

# Antonio Gallardo

## List of Publications by Year in descending order

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100  
papers

9,156  
citations

66343

42  
h-index

42399

92  
g-index

103  
all docs

103  
docs citations

103  
times ranked

9776  
citing authors

#	ARTICLE	IF	CITATIONS
1	Plant Species Richness and Ecosystem Multifunctionality in Global Drylands. <i>Science</i> , 2012, 335, 214-218.	12.6	1,043
2	Decoupling of soil nutrient cycles as a function of aridity in global drylands. <i>Nature</i> , 2013, 502, 672-676.	27.8	733
3	Increasing aridity reduces soil microbial diversity and abundance in global drylands. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 15684-15689.	7.1	728
4	Multiple elements of soil biodiversity drive ecosystem functions across biomes. <i>Nature Ecology and Evolution</i> , 2020, 4, 210-220.	7.8	543
5	Litter mass loss rates in pine forests of Europe and Eastern United States: some relationships with climate and litter quality. <i>Biogeochemistry</i> , 1993, 20, 127-159.	3.5	451
6	Structure and Functioning of Dryland Ecosystems in a Changing World. <i>Annual Review of Ecology, Evolution, and Systematics</i> , 2016, 47, 215-237.	8.3	330
7	Shrub encroachment can reverse desertification in semi-arid Mediterranean grasslands. <i>Ecology Letters</i> , 2009, 12, 930-941.	6.4	285
8	Leaf Decomposition in Two Mediterranean Ecosystems of Southwest Spain: Influence of Substrate Quality. <i>Ecology</i> , 1993, 74, 152-161.	3.2	284
9	Enhanced wheat yield by biochar addition under different mineral fertilization levels. <i>Agronomy for Sustainable Development</i> , 2013, 33, 475-484.	5.3	251
10	Changes in biocrust cover drive carbon cycle responses to climate change in drylands. <i>Global Change Biology</i> , 2013, 19, 3835-3847.	9.5	230
11	Effects of biochars produced from different feedstocks on soil properties and sunflower growth. <i>Journal of Plant Nutrition and Soil Science</i> , 2014, 177, 16-25.	1.9	198
12	What explains variation in the impacts of exotic plant invasions on the nitrogen cycle? A meta-analysis. <i>Ecology Letters</i> , 2014, 17, 1-12.	6.4	194
13	Factors limiting microbial biomass in the mineral soil and forest floor of a warm-temperate forest. <i>Soil Biology and Biochemistry</i> , 1994, 26, 1409-1415.	8.8	172
14	Carbon and nitrogen limitations of soil microbial biomass in desert ecosystems. <i>Biogeochemistry</i> , 1992, 18, 1-17.	3.5	164
15	Changes in belowground biodiversity during ecosystem development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 6891-6896.	7.1	151
16	Intransitive competition is widespread in plant communities and maintains their species richness. <i>Ecology Letters</i> , 2015, 18, 790-798.	6.4	149
17	Global ecological predictors of the soil priming effect. <i>Nature Communications</i> , 2019, 10, 3481.	12.8	148
18	Biological soil crusts modulate nitrogen availability in semi-arid ecosystems: insights from a Mediterranean grassland. <i>Plant and Soil</i> , 2010, 333, 21-34.	3.7	143

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19	Spatial Variability of Soil Properties in a Floodplain Forest in Northwest Spain. <i>Ecosystems</i> , 2003, 6, 564-576.	3.4	142
20	Effect of tree canopy on the spatial distribution of soil nutrients in a Mediterranean Dehesa. <i>Pedobiologia</i> , 2003, 47, 117-125.	1.2	110
21	Wheat growth and yield responses to biochar addition under Mediterranean climate conditions. <i>Biology and Fertility of Soils</i> , 2014, 50, 1177-1187.	4.3	103
22	Nitrogen immobilization in leaf litter at two Mediterranean ecosystems of SW Spain. <i>Biogeochemistry</i> , 1992, 15, 213.	3.5	101
23	Plant diversity and ecosystem multifunctionality peak at intermediate levels of woody cover in global drylands. <i>Global Ecology and Biogeography</i> , 2014, 23, 1408-1416.	5.8	93
24	Effects of exotic and native tree leaf litter on soil properties of two contrasting sites in the Iberian Peninsula. <i>Plant and Soil</i> , 2012, 350, 179-191.	3.7	91
25	Factors determining soil microbial biomass and nutrient immobilization in desert soils. <i>Biogeochemistry</i> , 1995, 28, 55-68.	3.5	89
26	Comparison of different collection systems for sorted household waste in Spain. <i>Waste Management</i> , 2010, 30, 2430-2439.	7.4	85
27	Soil characteristics determine soil carbon and nitrogen availability during leaf litter decomposition regardless of litter quality. <i>Soil Biology and Biochemistry</i> , 2015, 81, 134-142.	8.8	83
28	Effects of exotic invasive trees on nitrogen cycling: a case study in Central Spain. <i>Biological Invasions</i> , 2009, 11, 1973-1986.	2.4	77
29	Spatial variability of soil elements in two plant communities of NW Spain. <i>Geoderma</i> , 2007, 139, 199-208.	5.1	76
30	Differences in thallus chemistry are related to species-specific effects of biocrust-forming lichens on soil nutrients and microbial communities. <i>Functional Ecology</i> , 2015, 29, 1087-1098.	3.6	76
31	Changes in chemical composition of <i>Pinus sylvestris</i> needle litter during decomposition along a European coniferous forest climatic transect. <i>Soil Biology and Biochemistry</i> , 2003, 35, 801-812.	8.8	74
32	Nitrogen supply modulates the effect of changes in drying-rewetting frequency on soil C and N cycling and greenhouse gas exchange. <i>Global Change Biology</i> , 2015, 21, 3854-3863.	9.5	72
33	Direct and indirect impacts of climate change on microbial and biocrust communities alter the resistance of the N cycle in a semiarid grassland. <i>Journal of Ecology</i> , 2014, 102, 1592-1605.	4.0	71
34	Soil nutrient heterogeneity modulates ecosystem responses to changes in the identity and richness of plant functional groups. <i>Journal of Ecology</i> , 2011, 99, 551-562.	4.0	58
35	Changes in net N mineralization rates and soil N and P pools in a pine forest wildfire chronosequence. <i>Biology and Fertility of Soils</i> , 2009, 45, 781-788.	4.3	56
36	Changes in soil N and P availability in a <i>Pinus canariensis</i> fire chronosequence. <i>Forest Ecology and Management</i> , 2008, 256, 384-387.	3.2	55

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37	Biological soil crusts promote N accumulation in response to dew events in dryland soils. <i>Soil Biology and Biochemistry</i> , 2013, 62, 22-27.	8.8	49
38	<i>Quercus suber</i> dieback alters soil respiration and nutrient availability in Mediterranean forests. <i>Journal of Ecology</i> , 2016, 104, 1441-1452.	4.0	49
39	Plants and biological soil crusts modulate the dominance of N forms in a semi-arid grassland. <i>Soil Biology and Biochemistry</i> , 2010, 42, 376-378.	8.8	48
40	Biocrusts control the nitrogen dynamics and microbial functional diversity of semi-arid soils in response to nutrient additions. <i>Plant and Soil</i> , 2013, 372, 643-654.	3.7	48
41	The influence of soil age on ecosystem structure and function across biomes. <i>Nature Communications</i> , 2020, 11, 4721.	12.8	47
42	Short-term wildfire effects on the spatial pattern and scale of labile organic-N and inorganic-N and P pools. <i>Forest Ecology and Management</i> , 2009, 257, 739-746.	3.2	45
43	Aridity Modulates N Availability in Arid and Semiarid Mediterranean Grasslands. <i>PLoS ONE</i> , 2013, 8, e59807.	2.5	42
44	Biological soil crusts increase the resistance of soil nitrogen dynamics to changes in temperatures in a semi-arid ecosystem. <i>Plant and Soil</i> , 2013, 366, 35-47.	3.7	41
45	Estimating microbial biomass nitrogen using the fumigation-incubation and fumigation-extraction methods in a warm-temperate forest soil. <i>Soil Biology and Biochemistry</i> , 1990, 22, 927-932.	8.8	38
46	Differences between Soil Ammonium and Nitrate Spatial Pattern in Six Plant Communities. Simulated Effect on Plant Populations. <i>Plant and Soil</i> , 2006, 279, 333-346.	3.7	37
47	Spatial variability of soil properties under <i>Pinus canariensis</i> canopy in two contrasting soil textures. <i>Plant and Soil</i> , 2009, 322, 139-150.	3.7	33
48	Spatial pattern and scale of soil N and P fractions under the influence of a leguminous shrub in a <i>Pinus canariensis</i> forest. <i>Geoderma</i> , 2009, 151, 303-310.	5.1	33
49	Early-successional vegetation changes after roadside prairie restoration modify processes related with soil functioning by changing microbial functional diversity. <i>Soil Biology and Biochemistry</i> , 2011, 43, 1245-1253.	8.8	33
50	Short-term effects of litter from 21 woody species on plant growth and root development. <i>Plant and Soil</i> , 2014, 381, 177-191.	3.7	33
51	Human impacts and aridity differentially alter soil N availability in drylands worldwide. <i>Global Ecology and Biogeography</i> , 2016, 25, 36-45.	5.8	33
52	Temporal variation in total leaf phenolics concentration of <i>Quercus robur</i> in forested and harvested stands in northwestern Spain. <i>Canadian Journal of Botany</i> , 2001, 79, 1262-1269.	1.1	33
53	Ionic exchange membranes (IEMs): A good indicator of soil inorganic N production. <i>Soil Biology and Biochemistry</i> , 2013, 57, 964-968.	8.8	32
54	Climatic conditions, soil fertility and atmospheric nitrogen deposition largely determine the structure and functioning of microbial communities in biocrust-dominated Mediterranean drylands. <i>Plant and Soil</i> , 2016, 399, 271-282.	3.7	32

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55	Spatial pattern and scale of leaf N and P concentration in a <i>Quercus robur</i> population. <i>Plant and Soil</i> , 2005, 273, 269-277.	3.7	31
56	Soil nitrogen dynamics in response to carbon increase in a mediterranean shrubland of SW Spain. <i>Soil Biology and Biochemistry</i> , 1998, 30, 1349-1358.	8.8	30
57	Spatial pattern and scale of leaf N and P resorption efficiency and proficiency in a <i>Quercus robur</i> population. <i>Plant and Soil</i> , 2008, 311, 109-119.	3.7	30
58	Dissolved Organic Nitrogen in Mediterranean Ecosystems. <i>Pedosphere</i> , 2011, 21, 309-318.	4.0	30
59	Climatic vulnerabilities and ecological preferences of soil invertebrates across biomes. <i>Molecular Ecology</i> , 2020, 29, 752-761.	3.9	29
60	Soil chemical properties in abandoned Mediterranean cropland after succession and oak reforestation. <i>Acta Oecologica</i> , 2012, 38, 58-65.	1.1	28
61	Vascular plants mediate the effects of aridity and soil properties on ammonia-oxidizing bacteria and archaea. <i>FEMS Microbiology Ecology</i> , 2013, 85, 273-282.	2.7	28
62	Interactive effects of forest die-off and drying-rewetting cycles on C and N mineralization. <i>Geoderma</i> , 2019, 333, 81-89.	5.1	28
63	Wetting and drying events determine soil N pools in two Mediterranean ecosystems. <i>Applied Soil Ecology</i> , 2013, 72, 161-170.	4.3	27
64	Biological soil crusts affect small-scale spatial patterns of inorganic N in a semiarid Mediterranean grassland. <i>Journal of Arid Environments</i> , 2013, 91, 147-150.	2.4	27
65	Effect of pine harvesting on leaf nutrient dynamics in young oak trees at NW Spain. <i>Forest Ecology and Management</i> , 2002, 167, 161-172.	3.2	26
66	Temporal dynamic of parasite-mediated linkages between the forest canopy and soil processes and the microbial community. <i>New Phytologist</i> , 2016, 211, 1382-1392.	7.3	26
67	Wildfire changes the spatial pattern of soil nutrient availability in <i>Pinus canariensis</i> forests. <i>Annals of Forest Science</i> , 2009, 66, 210-210.	2.0	25
68	Spatial pattern and variability in soil N and P availability under the influence of two dominant species in a pine forest. <i>Plant and Soil</i> , 2011, 345, 211-221.	3.7	22
69	Depolymerization and mineralization rates at 12 Mediterranean sites with varying soil N availability. A test for the Schimel and Bennett model. <i>Soil Biology and Biochemistry</i> , 2011, 43, 693-696.	8.8	21
70	Biological soil crusts and wetting events: Effects on soil N and C cycles. <i>Applied Soil Ecology</i> , 2015, 94, 1-6.	4.3	20
71	Holm oak decline triggers changes in plant succession and microbial communities, with implications for ecosystem C and N cycling. <i>Plant and Soil</i> , 2017, 414, 247-263.	3.7	20
72	Climate and soil microorganisms drive soil phosphorus fractions in coastal dune systems. <i>Functional Ecology</i> , 2020, 34, 1690-1701.	3.6	20

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73	Temporal variation in total leaf phenolics concentration of <i>Quercus robur</i> in forested and harvested stands in northwestern Spain. <i>Canadian Journal of Botany</i> , 2001, 79, 1262-1269.	1.1	18
74	Développement à long terme des concentrations d'azote organique et inorganique, attribuable au feu dans une forêt de pins. <i>Annals of Forest Science</i> , 2010, 67, 207-207.	2.0	17
75	Factors determining waste generation in Spanish towns and cities. <i>Environmental Monitoring and Assessment</i> , 2015, 187, 4098.	2.7	17
76	Temperature Increases Soil Respiration Across Ecosystem Types and Soil Development, But Soil Properties Determine the Magnitude of This Effect. <i>Ecosystems</i> , 2022, 25, 184-198.	3.4	17
77	Biocrusts Modulate Responses of Nitrous Oxide and Methane Soil Fluxes to Simulated Climate Change in a Mediterranean Dryland. <i>Ecosystems</i> , 2020, 23, 1690-1701.	3.4	16
78	Green and senescent leaf phenolics showed spatial autocorrelation in a <i>Quercus robur</i> population in northwestern Spain. <i>Plant and Soil</i> , 2004, 259, 267-276.	3.7	15
79	Changes in leaf nutrient traits in a wildfire chronosequence. <i>Plant and Soil</i> , 2010, 331, 69-77.	3.7	15
80	Pathogen-induced tree mortality interacts with predicted climate change to alter soil respiration and nutrient availability in Mediterranean systems. <i>Biogeochemistry</i> , 2019, 142, 53-71.	3.5	14
81	Understanding long-term post-fire regeneration of a fire-resistant pine species. <i>Annals of Forest Science</i> , 2015, 72, 609-619.	2.0	13
82	Simulated nitrogen deposition influences soil greenhouse gas fluxes in a Mediterranean dryland. <i>Science of the Total Environment</i> , 2020, 737, 139610.	8.0	13
83	Biological Soil Crusts as a Model System in Ecology. <i>Ecological Studies</i> , 2016, , 407-425.	1.2	12
84	Wetting-drying cycles influence on soil respiration in two Mediterranean ecosystems. <i>European Journal of Soil Biology</i> , 2017, 82, 10-16.	3.2	12
85	Leaf resorption efficiency and proficiency in a <i>Quercus robur</i> population following forest harvest. <i>Forest Ecology and Management</i> , 2008, 255, 2264-2271.	3.2	11
86	Soil Ammonium vs. Nitrate Spatial Pattern in Six Plant Communities: Simulated Effect on Plant Populations. <i>Plant and Soil</i> , 2005, 277, 207-219.	3.7	10
87	Nutritional status of <i>Quercus suber</i> populations under contrasting tree dieback. <i>Forestry</i> , 2012, 85, 369-378.	2.3	10
88	Evolution of sorted waste collection: a case study of Spanish cities. <i>Waste Management and Research</i> , 2012, 30, 859-863.	3.9	9
89	Changes in biocrust cover drive carbon cycle responses to climate change in drylands. <i>Global Change Biology</i> , 2014, 20, 2697-2698.	9.5	8
90	Efficiency of a pilot scheme for the separate collection of the biowaste from municipal solid waste in Spain. <i>Scientific Reports</i> , 2021, 11, 11569.	3.3	7

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91	Serendipia: Castilla-La Mancha telepathology network. <i>Diagnostic Pathology</i> , 2008, 3, S5.	2.0	6
92	Laurel forest recovery during 20 years in an abandoned firebreak in Tenerife, Canary Islands. <i>Acta Oecologica</i> , 2008, 33, 1-9.	1.1	6
93	Temporal changes in the spatial pattern of leaf traits in a <i>Quercus robur</i> population. <i>Annals of Forest Science</i> , 2011, 68, 453-460.	2.0	4
94	Comparing the use of leaf and soil analysis as N and P availability indices in a wildfire chronosequence. <i>European Journal of Forest Research</i> , 2012, 131, 1327-1335.	2.5	4
95	The pedogenic Walker and Syers model under high atmospheric P deposition rates. <i>Biogeochemistry</i> , 2020, 148, 237-253.	3.5	4
96	Biocrusts increase the resistance to warming-induced increases in topsoil P pools. <i>Journal of Ecology</i> , 2022, 110, 2074-2087.	4.0	4
97	Wildfires decrease the local-scale ecosystem spatial variability of <i>Pinus canariensis</i> forests during the first two decades post fire. <i>International Journal of Wildland Fire</i> , 2019, 28, 288.	2.4	3
98	El ciclo global del nitrógeno. Una visión para el ecólogo terrestre. <i>Ecosistemas</i> , 2017, 26, 4-6.	0.4	3
99	Changes in the spatial structure of oak carbon-based secondary compounds after pine harvesting. <i>Forest Ecology and Management</i> , 2009, 258, 2511-2518.	3.2	2
100	Optimization of the Location of the Municipal Solid Waste Bins Using Geographic Information Systems. <i>Lecture Notes in Management and Industrial Engineering</i> , 2016, , 171-184.	0.4	2