

| | | | |
|-------------------------------------|--|---------------------|------------|
| Part A. PERSONAL INFORMATION | | CV date | 20/09/2023 |
| First and Family name | Penélope Serrano Ortiz | | |
| Researcher codes | Open Researcher and Contributor ID (ORCID**) | 0000-0001-7888-1889 | |
| Researcher codes | 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"): 3 (2004-2009, 2010-2015, 2016-2021). Grant date: 03/05/2022

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

Scopus: h-factor=27, citations=2877, i10-index=47, citations/year=167.7 (in 2016-2020)

Number of PhD. thesis oriented: 2 defended, 3 ongoing

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

Dr. Penélope Serrano Ortiz is a leading 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/or Principal Investigator for several projects "GEISpain" (2015-2018), "ELEMENTAL" (2018-2021), INTEGRATYON3 (Programa Estatal de I+D+i, Retos de la Sociedad); "IBERALP" (2021-2024) (Parques Nacionales); "OLEAGEIs" (2021-2023) (Proyectos I+D+i del Programa Operativo FEDER 2020)
2. Principal Investigator for the University of Granada (UGR) in the European FP7 InGOS project (2011-2015). 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 more than 80 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. Aranda-Barranco, S. **Serrano-Ortiz, P.**, Kowalski, A.S., Sánchez-Cañete, E.P. (**position: 2/4**). The temporary effect of weed-cover maintenance on transpiration and carbon assimilation of olive trees. *Agricultural and Forest Meteorology*, 2023, 329, 10926. **Q1**
2. **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**
3. 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**



4. 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**
5. **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**
6. **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**
7. **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**
8. 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**
9. **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**
10. **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**

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: Seguimiento integrado del intercambio de gases de efecto invernadero y aerosoles entre atmósfera y ecosistema en tierras secas: técnicas de teledetección y eddy covariance (INTEGRATYON3). PID2020-117825GB-C21. Financial entity: Ministerio de Economía y Competitividad fundamental. Legth: 09/2021-08/2025. PI: Penélope Serrano Ortiz and Juan Luis Guerrero Rascado. Amount: 197.230 €. Type of Participation: Coordinator and Principal Investigator
3. 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 (Amount:)
4. 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



5. 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.

6. Title: Improving future ecosystem benefits through Earth Observations (ECOPOTENTIAL) EP-210159204. Financial entity: European Commission. Length: 10/2015-12/2018. PI: Antonello Provenzale (National Research Council of Italy). Type of Participation: Researcher.

7. 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.

8. 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

9. 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)

10. 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.

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€