

CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

CV date	11/1/2022
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Part A. PERSONAL INFORMATION

First name	Isabel		
Family name	Reche		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	ireche@ugr.es	URL Web: http://wpd.ugr.es/~ireche/	
Open Research and Contributor ID (ORCID)(*)	0000-0003-2908-1724		

(*) Mandatory

A.1. Current position

Position	Full Professor of Ecology		
Initial date	7/12/2018		
Institution	University of Granada (UGR)		
Departament/Center	Ecology/ Faculty of Sciences		
Country	Spain	Teleph. number	+34958241000 Ext 20018
Key words	Microbial Ecology, Biogeochemistry, Limnology, Oceanography, Airborne microorganisms, Saharan dust		

A.2. Previous positions (research activity interruptions, art. 45.2.c)

Period	Position/Institution/Country/Interruption cause
30/10/2003 - 06/12/2018	Associated Professor of Ecology, UGR, Spain
01/09/2016 - 31/08/2017	Visiting Professor, University of California, Berkeley, USA
01/10/2002 - 29/10/2003	Associated Professor (non permanent), UGR, Spain
01/10/1998 - 30/09/2002	Assistant Professor non permanent), UGR, Spain
01/01/1998 - 30/09/1998	Postdoctoral (Reincorporation de doctors y technologists)
01/09/1997 - 31/12/1997	Postdoctoral, Institute Ecosystem Studies, NY, USA
01/09/1995 - 31/08/1997	Postdoctoral, Institute Ecosystem Studies, NY, USA
01/01/1995 - 31/08/1995	Postdoctoral Associate, UGR, Spain
01/01/1991 - 31/12/1994	Predoctoral fellowship (FPU)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
PhD (Excellence Award)	University of Granada	1995
Master Environmental Biology	University of Granada	1991
BSc Biology	University of Granada	1990

Part B. CV SUMMARY (max. 5000 characters, including spaces)

Currently, I am a Full Professor of Ecology at the **University of Granada (UGR)**. I defended my doctoral thesis in 1995 at the University of Granada on the microbial loop and the relationship between bacteria and phytoplankton in alpine lakes and received the 1995 PhD



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Excellence award for this dissertation. Afterward, I had a three-year postdoctoral contract (1995-1997) at the **Cary Institute of Ecosystems Studies, NY, USA** (<http://www.caryinstitute.org>) in collaboration with Drs. Michael L. Pace and Jon J. Cole. During my postdoc, I initiated a line of research on characterization of dissolved organic matter and its implications in the carbon cycle of lakes.

In January 1998, I returned to Spain with a contract for the reincorporation of scientists and technologists. I started at the university of Granada, along with Dr. Rafael Morales-Baquero, a new line of research on the importance of atmospheric aerosol deposition on the biogeochemistry in alpine lakes and Mediterranean reservoirs. I have mostly developed a line of research on microbial dispersion by atmospheric circulation. Simultaneously, I participated in several oceanographic projects in collaboration with Dr. C. Duarte, Dr. J. Aristegui, Dr. JM Gasol, and Dr. XA Álvarez-Salgado. We have applied spectroscopic techniques to characterize dissolved organic matter in the Southern Ocean and Mediterranean Sea. Later, during the 2010 Malaspina circumnavigation expedition, we have determined its importance in the microbial metabolism and the global carbon cycle in the deep Ocean. More recently, we worked in the western Mediterranean basin's saline wetlands. We studied their microbial and biogeochemical diversity to evaluate waterbirds' role as dispersal vectors of microorganisms and nutrients (guanotrophication). My two last projects of the National Plan (AEI) have a generic objective of determining the fluxes of greenhouse gases (CO₂, CH₄, and N₂O) in reservoirs located in different agricultural and forest landscapes and at different temporal scales. More recently, we started a new research line on equinoderm holobionts to determine whether mucus and subcuticular bacteria are widely established in the phylum Echinodermata and if they assimilate amino acids, nitrates, and ammonium from the environment. These results will contribute to knowing the ecosystem services provided by echinoderms. During the academic year 2016/17, I made a stay as a visiting professor at the **University of California, Berkeley, USA** in collaboration with Dr. D. Baldocchi after obtaining a Salvador de Madariaga grant.

I have five six-year-research periods according to the Spanish agency for the evaluation of research (ANECA), 75 publications in JCR (63 in the first quartile), which have 3768 citations in Google scholar. I have been Principal Investigator of 8 projects funded by different entities (MEC, MCINN, MINECO, MICIU, National Parks, BBVA Foundation, CEI-Granada Biotic, Junta de Andalucía).

I have supervised **seven PhD students**: Elvira Pulido-Villena (**Excellence Award 2004**), Eva Ortega-Retuerta, Teresa S. Catalá (**Excellence Award 2015**), Ignacio P. Mazuecos, S Mohammad Sadeghi-Nassaj, Gema L. Batanero, and Elizabeth León-Palmero (**Award 2021 Best PhD dissertation of the AIL**). At this moment, I am supervising four more PhD students: Eva Rodríguez-Velasco, Ihab Alfadhel, Andrés Martínez-García, Silke Martínez-Moreno. I have supervised **two postdoctoral researchers**: Natalie Mladenov and Andrew S. Mehring. Currently, I am supervising three other postdoctoral researchers Ignacio Peralta-Maraver, Félix Picazo and Rodrigo Javier Gonçalves.

In 2015, I chaired the international congress of the Association for the Sciences of Oceanography and Limnology that was held in Granada. In 2017, I was nominated as **Fellow of the Association for the Sciences of Limnology and Oceanography**.

I served as a reviewer for top journals (Nature Geoscience, Nature Rev. Micro, PNAS, Limnology & Oceanography, etc). I am/have been a member of national and international evaluation panels (Ramón y Cajal, Juan de la Cierva, Fundación BBVA, National Science Foundation (USA), Israel Science Foundation, CONICYT (Argentina), Research Foundation-Flanders (Belgium), Natural Environment Research Council NERC (UK), Agence Nationale de la Recherche (ANR) (Francia), Austria Academy of Sciences).

I am serving as an **Associated Editor Scientific Reports from May 2018**.

Firma (1): JOSÉ ANTONIO HODAR CORREA
En calidad de: Solicitante



I am member of John Martin Award Committee of the Association of the Sciences of Limnology and Oceanography (to 12/2022) and member of Nominations Committee of the Association of the Sciences of Limnology and Oceanography (to 12/2021).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Ten selected Publications (2017-2021) (see instructions)

Peralta-Maraver, I., **Reche I.**,... & Robertson, A. L. (2021). The riverine bioreactor: an integrative perspective on biological decomposition of organic matter across riverine habitats. **Science of the Total Environment**. This work proposes a novel analytical approach to predict decomposition processes of organic matter from metabolic scaling theory. One postdoctoral researcher in our research group led it.

Reche, I. & Perfectti, F. (2020) Promoting Individual and Collective Creativity in Science Students. **Trends in Ecology & Evolution** This work proposes some tips to promote creativity in PhD students and research group.

León-Palmero, E., Morales-Baquero, R., & **Reche, I.** (2020). Greenhouse gas fluxes from reservoirs determined by watershed lithology, morphometry, and anthropogenic pressure. **Environmental Research Letters**. This work shows that GHG fluxes from reservoirs depends on watershed lithology (CO₂), morphometry and eutrophication (CH₄), and watershed percentage of crops and urban areas (N₂O). It corresponds to one of my PhD students.

León-Palmero, E., Contreras-Ruiz, A., Sierra, A., Morales-Baquero, R., & **Reche, I.** (2020). Dissolved CH₄ coupled to photosynthetic picoeukaryotes in oxic waters and to cumulative chlorophyll a in anoxic waters of reservoirs. **Biogeosciences**, 17(12), 3223-3245. This work shows that dissolved CH₄ is mostly driven by primary producers both in oxic and anoxic waters. It corresponds to one of my PhD students.

Ruiz-González, C., Mestre, M., Estrada, M., Sebastián, M., Salazar, G., Agustí, S., Moreno-Ostos, E., Reche, I., Álvarez-Salgado X.A., Morán, X.A.G., Duarte, C. M., Sala, M.M. & Gasol J.M. (2020). Major imprint of surface plankton on deep ocean prokaryotic structure and activity. **Molecular Ecology**, 29: 1820-1838

Triadó-Margarit X, Caliz J, **Reche I**, Casamayor EO (2019) High similarity in bacterial bioaerosol compositions between the free troposphere and atmospheric depositions collected at high-elevation mountains **Atmospheric Environment** 203: 79-86. This work shows that bioaerosol collected in alpine sites as Sierra Nevada Mountains can be representative of the airborne microorganisms in the free troposphere.

Ortega-Retuerta, E., Mazuecos, I. P., **Reche, I.**, Gasol, J. M., Álvarez-Salgado, X. A., Álvarez, M., Montero M.F. & Arístegui, J. (2019) Transparent exopolymer particle (TEP) distribution and in situ prokaryotic generation across the deep Mediterranean Sea and nearby North East Atlantic Ocean. **Progress in Oceanography** 173: 180- 191. This work underlines the role of prokaryotic generation of exopolymers in deep waters of the Mediterranean Sea. It corresponds to one of my PhD students.

Reche I., D'Orta G., Mladenov N., Widge D.M., Suttle C.A. (2018) Deposition rates of viruses and bacteria above the atmospheric boundary layer. **The ISME Journal** 12: 1154-1162. This



work quantifies for the first time the atmospheric deposition of viruses and bacteria. It has been highly cited and is the Readers' Choice: **The best of The ISME Journal 2018** <https://www.nature.com/collections/gebaiadbcc>

Catalá T, Martínez-Pérez AM, Nieto-Cid M, Álvarez M, Otero J, Emelianov M, **Reche I**, Arístegui J, Álvarez-Salgado XA (2018) Dissolved Organic Matter (DOM) in the open Mediterranean Sea. I. Basin-wide distribution and drivers of chromophoric DOM. **Progress in Oceanography** 165: 35–51

Batanero GL, E León-Palmero, L Li, AJ Green, M Rendón-Martos, CA Suttle, **I. Reche** (2017) Flamingos and drought as drivers of nutrients and microbial dynamics in a saline lake. **Scientific Reports** 7 (1), 12173. This paper underlines the role of big waterbirds as drivers of microbial dynamics. It corresponds to one of my PhD students.

C.2. Selected research projects

Título del proyecto: *Modeling Nature (MNat)*. IP Juan Soler. Junta de Andalucía (QUALIFICA_00011). 2022-2025. Budget: 679761 €.

Título del proyecto: *Balance del Metano en aguas anóxicas y óxicas de un embalse eutrófico (METANOXIC)*. B-RNM-558-UGR20. Entidad financiadora: Proyectos I+D+i del Programa Operativo FEDER 2020 Universidad de Granada Entidad gestora: Universidad de Granada 2021-2023 IP Isabel Reche Budget: 35000 €

Título del proyecto: *"Ecosystem services provided by echinoderm holobionts in coastal zones (HOLOSYSTEMS)*. IP Isabel Reche. Junta de Andalucía (PY20_00705). 2021-2023 Budget: 118575 €

Título del Proyecto: *Centro temático sobre ecosistemas de montaña y teledetección, aprendizaje profundo inteligencia artificial, servicios electrónicos de la universidad de Granada Sierra Nevada*. European Commission, LifeWatch 2019 10-UGR01-WP2. IP: WP: Manuel Villar Argaiz

Título del proyecto: *Observatorio para el registro en continuo e interpretación de emisiones de gases de efecto invernadero en embalses Mediterráneos (O-GEI)*. EQC2019-005868-P Ministerio de Ciencia, Innovación y Universidades. Universidad de Granada. IP Francisco Rueda Valdivia. Budget: 245156 €

Título del proyecto: *CiRcadian, seasOnal and climatic variability in greeNhouse gas emissiOns in Mediterranean reservoirS: physical and biogeochemical drivers (CRONOS)*. PI: Isabel Reche. Ministry of Science and Innovation (RTI2018-098849-B-I00). 2019- 2022. Budget: 102850 €

Título del proyecto: *Wetlands and reservoirs as drivers of carbon and nitrogen cycles: climatic implications (HERA)*. PI: Isabel Reche. Ministry of Economy and Competitiveness (CGL2014-52362R). 2015-2018. Budget: 175000 €



Part A. PERSONAL INFORMATION

CV date

01/11/2022

First and Family name	Penélope Serrano Ortiz		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0001-7888-1889	
	SCOPUS Author ID (*)	15766404500	
	WoS Researcher ID (*)	L-2177-2014	

(*) Optional

(**) Mandatory

A.1. Current position

Name of University/Institution	University of Granada / Andalusian Institute for Earth System Research (IISTA-CEAMA)		
Department	Ecology		
Address and Country	Av. Fuentenueva s/n, 18071, Granada, Spain		
Phone number	+34 958249861	E-mail	penelope@ugr.es
Current position	Tenured Professor	From	09/03/2019
Key words	Micrometeorology, Greenhouse gases, carbon cycle, photosynthesis, respiration, subterranean ventilation, agro-systems		

A.2. Education

PhD, Licensed, Graduate	University	Year
Ph.D. in Environmental Sciences	University of Granada	2008
M.Sc in Geophysics and Meteorology	University of Granada	2010
Degree in Environmental Sciences	University of Granada	2002

A.3. General indicators of quality of scientific production (see instructions)

Number of recognized, ministerial six-year research periods ("sexenios"): 2 (2004-2009, 2010-2015). Grant date: 05/06/2020

Number of recognized, regional four-year research periods ("tramos autonómicos"): 4. Grant date: 24/10/2019

Scopus: h-factor=22, citations=1541, i10-index=38, citations/year=167.7 (in 2016-2020)

Google scholar: h-factor=24, citations=2090, i10-index=39, citations/year=269.2 (in 2016-2020)

Number of PhD. thesis oriented: 2 defended, 2 ongoing

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Dr. Penélope Serrano Ortiz is a leading young scientist with an outstanding trajectory. In 2004 the Andalusian Regional Government (ARG) awarded her a selective doctoral grant, unattached to any project, to develop her thesis in the U. Granada Applied Physics department (2008). Published results enabled her to obtain a competitive Spanish Ministry Mobility Postdoctoral fellowship to work at the U. Antwerp (Belgium; 2009-2010) and then a "Juan de la Cierva" fellowship at the CSIC-EEZA in Almería (Spain) (2010-2013). Finally, at the end of 2013 she was awarded a highly competitive contract from the UGR (Plan Propio de la UGR, "Incorporación de jóvenes doctores a nuevas líneas de investigación" (2013-2019). The main research line of the candidate is strongly connected to European efforts to reduce of greenhouse gas (GHG) emissions and to increase carbon sequestration. Her research line is focused on measurements GHG from different ecosystems and their





determinants by using the eddy covariance technique. This technique has been selected by the first European Research Infrastructure Consortium (ERIC) termed the "Integrated Carbon Observation System" (ICOS) to measure GHG fluxes at the ecosystem level. Concretely, the research activity of the candidate can be split into the following research lines:

1. Integrating GHG balance in terrestrial (natural and managed) ecosystems
 2. The contribution of abiotic CO₂ fluxes into the net ecosystem carbon exchange between terrestrial surface and the atmosphere
 3. Improving the methodology for quantifying CO₂ fluxes using the eddy covariance technique
- Regarding her CV, the following merits stand out:

1. Coordinator (and Principal Investigator) for the projects "GEISpain" and "ELEMENTAL" (Programa Estatal de I+D+i, Retos de la Sociedad). Budgets 163.350€ and 121.00€ respectively
2. Principal Investigator for the University of Granada (UGR) in the European FP7 InGOS project. Budget for the UGR: 31.847€
3. Publications: 58 peer-reviewed publication, 51 of them in SCI journals, 36 in journals ranked in the top quarter of their discipline (JCR).
4. National representative of Spain in the European COST Action ES0804 (2008-2013)
5. Session chair at 5 international conferences
6. Responsible Scientist of two "flux stations" of the global FLUXNET tower network (one of them (an olive orchard) proposed by the Spanish ministry for ICOS ERIC (the first European Research Infrastructure Consortium created)
10. Participation in 23 competitive projects (4 regional, 10 national and 9 international)
11. Attendance at 20 conferences and 4 invited workshops (14 international) with 78 contributions (2 invited oral)
12. Referee for the Spanish and Argentine research proposals (ANEP and ANPCyT agencies respectively)
13. Referee for the following SCI journals: *Global Change Biol*, *Agric Forest Meteorol*, *J. Geophys Res*, *Biogeosciences*, *Forest Ecol Management*, *J Arid Environ*, *Pedosphere*, *Photosynthetica*, etc.
14. Teaching activities: Great experience supervising Final career projects and Masters (8 and 7 respectively since 2010). Regular classes to undergraduate students (Biology and Environmental Science Degrees) and to Master's programs. Official professor of the Study Abroad Program of Arcadia University (Philadelphia, USA; courses taught in English) in Granada (45 hours/semester; 3 in total; from 2011 to 2013) and supervisor of Arcadia University students in research (240 hours; from 2012 to 2014).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

1. **Serrano-Ortiz, P.**; S. Aranda-Barranco; A. López-Ballesteros; C. Lopez-Canfin; E. P. Sánchez-Cañete; A. Meijide; and A. S. Kowalski, A.S. (**position: 1/7**). Transition period between vegetation growth and senescence controls interannual variability of C fluxes in a Mediterranean reed wetland. *JGR Biogeosciences*. 10.1029/2019JG005169. 2019. **Q1**
2. Xiao, J.; Li, X; He, B.; Arain, M.A.; ...A. V.; Varlagin (**12/15 alphabetical order**), Solar-induced chlorophyll fluorescence exhibits a universal relationship with gross primary productivity across a wide variety of biomes. *Global Change Biology*. 25 - 4, pp. e4 - e6. 2019. **Q1**
3. Chamizo, S; **Serrano-Ortiz, P.**; López-Ballesteros, Ana; Sanchez-Cañete, E. P; Vicente-Vicente, J. L.; Kowalski, A. S. (**position: 2/6**). Net ecosystem CO₂ exchange in an irrigated olive orchard of SE Spain: influence of weed cover. *Agriculture, Ecosystems & Environment*. 239, pp. 51 - 64. 2017. **Q1**





4. **Serrano-Ortiz, P.**; Sánchez-Cañete, E. P.; Olmo, F. J.; Metzger, S.; Pérez-Priego, O.; Carrara, A.; Alados-Arboledas, L.; Kowalski, A.S. (**position: 1/8**). Surface-Parallel Sensor Orientation for Assessing Energy Balance Components on Mountain Slopes. *Boundary-Layer Meteorology*. 158 - 3, pp. 489 - 499. 2016. **Q1**

5. **Serrano-Ortiz, P.**, Were, A.; Reverter, B. P.; Villagarcía, L.; Domingo, F.; Dolman, A. J.; Kowalski, A. S. (**position: 1/7**). Seasonality of net carbon exchanges of Mediterranean ecosystems across an altitudinal gradient. *Journal of Arid Environments*. 115, pp. 1 - 9. 2015. **Q2**

6. **Serrano-Ortiz, P.**, Oyonarte, C., Pérez-Priego, O., Domingo, F. (**position 1/9**), Ecological functioning in grass–shrub Mediterranean ecosystems measured by eddy covariance. *Oecologia* 175, 1005–1017. 2014. **Q2**

7. Stoy, P., M. Mauder, T. Foken, B.,.....Varlagin, A. (**position 25/29 alphabetical order**). A data-driven analysis of energy balance closure across FLUXNET research sites: The role of landscape-scale heterogeneity. *Agricultural and Forest Meteorology* 171-172, 137-152. 2013. **Q1**

8. **Serrano-Ortiz, P.**, Marañón-Jiménez, S., Reverter, B.R., Sánchez-Cañete, E.P., Castro, J., Zamora, R., Kowalski, A.S. (**position: 1/7**). Post-fire salvage logging reduces carbon sequestration in Mediterranean coniferous forest. *Forest Ecology and Management* 262, 2287-2296.2011. **Q1**

9. **Serrano-Ortiz, P.**, Roland, M., Sánchez-Moral, S., Janssens, I.A., Domingo, F., Goddérís, Y., Kowalski, A.S. Hidden, abiotic CO₂ flows and gaseous reservoirs in the terrestrial carbon cycle: Review and perspectives. *Agricultural and Forest Meteorology* 150, 321-329.2010. **Q1**

10. **Serrano-Ortiz, P.**, F. Domingo, A. Cazorla, A. Were, S. Cuezva, L. Villagarcía, L. Alados-Arboledas, and A. S. Kowalski. (**position: 1/8**). 2009. Interannual CO₂ exchange of a sparse Mediterranean shrubland on a carbonaceous substrate. *Journal of geophysical research* 114 G04015, doi:04010.01029/02009JG000983. **Q1**

C.2. Research projects

1. Title: Vulnerability of biodiversity and climate services in Iberian alpine communities of mountain National Parks. (IBERALP). PN2021-2820s. Financial entity: European Commission. Length: 2021-2024. PI: PI: Penélope Serrano Ortiz. Amount: 76.008 €. Participation type: Principal investigator

2. Title: LifeWatch-ERIC European Research Infrastructure Consortium by the. Implementing Decision (EU) 2017/499. Financial entity: European Commission. Length: 2021-2024. PI: Regino Zamora (dpt. Ecology. University of Granada. Spain). Amount: 6.052.480 €. Participation type: Principal investigator of the WP3

3. Title: Estudio de los balances de carbono y agua en ecosistemas gestionados para su adaptación al cambio climático (ELEMENTAL). CGL2017-83538-C3-1-R. Financial entity: Ministerio de Economía y Competitividad fundamental. Legth: 01/2018-12/2020. PI: Penélope Serrano Ortiz and Juan Luis Guerrero Rascado. Amount: 121.000 €. Type of Participation: Coordinator and Principal Investigator

4. Title: Hacia el balance integrado de gases de efecto invernadero en ecosistemas nacionales de alto impacto social y económico (GEISpain). CGL2014-52838-C2-1-R Financial Entity: Ministerio de Economía y Competitividad fundamental. Length: 01/2015-12/2018. PI: Penélope Serrano Ortiz y Andrew S. Kowalski. Amount: 163.350 €. Type of Participation: Coordinator and Principal Investigator.





- 5.** Title: Improving future ecosystem benefits through Earth Observations (ECOPOTENTIAL) EP-210159204. Financial entity: European Commission. Length: 10/2015-12/2018. PI: Antonnello Provenzalle (National Research Council of Italy). Type of Participation: Researcher.
- 6.** Title: European Long-Term Ecosystem and socioecological Research Infrastructure (eLTER) EP-210159204. Project number: 654359. Financial entity: European Commission. Length: 10/2015-12/2018. PI: Michael Mirtl (Umweltbundesamt GMBH, Austria). Type of Participation: Researcher.
- 7.** Title: InGOS: Integrated non-CO2 Greenhouse gas Observing System (Project Code 284274). Financial Entity: European Commission (FP7). Amount: 7999999€ (con incentivos regionales). 31.847€ for the University of Granada. PI: Alex Vermeulen, ECN (Energieonderzoek Centrum Nederland). Length: 01/2010-6/2013. Type of Participation: Principal Investigator for the University of Granada
- 8.** Title: Balance de carbono en el olivar: efecto de la presencia de la cubierta vegetal (RNM-7186). Financial Entity: Junta de Andalucía; Consejería de Economía, Innovación y Ciencia (Convocatoria 2011). Length: 01/2013-12/2016. PI: Andrew S. Kowalski, Universidad de Granada. Amount: 169184.94€. Type of participation: Investigator of the Research Team (and coordinator)
- 9.** Title: Greenhouse gas management in European land use systems (GHG Europe; Call FP7-ENV-2009-1.1.3.1; Project Code 244122). Financial Entity: European Commission (FP7). Length: 01/2010-6/2013. PI: Annette Freibauer, Thünen Institute of Climate-Smart Agriculture. Amount: 100000€ (con incentivos regionales). Type of participation: Researcher.
- 10.** Title: The effect of global warming on the role of wetlands as carbon sinks: a comparison between semi-arid warm and humid temperate sites (PRI-AIBDE-2011-0824). Financial Entity: Ministerio de Ciencia e Innovación. Length: 01/2012-12/2013. PI: Penélope Serrano, EEZA (CSIC). Amount: 4000€. Type of participation: Principal Investigator.

C.3. Contracts, technological or transfer merits

- 1.** Title: Design and implementation of an information system for the Large-Scale Biosphere-Atmosphere Programme in Amazonia. Entity: Instituto Nacional de Pesquisas da Amazônia (INPA).PI: Regino Zamora, Universidad de Granada. Length: 07/2013-06/2015. Amount: 261.625€. Type of Participation: Researcher
- 2.** Title: Calibración, Aplicación y Validación del modelo VPRM” en Andalucía (Contrato 3248 a través de Fundación Empresa).Entity: Consejería de Medio Ambiente (Junta de Andalucía) PI: Penélope Serrano Ortiz. Length: 01/2009-12/2009. Amount: 20851€
- 3.** Title: Red de observación sistemática de los flujos de carbono y energía en ecosistemas terrestres en España (II). Entity: Fundación Centro de Estudios Ambientales del Mediterráneo; Universidad de Granada. PI: Penélope Serrano, Universidad de Granada. Length: 12/2008-03/2009. Amount: 10000€

C.4. Patents

Not applicable



PartA. Personal Information

DATE	11/09/2022
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Surname(s)	Lorite	
Forename	Juan	
Social Security, Passport, ID number	XXXXXXXXXX	
Sex	XXXXXXXXXX	
Age	XXXXXXXXXX	
Researcher codes	WoS Researcher ID (*)	F-4690-2011
	SCOPUS Author ID(*)	6504274107
	Open Researcher and Contributor ID (ORCID)	http://orcid.org/0000-0003-4617-8069

(*) At least one of these is mandatory

A.1. Current position

Post/ Professional Category	Professor (Catedrático de Universidad)	
UNESCO Code	241703 / 241713 / 2417201 / 241791	
Key Words	Botany, Conservation Biology, Restoration Ecology	
Name of the University/Institution	Universidad de Granada	
	Department/Centre	Botany
	Full Address	c/Severo Ochoa s/n, 18071 Granada
	Email Address	jlorite@ugr.es
	Phone Number	XXXXXXXXXX
Start date	11/2021	

A.2. Education (title, institution, date)

	University	Degree	Title
1995	Granada	First degree	Bachelor in Biological Sciences
		Masters (if appropriate)	
2001	Granada	PhD	PhD in Biological Sciences

A.3. Indicators of Quality in Scientific Production (See the instructions)

<ul style="list-style-type: none"> - Thesis supervised in the last 10 years: 3 - Total number of citations: 1182 (WOS) / 4298 (Google Scholar) - Mean citations/year in the last 5 years: 131 (WOS) / 390 (Google Scholar) - Publications in First Quartile Q1: 32 - h-Index: 20 (WOS) / 33 (Google Scholar) - Indexed publications: 63 (WOS)

PartB. Free Summary of CV (Max. of 3.500 characters, including spaces)

Juan Lorite, is Professor (Catedrático de Universidad) at the Department of Botany and Director of the Herbarium at University of Granada. Associate Researcher at the Andalusian Center for the Assessment and Monitoring of Global Change (CAESCG). Interuniversity Institute for Earth System Research (IISTA). Head of the Research group: Characterization, conservation and restoration of plant species and communities. Site coordinator of the Sierra Nevada long-term monitoring site for GLORIA International project. He has expertise in restoration ecology and conservation biology. In the last years his research is focused in restoration ecology *sensu lato*, and conservation biology, both applied to different Mediterranean habitats. He has been involved in different projects dealing with climate change and global change in high mountain areas in the last five years. He has co-authored **92** papers in peer reviewed scientific journals, **64** indexed in Web of Science and **51** book or book

Firma (1): JOSÉ ANTONIO HODAR CORREA
En calidad de: Solicitante



chapters. He has worked in **40** called published research projects and/contracts with private or public funds, leading some of them. He has supervised **3** PhD thesis, **16** Master theses and **21** Bachelor theses.

PartC. Relevant accomplishments

C.1. Publications

1. **Article.** Lorite J., Salazar-Mendías, C., Pawlak, R, Cañadas E. 2021. Assessing the effectiveness of exclusion fences in protecting threatened plants. *Scientific reports.* 11, 16124.
2. **Article.** deCastro-Arrazola, I., March-Salas, M., and Lorite, J. 2021. Assessment of the Potential Risk of Rock-Climbing for Cliff Plant Species and Natural Protected Areas of Spain. *Front. Ecol. Evol.* 9, 1–9. doi:10.3389/fevo.2021.611362.
3. **Article.** Shackelford, N., et al. (+35 authors) J. Lorite. 2021. Drivers of seedling establishment success in dryland restoration efforts. *Nature Ecology & Evolution* 5, 1283–1290.
4. **Article.** Lembrechts J, (+70 authors) J. Lorite. 2020. SoilTemp: a global database of near-surface temperature. *Global Change Biology* 26(11): 6616-6629.
5. **Article.** Lorite J, Ros-Candeira A, Alcaraz-Segura D, and Salazar-Mendías C. 2020. FloraSNevada: a trait database of the vascular flora of Sierra Nevada, southeast Spain. *Ecology*: ecy.3091.
6. **Article.** García-Carmona M, García-Robles H, Turpín Torrano C, Fernández Ondoño E, Lorite J, Sierra Aragón M, Martín Peinado FJ. 2019. Residual pollution and vegetation distribution in amended soils 20 years after a pyrite mine tailings spill (Aznalcóllar, Spain). *Science of The Total Environment* 650: 933–940. DOI: 10.1016/j.scitotenv.2018.09.092
7. **Article.** Lorite J., Serrano F., Lorenzo A., Cañadas E., Ballesteros M., Peñas, J. 2017. Rock climbing alters plant species composition, cover, and richness in Mediterranean limestone cliffs. *PlosOne* 12(8) e0182414.
8. **Article.** Ballesteros, M., Cañadas, E.M., Marrs, R.H., Foronda, A., Martín-Peinado, F.J. & Lorite, J. 2017. Restoration of Gypsicolous Vegetation on Quarry Slopes: Guidance for Hydroseeding Under Contrasting Inclination and Aspect. *Land Degradation & Development.* 28(7): 2146-2154.
9. **Article.** Ballesteros, M., Ayerbe, J., Casares, M., Cañadas, E.M. & Lorite, J. 2017. Successful lichen translocation on disturbed gypsum areas: A test with adhesives to promote the recovery of biological soil crusts. *Scientific reports*, 1–9. Nature Publishing Group.
10. **Article.** Peñas-De Giles, Julio; Lorite-Moreno, Juan. 2016. Designing conservation strategies to preserve the genetic diversity of *Astragalus edulis* Bunge, an endangered species from Western Mediterranean region. *PeerJ*: : e3964.

C.2. Research Projects and Grants

1. A-RNM-4-UGR20. Análisis del efecto de la escalada en la conservación de plantas de roquedos en áreas protegidas de España (EcoClimb). Convocatoria: Programa operativo FEDER-Andalucía 2020. Investigador principal: Juan Lorite Moreno. Entidad de afiliación: Universidad de Granada. Periodo: 01/07/2021-30/06/2023. Subvención: 50.000 €. Tipo de participación: Investigador Principal.
2. LifeWatch-2019-10-UGR-01_WP-1. WP1-Colecciones Biológicas. Centro temático sobre ecosistemas de montaña y teledetección, aprendizaje profundo-inteligencia artificial, servicios electrónicos de la Universidad de Granada-Sierra Nevada. European Union Lifewatch-ERI. 01/01/2019-30/06/2023. Principal Investigator (WP): Juan Lorite Moreno. Coordinator: Regino Zamora.
3. P18-FR-3641. Evolución de la plasticidad fenotípica en el género *Moricandia*. Junta de Andalucía-Consejería de Innovación, Ciencia y empresa. 01/01/2020-30/12/2022. Principal Investigator: Francisco Perfectti Álvarez.
4. P11-RNM-7061. Desarrollo de técnicas de restauración ecológica de hábitats gipsícolas. Entidad financiadora: Junta de Andalucía. Convocatoria: Proyectos de Excelencia 2011. Investigador principal: Juan Lorite Moreno. Entidad de afiliación: Universidad de Granada.

Firma (1): JOSÉ ANTONIO HODAR CORREA
En calidad de: Solicitante



Periodo: 27/06/2013-27/06/2017. Subvención: 151.641,36 €. Tipo de participación: Investigador Principal.

5. COOP+ Cooperation of Research infrastructures to address Global Challenges in the environmental field. Entidad financiadora: Unión Europea. Convocatoria: H2020. Investigador principal: Bonet-García, Francisco Javier. Entidad: IISTA-Universidad de Granada. Periodo: 2016-2018. Subvención: 371.250 €. Tipo de participación: Investigador.
6. ECOPOTENTIAL: Improving future ecosystem benefits through Earth observations. Bonet-García. Entidad financiadora: Unión Europea. Convocatoria: H2020. Investigador principal: Bonet-García, Francisco Javier. Entidad: IISTA-Universidad de Granada. Periodo: 2015-2019. Subvención: 300.000 €. Tipo de participación: Investigador.
7. eLTER: European Long-Term Ecosystem and socio-ecological Research Infrastructure. Entidad financiadora: Unión Europea. Convocatoria: H2020. Investigador principal: Zamora Rodríguez, Regino. Entidad: IISTA-Universidad de Granada. Periodo: 2015-2019. Subvención: 167.000 €. Tipo de participación: Investigador.
8. ADAPTAMED-Protection of key ecosystems services by adaptive management of Climate Change endangered Mediterranean socio-ecosystems. Entidad financiadora: Unión Europea. Convocatoria: Life. Investigador principal: Zamora-Rodríguez, Regino. Entidad: Universidad de Granada. Periodo: 2015-2020. Subvención: 307.000 €. Tipo de participación: Investigador.

C.3. Contracts

1. Estudio de las bases ecológicas para la restauración de la vegetación de yesos en las explotaciones de Ventas de Huelma y Escúzar. Proyecto de investigación suscrito entre la Universidad de Granada y la entidad KNAUF GMBH. Investigador principal: Juan Lorite Moreno. Entidad de afiliación: Universidad de Granada. Periodo: 01/07/2008 – 31/03/2018. Presupuesto: 330.000 €.

C.4. Patents and other IPR

Firma (1): JOSÉ ANTONIO HODAR CORREA
En calidad de: Solicitante



CV date	07/09/2022
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Part A. PERSONAL INFORMATION

First and Family name	Fernández Rebollo, Pilar		
Researcher numbers	Researcher ID	ABH-2997-2020	
	Orcid code	0000-0001-7215-412X	

A.1. Current position

University/Institution	Universidad de Córdoba		
Department	Dpto. Ingeniería Forestal, ETSAIM		
Address and Country	Campus Universitario Rabanales, Edif. Leonardo da Vinci. Ctra. Madrid-Cádiz Km. 396, 14014 Córdoba		
Phone number	957 218410	E-mail	pfernandez@uco.es
Current position	Lecturer	From	10/08/98
Espec. cód. UNESCO	310607		
Palabras clave	Agroforestry systems, Animal-pasture-soil interactions, Ecosystem services, Grassland management, Grazing management		

A.2. Education

PhD	University	Year
First degree, Agricultural Engineer	University of Córdoba	1990
PhD, Agricultural Engineer	University of Córdoba	1995

A.3. Index of research quality

2 research periods, last one 2012-2017
 1 transference of knowledge period with positive evaluation
 8 PhD supervised, 2 ongoing PhD
 32 indexed research papers, (18 Q1)
 Citations: 435 (web of science) 1117 (google academic)
 h-index: 11 (web of science) 15 (google academic)
 Main Researcher in 2 National Projects, 2 Regional and 10 R+D Contracts; Researcher in 9 European Projects (1 H2020; 1 LIFE; 2 POPTec, 2 INTERREG, 1 INCO, 1 ENV4, 1 ISpra), 8 National Projects and 4 Regional Project
 >100 conference contributions, 25 books and book chapters, 35 scientific reports, more than 25 invited lectured.

Part B. CV SUMMARY (max. 3500 characters, including spaces)

I obtained my PhD at UCO in 1995 working as assistant researcher in Animal Production Department. I have been Lecturer in Grassland Management at Forestry Degree, ETSIAM, UCO since 1998. There, I develop my research lines in management and improvement of Mediterranean grassland, focusing on grazing and animal-plant-soil interactions. I belong to the research group of "Silvopascicultura" (AGR-221, PAIDI). Since 2000, I focus my research to dehesa system, considering not only pasture and livestock but also the structure, physiology and dynamics of tree and bush components. From this time, I have been collaborating, through different contracts and agreements, with Agricultural and Environmental Andalusia Governments, evaluating the application of agricultural policy (PAC) and the delivery of ecosystem services in dehesa of Andalusia. Given the environmental and economic repercussion of the forest diseases in dehesa farms, I have participated in different projects related to the control of root rot of the *Quercus* caused by oomycetes in collaboration with Andalusia Governments and Agro-forestry pathology group of the UCO. The close collaboration with the Andalusia Governments in these topics, ends up in the participation, as a member, in the Advisory Council of Biodiversity (2005-2012) and the Advisory Council of the oak decline (from 2018) of the Junta de Andalusia. I lecture among other courses in Grassland management, Grazing management in forests, and Agroforestry, in degree (14 ECTS/year) and master (5 ECTS/year). I teach in Master's Degree in Agroecology (UCO-UPO-UNIA), in Forestry (UCO), Sustainability and Global Change (UCO), and Forest Fires: Science and



management (UCO-ULE-UDL). I participate in a PhD program Agricultural, Food, Forestry and Sustainable Rural Development Engineering INGEVERDE, (UCO-USE-CSIC-IFAPA) in which I lead the research group on forest and agrosilvopastoral systems and resources. Renewable energy. I am author of 26 indexed research papers (15 Q1) and 25 books and book chapters. I have presented more than 100 communications in conferences. I have taken part of 25 competitive research projects and 10 R+D+i contracts from both, public and private sectors. I supervised 8 PhD and another 2 ongoing. I supervised 120 Degree projects (research), 12 Master theses. Since 2008, I have been responsible of 1.3 M€ in R+D+i (projects that I have led) and 1.9 M€. The Group AGR-221 collaborate with foreign researcher groups who have received pre/postdoctoral stays. I organized the Annual Scientific Meeting of the Spanish Society of Pasture (2008), IUFRO Working Party on Phytophthora in Forests and Natural Ecosystems (2012) and VIII Reunión IOBC-WPRS Working Group on forest protection (2016). I am ANEP reviewer since 2017 and ACADEMIA-ANECA.

Part C. RELEVANT MERITS

C.1. Publications

1. F. Milazzo, P. Fernández-Rebollo, A. Peña, T. Vanwallegem. 2022. The resilience of soil erosion rates under historical land use change in agroecosystems of Southern Spain. *Science of the Total Environment*. DOI: 10.1016/j.scitotenv.2022.153672.
2. René L.M. Schils, Conny Bufe Caroline Rhymer, Richard Francksen, Valentin H. Klaus, Mohamed Abdalla, Filippo Milazzo, Eszter Lellei-Kovács, Hein ten Berge, Chiara Bertora, Anna Chodkiewicz, Claudia Dămățircă, Iris Feigenwinter, Pilar Fernández-Rebollo, Shiva Ghiasi, Stanislav Hejduk, Matthew Hiron, Maria Janicka, Raoul Pellaton, Kate Smith, Rachel Thorman, Tom Vanwallegem, John Williams, Laura Zavattaro, Jarl Kampen, Ria Derx, Pete Smith, Mark J. Whittingham, Nina Buchmann. 2022. Permanent grasslands in Europe: Land use change and intensification decrease their multifunctionality. *Agriculture, Ecosystems and Environment*. DOI: 10.1016/j.agee.2022.107891.
3. Fernández-Habas, J., Carriere Cañada, M., García Moreno, A., Leal-Murillo, J.R., González-Dugo, M.P., Abellanas Oar B., Gómez-Giraldez P., Fernández-Rebollo, P. 2022. Estimating pasture quality of Mediterranean grasslands using hyperspectral narrow bands from field spectroscopy by Random Forest and PLS regressions. *Computers and Electronics in Agriculture*. <https://doi.org/10.1016/j.compag.2021.106614>.
4. Fernández-Habas J., García Moreno A., Hidalgo-Fernández M.T., Leal-Murillo, J.R., Abellanas Oar, B., Gómez-Giraldez, P., Gózález-Dugo M.P., Fernández-Rebollo, P. 2021. Investigating the potential of Sentinel-2 configuration to predict the quality of Mediterranean permanent grasslands in open woodlands. *Science of the Total Environment*, <https://doi.org/10.1016/j.scitotenv.2021.148101>.
5. Fernández-Habas, J., Hidalgo-Fernández, M. T., Leal-Murillo, J. R., Méndez, P., Quero, J. L., Vanwallegem, T., Fernández-Rebollo, P. 2021. Effects of two water regimes on morphological traits, nutritive value and physiology of three *Bituminaria bituminosa* varieties from the Canary Islands. *Journal of Agronomy and Crop Science*. DOI: 10.1111/jac.12485.
6. Rodríguez-Molina MC., Fernández-Rebollo P., Serrano-Pérez P., De Santiago A., Hidalgo-Fernández MT., Campos- Navarro FJ. 2021. Biofumigation with Brassica seed-based products combined with calcium carbonate to control *Phytophthora cinnamomi* root rot in cork and holm oaks. *European Journal of Plant Pathology*. 159: 471-483. <https://doi.org/10.1007/s10658-020-02175-7>.
7. Reyna-Bowen L, Fernandez-Rebollo P, Fernández-Habas J, Gómez J.A. 2020. The influence of tree and soil management on soil organic carbon stock and pools in dehesa systems. *CATENA*.190:104511.
8. Cruz-Aguilar R, Cruz-León A, Ramirez-Valverde B, Uribe-Gómez M, Fernández-Rebollo P, Cuevas-Reyes V. 2019. Characterization of peasant production units in the Sierra Huautla, Morelos, Mexico. *Tropical and Subtropical Agroecosystems*, 22: 723-733. 2019.
9. Fernández-Habas J, Fernández-Rebollo P, Casado M, Moreno A, Abellanas B. 2019. Spatio-temporal analysis of oak decline process in open woodlands: A case study in SW Spain. *Journal of environmental management*. 248 1093308.



10. Ríos P, González M, Obregón S, Carbonero MD, Leal JR, Fernández-Rebollo P, de Haro A, Sánchez ME. 2017. Brassica-based seedmeals biofumigation to control *Phytophthora cinnamomic* in the Spanish “dehesa” oak trees. *Phytopathologia Mediterranea*. 56 (3): 392-399.
11. González M, Ríos P, Fernández-Rebollo P, de Haro A, Serrano MS, Sánchez ME. 2017. Biofumigant action of Brassica seedmeals against *Phytophthora cinnamomic* in dehesa ecosystems. *Phytopathologia Mediterranea* 56 (2): 340.
12. Koenig W., Alejano R., Carbonero P., Fernandez-Rebollo P., Knops JMH., Marañón T., Padilla-Diaz CM., Pearse IS., Pérez-Ramos IM., Vázquez-Piqué J., Pesendorfer MB. 2016 Is the relationship between mast-seeding and weather in oaks related to their life-history or phylogeny? *Ecology* 97(10): 2603-2615.
13. Rios P, Obregón S, Haro A, Fernández-Rebollo P, Serrano MS, Sánchez ME. 2016. Effect of Brassica biofumigant amendments on different stages of the life cycle of *Phytophthora cinnamomi*. *Journal of Phytopathology*. 164 (9): 582-594.
14. Carbonero M., Fernández-Rebollo P. Holm oak dehesas. 2014. Influence of meteorology on acorn production. *Ecosistemas* 23(2): 55-63.
15. García-Moreno A, Carbonero M, Serrano-Moral M, Fernández-Rebollo P. Grazing affects shoot growth, nutrient and water status of *Quercus ilex* L. in Mediterranean open woodlands. 2014. *Annals of Forest Science*. 71:917-926.
16. Parras-Alcántara L, Díaz-Jaimes L, Lozano-García B, Fernández-Rebollo P, Moreno-Elcure F, Carbonero-Muñoz MD. 2014. Organic farming has little effect on carbon stock in a Mediterranean dehesa (southern Spain). *Catena* 113: 9–17.

C.2. Research projects

1. Multifuncionalidad of Iberian Forest on the face of climatic change. PID2020-115809RB-I00. 2021-2025. PR: Rafael Villar. 172183€.
2. Alimentación inteligente. SmartFOOD. Lifewatch. 2021-2023. PR: José Emilio Guerrero. 697.500€.
3. Fortalecimiento de los sistemas transfronterizos de prevención y extinción de incendios forestales y mejora de los recursos para la generación de empleo rural. POCTEC-0756. 2021-2022. PR: Francisco Rodriguez y Silva. 253.800€.
4. CILIFO-Centro Ibérico para la Investigación y Lucha contra Incendios Forestales. POCTEP-0753_CILIFO_5_E. 01/01/2019-12/12/2021. PR: Francisco Rodriguez y Silva. 1.059.147 €.
5. Analyzing new active techniques for tree regeneration in dehesas (NUTERA-DE II). IFAPA (PR. AVA-AVA2019.004). 17/05/2019-31/12/2021. PR: F. Navarro Reyes. 150.000 €
6. Organic beef cattle in dehesa: Production and commercialization improvement. Consejería de Agricultura, Pesca y Desarrollo Rural, Junta de Andalucía (GOP2I-HU-16-0018). 15/02/2018-31/12-2019. PR: P. Fernández Rebollo. 197.142,20 €.
7. Developing Sustainable Permanent Grassland systems and policies. SUPER-G (ID 774124), H2020-SFS-2017-2. 1/05/2018-1/05/2023. PR: Newell P (ADAS, UK); PR of UCO sub-project, Vanwallaghen T. 9.994.997,75 € (645.125 € UCO).
8. Analyzing new active techniques for tree regeneration in dehesas (NUTERA-DE). IFAPA-TRANSFORMA, Junta de Andalucía. 24/06/2016-31/12/2018. PR: F Navarro Reyes. 206.327,44 €.
9. Oak decline in Dehesa ecosystem. Impact assessment, monitoring and control options: biofumigation, soil amendments and oak resistance. INIA (RTA2014-00063-C04-03).21/09/2015-21/09/2018. PR: P. Fernández Rebollo. 115.000 €.
10. Dehesa Ecosystems: development of policies and tools for biodiversity conservation and management Life-Biodehesa. LIFE+11/BIO/ES/000726. 01/09/2012 - 31/07/2018. PR: JE Guerrero Ginel. 614.099 €.
11. Control of root rot of holm oak in dehesa: biofumigation, fertilization and natural and induced tolerance. P10-AGR-6501. 14/09/2011-14/09/2015. PR: P. Fernández Rebollo. 125.872 €.

C.3. Contracts

1. Evaluation of the tree status on dehesa network (Cordoba). WWF España. 202. PR: P. Fernández Rebollo. 6.050€.



2. Promotion of tree regeneration and diversification in dehesas: Pilot experiences (Córdoba). WWF España. 2019. PR: P. Fernández Rebollo. 10.726,05 €.
3. Dissemination of good practices for tree regeneration and diversification in dehesa: pilot farm of Retamal de Llerena (Extremadura). WWF España. 2018. PR: P. Fernández Rebollo. 2.650 €.
2. Growing holm oak seedling in special forest containers IFAPA. 2017. PR: P. Fernández Rebollo. 13.200 €.
3. Pilot experiences for the promotion of tree regeneration and diversification in dehesas of the Los Pedroches region (Córdoba). WWF España. 2017. PR: P. Fernández Rebollo. 10.726,05 €.
4. Evaluation and maintenance of the network of demonstration dehesa: promotion of tree regeneration and diversification. WWF España. 2016. PR: P. Fernández Rebollo. 10.890 €.
5. Dehesa demonstration network: promotion of tree regeneration and diversification. WWF-España. 2015-2016 PR: P. Fernández Rebollo. 11.245 €.
6. Study of mortality processes in pine forests (Sierra de Filabres and Baza, Almería) and Quercus species in Andalusia. EGMASA. 2010-2015. PR: R. Navarro. 200.000 €.

C.4 Invited speaker

1. Past, present and future of dehesa. III Congreso Ibérico de la Dehesa y el Montado. Badajoz. Noviembre 2018.
2. Dehesa and tree regeneration. XVIII Encuentro Universidad-Empresa: Problemática de la dehesa: propuesta de soluciones. Córdoba, 14 de dic, 2017.
3. Dehesa trees. Reflections to advance in the conservation. XXIV Jornadas Técnicas COVAP, La dehesa. Su conservación. Almodovar del Campo, Ciudad Real. 26 de oct, 2017.
4. Dehesa at risk. WWF Encounter: Dehesa at the crossroads. Madrid, 18 nov 2016.
5. Dehesa management Plans: What should be its content and scope? I Congreso Ibérico de la Dehesa y el Montado. Badajoz, 6-7 nov 2013.
6. Management and conservation of oak open woodlands in southern Spain. Oak forests coping with global change: ecology and management. UNIA, Baeza, España. Sep, 2013.
7. Assessment and improvements of CAP measures supporting the Dehesas in Spain. ICAAM International Conference on Dehesa and Montado. Evora, Portugal. Feb, 2013.

C.5 Institutional responsibilities and memberships of scientific societies

1. Member of Advisory Council of the oak decline. Consejería de Agricultura Pesca y Desarrollo Rural, Junta de Andalucía. From 2018 until now.
2. Member of Advisory Council of Biodiversity. Consejería de Medio Ambiente, Junta de Andalucía. 2005-2012.
3. Vocal of the Executive Committee of the Spanish Society of Pastures. 2011-2019.
4. Associate Editor of Monografías INIA-Serie Forestal (2011-2014) and Forest systems (from 2018 until now).
5. Member of the Scientific Committee of the Annual Meeting of the Spanish Pasture Society. From 2003 to 2021.
6. Reviewer of Scientific Journals: Pastos, Ecosistemas, Annals of Forest Science, Agroforestry System, Revista Internacional de biología tropical.
7. Projects Reviewer: ANEP and ANECA.

C.6 I+D+i Organization

1. VIII Reunión IOBC-WPRS (International Organization for Biological and Integrated Control-West Palearctic Regional Section). October 2016.
2. Farmer workshops for tree regeneration in dehesa. 2016, 2017, 2018 and 2019
3. Annual Scientific Meeting of the Spanish Society of Pasture, 2008. President of the Organization Committee.

C.7 Awards

Andrés Núñez de Prado, 2012, first award, "Olivar adehesado: integración del pastoreo con ganado ovino como herramienta de gestión en los olivares ecológicos"



Fecha del CVA	10/11/2022
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Parte A. DATOS PERSONALES

Nombre *	Pedro		
Apellidos *	Villar Salvador		
Sexo *	No Contesta	Fecha de Nacimiento *	
DNI/NIE/Pasaporte *		Teléfono *	(+34) 918854913
URL Web	https://pedrovillar.web.uah.es/		
Dirección Email	pedro.villar@uah.es		
Identificador científico	Open Researcher and Contributor ID (ORCID) *	0000-0001-9338-4530	
	Researcher ID	L-1380-2014	
	Scopus Author ID		

* Obligatorio

A.2. Situación profesional anterior

Periodo	Puesto / Institución / País
2012 - 2020	Coordinador del Máster en Restauración de Ecosistemas en la UAH / Universidad de Alcalá
2020 -	Coordinador Programa de doctorado Ecología, Biodiversidad y Cambio Global / Universidad de Alcalá

A.3. Formación académica

Grado/Master/Tesis	Universidad / País	Año
Conservación y aprovechamiento de las plantas y el suelo	Universitat de València	2000

Parte C. MÉRITOS MÁS RELEVANTES

C.1. Publicaciones

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores. Si aplica, indique el número de citaciones

- Artículo científico.** Diego Salazar-Tortosa; Jorge Castro; Rafael De Casas; Benjamín Viñegla-Pérez; Enrique Sánchez-Cañete; Pedro Villar-Salvador. (6/6). 2018. Gas exchange at whole plant level shows that a less conservative water use is linked to a higher performance in three ecologically distinct pine species Environmental Research Letters. IOP Publishing. 13, pp.045004. <https://doi.org/10.1088/1748-9326/aab18f>
- Capítulo de libro.** Jesús Pemán; Esteban Chirino; Douglass F Jacobs; et al; ;. (9/10). 2017. Physiological keys for natural and artificial regeneration of oaks Oaks Physiological Ecology. Exploring the Functional Diversity of Genus Quercus L.Springer. 7, pp.453-511. ISBN 978-3-319-69098-8. https://doi.org/10.1007/978-3-319-69099-5_14
- Artículo científico.** Mercedes; Alexandro B.; Gonzalo; et al; Jorge. 2022. Linking animal behaviour and tree recruitment: caching decisions by a scatter hoarder corvid determine seed fate in a Mediterranean agroforestry system Journal of Ecology. British Ecological Society. en prensa.
- Artículo científico.** Loreto Martínez-Baroja; José M^a Rey Benayas; Lorenzo Pérez-Camacho; Pedro Villar-Salvador. 2022. Drivers of oak establishment from 25 year-old woodland islets planted to assist natural regeneration in Mediterranean old fields European Journal of Forest Research. Springer. 141, pp.17-30. <https://doi.org/10.1007/s10342-021-01423-7>



- 5 **Artículo científico.** José Luis García-Pérez; Juan A. Oliet; Pedro Villar-Salvador; Jorge Eduardo Guzmán. 2021. Root Growth Dynamics and Structure in Seedlings of Four Shade Tolerant Mediterranean Species Grown under Moderate and Low Light Forests. MDPI. 12-11, pp.1540. <https://doi.org/10.3390/f12111540>
- 6 **Artículo científico.** Alexandro B. Leverkus; Laura Levy; Enrique Andivia; et al;. 2021. Restoring oak forests through direct seeding or planting: Protocol for a continental-scale experiment Plos One. PLOS. 16-11, pp.e0259552. <https://doi.org/10.1371/journal.pone.0259552>
- 7 **Artículo científico.** Enrique Andivia; Pedro Villar-Salvador; Juan Oliet; et al;. 2021. Climate and species stress resitenace modulate the higher survival of large seedlings in forest restoration worldwide Ecological Applications. ESA. 31-6, pp.e02394. ISSN 1939-5582.
- 8 **Artículo científico.** Na Luo; Pedro Villar-Salvador; Guolei Li; Jiaxi Wang. 2021. The dark side of nursery photoperiod reduction for summer plantation in a temperate-climate conifer: high winter mortality mediated by reduced seedling carbohydrate and nitrogen storage Forest Ecology and Management. Elsevier. 491, pp.119171. ISSN 0378-1127.
- 9 **Artículo científico.** Loreto Martínez-Baroja; Lorenzo Pérez-Camacho; Pedro Villar-Salvador; et al;. 2021. Caching territoriality and site preferences by a scatter-hoarder drive the spatial pattern of seed dispersal and affect seedling emergence Journal of Ecology. BES-Wiley. 109-6, pp.2342-2353. ISSN 1365-2745.
- 10 **Artículo científico.** Verónica Cruz; Pedro Villar-Salvador; Paloma Raíz-Benito; Inés Ibáñez; José M. Rey-Benayas. (2/5). 2020. Long-term dynamics of shrub facilitation shapes the mixing of evergreen and deciduous oaks in Mediterranean forest recovery Journal of Ecology. Wiley. 108, pp.1125-1137. <https://doi.org/10.1111/1365-2745.13309>
- 11 **Artículo científico.** Toca, A.; Villar-Salvador, P; Oliet, JA; Jacobs, DF. 2020. Normalization criteria determine the interpretation of nitrogen effects on the root hydraulics of pine seedlings Tree Physiology. Oxford Academic. 40, pp.1381-1391. <https://doi.org/10.1093/treephys/tpaa068>
- 12 **Artículo científico.** Wenhui Shi; Pedro Villar-Salvador; Guolei Li; X. Jiang. 2019. Acorn size is more important than nursery fertilization for outplanting performance of Quercus variabilis container seedlings Annals of Forest Science. Springer. 76, pp.22. <https://doi.org/10.1007/s13595-018-0785-8>
- 13 **Artículo científico.** Laura Fernández Pérez; Miguel Ángel Zavala; Pedro Villar-Salvador; Jaime Madrigal-González. (3/4). 2019. Divergent last century tree growth along an altitudinal gradient in a Pinus sylvestris dry-edge population Forests. 10-532. <https://doi.org/10.3390/f10070532>
- 14 **Artículo científico.** Andrei O. Toca; Juan Oliet; Pedro Villar-Salvador; Rodrigo Martínez; Douglass F. Jacobs. (3/5). 2019. Ecologically distinct pine species show differential root development after outplanting in response to nursery nutrient cultivation. Forest Ecology and Management. Elsevier. 451, pp.117562. <https://doi.org/10.1016/j.foreco.2019.117562>
- 15 **Artículo científico.** Enrique Andivia; Pedro Villar-Salvador; Juan Oliet; Jaime Puértolas; Kasten Dumroese. (2/5). 2019. How can my paper be useful for future meta-analysis on forest restoration plantations? New Forests. 50, pp.255-266. <https://doi.org/10.1007/s11056-018-9631-y>
- 16 **Artículo científico.** Verónica Cruz-Alonso; Paloma Benito-Ruiz; Pedro Villar-Salvador; José M^a Rey-Benayas. 2019. Long-term recovery of Mediterranean forests depends on restoration strategy and forest type Journal of Applied Ecology. BES. 56, pp.745-757. <https://doi.org/10.1111/1365-2664.13340>
- 17 **Artículo científico.** Loreto Martínez-Baroja; Lorenzo Pérez-Camacho; Pedro Villar-Salvador; et al;. 2019. Massive and effective acorn dispersal into open agroforestry systems by an overlooked vector, the Eurasian magpie (Pica pica). Ecosphere. Wiley. 10-12, pp.e02989. <https://doi.org/10.1002/ecs2.2989>
- 18 **Artículo científico.** Jiaxi Wang; Pedro Villar-Salvador; Guolei Li; Yong Liu. (2/4). 2019. Moderate water stress does not inhibit nitrogen remobilization allowing high growth in high nitrogen content Quercus variabilis seedlings under drought conditions Tree Physiology. Oxford Academic. 39, pp.650-660. <https://doi.org/10.1093/treephys/tpy130>



- 19 Artículo científico.** Enrique Andivia; Paolo Zuccarini; Beatriz Grau; Felicidad de Herralde; Pedro Villar-Salvador; Robert Savé. (5/6). 2019. Rooting big and deep rapidly: the ecological roots of pine species distribution in southern Europe *Trees. Structure and Function*. Springer. 33, pp.293-303. <https://doi.org/10.1007/s00468-018-1777-x>
- 20 Artículo científico.** Laura Fernández-Pérez; Pedro Villar-Salvador; Jordi Martínez-Vilalta; Andrei Toca; Miguel A. Zavala. (2/5). 2018. Distribution of pines in Iberia Peninsula agrees with seedling differences in foliage frost tolerance, not with xylem embolism vulnerability *Tree Physiology*. Oxford Press. 38, pp.507-516. Google Scholar (1) <https://doi.org/10.1093/treephys/tpx171>
- 21 Artículo científico.** Enrique Andivia; Jaime Madrigal; Pedro Villar-Salvador; Miguel A. Zavala. (3/4). 2018. Does facilitation from adult conspecifics increase sapling resilience to repeated droughts in water-limited pine forest? *Ecosphere*. en prensa. <https://doi.org/10.1002/ecs2.2282>
- 22 Artículo científico.** Wenhui Shi; Pedro Villar-Salvador; Douglass D. Jacobs; Guolei Li; X Jang. (2/5). 2018. Simulated predation of *Quercus variabilis* acorns impairs nutrient remobilization and seedling performance irrespective of soil fertility. *Plant and Soil*. Springer. 423, pp.295-306. Google Scholar (1) <https://doi.org/10.1007/s11104-017-3518-0>
- 23 Artículo científico.** Andrei Toca; Juan Oliet; Pedro Villar-Salvador; Judit Maroto; Douglass F. Jacobs. (3/5). 2018. Species ecology determines the role of nitrogen nutrition on the frost tolerance of pine seedlings *Tree Physiology*. Oxford Press. 38, pp.96-108. Google Scholar (1) <https://doi.org/10.1093/treephys/tpx165>
- 24 Artículo científico.** Diego Salazar-Tortosa; Jorge Castro; Pedro Villar-Salvador; Benjamín Viñegla-Pérez; Luis Matías; Anders Michelsen; Rafael Rubio de Casas; Ignacio Querejeta. (3/8). 2018. The “isohydric trap”: a detrimental feedback between water shortage and nutrient acquisition drives differential response of European pines under climatic dryness. *Global Change Biology*. 24, pp.4069-4083. <https://doi.org/10.1111/gcb.14311>
- 25 Artículo científico.** Matías, L.; Castro J.; Villar-Salvador, P; Quero, J.L.; Jump, A.S.(3/5). 2017. Differential impact of hotter drought on seedling performance of five ecologically distinct pine species *Plant Ecology*. Springer. 218, pp.201-212. ISSN 1573-5052. Google Scholar (4) <https://doi.org/10.1007/s11258-016-0677-7>
- 26 Artículo científico.** Castro, J.; Molina-Morales, M.; Leverkus, A.B.; Martínez-Baroja, L.; Pérez-Camacho, L.; Villar-Salvador, P.; Rebollo, S.; Rey-Benayas, J.M.(6/8). 2017. Effective nut dispersal by magpies (*Pica pica* L.) in a Mediterranean agroecosystem *Oecologia*. Springer. 184, pp.183-192. ISSN 0029-8549. Google Scholar (1) <https://doi.org/10.1007/s00442-017-3848-x>
- 27 Artículo científico.** Enrique Andivia; Pedro Villar-Salvador; Liliana Tovar; Sonia Rabasa; José M^a Rey Benayas. (2/5). 2017. Multiscale assessment of woody species recruitment in Mediterranean shrublands: facilitation and beyond *Journal of Vegetation Science*. Wiley. 28, pp.639-648. ISSN 1654-1103. Google Scholar (1) <https://doi.org/10.1111/jvs.12520>
- 28 Artículo científico.** Uscola, M.; Villar-Salvador, P.; Oliet, J.A.; Warren, Ch.(2/4). 2017. Root uptake of inorganic and organic N chemical forms in two coexisting Mediterranean forest trees *Plant and Soil*. Springer. 415, pp.387-392. ISSN 1573-5036. Google Scholar (2) <https://doi.org/10.1007/s11104-017-3172-6>
- 29 Capítulo de libro.** (AC); Juan A. Oliet. (1/2). 2021. Factores y procesos ecofisiológicos determinantes del arraigo y establecimiento de las plantas en las repoblaciones forestales Bases técnicas y ecológicas del proyecto de repoblación forestal. Ministerio para la Transición Ecológica y el Reto Demográfico. pp.89-127. ISBN 9788418508561.
- 30 Capítulo de libro.** Pedro (AC); Juan L.; Juan L.(1/3). 2021. La calidad de los materiales de reproducción Bases técnicas y ecológicas del proyecto de repoblación forestal. Ministerio para la Transición Ecológica y el Reto Demográfico. pp.781-822. ISBN 978-84-18508-57-8.



- 31 Capítulo de libro.** José M^a Rey Benayas; Loreto Martínez-Baroja; David García de León; Guillem Crespo Cepas; Miriam Pajares Guerra; Lorenzo Pérez-Camacho; Pedro Villar-Salvador. (7/7). 2021. Plantación de islotes forestales y setos como infraestructura verde para asistir la regeneración natural en paisajes agrícolas mediterráneos Bases técnicas y ecológicas del proyecto de repoblación forestal. Ministerio para la Transición Ecológica y el Reto Demográfico. pp.523-532. ISBN 9788418508561.
- 32 Capítulo de libro.** Asier Herrero; Paloma Ruiz-Benito; Enrique Andivia; Jaime Madrigal-González; Pedro Villar-Salvador; Sophia Rattcliffe; Miguel Ángel Zavala. 2021. Assessing drivers of current and future distribution of Mediterranean pine forests Pines and their mixed forest ecosystems in the Mediterranean Basin. Springer. ISBN 978-3-030-63624-1. <https://doi.org/10.1007/978-3-030-63625-8>

C.3. Proyectos y Contratos

- 1 Proyecto.** TRANSition towards enhanced revegetation success: large-scale implications of seeding vs. planting for ECOlogical restoration. Alexandro B. Leverkus. (Universidad de Granada). 01/12/2022-01/12/2024. 179.000 €.
- 2 Proyecto.** Acción COST Pan-European Network for Climate Adaptive Forest Restoration and Reforestation. European Cooperation in Science and Technology. Vladan Ivetic. (Belgrade University). 08/10/2020-08/10/2024. 550.000 €. Coordinador.
- 3 Proyecto.** Evaluación de funciones y servicios ecosistémicos de la avifauna en sistemas agroforestales. Ministerio de Ciencia e Innovación. Universidades. Salvador Rebollo de la Torre. (Universidad de Alcalá). 01/06/2020-31/05/2023. 163.350 €.
- 4 Proyecto.** Potencial de captación y almacenamiento de carbono en especies nativas (NT) y exóticas (NNT) en un contexto de cambio climático. Elena Granda IP. (Universidad de Alcalá). 2022-2023. 7.000 €.
- 5 Proyecto.** Conocimiento científico para avanzar hacia la consecución de los Objetivos de Desarrollo Sostenible: una ecología translacional es necesaria. Comunidad de Madrid. José M. Rey Benayas. (Universidad de Alcalá). 01/01/2019-31/12/2022. 850.000 €. Miembro de equipo.
- 6 Proyecto.** IV Reunión del Grupo de Trabajo de Ecología, Ecofisiología y Suelos Forestales de la Sociedad Española de Ciencias Forestales. Bases ecológicas para la gestión adaptativa de sistemas forestales. Universidad de Alcalá. Pedro Villar Salvador. (Universidad de Alcalá). 08/05/2019-09/05/2019. 800 €. Investigador principal.
- 7 Proyecto.** Contratación de ayudantes de investigación y técnicos de laboratorio cofinanciadas por Fondo Social Europeo a través del Programa Operativo de Empleo Juvenil y la Iniciativa de Empleo Juvenil (YEI). Pedro Villar Salvador. (Universidad de Alcalá). 01/2017-01/2019. 45.000 €.
- 8 Contrato.** Asesoría en materia de vegetación en el proyecto LIFE RIBERMINE Universidad Complutense de Madrid. Tíscar Espigares Pinilla. (Universidad de Alcalá). 05/02/2020-05/08/2020. 9.922 €.
- 9 Contrato.** Diseño y ejecución de restauraciones ecológicas Fundación Internacional para la Restauración de Ecosistemas (FIRE). 30/11/2017-30/11/2019.
- 10 Contrato.** Aplicación de nuevas tecnologías a la docencia de prácticas: elaboración de vídeos tutoriales como apoyo a prácticas de asignaturas experimentales Universidad de Alcalá. 11/2017-01/11/2018. 0 €.
- 11 Contrato.** Estrategias y técnicas de Restauración Agroecológicas Fundación Internacional para la Restauración de Ecosistemas. Pedro Villar Salvador. 27/10/2016-27/10/2017. 12.000 €.

C.5. Estancias en centros de I+D+i públicos o privados

- 1** Beijing Forestry University. Key Laboratory for Silviculture and Conservation. China. Beijing. 10/05/2019-03/07/2019. 55 días. Contratado/a.
- 2** Beijing Forestry University. Key Laboratory for Silviculture and Conservation. China. Beijing. 02/07/2017-17/02/2017. 15 días. Invitado/a.





CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date 07/11/2022

First name	Inmaculada		
Family name	de Vicente Álvarez-Manzaneda		
Gender (*)		Birth date (dd/mm/yyyy)	
Social Security, Passport, ID number			
e-mail	ivicente@ugr.es	URL Web	https://ecologia.ugr.es/pages/personal/profesorado/i_de_vicente
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-1449-5740		

(*) Mandatory

A.1. Current position

Position	Professor		
Initial date	July 23rd, 2021		
Institution	University of Granada		
Department/Center	Ecology	Faculty of Sciences	
Country	Spain	Teleph. number	+34958249768
Key words	Limnology, eutrophication, restoration ecology, biogeochemistry, sediments, catchment land-uses		

A.2. Previous positions (research activity interruptions, art. 14.2.b)

Period	Position/Institution/Country/Interruption cause
2000-2004	Ph D student/ University of Granada/ Spain
2005-2007	Hired/ University of Granada/ Spain
2007-2011	Hired/ University of Granada/ Spain
2011-2021	Associate Professor/ University of Granada/ Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Graduate in Environmental Sciences	University of Granada/ Spain	1999
PhD	University of Granada/ Spain	2004

Firma (1): JOSÉ ANTONIO HODAR CORREA
En calidad de: Solicitante



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Part B. CV SUMMARY (max. 5000 characters, including spaces)

Dra. Inmaculada de Vicente is Professor in the Department of Ecology at the University of Granada. In the Web of Science database, she has 56 publications, among them 53 are JCR articles (56.6% in the first quartile; with an average of 16.9 citations per item), 11 national and international book chapters and 74 conference papers international. She has supervised 4 PhD, 20 End-of-Degree Projects (Bachelor /Degree in Environmental Sciences and Biology) and 13 Master Projects. Currently, her research is mainly focused on the use of novel adsorbents such as magnetic and non magnetic particles for improving water quality of both natural aquatic ecosystems and also of treated wastewaters. It is of outstanding concern to consider that the last Thesis that she supervised is closely linked to the convenience of using magnetic particles as phosphorus adsorbents for counteracting the present alteration of phosphorus biogeochemical cycle was assessed. More specifically, the next goals were achieved: (i) to assess the toxicity of novel phosphorus adsorbents used for lake restoration on aquatic biota by using a multi-methodological approach based on standardized laboratory tests (Álvarez-Manzaneda et al., 2017, Journal of Hazardous Materials; Álvarez-Manzaneda and de Vicente, 2017, Chemosphere; del Arco et al., 2018, Ecotoxicology and Environmental Safety; Álvarez-Manzaneda et al., 2019, Chemosphere) and microcosms experiments (Álvarez-Manzaneda et al., 2019, Science of the Total Environment; del Arco et al., 2021, Ecotoxicology and Environmental Safety); (ii) to achieve the efficiency of magnetic particles for trapping phosphorus in secondary municipal effluents which lastly discharge in a Ramsar site (Fuente de Piedra, Málaga, Spain; Álvarez-Manzaneda et al., 2021, Chemosphere) and (iii) to evaluate the viability of recovered phosphorus from a natural eutrophicated ecosystem as a liquid fertilizer (Álvarez-Manzaneda et al., 2021, Journal of Environmental Management).

It is interesting to remark the extensive experience of Inmaculada de Vicente in both national and international collaborations (up to 77 co-authors, SCOPUS database). As an illustration, she has collaborated with members from the Istituto Italiano di Idrobiologia (de Vicente et al. 2006, Journal of Paleolimnology), Florida Atlantic University (Jensen et al. 2009, Limnology and Oceanography); University of Copenhagen (de Vicente et al. 2010a, Hydrobiologia); Department of Environmental Sciences and Cary Institute of Ecosystem Studies (de Vicente et al. 2010b, Hydrobiologia); and Aarhus University (Egemose et al. 2011, Canadian Journal of Fisheries and Aquatic Sciences).

Considering her contributions to society, she has also been enrolled in outreach activities such as "Proyecto de Iniciación a la Investigación e Innovación en Secundaria en Andalucía" (<https://piisa.es/>) by showing to bachelor students the negative effects of eutrophication in inland aquatic ecosystem through the experimentation. In addition, she has collaborated in two chapters of the Andalusia-Ecology Project which includes a study on the ecology of the Andalusian Community, in seven complete volumes (Hércules Ediciones; ISBN: 978-84-936736-5-9). She has also closely collaborated with different companies focused on the management of water resources (EMASESA, <https://www.emasesa.com/> and Freshwater Research, <http://fwr.ca/>) by different projects and by giving seminars.

Finally, she also has participated in the training of graduates (Azahara Merino Martos, Ana Inmaculada Funes Cabrerizo, Juan Diego Gilbert Rus and Inmaculada Álvarez-Manzaneda Salcedo as well as doctors (Dra. Ana Isabel del Arco Ochoa (01/06/2015-31/01/2017); Dra. Ingrid Fanes Treviño (15/10/2015-14/02/2016) and Dr. Kouassi, N'Guessan Louis Berenger, University of Peleforo Gon Coulibaly, Korhogo (Côte d'Ivoire; 1/03/2019 - 1/05/2019).

PartC. RELEVANT MERITS(sorted by typology)

C.1. Publications (see instructions)



1. Funes, A., J. de Vicente, L. Cruz-Pizarro & **I. de Vicente**. 2014. The influence of pH on manganese removal by magnetic microparticles in solution. *Water Research*, 53: 110-122.
2. Funes, A., J. de Vicente, L. Cruz-Pizarro, I. Álvarez-Manzaneda & **I. de Vicente**. 2016. Magnetic microparticles as a new tool for lake restoration: a microcosm experiment for evaluating the impact on Phosphorus fluxes and sedimentary Phosphorus pools. *Water Research*, 89: 366-374.
3. Funes, A., A.I. del Arco, I. Álvarez-Manzaneda, J. de Vicente & **I. de Vicente**. 2017. A microcosm experiment to determine the consequences of magnetic microparticles application on water quality and sediment phosphorus pools. *Science of the Total Environment*, 579: 245-253.
4. del Arco, A., G. Parra & **I. de Vicente**. 2018. Going deeper into phosphorus adsorbents for lake restoration: Combined effects of magnetic particles, intraspecific competition and habitat heterogeneity pressure on *Daphnia magna*. *Ecotoxicology and Environmental Safety*, 148: 513-519.
5. Álvarez-Manzaneda, I., F. Guerrero, A.I. del Arco, A. Funes, L. Cruz-Pizarro & **I. de Vicente**. 2018. Do magnetic phosphorus adsorbents used for lake restoration impact on zooplankton community? *Science of the Total Environment*, 656: 598-607.
6. Álvarez-Manzaneda, I., A. Baun, L. Cruz-Pizarro & **I. de Vicente**. 2019. Ecotoxicity screening of novel phosphorus adsorbents used for lake restoration. *Chemosphere*, 222: 469-478.
7. del Arco, A., I. Álvarez-Manzaneda, A. Funes, C. Pérez-Martínez & **I. de Vicente**. 2021. Assessing the toxic effects of magnetic particles used for lake restoration on phytoplankton: a community-based approach. *Ecotoxicology and Environmental Safety*, 207: 111288
8. Álvarez-Manzaneda, I., F. Guerrero, L. Cruz-Pizarro, M. Rendón & **I. de Vicente**. 2021. Magnetic particles as new adsorbents for the reduction of phosphate inputs from wastewater treatment plant to a Mediterranean Ramsar wetland (Southern Spain). *Chemosphere*, 270: 128640
9. Funes, A., I. Álvarez-Manzaneda, A. del Arco, J. de Vicente & **I. de Vicente**. 2021. Evaluating the effect of CFH-12® and Phoslock® on phosphorus dynamics during anoxia and resuspension in shallow eutrophic lakes. *Environmental Pollution*, 269: 116093
10. Álvarez-Manzaneda, I., N. Laza, F. B. Navarro, E. M. Suárez- Rey, M. L. Segura & **I. de Vicente**. 2021. Assessing the viability of recovered Phosphorus from eutrophicated aquatic ecosystems as a liquid fertilizer. *Journal of Environmental Management*, 285: 112156

C.2. Congress

- Participation in the organizing committee of international and national Congresses such the *Aquatic Sciences Meeting (ASLO)*. Granada (Spain). 2015
- Attendance to 74 congress since 2000, 25 in the last 10 years.

C.3. Research projects

- 1.- Title: *Nuevas metodologías para la restauración de ecosistemas acuáticos: aplicación de partículas magnéticas*
Finacial institution: *Proyectos de Excelencia, Junta de Andalucía (P10-RNM-6630)*
Participants: University of Granada and University of Jaén
Date: 2011-2014
Quantity: 117.233 €



PI: Dra. Inmaculada de Vicente Álvarez-Manzaneda

2.- Title: *Restauración de ecosistemas acuáticos mediante nanopartículas magnéticas: efectos ecotoxicológicos y recuperación del fósforo como fertilizante*

Financial institution: *Ministerio de Economía y Competitividad (CTM2013-46951-R)*

Participants: University of Granada and University of Jaén

Date: 2015-2018

Quantity: 120.000€

PI: Dra. Inmaculada de Vicente Álvarez-Manzaneda

3. Title: *Anthropogenic eutrophication and emergent pollution in a Mediterranean wetland in a context of climate change: restoration of water quality by using magnetic adsorbents (ECRAM)*

Financial institution: *Ministerio de Ciencia e Innovación. Proyectos Generación del Conocimiento. Proyecto PID2021-122429OB-I00*

Participants: University of Granada and University of Jaén

Date: 2022-2025

Quantity: 133.100€

PI: Dra. Inmaculada de Vicente and Dr. José María Conde Porcuna

4. Title: *Laboratory optimization and in-situ assessment of using magnetic nanomaterials for environmental remediation in a Mediterranean wetland (NANOREM)*

Financial institution: *Ministerio de Ciencia e Innovación. Proyectos de Transición Ecológica y Transición Digital Proyecto TED2021-129384B-C22*

Participants: University of Granada and University of Jaén

Date: 2022-2029

Quantity: 144.900€

PI: Dra. Inmaculada de Vicente and Dr. José María Conde Porcuna

C.4. Contracts, technological or transfer merits

- Secretary of the Department of Ecology of the University of Granada: May 2013-May 2022
- Representative of the Department of Ecology in the Environmental Sciences Teaching Commission: 2011-present
- Experience as a referee in more than 10 international magazines and national books





CURRICULUM VITAE (CVA)

AVISO IMPORTANTE – El Curriculum Vitae no podrá exceder de 4 páginas. Para rellenar correctamente este documento, lea detenidamente las instrucciones disponibles en la web de la convocatoria.

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Fecha del CVA

27-09-2022

Parte A. DATOS PERSONALES

Nombre	María Noelia		
Apellidos	Jiménez Morales		
Sexo (*)		Fecha de nacimiento	
DNI, NIE, pasaporte			
Dirección email	mnoelia@ugr.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)		9738318400 (Scopus)	0000-0002-8663- 9256

* datos obligatorios

A.1. Situación profesional actual

Puesto	Profesora titular		
Fecha inicio	05/10/2021		
Organismo/ Institución	Universidad de Granada		
Departamento/ Centro	Departamento Botánica		
País	España	Teléfono	
Palabras clave	Restauración ecológica, relaciones suelo-planta, cambios de uso del suelo, gestión forestal, biodiversidad y sistemas agroforestales		

A.2. Situación profesional anterior (incluye interrupciones en la carrera investigadora, de acuerdo con el Art. 14. 2.b) de la convocatoria, indicar meses totales)

Periodo	Puesto/ Institución/ País / Motivo interrupción
2016-2021	Profesora contratada/Universidad de Granada/España/Finalización contrato
2001-2016	Titulada superior/Doctora/ Instituto de Investigación y Formación Agraria (IFAPA, Camino de Purchil, Granada)/ España/ Finalización contrato
2008-2010	Becaria/Universidad de Granada/España/Finalización beca

(Incorporar todas las filas que sean necesarias)

A.3. Formación Académica

Grado/Master/Tesis	Universidad/País	Año
PhD Ciencias	Universidad de Granada	2009
Licenciada Ciencias Ambientales	Universidad de Granada	2004
Licenciada Biología	Universidad de Granada	1997

(Incorporar todas las filas que sean necesarias)

Parte B. RESUMEN DEL CV (máx. 5000 caracteres, incluyendo espacios): MUY IMPORTANTE: se ha modificado el contenido de este apartado para progresar en la adecuación a los principios DORA. Lea atentamente las "Instrucciones para cumplimentar el CVA"

Soy licenciada en Ciencias Biológicas (1997) y Ciencias Ambientales (2004) y Doctora en



Ciencias por la Universidad de Granada (2009). Mi actividad científica comenzó en el año 1997 y se ha desarrollado en diferentes centros de investigación y universidades, como en el Instituto de Investigación y Formación Agraria y Pesquera (IFAPA, Junta de Andalucía, España), el Centro Superior de Investigaciones Científicas (CSIC-Granada), el Centro de Conservación de la Biodiversidad de la Universidad de Cagliari (Cerdeña-Italia), el Instituto Nacional de Biodiversidad de Costa Rica (INBIO), la Universidad de California-Berkeley (EEUU), el USDA Forest Service (Rocky Mountain Research Station, Moscow, Idaho, EEUU) y actualmente en la Universidad de Granada. Mi experiencia investigadora se centra en las líneas de trabajo relacionadas con los efectos del cambio de uso del suelo, relaciones suelo-planta, técnicas de forestación de tierras agrarias y restauración de la vegetación en ambientes mediterráneos, ecología y gestión forestal sostenible y biodiversidad en agroecosistemas. He participado en 19 proyectos de investigación competitivos (Comisión Europea, INIA, MINECO, FEDER, Ramón ARECES, Junta de Andalucía,...) y 17 contratos y convenios con administraciones públicas (Consejería de Medio Ambiente-Junta Andalucía, Confederación Hidrográfica del Guadalquivir,...) en diversas fases, dependiendo del caso específico: idea, diseño y escritura del proyecto para su solicitud, diseño experimental, muestreo, análisis de datos, guía y escritura de manuscritos, contribuciones a congresos, etc. Mis capacidades científico-técnicas están avaladas por 50 artículos científicos, de los cuales 35 han sido publicados en revistas con un índice de calidad relativo JCR. También soy coautora de 11 libros completos, de 36 capítulos de libros, 7 documentos técnicos, 81 comunicaciones en congresos (34 internacionales y el resto nacionales) y una patente de invención. Respecto a mi actividad docente, he impartido docencia reglada en 6 asignaturas de 3 grados, y 1 título de posgrado en la Universidad de Granada. Además, he impartido docencia no reglada en diferentes cursos y jornadas y he participado en la docencia de un máster en la Universidad de Cagliari (Cerdeña, Italia). También he participado en la formación de jóvenes investigadores codirigiendo 8 Trabajos Fin de Máster y 11 Trabajos Fin de Grado.

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES (últimos 10 años)- Pueden incluir publicaciones, datos, software, contratos o productos industriales, desarrollos clínicos, publicaciones en conferencias, etc. Si estas aportaciones tienen DOI, por favor inclúyalo.

C.1. Publicaciones más importantes en libros y revistas con “peer review” y conferencias (ver instrucciones).

- Segura, C., **Jiménez, M.N.**, Fernández-Ondoño, E., Navarro, F.B. (2/4). 2021. Effects of afforestation on plant diversity and soil quality in semiarid SE Spain. *Forests* 2021, 12, 1730. <https://doi.org/10.3390/f12121730>
- Leverkus, A.B., Lázaro, A., Andivia, E., Castro, J., **Jiménez, M.N.**, Navarro, F.B. (5/6). 2021. Seeding or planting to revegetate the world's degraded land: Systematic review and experimentation to address methodological issues. *Restoration Ecology* 29 (4). Doi: 10.1111/rec.13372
- Segura, C., Navarro, F.B., **Jiménez, M.N.**, Fernández-Ondoño, E. (3/4). 2020. Implications of afforestation vs. secondary succession for soil properties under a semiarid climate. *Science of the Total Environment* 704, 135393. <https://doi.org/10.1016/j.scitotenv.2019.135393>
- **Jiménez, M.N.**, Ripoll, M.A., Sánchez-Miranda, Á., Navarro, F.B. (1/4). 2019. Using stem diameter variations to detect and quantify growth and relationships with climatic variables on a gradient of thinned Aleppo pines. *Forest Ecology and Management* 442: 53-62. <https://doi.org/10.1016/j.foreco.2019.03.061>
- Sánchez Martín, R., **Jiménez, M.N.**, Navarro, F.B. 2018. (2/3). Effects of vegetation management on plant diversity in traditional irrigation systems. *Journal of Environmental Management* 223, 396-402. <https://doi.org/10.1016/j.jenvman.2018.06.056>
- Segura, C., Fernández-Ondoño, E., **Jiménez, M.N.**, Navarro, F.B. (3/4). 2017. Thinning affects the needlefall nutrient return to soil in a semiarid Aleppo pine afforestation while



the nutrient dynamics remain unchanged. *Forest Ecology and Management* 405, 257-270. <https://doi.org/10.1016/j.foreco.2017.09.049>

- Martín-Peinado F.J., Navarro F.B., **Jiménez M.N.**, Sierra M., Martínez F.J., Romero-Freire A., Rojo L., Fernández-Ondoño E. (3/7). 2016. Long-term effects of pine plantations on soil quality in southern Spain. *Land Degradation and Development* 27, 1709-1720. DOI: 10.1002/ldr.2566
- Segura, C., **Jiménez, M.N.**, Nieto, O., Navarro, F.B., Fernández-Ondoño, E. (2/5). 2016. Changes in soil organic carbon over 20 years after afforestation in semiarid SE Spain. *Forest Ecology and Management* 381, 268-278. <https://doi.org/10.1016/j.foreco.2016.09.035>
- **Jiménez, M.N.**, Navarro, F.B. (1/2). 2016. Thinning effects on litterfall remaining after 8 years and improved stand resilience in Aleppo pine afforestation (SE Spain). *Journal of Environmental Management* 169, 174-183. <https://doi.org/10.1016/j.jenvman.2015.12.028>
- **Jiménez, M.N.**, Navarro, F.B. (1/2). 2015. Monthly foliar-nutrient pattern in a semiarid Aleppo pine afforestation five years after thinning. *Forest Ecology and Management* 343: 63-72. <https://doi.org/10.1016/j.foreco.2015.01.032>
- **Jiménez, M.N.**; Pinto, J.R.; Ripoll, M.A.; Sánchez-Miranda, A.; Navarro, F.B. (1/5). 2014. Restoring silvopastures with oak saplings: effects of mulch and diameter class on survival, growth, and annual leaf-nutrient patterns. *Agroforestry Systems* 88 (5): 935-946. Doi: 10.1007/s10457-014-9737-y
- Navarro, F.B.; Romero-Freire, A.; Del Castillo, T.; Foronda, A.; **Jiménez, M.N.**; Ripoll, M.A.; Sánchez-Miranda, A.; Huntsinger, L.; Fernández-Ondoño, E. 5/9). 2013. Effects of thinning on litterfall were found after years in a *Pinus halepensis* afforestation area at tree and stand levels. *Forest Ecology and Management* 289: 354-362. <http://dx.doi.org/10.1016/j.foreco.2012.09.026>

C.2. Congresos, indicando la modalidad de su participación (conferencia invitada, presentación oral, póster)

- Navarro, F.B.; Romero-Freire, A.; Del Castillo, T.; Foronda, A.; **Jiménez, M.N.**; Ripoll, M.A.; Sánchez-Miranda, A.; Huntsinger, L.; Fernández-Ondoño, E. 5/9). 2013. Effects of thinning on litterfall were found after years in a *Pinus halepensis* afforestation area at tree and stand levels. *Forest Ecology and Management* 289: 354-362. <http://dx.doi.org/10.1016/j.foreco.2012.09.026>
- **Jiménez, M.N.**, Castro-Rodríguez, J., Sánchez, J., Navarro, F.B. 2018. Trade-off among organic farming or abandonment vs. traditional management on plant diversity of sloping olive groves. *Iberian Meeting on Agroecological Research: Establishing the ecological basis for sustainable agricultura*. Évora, del 22 al 23 de noviembre. Póster.
- Sánchez, R., **Jiménez, M.N.**, Navarro, F.B. 2018. Effects of of vegetation management on plant diversity in traditional irrigation systems. *Iberian Meeting on Agroecological Research: Establishing the ecological basis for sustainable agricultura*. Évora, del 22 al 23 de noviembre. Póster
- Leverkus, A.B., Gálvez, C.R., Ripoll, M.A., Castro, J., **Jiménez, M.N.**, Carbonero, M.D., Fernández-Rebollo, P., Leal, J.R., Navarro, F.B. 2021. Selection of *Quercus ilex* acorns for reforestation of “dehesas” under climate change: experimental sowing of acorns of different provenances. 5^o European Agroforestry Conference: Agroforestry, Systems and Innovations. Cerdeña (Italia), del 17 al 19 de mayo. Póster.
- Navarro, F.B., Cledera, R., Vílchez, J.A., Gálvez, C., **Jiménez, M.N.** 2021. Seed mass and parent effects on the early response of Holm oak to different microclimatic tree shelters. 5^o European Agroforestry Conference: Agroforestry, Systems and Innovations. Cerdeña (Italia), del 17 al 19 de mayo. Póster.
- Leverkus, A.B., Navarro, F.B., **Jiménez, M.N.**, Lázaro, A., Castro, J., Andivia, E. 2021. Seeding or planting to revegetation the world’s degraded land? Preliminary findings from a systematic review. 9th World Conference on Ecological Restoration. A New Global Trayjectory. Québec (Canadá), del 21 al 24 de junio. Oral.



- Navarro, F.B., Varo, D., Vílchez, J.A., **Jiménez, M.N.** 2022. Effects of nursery-root manipulation, acorn mass and seed provenance on field response of Holm oak. The 13th European Conference on Ecological Restoration. Alicante, del 5 al 9 de septiembre. Póster.
- Navarro, F.B., Caño, A.B., Gálvez, C.R., Kazani, A., Carbonero, M.D., **Jiménez, M.N.** 2022. Large acorns, early sowing, weed control, but also locality, keys to the successful acorn seeding. The 13th European Conference on Ecological Restoration. Alicante, del 5 al 9 de septiembre. Póster.
- Leverkus, A.B., Gálvez, C.R., Ripoll, M.A., Castro, J., **Jiménez, M.N.**, Carbonero, M.D., Fernández, P., Villar, R., Navafro, F.B. 2022. Evaluating acorn provenance for reforestation by direct seeding in the face of climate change. 13th European Conference on Ecological Restoration. Alicante, del 5 al 9 de septiembre. Póster.
- Navarro, F.B., Caño, B., Gálvez, C.R., Kazani, A., Cledera, R., **Jiménez, M.N.** 2022. Effects of microclimatic shelters and maternal origin on directly sown acorns vs. outplanted seedlings. 13th European Conference on Ecological Restoration. Alicante, del 5 al 9 de septiembre. Póster.
- Juan-Overejo, R., Navarro, F.B., Caño, B., Moreno-Rojas, J.M.; Querejeta, J.I., Alcaraz-Segura, D., **Jiménez, M.N.**, Leverkus, A.B., Castro, J. 2022. Deciphering the performance of holm oak saplings to improve restoration success of of Mediterranean forests. 13th European Conference on Ecological Restoration. Alicante, del 5 al 9 de septiembre. Oral.

C.3. Proyectos o líneas de investigación en los que ha participado.

- *Thematic Center on Mountain Ecosystem & Remote sensing, Deep learning-AI e-Services University of Granada Sierra Nevada (Smart EcoMountains)*. Work Packages 1 (Biological Collections). Entidad financiadora: Lifewatch ERIC. Investigador principal: Regino Zamora. Cantidad financiada: 6.800.540,26 €. Período: 01/01/2019 - 31/12/2023. Participación en la toma de datos y análisis de los mismos así como la redacción de artículos científicos.
- RTI2018-096187-J-I00: *Restauración de bosques y sistemas agroforestales mediterráneos: implicaciones del método de reforestación (plantación vs. siembra directa) bajo gradientes de estrés ambiental*. Entidad financiadora: Ministerio de Ciencia, Innovación y Universidades. Duración: del 1/11/2019 al 31/10/2022. Cuantía de la subvención: 217.800€. Investigador responsable: Alexandro B. Leverkus. Participación en la toma de datos y análisis de los mismos así como la redacción de artículos científicos.
- AVA.AVA2019.004: *Nuevas Técnicas de Regeneración Asistida del Arbolado en Dehesas (NUTERA-DE II)*. Entidad Financiadora: Consejería de Agricultura, Ganadería, Pesca y Desarrollo Sostenible. Duración, desde 17/05/2019 hasta 30/06/2022. Cuantía de la subvención: 150.000 €. Investigador Responsable: Francisco Bruno Navarro Reyes. Participación en la toma de datos y análisis de los mismos así como la redacción de artículos científicos.
- Proyecto de excelencia de excelencia (P18-RT-1927): *Aumentando la resiliencia y resistencia de los sistemas agroforestales andaluces: bases para la restauración frente a los efectos del cambio global (RESISTE)*. Modalidad: Retos Consolidado. Entidad Financiadora: Consejería de Economía, Conocimiento, Empresas y Universidad, Junta de Andalucía. Duración: desde 1/01/2020 hasta 31/12/2022. Presupuesto concedido: 108.292€. Investigador responsable: Jorge Castro Gutiérrez. Participación en la toma de datos y análisis de los mismos así como la redacción de artículos científicos.

C.4. Participación en actividades de transferencia de tecnología/conocimiento y explotación de resultados

Patente: Protector mixto para plantas. Nº: 2224825B1. Fecha: 24/04/2007. Inventores: Francisco Bruno Navarro Reyes, M^a Ángeles Ripoll Morales, Inmaculada Bocio Peralta, M^a Noelia Jiménez Morales, Eduardo Gallego Teruel, Estanislao de Simón Navarrete.





CURRICULUM VITAE (CVA)

IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.

Part A. PERSONAL INFORMATION

CV date	01/11/2022
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First name	Castro		
Family name	Jorge		
Gender (*)		Birth date	
ID number			
e-mail	jorge@ugr.es	URL Web	
Open Research and Contributor ID (ORCID)(*)	0000-0002-6362-2240		

(*) Mandatory

A.1. Current position

Position	Full Professor		
Initial date	29/12/2017		
Institution	University of Granada		
Departament/Center	Department of Ecology, Faculty of Science		
Country	Spain	Teleph. number	+34610718508
Key words	Forest ecology, Ecological restoration, Plant ecology, Global change, Biodiversity conservation, Mediterranean-type ecosystems		

A.2. Previous positions (research activity interruptions, art. 45.2.c)

Period	Position/Institution/Country/Interruption cause
2007-2017	Professor of Ecology/University of Granada/Spain
2002-2007	Associate Professor of Ecology ("Titular"), University of Granada/Spain
2002-2007	Assistant Professor of Ecology, University of Granada/Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licensed in Biology	University of Granada / Spain	1993
PhD in Biology (Ecology)	University of Granada / Spain	2000

Part B. CV SUMMARY (4998 characters, including spaces)

I studied Biology at the University of Granada (1988-93), where I received my PhD in 2000 at the Department of Ecology. I obtained the position of Professor in 2007 at this university, and subsequently the position of Full Professor in 2017 (accredited by ANECA since 2014). I have made numerous short and post-doc stays at research centers in Denmark and Sweden (post-doc), United States (two stays, University of Minnesota and USGS in New Mexico) and the United Kingdom (University of Stirling, three stays). I have taught both at the University of Granada and for other international institutions (in English) such as the Studies Abroad program of the IES (Institute for Education of Students, Chicago), for which I have been teaching annually since 2005. I teach also in Master degrees at the University of Granada since 2002. I have given numerous invited talks (~35) in a considerable number of research



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centers in Spain, UK, France, Sweden, Switzerland, Germany, USA and Morocco, including other organizations such as IUCN or the Society for Ecological Restoration. I have been the director of 6 Doctoral Thesis and a large number of Master's Thesis (19) or undergrad dissertations (35). I act as peer reviewer of a large number of SCI Journals and Research Agencies of different countries. I am the head of the Research Group RNM918 ("Conservation and Restoration of Ecosystems and Agroecosystems") since its creation in January 2015. I have published 85 articles in JCR-listed journals (most of them in first quartile) having had some of them a profound impact in their field of research, as well as a similar number of publications including outreach articles, conference proceedings and book chapters.

My professional career has focused on the study of the factors that determine the regeneration of Mediterranean forests, considering most of the processes that operate from seed dispersal to the establishment of adult trees. Thus, I have studied seed predation, seed dispersal, the effect of herbivores, soil-plant-microorganism interactions, soil nutrient dynamics, or the effect of drought and climate change. In particular, I have paid special attention to the restoration of the Mediterranean forest, having developed applied works intended to improve both the knowledge of the processes operating in the ecosystems and the knowledge for the management of the Mediterranean forest and the recovery of disturbed communities. In this sense, I consider that a clear value of my professional career has been the realization of applied studies that have also meant an advance in the basic knowledge in the field of Ecology. My interests and objectives also include a considerable effort to transfer knowledge to society. In this sense, I have written numerous articles for the general public, I have participated in expert committees, and I have developed patents that are currently being exploited by the industrial sector.

An essential aspect of my career that I wish to highlight is the innovation and creation of new lines of work. These lines of work are at all times connected, but have involved challenges that I have not hesitated to take and that have given results of great impact. For example, during the development of my PhD thesis I initiated studies on the theory and applicability of plant-plant facilitation for forest restoration in Mediterranean environments, which has led to a large number of papers with a high impact (e.g., *J. Ecol.* 92: 266-277; *Restor. Ecol.* 10: 297-305). In 2004 I initiated a line of work related to the effect of increased drought on Mediterranean forests, which generated participation in one of the most cited articles in the field of Ecology (*Forest Ecol. Managem.* 259: 660-684; more than 6000 citations in Scholar Google), or more recent papers that are having a great impact in this field (e.g. *Global Change Biol.* 24: 4069-4083). In 2006 I initiated a line of work in post-fire restoration that has originated one of the most unique study sites in the world (experimental plots in Lanjarón, Sierra Nevada National Park) and a reference point worldwide, which has allowed not only the publication of a large number of articles, but also the participation in numerous international studies of great impact such as *Frontiers Ecol. Environm.* 18: 391-400, *J. Appl. Ecol.* 55: 279-289, or *Nature Commun.* 11: 4762. It is also worth mentioning my international collaboration network, which has allowed me to share ideas I am co-author of a recent article on wood decay rate at planetary scale published in **Nature** (another of the research lines I started some years ago) or the equally recent publication (November 2021) of an article in **Restoration Ecology** in which we propose a new concept for forest restoration (precision restoration). In short, I would like to highlight my extensive knowledge of Mediterranean forest ecology, my capacity for knowledge transfer (including the industrial sector), my ability to collaborate in multidisciplinary and interdisciplinary groups, and my ability to develop fresh and disruptive ideas that provide new solutions to problems of ecology and the environment.

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions)

A list of the most relevant publications, including all those listed in JCR, can be found at the URL: <https://scholar.google.com/citations?user=d5SEfi0AAAAJ&hl=es>



Please note that, after the PhD student, I do not make distinction between the second or last position in the signing order; in many papers with more than 3 authors (except those listed alphabetically) where I am the second or the last author I was the main senior researcher.

- Castro J.**, Sáez C., Molina-Morales M. (2021). The monk parakeet (*Myiopsitta monachus*) as a potential pest for agriculture in the Mediterranean basin. **Biological Invasions** (doi: 10.1007/s10530-021-02702-5).
- Castro J.** (2021). Post-fire restoration of Mediterranean pine forests. Pp. 537-565 in: Pines and their mixed forest ecosystems in the Mediterranean Basin. Ne'eman G., Osen Y. (eds), Pines and their mixed forest ecosystems in the Mediterranean Basin. Gidi N. y Yagil O. Springer.
- Castro J.**, Morales-Rueda F., Navarro F.B., Löf M., Vacchiano G., Alcaraz-Segura D. (2021). Precision restoration: a necessary approach to foster forest recovery in the 21st century. **Restoration Ecology** 29, e13421 (doi: 10.1111/rec.13421).
- Seibold S., Rammer W., Hothorn T, et al. (73 autores). The contribution of insects to global forest deadwood decomposition. **Nature** 597: 77-81.
- Thorn S., Chao A., Goergiev K.B., Müller J., Bässler C., Campbell J.L., **Castro J.**, et al. (2020). Estimating retention benchmarks for salvage logging to protect biodiversity. **Nature Communications** 11: 4762 (doi: 10.1038/s41467-020-18612-4).
- Leverkus A.B., Gustafsson L., Lindenmayer D.B., Castro J., Rey-Benayas J.M., Ranius T. Thorn S. (2020). Salvage logging effects on regulating ecosystem services and fuel loads. **Frontiers in Ecology and the Environment** 18:391-400 (doi: 10.1002/fee.2219).
- Molinas-Morales M., **Castro J.**, Albaladejo G. Parejo (2020). Precise cache detection by olfaction in a scatter-hoarder bird. **Animal Behaviour** 167: 185-191.
- Georgiev K.B., Chao A., **Castro J.**, et al. (2020). Salvage logging changes the taxonomic, phylogenetic and functional successional trajectories of forest bird communities. **Journal of Applied Ecology** 57: 1103-1112.
- Salazar-Tortosa D., **Castro J.**, Saladin B., Zimmermann N.E., Rubio de Casas (2020). Arid environments select for larger seeds in pines (*Pinus* spp). **Evolutionary Ecology** 34: 11-26
- Löf M., **Castro J.**, Engman M., Leverkus A.B., Madsen P., Reque J.A., Villalobos A., Gardiner E.S. (2019). Tamm Review: Direct seeding to restore oak (*Quercus* spp.) forests and woodlands. **Forest Ecology and Management** 448:474-489.
- Salazar-Tortosa D., **Castro J.**, Villar-Salvador P., Viñepla B., Matías L., Michelsen A., de Casas R.R. y Querejeta I. (2018). The "isohydric trap": a proposed feed-back between water shortage, stomatal regulation and nutrient acquisition drives differential growth and survival of European pines under climatic dryness. **Global Change Biology** 24: 4069-4083.
- Castro J.**, Molina-Morales M., Leverkus A.B., Martínez-Baroja L., Pérez-Camacho L., Villar-Salvador P., Rebollo S., Rey-Benayas J.M. (2017). Effective nut dispersal by magpies (*Pica pica* L.) in a Mediterranean agroecosystem. **Oecologia** 184: 183-192.
- Leverkus A.B., Rey-Benayas J.M., **Castro J.** (2016). Shifting demographic conflicts across recruitment cohorts in a dynamic post-disturbance landscape. **Ecology** 97: 2628-2639.
- Leverkus A.B., **Castro J.** (2017). An ecosystem services approach to the ecological effects of salvage logging: valuation of seed dispersal. **Ecological Applications** 24: 1057-1063.
- Castro J.**, Leverkus A.B., Fuster F. (2015). A new device to foster oak forest restoration via seed sowing. **New Forests** 46: 919-929.
- Matías L., **Castro J.**, Zamora R. (2011). Soil-nutrient availability under a global-change scenario in a Mediterranean mountain ecosystem. **Global Change Biology** 17: 1646-1657.

C.2. Congress

I have attended a large number of congresses and participated with about 130 communications. I do not consider this particularly relevant. Instead, I provide a small sample of some of the conferences I have given (title in the language used).



4. I have been the Director of the course "Nature-based solutions to global change" funded by the Vice-Rectorate for Inclusion, Equality and Sustainability of the University of Granada (3 credits, 18 November to 11 December 2021).



Part A. PERSONAL INFORMATION

CV date 14/11/2022

First and Family name	Rafael Villar Montero		
Social Security, Passport, ID number		Age	
Researcher numbers	Researcher ID	F-7507-2010	
	Orcid code	0000-0002-3895-9984	
	Scopus	201126-011817	

A.1. Current position

Name of University/Institution	Universidad de Córdoba		
Department	Dpto Botánica, Ecología y Fisiología Vegetal, Facultad de Ciencias		
Address and Country	Edificio Celestino Mutis, Campus de Rabanales, 14071 Córdoba		
Phone number	957 21 86 35	E-mail	rafael.villar@uco.es
Current position	Catedrático Universidad	From	1 Nov 2017
Espec. cód. UNESCO	Ecología Vegetal / 310601		
Key words	Growth, functional traits, construction cost, Leaf mass per area		

A.2. Education

PhD	University	Year
Licenciatura Biología	Sevilla	1985
Doctor en Ciencias Biológicas	Sevilla	1992

A.3. General indicators of quality of scientific production

Rafael Villar has recognized 4 periods of research (1992-1997, 1998-2004, 2005-2010, 2011-2016). He has published 64 papers in SCI journals in the areas of knowledge of *Ecology, Plant Sciences, Forestry, Agronomy, Soil Science and Multidisciplinary Sciences*. Most of them are in the first quartile (48 articles), and others in the second quartile (10 articles). In total his works have 13135 citations and he has an index h of 40 (Google Scholar data) and H index of WoS of 32.

Outstanding of all these works are: Nature 2004 with 4853 citations, New Phytologist 2009 with 1320 citations, New Phytologist 2005 with 612 citations (Google Scholar). These three works constitute 3 among the 15 most cited articles in the last 10 years at the University of Cordoba (ISI Web of Knowledge, Essential Science Indicators). Specifically, the Nature article (2004) is the most cited article of the University of Córdoba, the article by New Phytologist (2009) the sixth most cited, and the article by New Phytologist (2005) is ranked 14th within the University of Cordoba.

He has directed 8 doctoral theses and is currently directing 3 doctoral thesis. He has directed 29 dissertations, final projects, degree and final master projects. All of them with very high (8.5-9) or maximum (10) records.

Google Scholar Profile:

<http://scholar.google.com/citations?user=98IIIInkAAAAJ&hl=en&oi=ao>

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Rafael Villar Montero is a biologist from the University of Seville (1985) and doctor of Biological Sciences from the University of Seville (1992). Since 1995 he has been a tenured professor at the University of Ecology at the University of Córdoba and in 2017 he obtained the position of Professor.

The research activity focuses on the area of Ecology and more specifically on Plant Ecology. The topics covered by this activity are: Growth and distribution of biomass, Leaf Economics Spectrum and LMA (leaf mass per area); Functional traits in leaves, stems and root; respiration and photosynthesis; Chemical composition and construction cost; Effects of the seed mass in Quercus; Abiotic stress (drought, soil compaction, shade, nutrient limitation) on growth and survival; Applied aspects (reforestation-regeneration) and effects of biochar.



He has been principal investigator of 5 projects financed by the Government of Spain in different competitive calls, with a total concession of 548750 euros. He has participated in 9 projects financed by the Government of Spain or the Andalusian Community in different competitive calls. He has participated in a Life + project (Life-Biodehesa) funded by the European Union and in another international project on functional traits in *Prosopis* financed by the government of Peru.

In relation to the congresses, he has participated in around 90 congresses with oral presentations and posters.

Part C. RELEVANT MERITS

C.1. Publications (including books)

Papers in JCR

Villar, R., Olmo, M., Atienza, P., Garzón, A.J., Wright, I.J., Poorter, H., Hierro, L.A. (2020).

Applying the economic concept of profitability to leaves. **Scientific Reports** (in press)

Marañón, T., Navarro-Fernández, C. M., Gil-Martínez, M., Domínguez, M. T., Madejón, P., & Villar, R. (2020). Variation in morphological and chemical traits of Mediterranean tree roots: linkage with leaf traits and soil conditions. **Plant and Soil**, 449: 389-403.

<https://doi.org/10.1007/s11104-020-04485-5>

Salazar PC, Navarro-Cerrillo RM, Cruz G, Grados N, Villar R (2019). Variability in growth and biomass allocation and the phenotypic plasticity of seven *Prosopis pallida* populations in response to water availability. **Trees** 33: 1409–1422.

de la Riva EG, I Prieto, R Villar (2019). The leaf economic spectrum drives leaf litter decomposition in Mediterranean forests. **Plant and Soil**, 435: 353–366

Salazar PC, Navarro-Cerrillo RM, Grados N, Cruz G, Barrón V, Villar R (2019). Tree size and leaf traits determine the fertility island effect in *Prosopis pallida* dryland forest in Northern Peru. **Plant and Soil** 437: 117-135.

de la Riva EG, Villar R, Pérez-Ramos IM, Quero JL, Matías L, Poorter L, Marañón, T. (2018). Relationships between leaf mass per area and nutrient concentrations in 98 Mediterranean woody species are determined by phylogeny, habitat and leaf habit. **Trees** 32: 497-510. DOI 10.1007/s00468-017-1646-z

de la Riva EG, Marañón T, Pérez-Ramos IM, Navarro-Fernández CM, Olmo M, Villar R (2018) Root traits across environmental gradients in Mediterranean woody communities: are they aligned along the root economics spectrum? **Plant and Soil** 424: 35-48. DOI 10.1007/s11104-017-3433-4

Salazar PC, Navarro-Cerrillo R, Cruz G, Villar R (2018). Intraspecific leaf functional trait variability of eight *Prosopis pallida* tree populations along a climatic gradient of the dry forests of northern Peru. **Journal of Arid Environment** 152: 12-20 doi <https://doi.org/10.1016/j.jaridenv.2018.01.010>

Olmo M, Villar R (2018). Changes in root traits explain the variability of biochar effects on fruit production in eight agronomic species. **Organic Agriculture** 9: 139-153.

de la Riva EG, Lloret F, Pérez-Ramos IM, Marañón T, Saura-Mas S, Díaz-Delgado R, Villar R (2017) The importance of functional diversity in the stability of Mediterranean shrubland communities after the impact of extreme climatic events. **Journal of Plant Ecology** 10: 281–293. doi:10.1093/jpe/rtw027.

Bongers FJ, Olmo M, Lopez-Iglesias B, Anten N, Villar R (2017) Drought responses, phenotypic plasticity and survival of Mediterranean species in two different microclimatic sites. **Plant Biology** 19: 386–395. DOI:10.1111/plb.12544.

Pérez-Ramos I, Díaz-Delgado R, de la Riva E, Villar R, Lloret F, Maranon T (2017) Climate variability and community stability in Mediterranean shrublands: the role of functional diversity and soil environment. **Journal of Ecology** 105: 1335–1346.

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- Lloret F, de la Riva EG, Pérez-Ramos IM, Marañón T, Saura-Mas S, Díaz-Delgado R, Villar R (2016) Climatic events inducing die-off in Mediterranean shrublands: are species' responses related to their functional traits? *Oecologia* DOI 10.1007/s00442-016-3550-4.
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- Navarro-Fernández CM, Pérez-Ramos IM, Riva EG, Vera JR, Roumet C, Villar R, Marañón T (2016) Functional responses of Mediterranean plant communities to soil resource heterogeneity: a mycorrhizal trait-based approach. *Journal of Vegetation Science* 27: 1243–1253. Doi: 10.1111/jvs.12446.
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Chapters of books

- Escudero A, Mediavilla S, Olmo M, Villar R, Merino J (2017) Coexistence of deciduous and evergreen oak species in Mediterranean environments: costs associated with the leaf traits of both habits. En: *Oaks Physiological Ecology. Exploring the Functional Diversity of Genus Quercus L.* Eds: Gil-Pelegrín E, Peguero-Pina JJ, Sancho-Knapik D. Series Title: Tree Physiology.
- Villar R, Ruiz-Benito P, de la Riva EG, Poorter H, Cornelissen JHC, Quero JL (2017) Growth and growth-related traits for a range of *Quercus* species grown as seedlings under controlled conditions and for adult plants from the field. En: *Oaks Physiological Ecology. Exploring the Functional Diversity of Genus Quercus L.* Eds: Gil-Pelegrín E, Peguero-Pina JJ, Sancho-Knapik D. Series Title: Tree Physiology 393-417.
- Alameda D, Villar R (2013) Patrón espacial de las variables de la compactación del suelo y su relación con la cobertura vegetal. En: *Avances en el Análisis Espacial de Datos*



Ecológicos: Aspectos Metodológicos y Aplicados. De la Cruz, M. y Aragón, F. (eds.) 2013. ECESPA-Asociación Española de Ecología Terrestre. Móstoles. Madrid, España.

C.2. Research projects and grants

- *El funcionamiento de los bosques mediterráneos desde la perspectiva del análisis económico de la producción.* Ref: CGL2014-53236-R. Ministerio de Economía y Competitividad. 88000 (costes directos) **IP: Rafael Villar Montero.** Duración: 2015-2018.
- *Rasgos funcionales de las poblaciones locales de algarrobo (*Prosopis palida*) y su influencia sobre los servicios ecosistémicos en las principales comunidades rurales del norte de Perú.* Programa de Ciencia y Tecnología de Perú. Ref: 146-FINCyT-IB-2013. 107.188,24 euros. **IP: Gastón Cruz Alcedo.**
- *Dehesa Ecosystems: development of policies and tools for biodiversity conservation and management.* Life11 BIO/ES/726. European Union. 01/10/2012 a 31/12/2018, 614.099 euros, **IP: Consejería de Medio Ambiente, Junta de Andalucía.**
- *Importancia de rasgos vegetales claves en la distribución ecológica y en el éxito en la restauración del los ecosistemas (DIVERBOS).* Ref: CGL2011-30285-C02-02. Ministerio de Economía y Competitividad. Cuantía: 143990 **IP: Rafael Villar Montero.** Duración: 2012-2014
- *Estudio de biocarbón como sumidero de carbono. Cálculo del potencial de eliminación de CO₂ atmosférico e impacto en el medio ambiente (BIOCAR).* Ministerio Ciencia e Innovación Ref: IPT-440000-2010-8 25-06-2010- 31-12-2013, Subprograma INNFACTO, Cuantía: 146.587, **IP: Rafael Villar Montero**
- *Rasgos foliares y su relación con el funcionamiento de las plantas y ecosistemas mediterráneos (INTERBOS-02CGL2008-04503-CO3-02).* Ministerio de Ciencia e Innovación 2009-2011. **IP: Rafael Villar Montero.** Concesión: 144.353 euros

C.4. Teaching

He has dedicated 25 years of teaching in the University, mainly with the subjects of Ecology, Systems Ecology, Methods in Ecology for the Biology and Environmental Sciences degrees. The teaching dedication has varied from 90 to 198 hours per year, with an average dedication of 150 ± 29 hours per year. He has also participated in several subjects of three masters.

C.5. Reviews

He has been a reviewer of a large number of articles in various journals in the area of Ecology and Plant Sciences as: Functional Ecology, New Phytologist, Acta Oecologica, American Naturalist, Annals of Botany, Oikos, Tree Physiology, etc.

C.6. Dissemination

He has participated in many informative activities in different media as:

Press

- Agencia Sync. Las raíces, tallos y hojas de las plantas se coordinan. <http://www.agenciasinc.es/Noticias/Las-raices-tallos-y-hojas-de-las-plantas-se-coordinan>
- El País. Ciencia. Bongers et al. (2017). El cambio climático provocará que los matorrales devoren el bosque mediterráneo. https://elpais.com/elpais/2017/06/28/ciencia/1498649355_618553.html
- Artículo Science Leaf size 2017. <http://www.larazon.es/sociedad/medio-ambiente/resuelto-el-misterio-del-tamano-de-las-hojas-de-las-plantas-DF15899831>

Videos

Artículo Sack et al. (2017). Ecology Letters
<http://www.historiasdeluz.es/historia-del-dia/sostenibilidad/noticias-andalucia-plantas-cambio-climatico>

Radio and Television <http://www.cedecom.es/noticias/bosque-universitario/>



Fecha del CVA	11/01/2022
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Parte A. DATOS PERSONALES

Nombre	Juan A.		
Apellidos	Oliet Palá		
Sexo		Fecha de Nacimiento	
DNI/NIE/Pasaporte			
URL Web	https://www.researchgate.net/profile/Juan-Oliet		
Dirección Email	juan.olieta@upm.es		
Open Researcher and Contributor ID (ORCID)	0000-0001-7719-9327		

A.1. Situación profesional actual

Puesto	Catedrático de Universidad		
Fecha inicio	2018		
Organismo / Institución	Universidad Politécnica de Madrid		
Departamento / Centro	Sistemas y Recursos Naturales / ETS Ingeniería de Montes, Forestal y del Medio Natural		
País	España	Teléfono	(34) 910671768
Palabras clave	Silvicultura; Ecología vegetal		

A.3. Formación académica

Grado/Master/Tesis	Universidad / País	Año
Diseño y estadística en Ciencias de la Salud	Universitat Autònoma de Barcelona	2004
Doctor Ingeniero de Montes	Universidad de Córdoba	1995

Parte B. RESUMEN DEL CV

Full Professor of Forest restoration, Forest management and Silviculture at Universidad Politécnica de Madrid. Overall, my research interest is focused on forest restoration, with more than 25 years of experience. More specifically, I've worked on ecophysiological aspects of restoration, with special emphasis on understanding the ecophysiology of plant establishment to develop applied strategies and techniques to improve planting/sowing success. One area of research has been seedling quality, for which my main contribution has been the development of fertilization protocols to improve seedling quality. The other area is in tight relation to RECFORREST, looking interactive effects of abiotic stress on physiological response of planted seedlings. My research experience in this area was focused on the effects of microenvironmental conditions provoked by canopy openness, tree-shelters, site preparation and others on the survival and growth of planted trees. The results of my research are being applied to the development of ecotechnologies and planting practices based on regeneration niche theories that are improving planting and direct seedling effects. In the specific field of tree shelters, I've been Principal Investigator (PI) of two research projects since 1997, working with public administrations (Junta de Andalucía) and private companies (Repsol). Main outputs of this research have been 1 book and 14 JCR indexed papers.

Globally I have co-authored 36 JCR indexed papers since 2010 (26 Q1- 9 Q2 -1 Q4). My papers have received 1098 citations and my current H index is 19 since 2016 according to Scholar Google data base, and 1016 citations with an H index of 16 according to Scopus Database (since 2003). Similar records are depicted in Web of Knowledge. I've also co-authored 26 books/chapters, four books and eight book chapters as a first author. Advisor in five Doctoral Thesis, one currently in progress. Three were defended from 2010 to present. I have supervised 17 Master Thesis and 70 Final Grade Projects. Since 2010 I've been PI in three competitive projects funded by Department of Science of Spain (256,000 €), and participated (or currently participating) in other three projects from national and regional agencies. I've participated in one European MSCA (Action 691149, SufoRun). Currently I participate in a new MSCA Action (#101007950) and another European COST Action Pan-European Network for Climate Adaptive Forest Restoration and Reforestation (PEN-CAFORR) CA19128. I collaborate



with universities abroad (Forestry University of Beijing, Universities of Purdue and Hawaii in USA, Pontificia Católica Universidad de Santiago de Chile and University of Hawaii) where I have made some internships. Since 2011, I organized two scientific Congresses, one of them international. Founder of Restoring Forest international Group. Currently referee of more than 20 scientific journals in forestry, forest restoration, mineral nutrition, ecological restoration, plant physiology..., as well as Associate Editor of New Forests Journal since 2010. I participate in several scientific working groups such as ECOGESFOR (www.ecogesfor.org/en/) and FORECOLAB (www3.uah.es/forecolab/). Currently I'm the Coordinator of Repoblaciones forestales Group of the Spanish Society of Forest Science. I collaborate with key stakeholders for forest restoration in Spain (Junta de Andalucía, WWF, Repsol, TRAGSA, Junta de Comunidades de Castilla-La Mancha).

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES

C.1. Publicaciones más importantes en libros y revistas con “peer review” y conferencias

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores. Si aplica, indique el número de citaciones

- 1 **Capítulo de libro.** Magnus Loff; Back Tomas Ersson; Joakim Hjältén; Tomas Nordfjell; Juan Antonio **Oliet Pala**; Ian Willoughby. (5/6). 2015. Site Preparation Techniques for Forest Restoration Restoration of boreal and temperate forests. CRC Press. Capítulo 5, pp.85-105. ISBN 978-1-4822-1196-2.
- 2 **Artículo científico.** José A. Sigala; Juan A. Oliet; Mercedes Uscola. 2021. Assessing growth, frost tolerance and acclimation of pine seedlings with contrasted dormancy strategies as influenced by organic nitrogen supply *Physiologia Plantarum*. Wiley OnLine Library. 173-3, pp.1105-1119.
- 3 **Artículo científico.** Enrique Andivia; Pedro Villar-Salvador; Juan A- Oliet; Jaime Puértolas-Simón; et al.2021. Climate and species stress resistance modulate the higher survival of large seedlings in forest restorations worldwide *Ecological Applications*. 31-6, pp.e02394.
- 4 **Artículo científico.** Juan A Oliet; Jaime Puértolas; Patricio Valenzuela; Alberto Vázquez de Castro. 2021. Light Transmissivity of Tree Shelters Interacts with Site Environment and Species Ecophysiology to Determine Outplanting Performance in Mediterranean Climates *Land*. MDPI. 10-7, pp.753-763.
- 5 **Artículo científico.** José L. García-Pérez; Juan A. Oliet; Pedro Villar-Salvador; Jorge E-Guzmán. 2021. Root growth dynamics and structure in seedlings of four shade tolerant Mediterranean species grown under moderate and low light *Forests*. MDPI. 12, pp.1540.
- 6 **Artículo científico.** Nadia Rojas-Arévalo; Juan F. Ovalle; Juan A. Oliet; Frida I. Piper; Patricio Valenzuela; Rosana Ginocchio; Eduardo C. Arellano. 2021. Solid shelter tubes alleviate summer stresses during outplanting in drought-tolerant species of Mediterranean forests *New Forests*. Springer. Published on line, pp.1-15.
- 7 **Artículo científico.** Kyle M.E. Rose; James B. Friday; Juan A. Oliet; Douglass F. Jacobs. 2020. Canopy openness affects microclimate and performance of underplanted trees in restoration of high-elevation tropical pasturelands *Agricultural and Forest Meteorology*. Elsevier. 292-293, pp.108-105.
- 8 **Artículo científico.** Jose A. Sigala; Mercedes Uscola; Juan A. Oliet; Douglass F. Jacobs. 2020. Drought tolerance and acclimation in *Pinus ponderosa* seedlings: the influence of nitrogen form *Tree Physiology*. 40-9, pp.1165-1177.
- 9 **Artículo científico.** Andrei Toca; Pedro Villar-Salvador; Juan A. Oliet; Douglass F. Jacobs. 2020. Normalization criteria determine the interpretation of nitrogen effects on the root hydraulics of pine seedlings *Tree Physiology*. 40-10, pp.1381-1391.
- 10 **Artículo científico.** Joaquín Martínez-Urreaga; F.R. Beltran; J. Acosta; et al;. 2020. Tube shelters from agricultural plastic waste: An example of circular economy *Journal of Cleaner Production*. 268, pp.122401.



- 11 Artículo científico.** Andrei Toca; Juan A. Oliet; Pedro Villar-Salvador; Rodrigo Martínez-Catalán; Douglass F. Jacobs. 2019. Ecologically distinct pine species show differential root development after outplanting in response to nursery nutrient cultivation *Forest Ecology and Management*. Elsevier. 451, pp.117562.
- 12 Artículo científico.** Juan A. Oliet Palá; Raúl Blasco; Patricio Valenzuela; María Melero; Jaime Puértolas. 2019. Should we use meshes or solid tube shelters when planting in Mediterranean semiarid environments? *New Forests*. Springer. 50, pp.267-282.
- 13 Artículo científico.** Patricio Valenzuela; Eduardo Arellano; James Burguer; M.A. Pérez; Juan A. Oliet. (5/5). 2018. Soil conditions and sheltering techniques improve active restoration of degraded *Nothofagus pumilio* forest in Southern Patagonia *Forest Ecology and Management*. ELSEVIER. 424, pp.28-34. ISSN 0378-1127.
- 14 Artículo científico.** Juan A. Oliet; Rosa Planelles; Francisco Artero; Juan M. Domingo-Santos. (1/4). 2016. Establishing *Acacia salicina* under dry Mediterranean conditions: The effects of nursery fertilization and tree shelters on a mid-term experiment with saline irrigation *Ciencia e Investigación Agraria*. 43-1, pp.385-396. ISSN 0718-1620.
- 15 Artículo científico.** Juan F. Ovalle; Eduardo Arellano; Juan A. Oliet; Pablo Becerra; Rosanna Ginocchio. (3/5). 2016. Linking nursery nutritional status and water availability post-planting under intense summer drought: the case of a South American Mediterranean tree species *IForest-Biogeosciences and Forestry*. 9-null, pp.758-765. ISSN 1971-7458.
- 16 Artículo científico.** Mercedes Uscola; Francis Salifu; Juan Antonio Oliet Pala; Douglass F. Jacobs. (3/4). 2015. An exponential fertilization dose-response model to promote restoration of the Mediterranean oak *Quercus ilex* *New Forests*. 46-5-6, pp.795-812. ISSN 0169-4286.
- 17 Artículo científico.** Juan Antonio Oliet Pala; Alberto Vázquez de Castro Nogales; Jaime Puértolas. (1/3). 2015. Establishing *Quercus ilex* under Mediterranean dry conditions: sowing recalcitrant acorns versus planting seedlings at different depths and tube shelter light transmissions *New Forests*. 45-5-6, pp.869-884. ISSN 0169-4286.
- 18 Artículo científico.** Douglass F. Jacobs; Juan A. Oliet; James Aronson; et al.; (2/11). 2015. Restoring forests: What constitutes success in the twenty-first century? *NEW FORESTS*. 46-5-6, pp.601-614. ISSN 0169-4286.
- 19 Artículo científico.** Alberto Vazquez de Castro; Juan A. Oliet; Jaime Puértolas; Douglass F. Jacobs. (2/4). 2014. Light transmissivity of tube shelters affects root growth and biomass allocation of *Quercus ilex* L. and *Pinus halepensis* Mill *ANNALS OF FOREST SCIENCE*. 71-1, pp.91-99. ISSN 1286-4560.
- 20 Artículo científico.** Juan Antonio Oliet Pala; Francisco Artero; Simón Cuadros; Jaime Puértolas; Lourdes Luna; José M. Grau. (1/6). 2012. Deep planting with shelters improves performance of different stocktype sizes under arid Mediterranean conditions *New Forests*. 43-5-6, pp.925-939. ISSN 0169-4286.
- 21 Artículo científico.** Juan Antonio Oliet Pala; Douglass Frederick Jacobs. (1/2). 2012. Restoring forests: advances in techniques and theory *New Forests*. 43-null, pp.535-541. ISSN 0169-4286.
- 22 Capítulo de libro.** J. Pemán; E. Chirino; J. M. Espelta; et al; Juan A. Oliet; E. Gil Pelegrín. (7/10). 2017. Physiological Keys for Natural and Artificial Regeneration of Oaks *Oaks Physiological Ecology. Exploring the Functional Diversity of Genus Quercus*. Springer International Publishing. Cham. 7, pp.453-511. ISBN 978-3-319-69099-5.
- 23 Edición científica.** Douglass F. Jacobs; Juan A. Oliet; James Aronson; et al.; (2/11). 2015. Restoring forests: What constitutes success in the twenty-first century? *NEW FORESTS*. 46-5-6, pp.601-1012. ISSN 0169-4286.

C.2. Congresos

- 1** Juan A. Oliet Palá. Should we use meshes or tube shelters when planting in semiarid environments?. 3rd Restoring Forests: Regeneration and Ecosystem Function for the Future. IUFRO-Purdue University-SLU Faculty of Forest Sciences research school. 2017. Suecia. Participativo - Ponencia oral (comunicación oral). Congreso.



- 2 Juan A. **Oliet Palá**. El uso de plantas de mayor tamaño en repoblaciones forestales aumenta la supervivencia y crecimiento en áreas mediterráneas.. VII Congreso Forestal Español. Sociedad Española de Ciencias Forestales. 2017. España. Participativo - Ponencia oral (comunicación oral). Congreso.
- 3 Juan A. **Oliet Palá**. Establishing holm oak under Mediterranean semiarid conditions: Sowing versus planting under a gradient of shelter light transmission and planting depth. Restoring Forests. What constitutes success in the XXI Century?. Purdue University, IUFRO, USDA Forest Service. 2014. Estados Unidos de América. Participativo - Ponencia oral (comunicación oral). Congreso.

C.3. Proyectos o líneas de investigación

- 1 **Proyecto**. Pan-European Network for Climate Adaptive Forest Restoration and Reforestation” (PEN-CAForR) CA19128 (PEN-CAForR) CA19128. Comisión Europea. Vladan Ivetic. (Países de la Unión Europea y Otros). 01/10/2020-01/10/2024.
- 2 **Proyecto**. Decision Support for the Supply of Ecosystems Services under Global change” (MSCA #101007950). Comisión Europea. Jordi García Gonzalo. (Centro Tecnológico Forestal de Cataluña). 2021-2024.
- 3 **Proyecto**. Aumentando la resiliencia y resistencia de los sistemas agroforestales andaluces: bases para la restauración frente a los efectos del cambio global (RESISTE) P18-RT-1927. Junta de Andalucía. Jorge Castro Gutiérrez. (Universidad de Granada). 2020-2022. 108.292 €.
- 4 **Proyecto**. Conocimiento científico para avanzar hacia la consecución de los Objetivos de Desarrollo Sostenible: una ecología translacional es necesaria. P2018/EMT-4338. REMEDINAL TE-CM. Comunidad de Madrid. Adrián Escudero. (Universidad Rey Juan Carlos). 2018-2022. 817.000 €.
- 5 **Proyecto**. AGL2016-77863, FORADMIT: Gestión forestal para la adaptación y mitigación: diversificación estructural y específica de pinares mediterráneos de repoblación. Ministerio de Economía y Hacienda. Juan Antonio **Oliet Pala**. (Universidad Politécnica de Madrid). 16/12/2016-16/12/2020. 133.100 €. Investigador principal.
- 6 **Proyecto**. Models and decision SUpport tools for integrated Forest policy development under global change and associated Risk and Uncertainty. MSCA 691149 SuFoRun. European Commission. (Centro Tecnológico Forestal de Cataluña). 01/01/2016-01/01/2019. 328.000 €. Miembro de equipo.
- 7 **Proyecto**. AGL2011-24296, Tolerancia y estrategias ecofisiológicas de los pinos ibéricos durante la fase juvenil en respuesta al estrés hídrico, las bajas temperaturas y la disponibilidad de nutrientes ECOLPIN. Ministerio de Economía y Competitividad. Pedro Villar Salvador. (Universidad de Alcalá). 13/07/2011-12/07/2014. 145.000 €. Miembro de equipo.
- 8 **Proyecto**. AGL2011-13243-E, Acción Complementaria para la Organización del I Congreso Internacional RESTORING FORESTS Advances in Techniques and Theory.. Ministerio de Economía y competitividad. Juan Antonio **Oliet Pala**. (Universidad Politécnica de Madrid). 02/11/2011-31/12/2011. 8.000 €.
- 9 **Proyecto**. C11072007, CONGRESO INTERNACIONAL RESTORING FORESTS: ADVANCES IN TECHNIQUES AND THEORY. Universidad Politécnica de Madrid. Juan Antonio **Oliet Pala**. (Universidad Politécnica de Madrid). 01/01/2011-31/12/2011. 3.000 €.
- 10 **Proyecto**. C09072001, DISEÑO, CARACTERIZACION Y SELECCION DE MATERIAL PLASTICO FOTOSELECTIVO EN TUBOS PROTECTORES PARA REPOBLACION CON ESPECIES FORESTALES.. Ministerio de Ciencia e Innovación - REPSOL YPF. Juan Antonio **Oliet Pala**. (Universidad Politécnica de Madrid). 01/01/2009-31/12/2011. 119.000 €.
- 11 **Contrato**. Identificación de zonas forestales a restaurar en España según criterio experto (FUCOVASA 6201294) WWF / Adena. Juan A Oliet. 2019-01/07/2020. 6.000 €.
- 12 **Contrato**. Elaboración de un protocolo de seguimiento de repoblaciones forestales de reciente ejecución (FUCOVASA 6201086) Asociación para la defensa de la Naturaleza WWF/Adena.. Desde 2017. 7.260 €.

