Francisco I Pugnaire

List of Publications by Year
in descending order

142	15,367	25034 57	18130 120
papers	citations	h-index	g-index

147	147	147	11644
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Positive interactions among alpine plants increase with stress. Nature, 2002, 417, 844-848.	27.8	1,821
2	Facilitation in plant communities: the past, the present, and the future. Journal of Ecology, 2008, 96, 18-34.	4.0	788
3	Evolution of Suites of Traits in Response to Environmental Stress. American Naturalist, 1993, 142, S78-S92.	2.1	737
4	MEASURING PLANT INTERACTIONS: A NEW COMPARATIVE INDEX. Ecology, 2004, 85, 2682-2686.	3.2	694
5	Do biotic interactions shape both sides of the humped-back model of species richness in plant communities?. Ecology Letters, 2006, 9, 767-773.	6.4	517
6	The role of nurse plants in the restoration of degraded environments. Frontiers in Ecology and the Environment, 2006, 4, 196-202.	4.0	511
7	Rethinking plant community theory. Oikos, 2004, 107, 433-438.	2.7	479
8	Facilitation between Higher Plant Species in a Semiarid Environment. Ecology, 1996, 77, 1420-1426.	3.2	410
9	Rooting depth and soil moisture control Mediterranean woody seedling survival during drought. Functional Ecology, 2007, 21, 489-495.	3.6	374
10	Community structure and positive interactions in constraining environments. Oikos, 2005, 111, 437-444.	2.7	370
11	Changes in plant interactions along a gradient of environmental stress. Oikos, 2001, 93, 42-49.	2.7	367
12	Water release through plant roots: new insights into its consequences at the plant and ecosystem level. New Phytologist, 2012, 193, 830-841.	7.3	296
13	The importance of importance. Oikos, 2005, 109, 63-70.	2.7	289
14	Facilitation and Succession under the Canopy of a Leguminous Shrub, Retama sphaerocarpa, in a Semi-Arid Environment in South-East Spain. Oikos, 1996, 76, 455.	2.7	281
15	Facilitative plant interactions and climate simultaneously drive alpine plant diversity. Ecology Letters, 2014, 17, 193-202.	6.4	274
16	Plant interactions govern population dynamics in a semi-arid plant community. Journal of Ecology, 2005, 93, 978-989.	4.0	253
17	Climate change effects on plant-soil feedbacks and consequences for biodiversity and functioning of terrestrial ecosystems. Science Advances, 2019, 5, eaaz1834.	10.3	245
18	Soil as a mediator in plantâ€plant interactions in a semiâ€arid community. Journal of Vegetation Science, 2004, 15, 85-92.	2.2	225

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19	LINKING PATTERNS AND PROCESSES IN ALPINE PLANT COMMUNITIES: A GLOBAL STUDY. Ecology, 2005, 86, 1395-1400.	3.2	203
20	Variability in functional traits mediates plant interactions along stress gradients. Journal of Ecology, 2013, 101, 753-762.	4.0	177
21	Seed Bank and Understorey Species Composition in a Semi-arid Environment: The Effect of Shrub Age and Rainfall. Annals of Botany, 2000, 86, 807-813.	2.9	166
22	Effect of the canopy of Retama sphaerocarpa on its understorey in a semiarid environment. Functional Ecology, 1997, 11, 425-431.	3.6	161
23	Controls over Nutrient Resorption from Leaves of Evergreen Mediterranean Species. Ecology, 1993, 74, 124-129.	3.2	156
24	A field test of the stress-gradient hypothesis along an aridity gradient. Journal of Vegetation Science, 2011, 22, 818-827.	2.2	153
25	Interactions among soil, plants, and microorganisms drive secondary succession in a dry environment. Soil Biology and Biochemistry, 2014, 78, 298-306.	8.8	152
26	Alpine cushion plants inhibit the loss of phylogenetic diversity in severe environments. Ecology Letters, 2013, 16, 478-486.	6.4	151
27	Foundation species influence traitâ€based community assembly. New Phytologist, 2012, 196, 824-834.	7.3	150
28	Climatic change and rainfall patterns: Effects on semi-arid plant communities of the Iberian Southeast. Journal of Arid Environments, 2011, 75, 1302-1309.	2.4	149
29	Mechanisms of interaction between a leguminous shrub and its understorey in a semi-arid environment. Ecography, 1997, 20, 175-184.	4.5	148
30	Spatial patterns in a two-tiered semi-arid shrubland in southeastern Spain. Journal of Vegetation Science, 1996, 7, 527-534.	2.2	135
31	Tradeoffs Between Irradiance Capture and Avoidance in Semi-arid Environments Assessed with a Crown Architecture Model. Annals of Botany, 1999, 83, 459-469.	2.9	127
32	Positive plant interactions in the Iberian Southeast: Mechanisms, environmental gradients, and ecosystem function. Journal of Arid Environments, 2011, 75, 1310-1320.	2.4	115
33	Shrub spatial aggregation and consequences for reproductive success. Oecologia, 2003, 136, 296-301.	2.0	107
34	Soil microbial community under a nurse-plant species changes in composition, biomass and activity as the nurse grows. Soil Biology and Biochemistry, 2013, 64, 139-146.	8.8	102
35	An investigation of rooting depth of the semiarid shrub Retama sphaerocarpa (L.) Boiss. by labelling of ground water with a chemical tracer. Journal of Hydrology, 1996, 177, 23-31.	5.4	99
36	Facilitation in communities: underlying mechanisms, community and ecosystem implications. Functional Ecology, 2016, 30, 3-9.	3.6	94

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37	Shrubs influence arbuscular mycorrhizal fungi communities in a semi-arid environment. Soil Biology and Biochemistry, 2011, 43, 682-689.	8.8	89
38	Do changes in rainfall patterns affect semiarid annual plant communities?. Journal of Vegetation Science, 2009, 20, 269-276.	2.2	86
39	Ontogenetic shifts in interactions of two dominant shrub species in a semiâ€arid coastal sand dune system. Journal of Vegetation Science, 2009, 20, 535-546.	2.2	85
40	Donâ€™t Diss Integration: A Comment on Ricklefsâ€™s Disintegrating Communities. American Naturalist, 2009, 174, 919-927.	2.1	83
41	Response of the Tussock Grass Stipa tenacissima to Watering in a Semi-Arid Environment. Functional Ecology, 1996, 10, 265.	3.6	80
42	Variability in amount and frequency of water supply affects roots but not growth of arid shrubs. Plant Ecology, 2009, 204, 261-270.	1.6	80
43	Title is missing!. Plant and Soil, 2002, 240, 343-352.	3.7	79
44	A global analysis of bidirectional interactions in alpine plant communities shows facilitators experiencing strong reciprocal fitness costs. New Phytologist, 2014, 202, 95-105.	7.3	79
45	Direct and indirect interactions coâ€determine species composition in nurse plant systems. Oikos, 2013, 122, 1371-1379.	2.7	76
46	Early root growth plasticity in seedlings of three Mediterranean woody species. Plant and Soil, 2007, 296, 103-113.	3.7	74
47	Hydraulic lift: soil processes and transpiration in the Mediterranean leguminous shrub Retama sphaerocarpa (L.) Boiss. Plant and Soil, 2010, 329, 447-456.	3.7	74
48	Land-use changes and carbon sequestration through the twentieth century in a Mediterranean mountain ecosystem: Implications for land management. Journal of Environmental Management, 2010, 91, 2688-2695.	7.8	70
49	The role of hydraulic lift on seedling establishment under a nurse plant species in a semi-arid environment. Perspectives in Plant Ecology, Evolution and Systematics, 2011, 13, 181-187.	2.7	69
50	Comparative Physiology and Growth of Two Perennial Tussock Grass Species in a Semi-Arid Environment. Annals of Botany, 1996, 77, 81-86.	2.9	68
51	Rethinking species selection for restoration of arid shrublands. Basic and Applied Ecology, 2009, 10, 640-647.	2.7	68
52	Environmental and physiological factors governing nutrient resorption efficiency in barley. Oecologia, 1992, 90, 120-126.	2.0	66
53	A role for belowâ€ground biota in plantâ€“plant facilitation. Journal of Ecology, 2013, 101, 1420-1428.	4.0	66
54	Plant-plant competition outcomes are modulated by plant effects on the soil bacterial community. Scientific Reports, 2017, 7, 17756.	3.3	66

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55	Mediterranean-climate oak savannas: the interplay between abiotic environment and species interactions. Web Ecology, 2009, 9, 30-43.	1.6	66
56	Colonization processes in semi-arid Mediterranean old-fields. Journal of Arid Environments, 2006, 65, 591-603.	2.4	65
57	Does the stressâ€gradient hypothesis hold water? Disentangling spatial and temporal variation in plant effects on soil moisture in dryland systems. Functional Ecology, 2016, 30, 10-19.	3.6	64
58	Spatial pattern inAnthyllis cytisoidesshrubland on abandoned land in southeastern Spain. Journal of Vegetation Science, 1997, 8, 627-634.	2.2	63
59	Hydraulic lift and tolerance to salinity of semiarid species: consequences for species interactions. Oecologia, 2010, 162, 11-21.	2.0	63
60	Symbiotic soil fungi enhance ecosystem resilience to climate change. Global Change Biology, 2017, 23, 5228-5236.	9.5	63
61	Arbuscular mycorrhizal fungi host preference and site effects in two plant species in a semiarid environment. Applied Soil Ecology, 2011, 48, 313-317.	4.3	62
62	Nucleation-driven regeneration promotes post-fire recovery in a Chilean temperate forest. Plant Ecology, 2013, 214, 765-776.	1.6	61
63	Trade-offs between maintenance of ecosystem services and socio-economic development in rural mountainous communities in southern Spain: A dynamic simulation approach. Journal of Environmental Management, 2013, 131, 280-297.	7.8	61
64	Title is missing!. Plant Ecology, 1999, 145, 327-339.	1.6	55
65	Response of a Mediterranean semiarid community to changing patterns of water supply. Perspectives in Plant Ecology, Evolution and Systematics, 2009, 11, 255-266.	2.7	55
66	Consequences of facilitation: one plant's benefit is another plant's cost. Functional Ecology, 2014, 28, 500-508.	3.6	55
67	Does shelter enhance early seedling survival in dry environments? A test with eight Mediterranean species. Applied Vegetation Science, 2011, 14, 31-39.	1.9	54
68	The effects of foundation species on community assembly: a global study on alpine cushion plant communities. Ecology, 2015, 96, 2064-2069.	3.2	53
69	Disentangling direct and indirect effects of a legume shrub on its understorey community. Oikos, 2015, 124, 1251-1262.	2.7	53
70	Climatic drivers of plantâ€“plant interactions and diversity in alpine communities. Alpine Botany, 2011, 121, 63-70.	2.4	47
71	Network motifs involving both competition and facilitation predict biodiversity in alpine plant communities. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	47
72	Seed production and dispersal in the semi-arid tussock grassStipa tenacissimaL. during masting. Journal of Arid Environments, 1995, 31, 55-65.	2.4	46

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73	The shift from plantâ€“plant facilitation to competition under severe water deficit is spatially explicit. Ecology and Evolution, 2017, 7, 2441-2448.	1.9	45
74	Benefactor and allelopathic shrub species have different effects on the soil microbial community along an environmental severity gradient. Soil Biology and Biochemistry, 2015, 88, 48-57.	8.8	44
75	Stress resistance strategy in an arid land shrub: interactions between developmental instability and fractal dimension. Journal of Arid Environments, 2000, 45, 325-336.	2.4	43
76	Patch structure dynamics and mechanisms of cyclical succession in a Patagonian steppe (Argentina). Journal of Arid Environments, 2008, 72, 1552-1561.	2.4	42
77	Hydraulic lift through transpiration suppression in shrubs from two arid ecosystems: patterns and control mechanisms. Oecologia, 2010, 163, 855-865.	2.0	42
78	The Ratio of Leaf to Total Photosynthetic Area Influences Shade Survival and Plastic Response to Light of Green-stemmed Leguminous Shrub Seedlings. Annals of Botany, 2003, 91, 577-584.	2.9	40
79	Disentangling aboveâ€•and belowâ€ground facilitation drivers in arid environments: the role of soil microorganisms, soil properties and microhabitat. New Phytologist, 2017, 216, 1236-1246.	7.3	40
80	Facilitation influences patterns of perennial species abundance and richness in a subtropical dune system. AoB PLANTS, 2018, 10, ply017.	2.3	40
81	A comparison of direct and indirect methods for measuring leaf and surface areas of individual bushes. Plant, Cell and Environment, 1995, 18, 1332-1340.	5.7	39
82	No evidence of facilitation collapse in the Tibetan plateau. Journal of Vegetation Science, 2015, 26, 233-242.	2.2	39
83	Title is missing!. Plant and Soil, 2002, 240, 253-262.	3.7	38
84	Species Identity and Water Availability Determine Establishment Success Under the Canopy of Retama sphaerocarpa Shrubs in a Dry Environment. Restoration Ecology, 2009, 17, 900-907.	2.9	38
85	Hydraulic lift promotes selective root foraging in nutrient-rich soil patches. Functional Plant Biology, 2012, 39, 804.	2.1	38
86	The context dependence of beneficiary feedback effects on benefactors in plant facilitation. New Phytologist, 2014, 204, 386-396.	7.3	37
87	Woody species of a semi-arid community are only moderately resistant to cavitation. Functional Plant Biology, 2010, 37, 828.	2.1	35
88	Contribution of co-occurring shrub species to community richness and phylogenetic diversity along an environmental gradient. Perspectives in Plant Ecology, Evolution and Systematics, 2016, 19, 30-39.	2.7	34
89	Impacts of changing rainfall patterns on mycorrhizal status of a shrub from arid environments. European Journal of Soil Biology, 2012, 50, 64-67.	3.2	33
90	Invasion of Agave species (Agavaceae) in south-east Spain: invader demographic parameters and impacts on native species. Diversity and Distributions, 2004, 10, 493-500.	4.1	32

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91	Photosynthetic rate and canopy development in the drought-deciduous shrub Anthyllis cytisoides L.. Journal of Arid Environments, 2000, 46, 79-91.	2.4	31
92	Title is missing!. , 1997, 131, 207-213.		30
93	Plant Neighbour Identity Matters to Belowground Interactions under Controlled Conditions. PLoS ONE, 2011, 6, e27791.	2.5	27
94	Belowground zone of influence in a tussock grass species. Acta Oecologica, 2011, 37, 284-289.	1.1	26
95	The paradox of forbs in grasslands and the legacy of the mammoth steppe. Frontiers in Ecology and the Environment, 2021, 19, 584-592.	4.0	26
96	Mutual positive effects between shrubs in an arid ecosystem. Scientific Reports, 2015, 5, 14710.	3.3	25
97	A traitâ€based approach to understand the consequences of specific plant interactions for community structure. Journal of Vegetation Science, 2017, 28, 696-704.	2.2	25
98	Diurnal and seasonal changes in cladode photosynthetic rate in relation to canopy age structure in the leguminous shrub Retama sphaerocarpa. Functional Ecology, 1999, 13, 640-649.	3.6	22
99	Effects of changes in rainfall amount and pattern on root dynamics in an arid shrubland. Journal of Arid Environments, 2015, 114, 49-53.	2.4	22
100	Functional Plant Types Drive Plant Interactions in a Mediterranean Mountain Range. Frontiers in Plant Science, 2016, 7, 662.	3.6	21
101	Are complementarity effects of species richness on productivity the strongest in speciesâ€rich communities?. Journal of Ecology, 2021, 109, 2038-2046.	4.0	21
102	Soil as a mediator in plant-plant interactions in a semi-arid community. Journal of Vegetation Science, 2004, 15, 85.	2.2	21
103	Relationships between specific leaf area and leaf composition in succulent and non-succulent species of contrasting semi-desert communities in south-eastern Spain. Journal of Arid Environments, 2015, 118, 69-83.	2.4	20
104	Leaf Î´13C as an indicator of water availability along elevation gradients in the dry Himalayas. Ecological Indicators, 2018, 94, 266-273.	6.3	20
105	The role of arbuscular mycorrhizae in primary succession: differences and similarities across habitats. Web Ecology, 2010, 10, 50-57.	1.6	20
106	Nutritional adaptations of caper shrub(Capparis OvataDesf.) to environmental stress. Journal of Plant Nutrition, 1991, 14, 151-161.	1.9	19
107	Variability of inorganic nutrient concentrations in leaves. New Phytologist, 2001, 150, 506-507.	7.3	19
108	The balance of canopy and soil effects determines intraspecific differences in foundation speciesâ€™ effects on associated plants. Functional Ecology, 2018, 32, 2253-2263.	3.6	19

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109	Soil microâ€organisms and competitive ability of a tussock grass species in a dry ecosystem. Journal of Ecology, 2019, 107, 1215-1225.	4.0	19
110	Higher leaf nitrogen content is linked to tighter stomatal regulation of transpiration and more efficient water use across dryland trees. New Phytologist, 2022, 235, 1351-1364.	7.3	18
111	Phylogenetic distance among beneficiary species in a cushion plant species explains interaction outcome. Oikos, 2015, 124, 1354-1359.	2.7	17
112	Mimicking a rainfall gradient to test the role of soil microbiota for mediating plant responses to drier conditions. Oikos, 2018, 127, 1776-1786.	2.7	17
113	Plant life history stage and nurse age change the development of ecological networks in an arid ecosystem. Oikos, 2018, 127, 1390-1397.	2.7	16
114	Species identity improves soil respiration predictions in a semiarid scrubland. Geoderma, 2020, 363, 114153.	5.1	16
115	Carbon fluxes from a temperate rainforest site in southern South America reveal a very sensitive sink. Ecosphere, 2018, 9, e02193.	2.2	15
116	Co-ordination between xylem anatomy, plant architecture and leaf functional traits in response to abiotic and biotic drivers in a nurse cushion plant. Annals of Botany, 2021, 127, 919-929.	2.9	14
117	Warming enhances growth but does not affect plant interactions in an alpine cushion species. Perspectives in Plant Ecology, Evolution and Systematics, 2020, 44, 125530.	2.7	13
118	The effect of initial biomass in manipulative experiments on plants. Functional Ecology, 2006, 20, 1-3.	3.6	12
119	Abiotic conditions, neighbour interactions, and the distribution of Stipa tenacissima in a semiarid mountain range. Journal of Arid Environments, 2009, 73, 1084-1089.	2.4	12
120	Water uptake and redistribution during drought in a semiarid shrub species. Functional Plant Biology, 2014, 41, 812.	2.1	12
121	Phenological and reproductive responses of a semiarid shrub to pulsed watering. Plant Ecology, 2014, 215, 769-777.	1.6	11
122	Facilitation mediates species presence beyond their environmental optimum. Perspectives in Plant Ecology, Evolution and Systematics, 2019, 38, 24-30.	2.7	11
123	Effects of soil microbial communities associated to different soil fertilization practices on tomato growth in intensive greenhouse agriculture. Applied Soil Ecology, 2021, 162, 103896.	4.3	11
124	Shrub facilitation drives tree establishment in a semiarid fogâ€dependent ecosystem. Applied Vegetation Science, 2018, 21, 113-120.	1.9	10
125	Complementarity in nurse plant systems: soil drives community composition while microclimate enhances productivity and diversity. Plant and Soil, 2020, 450, 385-396.	3.7	10
126	Azorella Cushion Plants and Aridity are Important Drivers of Soil Microbial Communities in Andean Ecosystems. Ecosystems, 2021, 24, 1576-1590.	3.4	10

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127	Facilitation by a dwarf shrub enhances plant diversity of human-valued species at high elevations in the Himalayas of Nepal. Basic and Applied Ecology, 2021, 54, 23-36.	2.7	10
128	Evolutionary changes in correlations among functional traits in <i>Ceanothus</i> in response to Mediterranean conditions. Web Ecology, 2006, 6, 17-26.	1.6	10
129	Title is missing!. Plant Ecology, 2000, 146, 105-115.	1.6	9
130	Factors controlling shrub encroachment in subtropical montane systems. Applied Vegetation Science, 2018, 21, 190-197.	1.9	9
131	Disentangling plant establishment in sandy coastal systems: biotic and abiotic factors that determine Allagoptera arenaria (Arecaceae) germination. Acta Botanica Brasilica, 2018, 32, 12-19.	0.8	9
132	Different mycorrhizal fungal strains determine plant community response to nitrogen and water availability. Journal of Plant Nutrition and Soil Science, 2015, 178, 146-154.	1.9	8
133	Water Shortage Drives Interactions Between Cushion and Beneficiary Species Along Elevation Gradients in Dry Himalayas. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 226-238.	3.0	7
134	Azorella compacta : survival champions in extreme, highâ€elevation environments. Ecosphere, 2020, 11, e03031.	2.2	6
135	Species interactions involving cushion plants in high-elevation environments under a changing climate. Ecosistemas, 2021, 30, 2186.	0.4	6
136	Plant community changes after land abandonment control CO2 balance in a dry environment. Plant and Soil, 2018, 425, 253-264.	3.7	5
137	Title is missing!. Fluid Dynamics, 2002, 37, 970-982.	0.9	4
138	Warming effects on the colonization of a coastal ecosystem by Furcraea foetida (Asparagaceae), a clonal invasive species. Plant Ecology, 2018, 219, 813-821.	1.6	2
139	Functional responses of four Sahelian tree species to resource availability. Flora: Morphology, Distribution, Functional Ecology of Plants, 2019, 254, 181-187.	1.2	2
140	The role of soil communities on the germination of a pioneer tree species in the Atlantic rainforest. Soil Biology and Biochemistry, 2022, 172, 108762.	8.8	2
141	Functional groups of Sahelian trees in a semiarid agroforestry system of Senegal. Journal of Plant Ecology, 2017, , rtw140.	2.3	1
142	Shrubs mediate forest start-up and patch dynamics in a semiarid landscape. Perspectives in Plant Ecology, Evolution and Systematics, 2018, 34, 140-149.	2.7	1