CURRICULUM VITAE (CVA)

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

CV date	11/05/2023

Part A. PERSONAL INFORMATION

First name	José Miguel		
Family name	Olano Mendoza		
Gender (*)	Male	Birth date	13/01/1966
ID number	16043063B		
e-mail	josemiguel.olano@uva.es	URL Web: https://www.cambiumresearch.eu/people/jose-miguel-olano/	
Open Research and Contributor ID (ORCID)(*)		0000-0002-4526-5462	

(*) Mandatory

A.1. Current position

Position	Full Professor (CAUN)		
Initial date	21/06/2019		
Institution	Universidad de Valladolid		
Departament/Center	Ciencias Agroforestales/EiFAB		
Country	Spain	Telephone	
Key words	Plants, global change, seed banks, tree rings, wood anatomy		

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

Period	Position/Institution/Country/Interruption cause
2003 - 2019	Professor (PTUN)/UVa/Spain
2001 - 2003	Profesor Ayudante de Universidad (PRAS)/UVa/Spain
1999 - 2001	Associate Professor (PRAS)/UVa/Spain
1997 - 1997	Associate Professor (PRAS)/ UPV/EHU / Spain
1996 - 1996	Associate Professor (PRAS)/U Politécnica Valencia / Spain
1990 - 1993	FPU Predoctoral/ UPV/EHU / Spain

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Biological Sciences PhD	Universidad del País Vasco (UPV/EHU) Spain	1995
Biology Degree	Universidad del País Vasco (UPV/EHU) Spain	1989

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

I am a biologist specialized in Ecosystems (1989) with a PhD on numerical classification of vegetation communities (1995) by Basque Country University under the direction of Javier Loidi (https://bit.ly/2JE9DE3). After my PhD I got temporary positions as teacher in Polytechnic University of Valencia (1996) and Basque Country University (1997), while working as independent biologist on vegetation mapping and forest conservation. In 1999, I got a temporary position in Soria (Spain) at the Universidad de Valladolid, it became permanent in 2003 and I became Botany Full Professor in 2019. Since January 2018, I have been the dean

of EiFAB (http://ingenieriasoria.blogs.uva.es/), forest and agricultural engineering faculty in Soria. I am board member of the Cesefor foundation (http://www.cesefor.com/). I have combined research with teaching Botany and Ecology in Forest and Agricultural Engineering, Education and Biology Faculties for 26 years and 17 years in Master and PhD courses. I have also led seven PhD thesis, and currently lead two.

Along my career, I have developed different research lines starting from community classification (phytosociology), moving on to seed bank dynamics in forests and gypsum ecosystems, forest dynamics, plant demography, mycological production, resource levels effects in plant growth or plant insect interactions. Since 2006, I focused on the application of dendrochronology to gain temporal insight on answer to different ecological questions (facilitation, succession, response to climate, effect of management…) using all available proxies in wood (ring width, IADF, anatomy, microdensitometry, isotopes…) and applying them to the broad range of plants (trees, shrubs and forbs). Recently, I have begun to combine tree ring information with the use of remote sensing and artificial intelligence to gain larger spatio-temporal context on the effects of global change in forest ecosystems as well as development of software and hardware to improve data acquisition and processing.

My research has resulted in 115 SCI publications (>75% Q1) receiving 3623/5166 citations (Scopus/Google Scholar) with an h index of 33/40 as well as several books and book chapters. I have been granted with four research “sexenios” (last in 2018) and one of transference (2018). I have also a software intellectual property. For me it is increasingly important to contribute to the transfer of the research to the society, disseminating to the broad public and also to the managers and stakeholders to improve management techniques. In this sense, I am particularly proud of my work in Teide National Park that have contributed to the configuration of Park’s policy to cope with global change drivers. In this sense the National Park decision to recover former *Juniperus cedrus* woodlands from the populations restricted to cliffs by human and livestock pressure, is based on our work (shorturl.at/MY457). I would also like to remark my contribution on forest management adaptation to climate change in Soria, my adopted land, within LIFE Soria Forest Adapt project.

Science is a global enterprise and I have done research stays in the United States (Oklahoma State University, Archbold Biological Station (Fl), University of Arizona), Russia (SFU), Germany (Erlangen University), Austria (Wien Univesitat) and Switzerland (WSL), resulting in publications in most of the stays and long-term collaborations with WSL and SFU.

Along my scientist career, successes and, above all, mistakes have provided me a deeper insight on our profession. This experience has been critical to acquire scientific and social abilities necessary to form a dynamic research group. In this sense, I consider me very fortunate to have the opportunity of creating the *cambium research group*, that has grown from 5 researchers in 2016 to 19 (7 postdocs of different fields and academic ages) as January 2023, with 4 predocs incorporating in a few months. Building a multidisciplinary and productive group focused on global change effects in terrestrial ecosystems understanding, monitoring and management, has been a rewarding task. It is an honor to see that the group I started is increasingly recognized in our university (awarded with UVa Consejo Social Prize 2022) as well in our research field. Moreover, we have accomplished this task in a small campus without scientific tradition and starting from a reduced permanent position staff (2). Beyond size and productivity, my deeper satisfaction is that in *cambium* (www.cambiumresearch.eu), researchers are in the center and do our best to develop a successful and personally rewarding career, while doing good (and enjoyable) Science. This is particularly the case of predocs and young postdocs that need cues and mentoring to face the competitive Spanish scientific system. In this sense, many of the pre- or postdocs that I mentored have obtained permanent positions, competitive postdocs, awards or national and international research projects.

Part C. RELEVANT MERITS

C.1. Publications

A list of recent selected publications. Full list in http://bit.do/eS6WV

1. **Olano JM**, Hernández-Alonso H, Sangüesa-Barreda G, Rozas V, García-Cervigón AI, García-Hidalgo M (2022) Disparate response to water limitation for vessel area and secondary growth along *Fagus sylvatica* southwestern distribution range. *Agricultural and Forest Meteorology* 323:109082. doi.org/10.1016/j.agrformet.2022.109082 Total cites: 1
2. **Olano JM**, García-Cervigón AI, Sangüesa-Barreda G, Rozas V, Muñoz-Garachana D, García-Hidalgo M, García-Pedrero A (2021) Satellite data and machine learning reveal the incidence of late frost defoliations on Iberian beech forests. *Ecological Applications* 31: e02288. doi.org/10.1002/eap.2288 Total cites:11 (5.5 cites/year)
3. Sanguesa-Barreda G, Di Filippo A, Piovesan G, Rozas V, Di Fiore L, Garcia-Hidalgo M Garcia-Cervigon, AI, Muñoz-Garachana D, Baliva M, **Olano JM** (2021) Warmer springs have increased the frequency and extension of late-frost defoliations in southern European beech forests. *Science of the Total Environment* 775: 145860. doi.org/10.1016/j.scitotenv.2021.145860 Total cites: 28 (14 cites/year)
4. García-Cervigón AI, Fajardo A, Caetano-Sánchez C, Camarero JJ, **Olano JM** (2020) Xylem anatomy needs to change, so that conductivity can stay the same: Xylem adjustments across elevation and latitude in *Nothofagus pumilio*. *Annals of Botany* 127(7): 1101–1112. doi: doi.org/10.1093/aob/mcaa042 Total cites: 22 (5.4 cites/year)
5. **Olano JM**, Martínez-Rodrigo R. Altelarrea JM, Ágreda T, Fernández-Toirán M, García-Cervigón AI, Rodríguez-Puerta F, Águeda B (2020) Primary productivity and climate control mushroom yields in Mediterranean pine forests. *Agricultural and Forest Meteorology* 288-289: 108015. doi.org/10.1016/j.agrformet.2020.108015 Total cites: 6 (1.5 cites/year)
6. **Olano JM**, González-Muñoz N, Arzac A, Rozas V, Von Arx G, Delzon S, García-Cervigón AI. (2017) Sex determines xylem anatomy in a dioecious conifer: hydraulic consequences in a drier world. *Tree Physiology* 37: 1493-1502. doi.org/10.1093/treephys/tpx066 Total cites: 33 (4.7 cites/year)
7. **Olano JM**, Arzac A, García-Cervigón AI, von Arx G, Rozas V (2013) New star on the stage: Amount of ray parenchyma in tree rings shows a link to climate. *New Phytologist* 198: 486-495. doi.org/10.1016/j.ppees.2013.04.001 Total cites: 90 (8.2 cites/year)
8. von Arx G, Arzac A, Fonti P, Frank D, Zweifel R, Rigling A, Galiano L, Gessler A, **Olano JM**. (2017) Responses of sapwood ray parenchyma and non-structural carbohydrates of *Pinus sylvestris* to drought and long-term irrigation. *Functional Ecology* 31: 1371-1382. doi.org/10.1111/1365-2435.12860 Total cites: 82 (11.7 cites/year)
9. **Olano JM**, Eugenio M, García-Cervigón AI, Folch M, Rozas V (2012) Quantitative Tracheid Anatomy Reveals a Complex Environmental Control of Wood Structure in Continental Mediterranean Climate. *International Journal of Plant Sciences* 173: 137-149. doi.org/10.1086/663165 Total cites: 102 (9.3 cites/year)
10. Camarero JJ, **Olano JM**, Parras A (2010) Plastic bimodal xylogenesis in conifers from continental Mediterranean climates. *New Phytologist* 185: 471-480. doi.org/10.1111/j.1469-8137.2009.03073.x Total cites: 419 (29.9 cites/year)

C.2. Congress

I have presented more than a hundred presentation in congress. I have contributed to the organization of three international congress (1 organizing committee (42nd IAVS, 2 scientific committee 14nd TRACE, III Coloquio *Juniperus*) and one national congress (organizing committee AEFA-1997).

C.3. Research projects

1) **LIFE ForestAdapt** LIFE19 CCA/ES/0011816RA-I0**.** Funded by European Comission. From October 2020 to October 2024. Funding 1.5 Million €. Led by Fundación Global Nature. Number of partners 5. José Miguel Olano (UVa) leads one action 75000 €. 2020-2024.
2) **PROWARM**. Winter is not coming: Understanding the pine processionary moth rangeof expansion in a context of global warming. PID2020-118444GA-I00. Funded by Mineco. # *researchers 3*. PI: Gabriel Sangüesa Barreda. Funding: 141.000 € + 4 years predoct contract. 2021-2024
3) **High resolution platform f**or microscopic analysis of specimens on microscope slide. Infrarred IR2020-1-UVA08. Funded by Junta de Castilla y León. 175.000 €. # *researchers 12*. PI José Miguel Olano. 2020-2021
4) **Outbreak**: Merging AI, remote sensors and dendrochronology to reconstruct and predict moth processionary outbreaks in Castille and León VA171P20. Funded by Junta de Castilla y León. 264.000 €. # *researchers 10*. IP José Miguel Olano. 2020-2023.
5) ***spRING. Novel proxies to understand forest response to spring conditions under climate change*** CGL2017-87309-P. Funded by Spanish Ministry (Mineco). Funding 128.000 € + 4 years predoct contract. # *researchers 2*. PI Vicente Rozas. 2018-2020.
6) ***LAUREL. Reading wood to assess the vulnerability of Macaronesian laurel forests to global change*** PID2019-109906RA-I00. Funded by Spanish Ministry (Mineco). Funding 101.640 €. # *researchers 2*. PI Ana I García-Cervigón. 2020-2022.
7) **Understanding laurel forest dynamics to develop management strategies to climate change.** VA113G19. Funded by Castilla y León Regional Government. From Jan 2019 to October 2021. Funding 12000 €. # researchers 8. PI: Vicente Rozas.
8) **Juan de la Cierva Incorporation grant to Gabriel Sangüesa.** 3 year post doc contract (2021-2023). Receiving institution host: José Miguel Olano.

C.4. Contracts, technological or transfer merits

Since 2017 I have been board member of Cesefor Foundation (http://www.cesefor.com/). During this period Cesefor has become a reference institution in technology transfer for the forestry sector (>50 workers). Beyond my role as board, I have collaborated providing assessment to its mycology line, for example within Operative Group GO Mikogest. I am also partner in the LIFE Project Soria Forest Adapt (*see projects above*), aimed to provide adaptive solutions to forestry in response to climate change. In this sense we are currently developing "Cuadernos de Zona" for Soria and Castilla y León, these documents aim to identify the adequate planting species for each area under the forecasted climate conditions.

I led four projects for Teide National Park (financed through GESPLAN) to identify the mortality drivers of Teide broom and the situation of *Juniperus cedrus* populations. In these projects we have associated Teide broom decline to extreme drought events and identified ancient *Juniperus* trees population (older than 1000 years) in cliffs that have been the reservoirs supporting current NP juniper population. Currently, we have started a project to identify the genetic structure of Teide juniper populations. As a result, National Park policy has designed a recovery plan for this species that will be profusely planted.

I collaborate with föra forest technologies, and I have codirected an Industrial Doctorate. I also collaborate regularly with Bioma Forestal entreprise reconstructing forest management history

I have coauthored the Nature 2000 Habitat Guide for Castilla y León Autonomous Region (ISBN: 9788497184755) and for Navarra Kingdom (ISBN: 978-84-235-3499-9) that have contributed to a better application of Natura 2000 actions.