

Curriculum Vitae

Family name: **Marañón Jiménez**

Given name: **Sara**

Date of birth: 30 September, 1983

Place of birth: Jaén, Spain

Citizenship: Spain

Researcher ID: A-7926-2013

h-index: 19; total citations: 1196 (Source: Google Scholar, updated 19.07.2022)

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Current research foci

- Effect of global change and ecosystem perturbations on the **soil microbial activity, soil community composition and plant-soil interactions**.
- Alterations of **ecosystem stoichiometry, carbon and nutrient biogeochemical cycles** and implications for **soil C storage**.

A. Education

- 2007-2011 **European Ph.D. at Ecology and Biogeochemistry**, University of Granada (UGR), Spain. Supervisors: Prof. Jorge Castro, Prof. Regino Zamora, Prof. Andrew S. Kowalski. Grade: *Cum laude* and prize to the Excellent Doctorate.
- 2006-2008 **Doctorate (Master) program in Environmental Biology**. UGR. Spain. Supervisors: Prof. Jorge Castro, Prof. Regino Zamora, Prof. Andrew S. Kowalski. Grade: A (Max.: A).
- 2001-2006 **University degree of Environmental Sciences**. University of Málaga. Spain. Grade: A

B. Previous positions and research experience

Assistant professor at the Autonomous University of Barcelona, UAB. Spain. Tasks: Teaching in the subjects *Soil Sciences, Soil Protection, Pedology, Evaluation of Species and Ecosystems*. Mar. 2020-currently.

Associate professor at the Autonomous University of Barcelona, UAB. Spain. Tasks: Teaching in the subjects *Ecotoxicology and Contamination, Evaluation of Species and Ecosystems, Applied Ecology, Ecology, Case Study in Environmental Biology*. Sept. 2019-Mar. 2020.

Post-Doctoral fellow at the Center for Ecological Research and Forestry Applications (CREAF), UAB. Spain. Tasks: Assessment on warming impacts on the N cycle, C:N stoichiometry and plant-soil interactions in subarctic ecosystem using stable isotopes and biotechnology methods. Group leader: Prof. Josep Peñuelas. Sept. 2017-Aug. 2019

Post-Doctoral fellow at the Dep. Applied Physics, UGR. Spain. Tasks: Evaluation of sustainable agricultural practices to enhance soil C sequestration in olive groves. Group leader: Prof. Andrew S. Kowalski. Mar. 2016- Sept. 2017

Post-Doctoral fellow at Plant and Vegetation Ecology Group, University of Anvers, Belgium. Tasks: Use of geothermal soil gradients in Iceland to study warming effects on soil C mineralization. Group leader: Prof. Ivan Janssens. Mar. 2015 –Mar. 2016

Post-doctoral position at Dep. Computational Hydrosystems, Helmholtz Center of Environmental Research (UFZ), Leipzig, Germany. Tasks: Design and implementation of long-term research stations for the assessment of C stocks, fluxes and tree transpiration. Group leaders: Dr. Matthias Cuntz & Dr. Corinna Rebmann. May 2012 –Dec 2014.

Post-doctoral fellow at Dep. Applied Physics, UGR, Spain. Tasks: Monitoring network of C fluxes in Spanish Mediterranean ecosystems– quantification and processes assessment. Group leader: Prof. Andrew S. Kowalski. Nov. 2011 – Apr. 2012

Research internship at Plant and Vegetation Ecology Group, University of Antwerp, Belgium. Group leader: Prof. Ivan Janssens. Sep.-Dec. 2008

Research internship at Ecological Restoration Institute, Northern Arizona University, USA. Group leader: Peter Fulé. Sep.-Dec. 2008

Research internship at Experimental research station *El Zaidin* (EEZ), Research group of vegetal protection. Superior Council of Scientific Research (CSIC), Granada, Spain. Group leader: Dr. Mercedes Campos. Sep. 2006 –Jan. 2007

Research internship at Dep. of Cellular Biology, Genetics and Physiology. University of Málaga. Group leader: Prof. Cayo Ramos. Sep.-Dec. 2003.

C. Other skills

Computer skills Python, R, JMP, ArcGis, ImageJ, Inkscape.
 Languages Spanish (Mother tongue), English, Italian and Catalan (proficient in reading, writing, and conversation),
 German (Intermediate, B1 level)
 Driving license Type B (regular cars)

D. Fellowships and awards

- **Lector by the Serra Hunter Programme.** Generalitat de Catalunya. 5 years starting in March 2021.
- **Research projects for young researchers (JIN) of the Spanish State Program R&D&I** oriented to the Challenges of the Society (SOCRATES). 36 months starting in Sept. 2021, total 193,600 €.
- **Post-doctoral fellowship** Marie Slodowska-Curie, granted by EC H2020 Programme, 24 months starting in Sep. 2017, total 170,121.60 €.
- **Post-doctoral fellowship** *Andalusia Talent Hub*, granted by EU 7th Framework Programme (Marie Curie Actions) and Andalusian Knowledge Agency (AAC), 24 months starting in March 2015, total 158,969 €.
- Award to the **Extraordinary Doctorate** by the UGR (2015).
- **Research grant** for access to state-of-the-art research facilities. *Designing Trees for the Future* (Trees4Future) granted by EU 7th Framework Programme (FP7), total costs of travel, accommodation and samples analyses by X-ray Computed Microtomography (Ghent University Center for X-ray Tomography) during 2 weeks in Jun. 2014.
- **Travel grant** for early career scientists to participate at the conference *Soil Systems and Critical Zone Processes. Integrate Life support functions Across Disciplines*, Ascona, Switzerland. Awarded by the ETH Zurich and the Geological Society of America. 2013.
- **Prize to the best poster** awarded by the ETH Zurich and the Geological Society of America in the conference *Soil Systems and Critical Zone Processes. Integrate Life support functions Across Disciplines*. 300 CHF (approx. 275 €), 2013.
- **Post-doctoral fellowship**, granted by the UGR, 6 months starting in Nov. 2011.
- **Ph.D. fellowship**, Programme for Training of University Professionals, granted by the Spanish Ministry of Education and Science (FPU-MEC), 4 years starting in Sep. 2007.
- **Prize to the best poster** awarded by the Thematic Network: Effects of Forest Fires over Soils (FuegoRed) at the *International Meeting of Forest Fire Effects on Soils*. 2009.
- **Ph.D. fellowship**, granted by the UGR, 3 months starting in Jun. 2007.
- **Research training grant** of the Superior Council of Scientific Research (CSIC), 3 months starting in Sep. 2006

E. Teaching experience

Accreditations:

- Habilitation as **Profesor Ayudante Doctor** (Temporary Associate Professor) by the Spanish National Agency for Quality Evaluation and Accreditation (ANECA), 2012; and as **Agregado** and **Lector** (Temporary Assistant Professor) by the Agency for the Quality of the University System of Catalonia (AQU), 2019.

Associate / Assistant professor in:

- *Soil Sciences, Soil Protection, Pedology, Evaluation of Species and Ecosystems. Degrees in Environmental Biology and Environmental Sciences* Dep. of Animal and Vegetal Biology and Ecology, Autonomous University of Barcelona.
- *Ecotoxicology and Contamination, Evaluation of Species and Ecosystems, Applied Ecology, Ecology, Case Studies in Environmental Biology.* Degrees in Environmental Biology and Environmental Sciences, Dep. of Animal and Vegetal Biology and Ecology, Autonomous University of Barcelona.
- *Ecology, Ecology of Communities and Systems, Ecology of Organisms and Populations and Fundamentals of Applied Ecology.* Degrees in Biology and Environmental Sciences, Dep. of Ecology, University of Granada.
- *Physics and Applied Physics.* Degrees in Environmental Sciences and Physics, Dep. of Applied Physics, University of

Granada.

Students supervision:

- **Ph.D. students (2):**
 - Evapotranspiration and sap flux of Thuringian forests. 2012-2014. Helmholtz Center of Environmental Research (UFZ), Leipzig, Germany.
 - Nitrogen isotope in lake sediments and the loess sequence in China for nitrogen cycling and paleoclimate reconstruction. PhD research stay (2021-currently)
- **Master students (1)** at the Autonomous University of Barcelona (UAB), Barcelona, Spain. MsC thesis: Resilience of Soil Stoichiometry in Subarctic soils under Temperature-Induced Soil Carbon Losses: Where does the Nitrogen go?. 2017-2018.
- **Graduation projects (4):**
 - Climate change effects on the distribution of big mammals in the arctic. Dep. of Animal and Vegetal Biology and Ecology, Autonomous University of Barcelona. 2019-2020.
 - Dynamics of soil CO₂ emissions: Spatial and temporal variability and determining environmental factors. Dep. of Applied Physics, University of Granada. 2016-2017.
 - Optimization of carbon sequestration capacity of soils in olive groves by sustainable agricultural practices. Dep. of Applied Physics, University of Granada. 2015-2016.
 - Soil CO₂ fluxes measured with portable chamber systems in a burnt Alpine forest. Dep. Ecology, University of Granada. 2008-2009.
- **Graduate STEM research project (1)** at International Arcadia University. Research project: Soil CO₂ emissions under sustainable irrigation regimes and agricultural practices. 2016.
- **Tutor of 6 research student assistants** at the Helmholtz Center of Environmental Research (UFZ), Leipzig, Germany and **2 research internships** at the University of Antwerp, Belgium.

Pedagogic training:

- Courses of the Program of accreditation in Pedagogy Training for Higher Education: *The Oral Speech, The Evaluation in University Students, Teaching Innovation Experiences, The Teacher Portfolio, Teaching Planification: from the Syllabus to the Program*. UAB. 2021-22.
- *Skills for Effective PhD Supervision*. Watering Talents Program, CREAM. 2022.
- Master in Didactics of Natural Sciences for Secondary Education. University of Granada. 2007-2018. Grade: A (Max.: A).

Elaboration and participation in innovative educative projects:

- Project MAGNET for the development of science education programmes in secondary education. (<https://magnet.cat/>). 2018-2020.

F. Management roles

- Member of the Sustainability Work Group of the Biosciences Faculty (UAB). 2022-currently.
- Member of the Academic Commission of the Doctorate Program Terrestrial Ecology and Biodiversity (UAB). 2022-currently.
- Member of the Monitoring Commission of PhD students (Dep. Vegetal Biology, animal biology and Ecology, UAB). 2022-currently.
- Member of selection committee for associate professor positions (Dep. Vegetal Biology, animal biology and Ecology, UAB). 2022.

G. Scientific services and memberships

- **Reviewer in scientific journals:** Agricultural and Forest Meteorology (1), Applied Vegetation Science (1), Biogeosciences Discussions (2), Ecoscience (1), Forest Ecology and Management (1), Forests (2), Geoderma (1), Global Change Biology (2), Journal of Arid Environments (1), Pedosphere (1).
- **Reviewer of project proposals:** Postdoctoral Fellowships of the National Sciences Foundation (NSF) of EEUU and Research Scientific and Technology Projects of the National Agency of Science and Technology Promotion (PYCY) of Argentina.
- Contributing author on **seven standard protocols of international reference** for the long term monitoring of carbon stocks and GHG emissions of European sensitive ecosystems to climate change (**ICOS European Research Infrastructure**) and

active participation on six working groups: Chamber measurements for soil CO₂ emissions, soil sampling and analyses, plant sampling and analyses, ancillary vegetation measurements, lateral fluxes, soil climate.

- **Member of scientific networks and associations:** FutureArctic Innovative Training Network (H2020-MSCA-ITN-2018, <https://futurearctic.be/>), including more than 60 researchers and 7 private companies worldwide, Spanish Thematic Network of Effects of Forest Fires on Soils (Fuegored), Spanish Association of Terrestrial Ecology (AEET), Spanish Society of Soil Sciences (SECS), COST Action 639: Greenhouse-gas budget of soils under changing climate and land use, European Geosciences Union (EGU), American Geosciences Union (AGU), ForHot Consortium (<http://forhot.is/>), ICOS European Research Infrastructure (<https://www.icos-ri.eu/>).
- **Research collaborations:** R. Zamora, A.S. Kowalski, E.P. Sánchez-Cañete, P. Serrano-Ortiz, J. Castro, E. Fernandez (University of Granada, **Spain**); J. Peñuelas, JM Alcañiz, X Domene (CREAF, **Spain**); C.D. Allen (US Geological Survey, **USA**), R. Jandl (**Austrian** Forest Research Center, BFW); M. Rodeghiero (IASMA Research and Innovation Centre, **Italy**); M. Cuntz and C. Rebmann (UFZ, **Germany**); M. Herbst (Institute of Agricultural Climate Research, **Germany**); Marion Schrümpf (Max-Planck Institute, **Germany**); K. Steppe (University of Ghent, **Belgium**); M. Almagro (Centro de Edafología y Biología Aplicada del Segura –CEBAS, **Spain**); J. Curiel Yuste (National Museum of Natural Sciences, **Spain**); B. Sigurdsson (Agricultural University of **Iceland**); J. Soong (Lawrence Berkeley National Laboratory, **USA**); J. Craine (Jonah Ventures, **USA**); A.I. Elmore (University of Maryland Center for Environmental Science, **USA**); A.I. Janssens and E. Verbruggen (University of Antwerp, **Belgium**); A. Richter, L Fuchslueguer (University of Vienna, **Austria**), Direction of Natural and National Reserves of Sierra Nevada; Technological Center of Olive Cultivation and Oil Production (CITOLIVA), Private Companies of olive oil production Castillo de Canena SL, of biodegradable batteries Fuelium SL (**Spain**) and of steel and mining company ArcelorMittal S.L. (**International**).

H. Organization of scientific meetings

- **Session Convener** "Nutrient-Carbon Cycle Interactions in Terrestrial Ecosystems" at the Annual Conference of the American Geosciences Union, for two consecutive years: 2018 and 2019.
- **Active member of the organization committee** of the *4th Congress of Environmental Sciences: Tourism and Sustainability, a Joint Commitment*, 2005.

I. Seminar presentations and conference contributions (only a selection)

- **Oral communication.** Soil warming triggers coupled carbon and nitrogen losses in subarctic soils. 1st Meeting of the Iberian Ecological Society & XIV AEET Meeting, Barcelona, Spain, 2019.
- **Invited keynote presentation.** StoiCa project: First insights of a ¹⁵N field labeling experiment at the geothermal gradients in Iceland. 7th meeting of the ForHot Consortium: Joint Ecosystem Assessment on the Effects of Natural Soil Warming on Subarctic Grasslands and Forests. Sitges, Spain. 2019.
- **Invited keynote presentation.** Sequential destabilization of C and N biogeochemical cycles to increasing temperatures in the subarctic (SOCRATES). 7th meeting of the ForHot Consortium: Joint Ecosystem Assessment on the Effects of Natural Soil Warming on Subarctic Grasslands and Forests. Sitges, Spain. 2019.
- **Invited keynote presentation.** Soil warming triggers coupled carbon and nitrogen losses in subarctic soils. 5th IMBALANCE-P Annual Meeting. Sitges, Spain. 2019.
- **Invited keynote presentation.** Where did the Nitrogen go? (Or why Nitrogen do not rule the world... entirely). 7th meeting of the ForHot Consortium: Joint Ecosystem Assessment on the Effects of Natural Soil Warming on Subarctic Grasslands and Forests. Sitges, Spain. 2018.
- **Invited keynote presentation.** Coupled carbon and nitrogen losses in response to seven years of chronic warming in subarctic soils. 4th IMBALANCE-P Annual Meeting. Loomel, Belgium. 2018.
- **Invited keynote presentation.** Resilience of Soil Stoichiometry in Subarctic soils under Temperature-Induced Soil Carbon Losses: Where does the N go? 6th meeting of the ForHot Consortium: Joint Ecosystem Assessment on the Effects of Natural Soil Warming on Subarctic Grasslands and Forests. Vienna, Austria. 2017.
- **Invited keynote presentation.** Soil warming increases metabolic quotients of soil microorganisms without changes in temperature sensitivity of soil respiration. 5th meeting of the ForHot Consortium: Joint Ecosystem Assessment on the Effects of Natural Soil Warming on Subarctic Grasslands and Forests". Anvers, Belgium. 2016.

- **Invited keynote presentation.** Carbon losses due to warming may exacerbate carbon limitation of soil microorganisms. *5th meeting of the ForHot Consortium Joint Ecosystem Assessment on the Effects of Natural Soil Warming on Subarctic Grasslands and Forests*. Antwerp, **Belgium**. 2016.
- **Invited keynote presentation.** Influence of agricultural management and irrigation regimes on the soil carbon sequestration potential: Towards a sustainable olive cultivation. *Workshop on sustainable agricultural management practices to increase carbon sequestration in the olive grove*. Mengibar, **Spain**. 2016.
- **Oral presentation.** Sap flow is underestimated by thermal dissipation sensors due to alterations of wood anatomy. *American Geosciences Union Fall Meeting*. San Francisco, **USA**. 2014.
- **Oral presentation.** An empirical study of the wound effects on sap flow measured with thermal dissipation probes. *American Geosciences Union Fall Meeting*. San Francisco, **USA**. 2014
- **Poster (Prize).** Drought severity effects on the C sources for microorganisms during soil rewetting CO₂ pulses. *Soil Systems and Critical Zone Processes. Integrate Life support functions Across Disciplines*. Ascona, **Switzerland**. 2013.
- **Oral presentation.** Post-fire salvage logging increases water stress and reduces seedling growth and nutrient uptake of *Pinus pinaster* in the Sierra Nevada, Spain. *12th Conference of the European Ecology Federation*. Ávila, **Spain**. 2011.
- **Oral presentation.** Effects of post-fire silvicultural treatments related to the burned wood on the soil nutrient availability and soil carbon sequestration. *Society of Ecological Restoration European Conference*. Avignon, **France**. 2010.
- **Oral presentation.** Burnt wood in forest fires as a nutrient reservoir for the soil in and altitudinal gradient. *IV Iberian conference of Soil Science*. Granada, **Spain**. 2010.
- **Poster (Prize).** Role of the burnt wood in the recovery of the soil fertility after forest wildfires. *II International Meeting "Forest Fire Effects on Soils". Thematic National Web: Effects of Forest Fires over the Soils*. Sevilla and Cortegana, **Spain**. 2009.
- **Oral presentation.** Burnt wood in forest fires as a nutrient reservoir for the soil in an altitudinal gradient. *9th Congress of the Spanish Association of Terrestrial Ecology*. Úbeda, **Spain**. 2009.
- **Oral presentation.** Effect of the post-fire management on the soil respiratory CO₂ fluxes. *Spanish Forestry Congress*. Ávila, **Spain**. 2009.
- **Oral presentation.** Rainfall events overshadow post-fire burnt wood management and temperature effects in determining soil respiration in Mediterranean mountain ecosystems. *Greenhouse-Gas Budget of Soils under Changing Climate and Land Use: Soil Carbon in Mediterranean Ecosystems*. Florence, **Italy**. 2009.

J. Knowledge transfer and outreach activities

Transference of research:

- Active participation in the **Workshop on Sustainable Agricultural Management Practices to Increase Carbon Sequestration in the Olive Grove** aimed to promote efficient communication between scientists and farmers and encourage land manager's consciousness and education on sustainable agricultural practices. Influence of agricultural management and irrigation regimes on the soil carbon sequestration potential: Towards a sustainable olive cultivation. Technological Center of Olive Cultivation and Oil Production (CITOLIVA). Mengibar, Spain. 2016.
- Stretch collaboration with the **Company of olive oil production Castillo de Canena** (Spain, <https://www.castillodecanena.com/en/carbolivar-congress-eu-geoscience/>) for the transference of research results to the implementation of sustainable agricultural practices.
- Active collaboration with the management **authorities of the National Park of Sierra Nevada**, to assist in the decision making of restoration and forest management strategies of areas affected by wildfires.

Participation in outreach activities:

- Research work with **high resonance in media**, with coverage in >20 paper and online newspapers such as La Vanguardia, El Diario, Europa press, La COPE, La Voz de Asturias, El Faro de Vigo, Econoticias, Ecoavant and Science Daily, and the CREAMblog among others (<http://blog.creaf.cat/noticies/cada-vegada-hi-haura-menys-nitrogen-disponible-per-les-plantas/>, <http://blog.creaf.cat/noticies/islandia-es-un-laboratori-natural-per-estudiar-els-efectes-del-canvi-climatic-al-sol-2/>, >500 visualizations in Spanish, >300 in Catalan, >120 in English).
- **Personal interviews** for the CREAM blog (<http://blog.creaf.cat/es/conocimiento/un-aumento-de-la-temperatura-superior-a-2-oc-puede-desencadenar-efectos-irreversibles-en-el-planeta/>) and for the Institute of Secondary Education Nestor Almendros about the profession of a scientist and the role of women on science.

- **Invited outreach conference.** Climatic crisis what to do now? Feedback loops: Why 2°C warming could trigger unpredictable effects in the planet. Organized by the Faculty of Philosophy and Letters, UAB. <https://www.youtube.com/watch?v=vdKBXZMqFDU>.
- Interview in **radio podcasts** of the student association of Communication Sciences of the Autonomous University of Barcelona.
- Participation in the **European Researcher's Night** (Marie Skłodowska Curie Actions, H2020 Programme, EC, 2017 and 2019)
- Collaborative **education programmes in public schools** (MAGNET project, 2018-currently, <https://magnet.cat/>)
- **Round table** to encourage science literacy by means of participative science discussions with the general public: Scientific Coffee at the Casa Orlandai, with the talk: Nitrogen: Essential element for living organisms (<http://cienciaensocietat.org/cafes-cientifics-a-la-casa-orlandai/>).
- Participation in the elaboration of the ClimaTickTock **pedagogical board game**, aimed to teach kids and adults the effect of mitigation and adaptation strategies to reduce climate change (<https://meetingorganizer.copernicus.org/EGU2018/EGU2018-15319.pdf>).
- Participation in science outreach and educative programme **Recerkids**, aimed to bring the scientific research closer to students of Primary Education. Organized by the General Directorate of Research of the Generalitat de Catalunya and Eduxarxa. (<https://www.recerkids.cat/>).
- Participation in science outreach and educative programme **Científiks, in the V Scholar quiz of videogames design** aimed to bring the scientific research closer to students of Primary Education. Organized by the Department of Research and Universities of the Generalitat de Catalunya and Eduxarxa. (<https://cientificsenjoc.cat/>)

K. Research expeditions

2007-2011	Soil, vegetation and wood sampling at extreme temperatures in Sierra Nevada, Spain (3300 m. a.s.l.)
2012-2014	Field work and coordination of a large work group for installation of sensors, soil and vegetation sampling and trenches excavation at harsh meteorological conditions (snow cover), Germany.
2015-2019	Soil sampling in geothermal gradients in Iceland with strong wind, rain and very cold temperatures.
2016	Sampling and digging for sensors installation at very high summer temperatures in olive groves, Spain

L. Participation in research projects

International:

1. Sequential destabilization of C and N biogeochemical cycles to increasing Temperatures in the Subarctic (SOCRATES). Spanish State Program R&D&I oriented to the Challenges of the Society. **IP: S. Marañón-Jimenez.** 104,060 € (2022-2025)
2. Resilience of Soil Stoichiometry in subarctic soils under Temperature-Induced Soil Carbon Losses: Where does the N go? (StoiCa). European Commission (MSCA H2020 750252). **IP: S. Marañón-Jimenez.** 170,121.60 €. (2017-2019)
3. Global Warming Effects on the Carbon Sequestration Potential of Soils: Moisture and Temperature Roles (DRYHOT). Talent Hub programme. European Commission and Regional Andalusian Council (MSCA H2020 COFUND 291780) **IP: S. Marañón-Jimenez.** 158,959 € (2015-2017)
4. Effects of phosphorus limitations on Life, Earth system and Society (IMBALANCE-P). Synergy grant of the European Commission (ERC-2013-SyG 610028). **IP:** J. Peñuelas, P. Ciais, I. Janssens, M. Obersteiner. 13,600,579.98 € (2014-currently)
5. A glimpse into the Arctic future: equipping a unique natural experiment for next-generation ecosystem research. FutureArctic Innovative Training Network (H2020-MSCA-ITN-2018). **IP:** I. Janssens. 3.965.109,84 € (2018-2023)
6. Natural soil warming in natural grasslands and a Sitka spruce forest in Iceland (FORHOT). B. Sigurdson (2015-currently).
7. Integrated Fluid Dynamics in Sediment Basins (INFLUINS). Federal Ministry for Education and Research (BMBF) and the Ministry of Culture of the state of Thuringen. (2012-2014).
8. Integrated Carbon Observation System (ICOS). European Commission under FP7. (2012-2014).
9. Terrestrial Environmental Observatories (TERENO). Helmholtz Association (2012-2014).
10. International Water Research Alliance Saxony (IWAS). Federal Ministry for Education and Research (BMBF). UFZ, the Dresden Technical University and the Stadtentwässerung Dresden. (2012-2014).
11. Greenhouse gas management in European land use systems (GHG-Europe). Grant Agreement 244122. European

Community, Program VII. IP: A. Freibauer. Responsible researcher at UGR: A.S. Kowalski. 7,000,000 € (2010-2013).

12. Integrated non-CO₂ Greenhouse gas Observing System (InGOS). European Commission FP7. (2010-2015)

National (Spain):

13. Biodegradable and compostable batteries for precision agriculture and decentralized energy systems (BIDEKO). Ministry of Science and Innovation (2021-currently).
14. Evaluation of the Ozone fluxes in relevant Mediterranean ecosystems (GEISpain). Ministry of Economy and Competitiveness. IP: A.S. Kowalski (2015-2018)
15. Global change effects in the role of peatlands as carbon sinks. CSIC. IP: P. Serrano (2012-2013).
16. Carbon balance in the olive grove: Effect of the presence of vegetal canopy (CARBOLIVAR) Excellence Project of the Andalusian Regional Council of Innovation, Science and Companies. IP: A. S. Kowalski. 147,000 € (2012-2014).
17. Monitoring web of carbon fluxes in Spanish Mediterranean ecosystems– quantification and processes assessment (Carbored-II). Spanish Ministry of Science and Innovation. IP: A. S. Kowalski. 126,300€ (2011-2013).
18. Tolerance and ecophysiological strategies of Iberian pines at juvenile stages to drought, low temperature and nutrient availability (ECOLPIN). Spanish Ministry of Science and Innovation. IP: P. Villar (2012-2014).
19. Spanish Woodlands and Global Change: Threats and Opportunities” Consolider-Ingenio Montes”. Spanish Ministry of Education and Science. IP: J. Retana (2009-2013).
20. Effect of the burnt wood management on the post-fire forest regeneration: Implementation of soft ecological restoration techniques. Autonomous Organism of National Parks. IP: J. Castro (2007-2009).
21. Post-fire colonization by oak (*Quercus ilex*) of pine forest plantations according to the management of the burnt wood: Analysis of the agreement between the dispersal factors and the establishment (COILEX). 145,684 €. IP: J. Castro (2009-2012).
22. Effect of the post-fire silvicultural treatments on the CO₂ fluxes and the Carbon balance: Analysis of policies that optimise the C sequestration in Mediterranean ecosystems. National Institute of Researching and Agricultural and Alimentary Technology (INIA) IP: A.S. Kowalski. 78,534 €. (2007-2010).
23. Sustainable management of Mediterranean forests. (GESBOME). Excellence Project of the Andalusian Regional Council of Innovation, Science and Companies. IP: R. Zamora. (2007-2010).

M. Publications in SCI journals and book chapters

1. **Marañón-Jiménez S.**, Serrano-Ortiz P., Peñuelas J., Meijide A., Chamizo S., López-Ballesteros A., Vicente-Vicente J.L., Fernández-Ondoño E. 2022. Effects of herbaceous covers and mineral fertilizers on the nutrient stocks and fluxes in a Mediterranean olive grove. *European Journal of Agronomy*, 140, 126597.
2. Verbruggen N., Leblans N.I.W., Sigurdsson B.D., Vicca S., Soong J.L., Weedon J.T., Poeplau C., Van de Velde K., Verbruggen E., Wallander H., Liu Z.F., **Marañón-Jiménez S.**, Gundersen P., Maljanen M., Guenet B., Dauwe S., Katterer T., Oddsdóttir E.S., Ostonen I., Peñuelas J., Richter A., Van Bodegom P.M., Walker T. N., Janssens I.A. 2022. Soil carbon loss in warmed subarctic grasslands is rapid and restricted to topsoil. *Biogeosciences letters* 19, 3381–3393.
3. **Marañón-Jiménez S.**, Asensio D., Sardans S., Zuccarini P., Ogaya R., Mattana S., Peñuelas J. 2022. Seasonal drought in Mediterranean soils mainly changes microbial C and N contents whereas chronic drought mainly impairs the capacity of microbes to retain P. *Soil Biol. Biochem.* 165, 108515.
4. Asensio D., Zuccarini P., Ogaya R., **Marañón-Jiménez S.**, Sardans S., Peñuelas J. 2021. Simulated climate change and seasonal drought increase carbon and phosphorus demand in Mediterranean forest soils. *Soil Biology and Biochemistry* 163, 108424.
5. **Marañón-Jiménez S.**, Radujković D, Verbruggen E, Grau O, Cuntz M, Peñuelas J, Richter A, Schrumpf M, Reibmann C. 2021. Shifts in the Abundances of Saprotrophic and Ectomycorrhizal Fungi with Altered Leaf Litter Inputs. *Frontiers in Soil Science* 12(1452). doi:10.3389/fpls.2021.682142.
6. Walker TWN, Janssens IA, Weedon JT, Sigurdsson BD, Richter A, Peñuelas J, Leblans NIW, Bahn M, Bartrons M, De Jonge C, Fuchslueger L, Gargallo-Garriga A, Gunnarsdóttir GE, **Marañón-Jiménez S.**, Oddsdóttir ES, Ostonen I, Poeplau C, Prommer J, Radujković D, Sardans J, Sigurðsson P, Soong JL, Vicca S, Wallander H, Ilieva-Makulec K, Verbruggen E. 2020. A systemic overreaction to years versus decades of warming in a subarctic grassland ecosystem. *Nature Ecology and Evolution* 4, 101-108.
7. Soong J.L., Fuchslueger L., **Marañón-Jiménez S.**, Thorn M.S., Janssens I.A., Peñuelas J., Richter A. 2020. Microbial carbon limitation - the need for integrating microorganisms into our understanding of ecosystem carbon cycling. *Global Change Biology* 26 (4), 1953-1961.

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