

Date of the CVA	06/03/2017
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Section A. PERSONAL DATA

Name and Surname	Enrique Pérez Sánchez-Cañete		
DNI	[REDACTED]	Age	34
Researcher's identification number	Researcher ID	I-3615-2014	
	Código Orcid	0000-0003-0482-6726	

A.1. Current professional situation

Institution	Universidad de Granada		
Dpt. / Centre	Física Aplicada / Facultad de Ciencias		
Address	Avenida Fuente Nueva S/N, Dept. Física Aplicada, 18071, Granada		
Phone	[REDACTED]	Email	enripsc@ugr.es
Professional category	Postdoc-Marie Curie IOF	Start date	2017
UNESCO spec. code	250908 - Micrometeorology		
Keywords	Meteorology; Terrestrial ecosystem; Climate change; Atmospheric conditionsv		

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Programa Oficial de Doctorado en Ciencias de la Tierra	Universidad de Granada	2013
Máster en Geofísica y Meteorología	Universidad de Granada	2010
Ciencias Ambientales	Universidad de Granada	2006

A.3. General quality indicators of scientific production

Date: from 23/01/2017 to the last 5 years (Google Scholar)

H-index: 11

i10-index: 13

Citations: 296

Scientific production: 22 papers in journals listed in the Science Citation Index. 82 % published in the first quartile (18 papers) and 18% in the second quartile (4 papers).

He has mentored 1 end-of-course project, 3 Master's theses and now he mentors a PhD student.

Section B. SUMMARY OF THE CURRICULUM

Enrique's research is focused on improving knowledge of subterranean CO₂ dynamics, characterizing the drivers involved in its transport and exchange with the atmosphere. In October of 2006 he finished his studies with a Bachelor of Science in Environmental Sciences from the University of Granada (UGR). From 2007-2009 he worked as technical support staff for a research project based on the regeneration of post-fire vegetation, collaborating with departments of Botany, Ecology and Applied Physics of the UGR. In late 2009, he started his doctoral research in the Department of Desertification and GeoEcology at the Arid Zone Experimental Station of (CSIC) and received a master's degree in Geophysics and Meteorology from the UGR in 2010. In June of 2013, he defended his dissertation entitled "Characterization of CO₂ exchanges in deep soils and caves and their role in the net ecosystem carbon balance" and obtained the degree of International Doctor from the UGR and the top doctorate award in the field of science.

Enrique is extremely prolific, despite having passed just three and half years since his thesis defense, he has 22 papers published or accepted for publication. All of his papers have been

published in prestigious international journals. According to Scopus/Google-Scholar, he has received 191/297 citations and an h-index of 9/11. His work has resulted in 51 conference presentations and 3 book chapters, one published by Springer. He has participated in 14 projects (2 in the United States, 4 at European level, 4 Spanish national, 3 regionals and 1 local) and 4 agreements with national and international administrations. He has been principal investigator of a European project (DIESEL, FP7-PEOPLE-2013-IOF, Project Code 625988) and a proof-of-concept and patent-development project funded by the University of Granada and the "Fundación CajaMar". He has obtained 2 European-funded grants: a COST Action for a 3-month stay at the University of Helsinki and a 3-year Marie Curie IOF to work for two years at the University of Arizona at the Biosphere 2 facility, the largest laboratory in the world to study controlled conditions in ecosystems, and a year of return at the UGR. During his doctoral thesis he did three research stays, one in Finland and two in the United States.

In spite of doing his Thesis in the CSIC, he has been able to teach, because for three years he was an invited professor by the Department of Applied Physics of the UGR teaching the subjects of "Meteorology and Climatology" and "Physical Foundations Applied to Structures". He has also been invited to teach in the Master's program in Evaluation of Global Change at the University of Almería. He has participated in two teaching innovation projects and directed 3 Master's theses, two in the Master's in Geophysics and Meteorology of the University of Granada, and one in the Master's in Ecology of Aquatic and Terrestrial, Natural and Anthropogenic Ecosystems at the University of Montpellier II. Since May 2014 he is accredited by the ANECA as Profesor Contractado Doctor, Profesor Ayudante Doctor and Profesor de Universidad Privada.

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

- 1 **Scientific paper**. Sánchez-Cañete, E.P; et al. 2016. Improving the accuracy of the gradient method for determining soil carbon dioxide efflux. *Journal of Geophysical Research: Biogeosciences*. ISSN 0148-0227.
- 2 **Scientific paper**. Sánchez-Cañete, E.P; et al. 2016. Winds induce CO₂ exchange with the atmosphere and vadose zone transport in a karstic ecosystem. *Journal of Geophysical Research: Biogeosciences*. 121-8, pp.2049-2063. ISSN 0148-0227.
- 3 **Scientific paper**. Pérez-Priego, O; et al. 2015. Analysing uncertainties in the calculation of fluxes using whole-plant chambers: random and systematic errors. *Plant and Soil*. 393-1-2, pp.229-244. ISSN 0032-079X.
- 4 **Scientific paper**. Sánchez-Cañete, E.P; Kowalski, A.S. 2014. Comment on "Using the gradient method to determine soil gas flux: A review" by M. Maier and H. Schack-Kirchner. *Agricultural and Forest Meteorology*. 197, pp.254-255. ISSN 0168-1923.
- 5 **Scientific paper**. Sánchez Cañete, E. P.; et al. 2013. Deep CO₂ soil inhalation / exhalation induced by synoptic pressure changes and atmospheric tides in a carbonated semiarid steppe. *Biogeosciences*. 10, pp.6591-6600. ISSN 1726-4170.
- 6 **Scientific paper**. Pérez-Priego, O.; et al. 2013. Isolating the effect of subterranean ventilation on CO₂ emissions from drylands to the atmosphere. *Agricultural and Forest Meteorology*. 180, pp.194-202. ISSN 0168-1923.
- 7 **Scientific paper**. Hamerlynck, E.P; et al. 2013. Nocturnal soil CO₂ uptake and its relationship to subsurface soil and ecosystem carbon fluxes in a Chihuahuan Desert shrubland. *Journal of Geophysical Research: Biogeosciences*. American Geophysical Union. 118, pp.1-11.
- 8 **Scientific paper**. Sánchez-Cañete, E.; et al. 2011. Subterranean CO₂ ventilation and its role in net ecosystem exchange with the atmosphere. *Geophysical research letters*. 38, pp.1-4. ISSN 1944-8007.
- 9 **Scientific paper**. Ruiz-Reverter, B.; et al. 2010. Analyzing the major drivers of net in a mediterranean alpine shrubland. *Biogeosciences*. 7, pp.2601-2611.
- 10 **Book chapter**. Serrano-Ortiz, P.; Sánchez-Cañete, E. P.; Oyonarte, C.2012. Chapter 15. The Carbon Cycle in drylands. *Recarbonization of the Biosphere*. Springer. pp.347-368. ISBN 978-94-007-4158-4.

C.2. Participation in R&D and Innovation projects

- 1 1331408, Transformative Behavior of Energy, Water and Carbon in the Critical Zone II: Interactions between Long- and Short-term Processes that Control Delivery of Critical Zone Services. National Science Foundation (NSF). Jon Chorover. (University of Arizona). 02/2015-09/2018. 3.349.489 €. Team member.
- 2 Procedimiento y sistema para enriquecer en CO₂ el aire de un invernadero mediante un sistema de perforaciones y bombeo de aire subterráneo. Universidad de Granada. Programa de Desarrollo tecnológico (Prototipos y pruebas de concepto). Sánchez-Cañete, E.P. (Fundación CAJAMAR). 12/2016-12/2017. 10.874 €.
- 3 1417101, Collaborative Research: Determining the role of hydraulic redistribution regimes in the critical zone - an experimental and modeling synthesis. National Science Foundation (NSF). Greg Barrond-Gafford. (University of Arizona). 02/2015-12/2017. 435.537 €. Team member.
- 4 625988, Developing Improved Estimations of Soil CO₂ Effluxes at ecosystem Level (DIESEL). FP7-PEOPLE-2013-IOF, European Commission. Sánchez-Cañete, E.P. (Universidad de Granada). 01/2015-12/2017. 254.474 €. Principal investigator.
- 5 284274, Integrated non-CO₂ greenhouse gas Observing System. FP7-INFRASTRUCTURES. European Commission. Penélope Serrano Ortíz. (Universidad de Granada). 01/2010-06/2015. 31.478 €. Team member.
- 6 P08-RNM-3721, Balance de carbono en ecosistemas carbonatados: discriminación entre procesos bióticos y abióticos. Junta de Andalucía. Proyectos de Excelencia. Francisco Domindo Poveda. (Estación Experimental de Zonas Áridas). 01/2009-12/2013. 270.924 €. Doctorando.
- 7 244122, Greenhouse gas management in European land use systems. FP7-ENV-2009. European Commission. Andrew S. Kowalski. (Universidad de Granada). 01/2010-06/2013. 75.000 €.

C.3. Participation in R&D and Innovation contracts

- 1 Design and implementation of an information system for the Large-Scale Biosphere-Atmosphere Programme in Amazonia. Instituto Nacional de Pesquisas da Amazônia (INPA). Regino Zamora. 07/2013-01/07/2015. 261.625 €.
- 2 Diseño experimental de indicadores y metodología del programa de seguimiento de los efectos del cambio global en zonas áridas, semiáridas del levante andaluz. Universidad de Almería; Junta de Andalucía. Francisco Javier Cabello Piñar. From 09/2009. 1.900.000 €.
- 3 Calibración, aplicación y validación del modelo "vprm" en Andalucía. Junta de Andalucía. Penelope Serrano Ortiz. From 03/2009. 20.876 €.
- 4 Red sistemática de los flujos de carbono y energía en ecosistemas terrestres en España. Torre de medida laguna seca. Fundación Centro de Estudios Ambientales del Mediterráneo. Andrew S. Kowalski. From 12/2008. 15.000 €.