Roberto Quiroz

List of Publications by Year
in descending order

79 papers	2,753 citations	159525 30 h-index	197736 49 g-index
81 all docs	81 docs citations	81 times ranked	3615 citing authors

#	Article	IF	Citations
1	Modelling strategies for assessing and increasing the effectiveness of new phenotyping techniques in plant breeding. Plant Science, 2019, 282, 23-39.	1.7	173
2	Multifractal Characterization of Soil Pore Systems. Soil Science Society of America Journal, 2003, 67, 1361-1369.	1.2	164
3	Climate change impact on global potato production. European Journal of Agronomy, 2018, 100, 87-98.	1.9	143
4	Leaf greenness as a drought tolerance related trait in potato (Solanum tuberosum L.). Environmental and Experimental Botany, 2015, 110, 27-35.	2.0	95
5	Persistent toxic substances in soils and waters along an altitudinal gradient in the Laja River Basin, Central Southern Chile. Chemosphere, 2005, 58, 905-915.	4.2	92
6	Chlorophyll concentration in leaves is an indicator of potato tuber yield in water-shortage conditions. Scientia Horticulturae, 2014, 168, 202-209.	1.7	92
7	A potato model intercomparison across varying climates and productivity levels. Global Change Biology, 2017, 23, 1258-1281.	4.2	90
8	Key ecosystem services and ecological intensification of agriculture in the tropical high-Andean Puna as affected by land-use and climate changes. Agriculture, Ecosystems and Environment, 2017, 236, 221-233.	2.5	81
9	Potato, sweet potato, and yam models for climate change: A review. Field Crops Research, 2014, 166, 173-185.	2.3	77
10	Performance of the SUBSTOR-potato model across contrasting growing conditions. Field Crops Research, 2017, 202, 57-76.	2.3	75
11	Improving potato drought tolerance through the induction of long-term water stress memory. Plant Science, 2015, 238, 26-32.	1.7	73
12	Understanding precipitation patterns and land use interaction in Tibet using harmonic analysis of SPOT VGTâ€510 NDVI time series. International Journal of Remote Sensing, 2005, 26, 2281-2296.	1.3	70
13	Effect of partial root-zone drying irrigation timing on potato tuber yield and water use efficiency. Agricultural Water Management, 2013, 123, 65-70.	2.4	70
14	Is Poverty to Blame for Soil, Pasture and Forest Degradation in Peruâ€™s Altiplano?. World Development, 2003, 31, 1903-1919.	2.6	67
15	Improving daily rainfall estimation from NDVI using a wavelet transform. Environmental Modelling and Software, 2011, 26, 201-209.	1.9	62
16	Tailoring agricultural extension to different production contexts: a user-friendly farm-household model to improve decision-making for participatory research. Agricultural Systems, 2001, 69, 183-198.	3.2	54
17	PAH fluxes in the Laja Lake of south central Chile Andes over the last 50 years: Evidence from a dated sediment core. Science of the Total Environment, 2005, 349, 150-160.	3.9	49
18	Defining biological thresholds associated to plant water status for monitoring water restriction effects: Stomatal conductance and photosynthesis recovery as key indicators in potato. Agricultural Water Management, 2016, 177, 369-378.	2.4	49

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19	Atmospheric transmissivity: distribution and empirical estimation around the central Andes. International Journal of Climatology, 2004, 24, 1121-1136.	1.5	46
20	Precipitation Characteristics of the South American Monsoon System Derived from Multiple Datasets. Journal of Climate, 2012, 25, 4600-4620.	1.2	46
21	CGIAR modeling approaches for resourceâ€constrained scenarios: I. Accelerating crop breeding for a changing climate. Crop Science, 2020, 60, 547-567.	0.8	45
22	Partial root-zone drying irrigation and water utilization efficiency by the potato crop in semi-arid regions in China. Scientia Horticulturae, 2012, 134, 20-25.	1.7	44
23	TRMM rainfall correction over the Andean Plateau using wavelet multi-resolution analysis. International Journal of Remote Sensing, 2012, 33, 4583-4602.	1.3	43
24	Selection among Nonlinear Models for Rate of Passage Studies in Ruminants. Journal of Animal Science, 1988, 66, 2977.	0.2	41
25	Sources of polycyclic aromatic hydrocarbons (PAHs) in sediments of the Biobio River in south central Chile. Environmental Chemistry Letters, 2009, 7, 133-139.	8.3	38
26	Impact of climate change on the potato crop and biodiversity in its center of origin. Open Agriculture, 2018, 3, 273-283.	0.7	38
27	Carbohydrate metabolism and cell protection mechanisms differentiate drought tolerance and sensitivity in advanced potato clones (Solanum tuberosum L.). Functional and Integrative Genomics, 2011, 11, 275-291.	1.4	36
28	Managing Potato Biodiversity to Cope with Frost Risk in the High Andes: A Modeling Perspective. PLoS ONE, 2014, 9, e81510.	1.1	34
29	A framework for scaling sustainable land management options. Land Degradation and Development, 2018, 29, 3272-3284.	1.8	34
30	Socio-economic Comparison Between Traditional and Improved Cultivation Methods in Agroforestry Systems, East Usambara Mountains, Tanzania. Environmental Management, 2005, 36, 682-690.	1.2	33
31	How big is the potato (Solanum tuberosum L.) yield gap in Sub-Saharan Africa and why? A participatory approach. Open Agriculture, 2018, 3, 180-189.	0.7	33
32	Characterizing water fingering phenomena in soils using magnetic resonance imaging and multifractal theory. Nonlinear Processes in Geophysics, 2009, 16, 159-168.	0.6	31
33	Polycyclic aromatic hydrocarbons fluxes during the past 50 years observed in dated sediment cores from Andean mountain lakes in central south Chile. Ecotoxicology and Environmental Safety, 2006, 63, 52-60.	2.9	29
34	Development of low-cost remote sensing tools and methods for supporting smallholder agriculture. Applied Geomatics, 2020, 12, 247-263.	1.2	29
35	Quantifying the expression of potato genetic diversity in the high Andes through growth analysis and modeling. Field Crops Research, 2010, 119, 135-144.	2.3	28
36	Drought and Heat Tolerance Evaluation in Potato (Solanum tuberosum L.). Potato Research, 2014, 57, 225-247.	1.2	28

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37	Spectroscopic Assessment of Soil Organic Matter in Wetlands from the High Andes. Soil Science Society of America Journal, 2010, 74, 2246-2253.	1.2	27
38	Small Cardamomâ€"Precious for People, Harmful for Mountain Forests. Mountain Research and Development, 2006, 26, 131-137.	0.4	26
39	Soil organic carbon stocks and fractionation under different land uses in the Peruvian high-Andean Puna. Geoderma, 2017, 307, 65-72.	2.3	26
40	Spice crops agroforestry systems in the East Usambara Mountains, Tanzania: growth analysis. Agroforestry Systems, 2009, 76, 513-523.	0.9	23
41	A new assessment in total and extreme rainfall trends over central and southern Peruvian Andes during 1965â€"2010. International Journal of Climatology, 2018, 38, e998.	1.5	23
42	Assessing Potato Yellow Vein Virus (PYVV) infection using remotely sensed data. International Journal of Pest Management, 2009, 55, 251-256.	0.9	20
43	Emission factors of particulate matter, polycyclic aromatic hydrocarbons, and levoglucosan from wood combustion in south-central Chile. Journal of the Air and Waste Management Association, 2017, 67, 806-813.	0.9	20
44	Linking process-based potato models with light reflectance data: Does model complexity enhance yield prediction accuracy?. European Journal of Agronomy, 2017, 82, 104-112.	1.9	20
45	Roots, Tubers and Bananas: Planning and research for climate resilience. Open Agriculture, 2017, 2, 350-361.	0.7	20
46	Development of an Open-Source Thermal Image Processing Software for Improving Irrigation Management in Potato Crops (Solanum tuberosum L.). Sensors, 2020, 20, 472.	2.1	19
47	Ecoregional Research for Development. Advances in Agronomy, 2007, 93, 257-311.	2.4	17
48	Detection of bacterial wilt infection caused by Ralstonia solanacearum in potato (Solanum) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 307 Td 2012, 13, 236-255.	3.1	17
49	Is Discrimination of ¹³C in Potato Leaflets and Tubers an Appropriate Trait to Describe Genotype Responses to Restrictive and Wellâ€Watered Conditions?. Journal of Agronomy and Crop Science, 2015, 201, 410-418.	1.7	17
50	Quantifying energy dissipation by grazing animals in harsh environments. Journal of Theoretical Biology, 2003, 225, 351-359.	0.8	16
51	Multifractal characterization of the spatial distribution of ulexite in a Bolivian salt flat. International Journal of Remote Sensing, 2005, 26, 615-627.	1.3	15
52	Soil carbon stocks and stability across an altitudinal gradient in southern Peru. Journal of Soils and Water Conservation, 2011, 66, 213-220.	0.8	15
53	Is Partial Root-Zone Drying More Appropriate than Drip Irrigation to Save Water in China? A Preliminary Comparative Analysis for Potato Cultivation. Potato Research, 2018, 61, 391-406.	1.2	15
54	Land Use Effects on Soil Fertility and Nutrient Cycling in the Peruvian Highâ€Andean Puna Grasslands. Soil Science Society of America Journal, 2018, 82, 463-474.	1.2	15

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55	Infrared Radiometry as a Tool for Early Water Deficit Detection: Insights into Its Use for Establishing Irrigation Calendars for Potatoes Under Humid Conditions. Potato Research, 2019, 62, 109-122.	1.2	15
56	Characterizing the diversity of sweetpotato through growth parameters and leaf traits: Precocity and light use efficiency as important ordination factors. South African Journal of Botany, 2017, 113, 192-199.	1.2	14
57	Poverty and the Deterioration of Natural Soil Capital in the Peruvian Altiplano. Environment, Development and Sustainability, 2003, 5, 477-490.	2.7	11
58	Applying Multifractal Analysis to Remotely Sensed Data for Assessing PYVV Infection in Potato (Solanum tuberosum L.) Crops. Remote Sensing, 2010, 2, 1197-1216.	1.8	11
59	Characterization of Peatland Soils from the High Andes through 13 C Nuclear Magnetic Resonance Spectroscopy. Soil Science Society of America Journal, 2013, 77, 673-679.	1.2	11
60	Spatial random downscaling of rainfall signals in Andean heterogeneous terrain. Nonlinear Processes in Geophysics, 2015, 22, 383-402.	0.6	11
61	Multiscale assessment of spatial precipitation variability over complex mountain terrain using a highâ€resolution spatiotemporal wavelet reconstruction method. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12,198.	1.2	10
62	Preliminary Evidence of Nocturnal Transpiration and Stomatal Conductance in Potato and their Interaction with Drought and Yield. American Journal of Potato Research, 2018, 95, 139-143.	0.5	10
63	Multifractal Downscaling of Rainfall Using Normalized Difference Vegetation Index (NDVI) in the Andes Plateau. PLoS ONE, 2017, 12, e0168982.	1.1	9
64	Quantifying soil carbon stocks and humification through spectroscopic methods: A scoping assessment in EMBU-Kenya. Journal of Environmental Management, 2019, 234, 476-483.	3.8	9
65	Unraveling Ecophysiological Mechanisms in Potatoes under Different Irrigation Methods: A Preliminary Field Evaluation. Agronomy, 2020, 10, 827.	1.3	8
66	Canopy Temperature as a Key Physiological Trait to Improve Yield Prediction under Water Restrictions in Potato. Agronomy, 2021, 11, 1436.	1.3	7
67	Radiation Interception, Conversion and Partitioning Efficiency in Potato Landraces: How Far Are We from the Optimum?. Plants, 2020, 9, 787.	1.6	6
68	MIAMH, A predictive model of range ruminant diets in patchy environments. Agricultural Systems, 1993, 43, 381-395.	3.2	5
69	Use of Visual Material for Eliciting Shepherds' Perceptions of Grassland in Highland Peru. Mountain Research and Development, 2007, 27, 146-152.	0.4	5
70	Conservation and Cardamom Cultivation in Nature Reserve Buffer Zones in the East Usambara Mountains, Tanzania. Journal of Sustainable Forestry, 2010, 29, 696-715.	0.6	5
71	A simulation model of an alpaca system in the dry puna of the Andes. Agricultural Systems, 1994, 46, 205-225.	3.2	4
72	Improving potato cultivation using siphons for partial root-zone drying irrigation: A case study in the Blue Nile river basin, Ethiopia. Open Agriculture, 2017, 2, 255-259.	0.7	4

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73	Pursuing the Millennium Development Goals in the Andean Altiplano. Mountain Research and Development, 2006, 26, 15-19.	0.4	3
74	Socio-economic Feasibility of Potato Cultivation in Andhra Pradesh, India. Potato Research, 2016, 59, 167-179.	1.2	3
75	Assessment and optimization of an ultrasound-assisted washing process using organic solvents for polychlorinated biphenyl-contaminated soil. Waste Management and Research, 2013, 31, 969-978.	2.2	2
76	Combining reference trials, farm surveys and mathematical models to assess carbon footprint and mitigation measures in tropical agriculture. Annals of Agricultural Sciences, 2019, 64, 188-195.	1.1	2
77	MULTIFRACTAL CHARACTERIZATION OF SPATIAL INCOME CURDLING: THEORY AND APPLICATIONS. International Journal of Modeling, Simulation, and Scientific Computing, 2008, 11, 861-874.	0.9	1
78	TEMPORAL VARIATION OF PAHS IN SOILS FROM THE BIOBÃO REGION: CENTRAL SOUTHERN CHILE. Journal of the Chilean Chemical Society, 2011, 56, 571-573.	0.5	1
79	YIELD AND NUTRIENT UPTAKE IN SWEET POTATO PLANTS GROWN WITH SALT AND WATER STRESS. Revista Chapingo, Serie Horticultura, 2014, XX, 19-28.	1.1	1