



## CURRICULUM VITAE (CVA)

CV date	03/2024
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### Part A. PERSONAL INFORMATION

First name	Ana		
Family name	Andreu Méndez		
Gender	Female	Birth date	12/07/1984
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#### A.1. Current position

Position	Ramón y Cajal Fellow		
Initial date	01/02/2024		
Institution	University of Córdoba (UCO)		
Department	Fluvial Dynamics & Hydrology Group, Dept of Agronomy-DAUCO- María de Maeztu		
Country	Spain	Teleph. number	+34 957 212662
Keywords	Savanna, Hydrology, Earth Observation, Micrometeorological data, Semiarid ecosystems, Biomass, Drought.		

#### A.2. Previous positions (research activity interruptions, art. 13.2.b))

Period	Position/Institution/Country/Cause of the Interruption
01/02/2022 - 31/01/2024	Postdoctoral Fellow, DAUCO open call 2021
01/02/2020 - 31/01/2021	Marie Curie postdoc. in IFAPA, Cordoba, Spain.
01/02/2018 - 31/01/2020	Marie Curie postdoc. in Univ. of California, Berkeley (Cal), USA.
01/07/2017 - 31/10/2017	Undertaking in United Nations Univ. - FLORES, Dresden, Germany.
01/10/2015 - 30/06/2017	Research Assistant at UNU-FLORES, Dresden, Germany.
12/01/2015 - 30/09/2015	Postdoctoral fellow at Univ. of California, Berkeley, USA.
01/12/2010 - 30/11/2014	Ph.D. student with a competitive grant in IFAPA, Cordoba, Spain.
01/09/2010 - 30/09/2010	Ph.D. student with a competitive grant in UCO, Cordoba, Spain

#### A.3. Education

PhD, Graduate Degree	University/Country	Year
Agronomic Engineer (nº9/142 students)	Polytechnic University of Valencia-Spain	2008
MSc Water&Sanitation Projects in Int.Cooper.	EOI Bussines School-Spain	2009
MSc Environmental Hydraulics	University of Cordoba-Spain	2010
Ph.D. in Biogeochemical Fluxes Dynamics	University of Cordoba-Spain	2014

### Part B. CV SUMMARY [Words in blue are hyperlinks.](#)

My work's overall scientific impact and achievement record are significant for my research stage and field (**H-i 9Scopus/9Google Scholar/8WoS/10RG, 22 JCR/23Scopus pub.**, citations 171S/223GS/155WoS/225RG). My career has been connected to monitoring Mediterranean landscapes using remote and ground sensors to support decision-making processes. Currently, I have a competitive position at the **Fluvial Dynamics and Hydrology (DFH)** group, focusing on the impact of microclimate conditions on the hydrology and management of [Andalusian mountainous](#) and dehesa areas. I also led the project [DroughT impACt on the vegeTation of South African semlarid mosaiC landscapes: Implications on grass-crop-lands primary production](#) funded by the European Space Agency (ESA). Recently, I was selected for the prestigious **Ramon y Cajal Fellowship 2022**, and I plan to continue developing my research line in the UCO.

Previously, I was a **Marie Skłodowska-Curie** postdoc. (IFAPA, Córdoba), leading [SWATCH Savanna WATER and Carbon fluxes modeling integrating Earth Observation](#). The 1<sup>st</sup> phase was conducted with Prof. Baldocchi at the [Biometlab, Univ. of California, Berkeley \(Cal\)](#), US. I strengthened my theoretical, technical, and applied knowledge there while bolstering my international network. From 2015-2017, I worked at the United Nations Univ. -FLORES (Germany), where I led the [Remote Sensing of Water Use & Stress in the African Savanna](#) Tiger project, funded by ESA. Before this experience, I was a **postdoc at Cal**, which was key in defining my research line. I defended my **Ph.D. in Dec. 2014** (Cum Laude) in collaboration with groups in Spain, The Netherlands, and the USA.

I have demonstrated **leadership** and independent thinking by **leading (3)** and participating in international (10) and national (7) projects, together with private companies (such as [COVAP](#) or [Deimos](#)) and public administrations (like Natural Parks agencies), publishing in indexed journals, designing and conducting field campaigns (e.g., [Tonzi-Ameriflux](#) in the US, [Kruger Park](#) in South Africa, [Santa Clotilde](#) farm and [Andalusian mountains](#) in Spain), supervising Ph.D. thesis (1 finalized/2 ongoing), Master thesis (1 finalized/2 ongoing) and students, writing book chapters (9BC, e.g., [Fekete et al., 2021](#) -37 citations), obtaining grants (13), and initiating independent collaborations with world-leading researchers that developed into publications or project collaborations.

I have been convener of the [EGU2023 Evapotranspiration session](#), and Scientific Committee for the [Remedia 2022](#) & [Remote Sensing & Hydrology-IAHS 2018](#) symposiums, Guest Editor for the IAHS Proceedings and Remote Sensing special issue on [Savannas](#), coordinator of the workshops [ceiA3 2023 Remote Sensing for Soil Moisture](#), [2023 Hydrometeorological mountain indicators](#), [2017 Remote Sensing for Monitoring Water in African Savannas](#) and IAHS [#2023TheNextDecade](#) and [2014 Remote sensing-based fluxes](#). Besides the **5-yrs abroad**, I have extensive **international** experience, including field campaigns, projects (e.g., Ari-Healthy with ONERA, [Grapex](#) with the USDA), training competitive courses (e.g., [REFLEX2012](#), [ESA LTC2018](#)), conferences (77 in total, 44 oral and 63 international), and short stays (~11 months) in France (CEFE-CNRS Montpellier), in South Africa (at the Western Cape, KwaZulu Natal and Limpopo Universities), the Netherlands (ITC, Twente Univ.), Germany (Bio- and Geosciences Forschungszentrum) and US (Hydrology and Remote Sensing Lab.-USDA).

I have **teaching experience** in doctorate programs (MSc in Env. Hydraulics UCO and Integrated Management of Fluxes UNU-FLORES), courses, and [seminaries](#). I am committed to **public dissemination**: I have more than 15yr of experience in outreach activities, e.g., supporting [Women in Science](#), ecosystem conservation through [NGOs](#), or with public talks ([Las que cuentan la ciencia](#), [Ciencia en el Bar](#)). My research has been covered in [international](#) and [national](#) media, by [UCO](#), [IFAPA](#), [UNU-FLORES](#), and [kids' comics!](#)

### C.1. Publications (selected 10/22) (Impact Factor -IF, Times cited in WoS/Research Gate -CX/CX)

- Johnston, M., **Andreu, A.**, Verfaillie, J., Baldocchi, Moorcroft, P. R. (2022) *What lies beneath: Vertical temperature heterogeneity in a Mediterranean woodland savanna*. [Remote Sensing of Env.](#), **274**. 1<sup>st</sup> decile (D1) (10/279 Env. Sciences), IF: 13.85 (JCR) **Cited by 3**
- Burchard-Levine, V., Nieto, H., [...], & Martín, M. P. **12/8** (2021) *A remote sensing-based 3-source energy balance model to improve global estimations of ET in semi-arid tree-grass ecosystems*. [Global Change Biology](#), **00**, 1–23. D1 (1/60 Biodiversity Conserv.), IF: 13.211(JCR). **8WoS/11RG**
- Johnston, M., **Andreu, A.**, Verfaillie, J., Baldocchi, D., González-Dugo, M. P., Moorcroft, P. R. (2021) *Measuring surface temperatures in a woodland savanna: Opportunities and challenges of thermal imaging in an open-canopy ecosystem*. [Agric. Forest Meteorol.](#) **310**, 108484. D1 (3/91 [Agronomy](#)). IF: 5.734 (JCR) **6WoS/10RG**
- González-Dugo, M. P., Chen, X., **Andreu, A.**, Carpintero, E., Gómez-Giraldez, P. J., Carrara, A., and Su, Z. (2021) *Long-term water stress and drought assessment of Mediterranean oak savanna vegetation using thermal remote sensing*. [Hydrol. Earth Syst. Sci.](#), **25**, 755–768. D1 (7/98 [Water Resources](#)). IF: 5.748 (JCR) **7WoS/9RG**
- Carpintero, E., Mateos, L., **Andreu, A.**, González-Dugo, M. P. (2020). *Effect of the differences in spectral response of Mediterranean tree canopies on the estimation of evapotranspiration using vegetation index-based crop coefficients*. [Agricultural Water Management](#), **238**, 106201. D1 (5/9 [Agronomy](#)). IF: 4.516 (JCR) **19WoS/19WoS**
- Carpintero, E., **Andreu, A.**, Gómez-Giraldez, P. J., Blázquez, Á., González-Dugo, M. P. (2020). *Remote-Sensing-Based Water Balance for Monitoring ET and Water Stress of a Mediterranean Oak-Grass Savanna*. [Water](#), **12**, 1418. Q1 (125/704 Geograp.) IF:3.7 (SJR) **10WoS/10RG**

- 7 **Andreu, A. (CA)**, T. Dube, H. Nieto, A. E. Mudau, M. P. González-Dugo, R. Guzinski, S. Hülsmann. (2019) *Remote sensing of water use and water stress in the African savanna ecosystem at local scale – Development and validation of a monitoring tool*, [Physics & Chem. of the Earth](#), **112** 154-164. Q2 (39/94 Water Resources), IF: 2.308 (SJR) **8WoS/12RG**
- 8 **Andreu A (CA)**, Kustas, W.P., Polo, M.J., Carrara, A. and González-Dugo, M.P. (2018). *Modeling Surface Energy Fluxes over a Dehesa (Oak Savanna) Ecosystem Using TSEB I*. [Remote Sensing](#), **10**, 567. Q1 (7/30 Remote Sensing), IF: 2.992 (JCR) **23WoS/35RG**
- 9 **Andreu A (CA)**, Kustas, W.P., Polo, M.J., Carrara, A. and González-Dugo, M.P. (2018). *Modeling Surface Energy [...] II—Integration of Remote Sensing Medium and Low Spatial Resolution Satellite Images* [Remote Sensing](#), **10**, 558. Q1, IF: 2.992 (JCR) **14WoS/17RG**
- 10 **Andreu A (CA)**., Timmermans W.J., Skokovic D., González-Dugo M.P. (2015) *Influence of component temperature derivation from dual-angle thermal infrared observations on TSEB flux estimates over an irrigated vineyard*. [Acta Geophysica](#), **63**, 1540–1570. Q2 (48/99 in Geophysics), IF: 2.3 (SJR). **8WoS/11RG**

#### C.2. Congress (selected 3/77, 63 international, 44 oral)

1. **Andreu A**, Carpintero E, Muñoz-Gomez MJ, Blazquez-Carrasco A, González-Dugo MP. (2022) [Scale influence in water resources management for heterogeneous oak-savanna distinctive microclimates](#). International Association of Hydrological Sciences IAHS 2022. Montpellier. Oral.
2. **Andreu A**, Carpintero E, Gómez-Giráldez PJ, González-Dugo MP. (2021) [Accounting for carbon exchanges in a semiarid oak savanna \(dehesa\)](#). EGU General Assembly 2021, EGU21-14189. Oral.
3. **Andreu A**, Dube T., Nieto H., Mudau A.E. Guzinski R., Shoko C., Mutanga O., (2017). Exploring the joint potential of Sentinel 2 & 3 in monitoring water use & stress in African savanna ecosystems. ISRSE37, Tshwane, South Africa, 8 – 12 May 2017. ISBN 978-1-5108-7460-2. Oral.

#### C.3. Research projects (selected 8/17, 10 international, 3 as a Principal Investigator-PI)

1. Team member. 01/01/2023-31/12/2026. EUs Horizon Europe Framework Programme (HORIZON) HORIZON-CL6-2022-GOVERNANCE-01-11. [ScaleAgData. Scaling agricultural sensor data for improved monitoring of agri-environmental conditions](#) (ScaleAgData - 101086355). PI: M.P. González-Dugo. Budget: €207,075. Total project: €7496563. International.
2. **PI**. 27/05/2022 - 27/05/2023. [Drought impACT on the vegeTation of South African semlarid mosaiC landscapes: Implications on grass-crop-lands primary production \(Tactic\)](#). Institutions: UCO, Western Cape Univ. Funded by ESA. 25000€.
3. Team member. 05/10/2020 - 31/12/2022. P20\_00178 [Tendencias hidrometeorológicas en zonas protegidas de montaña en Andalucía \[...\] servicios climáticos para estrategias de adaptación al cambio climático](#). PI: Prof. Polo. Institutions: UCO. Funded by Consejería Economía. 95968€ .
4. Team member. 01/01/2020 - 30/06/2022 1265875-R. [Seguimiento hidrológico de la vegetación en montaña mediterránea mediante fusión de sensores remotos en Andalucía \(SIERRA\)](#). PI: Dr. Pimentel. Institutions: UCO. Funded by UCO and Junta de Andalucía. 25424€
5. Team member. 01/01/2021-30/12/2023. [VSWIR & TIR Synergy to monitor open forest water stress in preparation for French and American observations missions \(ARY-HEALTHY\)](#). PI: Dr. Adeline, K. Institutions: French Aerospace Lab. (ONERA), Cal, U. Davis. Funded by CNES (France).
6. **PI**. 01/02/2018-31/01/2021. H2020-MSCA-IF-2015 SWATCH GA. 703978 [Savanna water and carbon fluxes modelling integrating Earth Observation data](#). Institutions: IFAPA, Cal. Funded by: European Commission H2020-Marie Sklodowska-Curie actions. 239191.2€
7. **PI**. 01/02/2016-01/02/2018. [Remote sensing of water use and water stress in African savanna ecosystem from local to regional scale: Implications for land productivity – Tiger Bridge project #410](#). Institutions: UNU-FLORES, Univ. KwaZulu Natal. Funded by: ESA. 31000€
8. Team member. 20/02/2014-19/02/2016 [A Web-Accessible Database of Modelling Tools for Integrated Resources Management](#). PI: Dr. Huelsmann. Institutions: UNU-FLORES. Funded by the German Federal Ministry for Education and Research.

#### C.4. Contracts, technological or transfer merits (selected)

1. Organizer and lecturer of the workshop on [Hydrometeorological indicators for Andalusian mountains](#) with agents and technicians of Natural Parks in Cabra, Spain, in March 2023.
2. **Andreu, A.**, Carpintero, E., González-Dugo, M.P. (2021) [Teledetección para la agricultura – IFAPA](#), 41 p. Technical guide for farmers.



3. **Andreu, A.** (2021) [Supporting decision-making processes in semi-arid Savannas with Earth Observation](#). The Project Repository Journal, vol 8. ISSN 2632-4067. 104-107p. EDMA (Eds). Outreach paper for public dissemination.
4. Organizer and lecturer of the international workshop on [Remote Sensing of Water Use & Stress in the African Savanna Ecosystem\[...\]](#), with participants from the Water & Sanitation Departments of SA and Zambia, the SA Space Agency, etc. 2017- 20<sup>th</sup> to 22<sup>nd</sup> Sep. Univ. of Limpopo, SA.
5. **Andreu A**, Kimonye E, and Dube T. (2017) [TIGER SAVANNA TOOL HANDBOOK](#). Dresden: UNU-FLORES. Eds: Atiqah F. ISBN 9783944863542. Technical guide for technical users.
6. **Andreu A.**, Berger, V., [22], Wolf., in alphabetical order. (2017) [How Do We Want to Live Tomorrow? Perspectives on Water Management \[...\]](#). Leopoldina & Brazilian Academy, Essen. Policy report.
7. 2016-Oct. Trainer in the WMO & ENVISAT [Course in the use of satellite products \[...\]](#), in Harare (Zimbabwe), directed to National Meteorological Services and Ministries of Agriculture of Angola, Botswana, Namibia, Lesotho, Malawi, Mozambique, SA, Swaziland, Zambia, and Zimbabwe.

### C.5. Other merits

1. **-Thesis supervisor** [Dr. Carpintero](#) (Cum Laude, UCO 2021), M. Muñoz (end date 2024), and A. Calbet (end date 2026) - **MSc** J. Ortiz (10, UCO 2022), M. Olalla and P. Baraja (Ongoing) **-students mentor:** J.M Calzadilla (2020, IFAPA), E. Kimonye (2016, UNU), and for [WiSE Womxn in Science](#) (2018, Cal).
2. **Teaching activities (>200h):** e.g., UCO Doctoral Programme *Module Gestión de Cuencas*, and training such as *Writing Science* and *Writing Proposals*. UNU-FLORES Doctoral Programme *Module Ecosystems monitoring and modeling*. International and [national seminars](#) and training such as ceiA3 course 2021/2023 *Soil Moisture Monitoring (coordinator for the 2023 edition)*.
3. **Invited lecturer:** e.g., [PAUWES-UNU 2017/2018](#), [UWC 2023](#), [SuperG Summer School 2022](#).
4. Scientific reviewer for the [DNC2017 Conference](#), Guest Editor, Co-Chair, and Scientific Committee of the 4<sup>th</sup> RSHS'18 Symposium. Scientific and Organizing Committee of [Workshop Remedia 2022](#) and [Workshop on Remote Sensing for Monitoring Water in African Savannas 2017](#). Convener for [EGU 2023 ET session](#). Guest Editor in Remote Sensing MDPI special issue 2023: [Remote sensing of savannas and woodlands II](#), and organizing Committee [2023 IAHSWorkshop #TheNextDecade](#) and 2014 [Remote sensing-based water and energy fluxes](#).
5. **Reviewer** for indexed journals (e.g., 3 in MDPI Remote Sensing and Agronomy, 6 in Agricultural Forest Meteo., 2 in Remote Sensing of Env., 1 in Irrigation Science), proposals (NSFC-ISF Research Israel-China), and Ph.D. dissertations (N. S. Rao, 2016, Andhra Univ).
6. -postdoc. **short stays:** 15 days at [Western Cape Univ.](#), 2 months [CEFE-CNRS](#) in Montpellier, 1 month at [KwaZulu Natal Univ.](#), and 1 week at [Limpopo Univ.](#) -predoc: 1 month at [ITC-The Netherlands](#), 3 months in the [ARS-USDA](#), 3 months in [Bio- and Geosciences Forschungszentrum](#).
7. **Outreach activities (selected):** [Las que cuentan la ciencia](#) stage performance, [Ciencia en el bar](#) short talk, ["Ignite" talk](#); [outreach project videos](#), 11 February International Day of Women and Girls in Science [videos](#), [talks](#), and [Mujeres y Ciencia ARAC project](#); [Café con Ciencia 2023/2017](#), [Ingenios en Ruta 2022/2023](#), [Women in Science](#) and [other](#) radio shows. She also manages and creates content for the DFH group's [Twitter\(X\)](#), and for her [website](#) and [blog](#).
8. **Specialized training (selected):** Post-processing of eddy covariance data (FLUXNET-ECN), 2021 Ameriflux ET & 2015 Data and Tech Workshops (Cal), Foundations of Data Science (Computational Thinking, Inferential Thinking and Prediction, and Machine Learning with Python, in Cal), Intro to Shell, Git, and Python (Cal), 8<sup>th</sup> Advance Training Course on Land Remote Sensing (UK), Sierra Rescue International Wilderness First Aid (Cal), 5<sup>TH</sup> EUFAR Regional Experiments For Land-atmosphere EXchanges (Spain), Trends in water, energy and CO<sub>2</sub> accounting (UCO).
9. **Training for teaching:** Make Your Course More Effective and Societally Relevant (AGU 2019), Nature Guide-interpreter (Ecologistas en Acción), Women & Science (Ecologistas en Acción), Communication in Knowledge Transfer (IFAPA), Communication Management (CIPÓ company).
10. **Memberships:** Asociación Española de Teledetección, Marie Curie Alumni Association, European Geoscience Union, International Association of Hydrological Sciences, American Geophysical Union (2015, 2018-2019). Part of the Mujeres de Ciencia Community (ARAC) and the Early Career FLUXNET Network.
11. **Other:** Mountain and climbing skills and knowledge.