, 28, 1083-1086.	4.0	31

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55	The Alboran domain in the western Mediterranean evolution: the birth of a concept. Bulletin - Societe Geologique De France, 2015, 186, 371-384.	2.2	31
56	Ranges and basins in the Iberian Peninsula: their contribution to the present topography. Geological Society Memoir, 2006, 32, 223-234.	1.7	30
57	Small-scale gravitational instabilities under the oceans: Implications for the evolution of oceanic lithosphere and its expression in geophysical observables. Philosophical Magazine, 2008, 88, 3197-3217.	1.6	30
58	Decoupled crust-mantle accommodation of Africa-Eurasia convergence in the NW Moroccan margin. Journal of Geophysical Research, 2011, 116, .	3.3	30
59	Neogene vertical movements and constraints on extension in the Catalan Coastal Ranges, Iberian Peninsula, and the Valencia trough (western Mediterranean). Tectonophysics, 1992, 203, 185-201.	2.2	26
60	The onset of extension during lithospheric shortening: a two-dimensional thermomechanical model for lithospheric unroofing. Geophysical Journal International, 1999, 139, 98-114.	2.4	26
61	Deep structure of the VÃ¡ring Margin: the transition from a continental shield to a young oceanic lithosphere. Earth and Planetary Science Letters, 2004, 221, 131-144.	4.4	26
62	Thermal and petrophysical characterization of the lithospheric mantle along the northeastern Iberia geo-transect. Gondwana Research, 2015, 27, 1430-1445.	6.0	26
63	Geophysical and geological constraints on the evolution of the Guadalquivir foreland basin, Spain. Geological Society Special Publication, 1998, 134, 29-48.	1.3	25
64	Evidence for the multi-stage formation of the south-western Valencia Trough. Marine and Petroleum Geology, 1995, 12, 101-109.	3.3	24
65	Lithospheric structure in Central Eurasia derived from elevation, geoid anomaly and thermal analysis. Geological Society Special Publication, 2017, 427, 271-293.	1.3	24
66	Lithospheric structure of the Mid-Norwegian Margin: comparison between the MÃ¡re and VÃ¡ring margins. Journal of the Geological Society, 2005, 162, 1005-1012.	2.1	24
67	Slab pull effects from a flexural analysis of the Tonga and Kermadec trenches (Pacific Plate). Geophysical Journal International, 2000, 141, 479-484.	2.4	23
68	An approach to the thermal field in northeastern Spain. Tectonophysics, 1989, 164, 259-266.	2.2	22
69	Numerical modeling of simultaneous extension and compression: The Valencia trough (western Tj ETQq1 1 0.784314 rgBT /Qyerlock 21	2.8	21
70	Extensional geometry of the Mid Norwegian Margin before Early Tertiary continental breakup. Marine and Petroleum Geology, 2004, 21, 177-194.	3.3	21
71	Modelling of thermal anomalies in the NW border of the Valencia Trough by groundwater convection. Geophysical Research Letters, 1990, 17, 105-108.	4.0	20
72	Three-dimensional modelling of crustal motions caused by subduction and continental convergence in the central Mediterranean. Geophysical Journal International, 1999, 136, 261-274.	2.4	20

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73	Numerical modelling of tectonic plates subduction using X-FEM. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 4283-4293.	6.6	20
74	Lithospheric thermal structure of NE Spain and the North-Balearic basin. Journal of Geodynamics, 1990, 12, 253-267.	1.6	18
75	Geothermal anomalies in the Vallesâ€Penedes Graben Master Fault: Convection through the Horst as a possible mechanism. Journal of Geophysical Research, 1990, 95, 4887-4894.	3.3	17
76	Deep Seated Density Anomalies Across the Iberiaâ€Africa Plate Boundary and Its Topographic Response. Journal of Geophysical Research: Solid Earth, 2019, 124, 13310-13332.	3.4	17
77	Thermo-mechanical constraints on kinematic models of lithospheric extension. Earth and Planetary Science Letters, 1995, 134, 87-98.	4.4	16
78	Three-dimensional crustal structure of the VÃring Margin (NE Atlantic): A combined seismic and gravity image. Journal of Geophysical Research, 2003, 108, .	3.3	16
79	Lithospheric mantle buoyancy: the role of tectonic convergence and mantle composition. Scientific Reports, 2019, 9, 17953.	3.3	16
80	Heat flow and regional uplift at the north-eastern border of the Ebro basin, NE Spain. Geophysical Journal International, 1995, 121, 393-403.	2.4	15
81	Thin-sheet modelling of lithospheric deformation and surface mass transport. Tectonophysics, 2005, 407, 239-255.	2.2	15
82	Evidence of Segmentation in the Iberiaâ€Africa Plate Boundary: A Jurassic Heritage?. Geosciences (Switzerland), 2019, 9, 343.	2.2	14
83	LitMod2D_2.0: An Improved Integrated Geophysicalâ€Petrological Modeling Tool for the Physical Interpretation of Upper Mantle Anomalies. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008777.	2.5	14
84	Heat-flow data and shallow thermal regime on Mallorca and Menorca (western Mediterranean). Tectonophysics, 1992, 203, 133-143.	2.2	13
85	Evidence for mantle heterogeneities in the westernmost Mediterranean from a statistical approach to volcanic petrology. Lithos, 2017, 276, 62-74.	1.4	12
86	Opposite Subduction Polarity in Adjacent Plate Segments. Tectonics, 2018, 37, 3285-3302.	2.8	12
87	Opposite Symmetry in the Lithospheric Structure of the Alboran and Algerian Basins and Their Margins (Western Mediterranean): Geodynamic Implications. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021388.	3.4	12
88	Extension with lateral material accommodation â€” â€activeâ€™ vs. â€passiveâ€™ rifting. Tectonophysics, 1996, 266, 121-137.	2.2	11
89	Regional Geothermal Gradients and Lithospheric Structure in Spain. Exploration of the Deep Continental Crust, 1991, , 176-186.	0.1	10
90	Lithospheric Transition from Continental to Oceanic in the West Iberia Atlantic Margin. , 1995, , 247-263.		10

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91	Structural controls on sedimentary basin evolution: introduction. <i>Tectonophysics</i> , 1997, 282, xi-xviii.	2.2	8
92	Iberia geodynamics: An integrative approach from the Topo-Iberia framework. <i>Tectonophysics</i> , 2015, 663, 1-4.	2.2	8
93	Impact of the lithosphere on dynamic topography: Insights from analogue modeling. <i>Geophysical Research Letters</i> , 2017, 44, 2693-2702.	4.0	8
94	Neotectonic Deformation in Central Eurasia: A Geodynamic Model Approach. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 9461-9484.	3.4	8
95	Four decades of geophysical research on Iberia and adjacent margins. <i>Earth-Science Reviews</i> , 2021, 222, 103841.	9.1	8
96	Heat pulse line-source method to determine thermal conductivity of consolidated rocks. <i>Review of Scientific Instruments</i> , 1986, 57, 2832-2836.	1.3	7
97	Two-dimensional geoid modelling: some remarks on Chapman's algorithm. <i>Geophysical Journal International</i> , 1996, 127, 542-544.	2.4	7
98	Analog and Numerical Experiments of Double Subduction Systems With Opposite Polarity in Adjacent Segments. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009035.	2.5	7
99	Regional crustal and lithospheric thickness model for Alaska, the Chukchi shelf, and the inner and outer Bering shelves. <i>Geophysical Journal International</i> , 2020, 220, 522-540.	2.4	6
100	Coupled mantle dripping and lateral dragging controlling the lithosphere structure of the NW-Moroccan margin and the Atlas Mountains: A numerical experiment. <i>Lithos</i> , 2014, 189, 16-27.	1.4	5
101	On the interpretation of gravity tide residuals in the Iberian Peninsula. <i>Journal of Geodynamics</i> , 2008, 45, 18-31.	1.6	3
102	Numerical modelling of opposing subduction in the Western Mediterranean. <i>Tectonophysics</i> , 2022, 830, 229309.	2.2	3
103	The nature of crustal reflectivity at the southwest Iberian margin. <i>Tectonophysics</i> , 2017, 721, 239-253.	2.2	2
104	Corte litosférico al Este de la Península Ibérica y sus márgenes. <i>Modelización de las propiedades físicas del manto superior. Física De La Tierra</i> , 1970, 23, 131.	0.1	1
105	La estructura profunda del Zagros y de la meseta de Irán: un modelo geofísico y petrológico. <i>Física De La Tierra</i> , 1970, 23, 93.	0.1	0
106	Modelling Gravitational Instabilities: Slab Break-off and Rayleigh-Taylor Diapirism. , 2008, , 1491-1510.		0