

# CURRICULUM VITAE

**Family Name:** Villamayor Moreno      **First Name:** Julián

**Current Professional Position:** Post-doctoral fellow at LOCEAN-IPSL, UPMC, Paris (France).

**Affiliation:** Laboratoire d'Océanographie et du Climat: Expérimentations et Approches Numériques (LOCEAN), Institut Pierre Simon Laplace (IPSL), IRD/CNRS Université P. et M. Curie, Paris (France).

**Contact:** +34 652528264 / +33 671777516      **Email:** julian.villamayor@locean-ipsl.upmc.fr

**Sex:** Male      **Date of birth:** 02 February 1986      **Nationality:** Spanish

**Research interest:** Past, present, and future climate variability. Precipitation and sea surface temperature modes of decadal-to-multidecadal variability. Sea-atmosphere interactions. Teleconnections. Climate modelling. General circulation models.

## ACADEMIC ACHIEVEMENTS:

### **PhD in Physics (Atmospheric Sciences)**

**Title:** “Influence of the sea surface temperature decadal variability on tropical precipitation: West African and South American monsoon”.

**Supervisor:** Elsa Mohino

**University:** Complutense de Madrid.

**Date:** February 2018.

**Grade:** Excellent *cum laude*. International mention.

### **Master Degree in Geophysics and Meteorology**

**University:** Complutense de Madrid.

**Date:** September 2012.

### **Degree in Physics**

**University:** Autónoma de Madrid.

**Date:** June 2010.

## GRANTS AND SCHOLARSHIPS:

**Name:** Pre-doctoral mobility grants for the realization of short stays in research centers 2015. **Conferring Institution:** Spanish Ministry of Economy and Competitiveness. **Duration:** 3 months.

**Name:** Pre-doctoral mobility grants for the realization of short stays in research centers 2014. **Conferring Institution:** Spanish Ministry of Economy and Competitiveness. **Duration:** 3 months.

**Name:** Research staff training. **Aim:** Pre-doctoral. **Conferring Institution:** Spanish Ministry of Economy and Competitiveness. **Duration:** 4 years.

## PRIZES AND AWARDS:

### **Springer Theses Award 2019.**

Influence of the sea surface temperature decadal variability on tropical precipitation: West African and South American monsoon.

Nominated as an outstanding PhD thesis by the Universidad Complutense of Madrid, Madrid, Spain.

## FOREIGN LANGUAGES SKILLS:

**English:** Advanced level written, read and spoken.

**French:** Competent written, read and spoken.

**Spanish:** Mother tongue.

### **SCIENTIFIC PUBLICATIONS:**

- **Villamayor J** (2019) Influence of the sea surface temperature decadal variability on tropical precipitation: West African and South American monsoon. Springer Theses Award 2019.
- **Villamayor J**, Mohino E, Khodri M, Mignot J, Janicot S (2018). Atlantic Control of the Late Nineteenth-Century Sahel Humid Period. *Journal of Climate*, 31(20), 8225-8240.
- **Villamayor J**, Ambrizzi T, Mohino E (2017). Influence of decadal sea Surface temperature variability on northern Brazil rainfall in CMIP5 simulations. *Climate Dynamics*, 1-17.
- Rodríguez-Fonseca B, Suárez-Moreno R, Ayarzagüena B, López-Parages J, Gómara I, **Villamayor J**, Mohino E, Losada T, Castaño-Tierno A (2016). A review of ENSO influence on the North Atlantic. A non-stationary signal. *Atmosphere*, 7(7), 87.
- **Villamayor J**, Mohino E (2015). Robust Sahel drought due to the Interdecadal Pacific Oscillation in CMIP5 simulations. *Geophysical Research Letters*, 42(4), 1214-1222.
- Lopez-Parages J, **Villamayor J**, Gómara I, Losada T, Martín-Rey M, Mohino E, Polo I, Rodríguez-Fonseca B, Suarez R (2013) Nonstationary interannual teleconnections modulated by multidecadal variability, *Física de la Tierra*, ISSN 0214-4557
- **Villamayor J**, Mohino E (2012) Variabilidad multidecadal del Atlántico norte en modelos del CMIP5. *Meteorología y Calidad del Aire. XXXII Jornadas Científicas de la Asociación Meteorológica Española*, ISBN10 = 84-695-6430-7; ISBN13 = 978-84-695-6430-1 (Extended proceedings)

### **TEACHING:**

**Subject:** “Laboratorio de Computación Científica” of the degree in Physics. **University:** Universidad Complutense de Madrid. **Duration:** Totaling 60 hours during academic courses 2014-15 and 2015-16.

### **STAYS IN FOREIGN CENTRES:**

- **Institution:** LOCEAN-UPMC, Paris (France). **Type of stay:** Post-doctoral. **Period:** March 2018- December 2019.
- **Institution:** LOCEAN-UPMC, Paris (France). **Type of stay:** Pre-doctoral. **Period:** March 2016- May 2016.
- **Institution:** University of Sao Paulo, Sao Paulo (Brazil). **Type of stay:** Pre-doctoral. **Period:** May 2015- July 2015.

### **PARTICIPATION IN RESEARCH PROJECTS:**

- The Mystery of the Expanding Tropics: from Past to Future (THEMES). BNP Paribas Foundation’s Climate Initiative program. IP: Dr. Valerie Daux.
- Enhancing prediction of Tropical Atlantic climate and its impacts (PREFACE, ref.603521), Complutense University of Madrid (Spain), February-April 2015.
- Multiscale Climate Variability. Agronomical and Economic impacts (MULCLIVAR, ref: CGL2012-38923-C02-01), Complutense University of Madrid (Spain), July 2013- January 2015
- Actualization of resources at the Simeon Fongang Laboratory of Atmospheric and Ocean Physics at UCAD (Senegal). IP: Dr. Elsa Mohino Harris.

- Short term climate change predictability and projections (ref CGL2011-13564-E). IP: Dr. Elsa Mohino Harris.
- Seminar Spain-Brazil on Atlantic Climate Variability and Teleconnections (ref PHB2011-0113-TA). IP: Dr. Belén Rodríguez de Fonseca.
- Project for Innovation and Improvement of the quality of teaching activity: Virtual Laboratory of Meteorology and Climate (ref 122PCD1144). IP: Dr. Belén Rodríguez de Fonseca.
- Global Climate modelization by means of a hierarchy of climatic models. Application to the Iberian Peninsula (MOVAC, Ref: 20080005008402). IP: Dr. Marisa Luisa Montoya.
- Tropical Atlantic variability and the Climate Shift (TRACS, ref CGL2009-10285). IP: Dr. Belén Rodríguez de Fonseca.

### **PRESENTED WORKS IN CONFERENCES:**

- **Title:** “Hadley Circulation Decadal Variability in IPSL-CM6A-LR Model and Observations over the last 1500 years.” (Poster presentation). **Authors:** Julián Villamayor, Myriam Khodri, Juan A. Rivera, Elizabeth B. Naranjo and Valérie Daux. **Conference:** Atelier CMIP6, 2019, Bordeaux, France.
- **Title:** “The expanding tropics impact on central Andes precipitation.” (Poster presentation). **Authors:** Julián Villamayor, Myriam Khodri, Juan A. Rivera, Elizabeth B. Naranjo and Valérie Daux. **Conference:** European Geoscience Union General Assembly, 2019, Viena, Austria.
- **Title:** “Atlantic control of the late-19<sup>th</sup> century Sahel humid period” (Poster presentation). **Authors:** Julián Villamayor, Elsa Mohino, Myriam Khodri, Juliette Mignot and Serge Janicot. **Conference:** European Geoscience Union General Assembly, 2018, Viena, Austria.
- **Title:** “Decadal prediction of Sahel rainfall” (Oral presentation). **Authors:** Elsa Mohino, Noel Keenlyside, Holger Pohlmann, Marco Gaetani, Noelia Otero, Julián Villamayor. **Conference:** 16<sup>th</sup> CTWF International Symposium on Advances in Seasonal to Decadal Prediction, 2017, Beijing, China.
- **Title:** “Influence of decadal sea surface temperature variability on northern Brazil rainfall in CMIP5 simulations” (Poster presentation). **Authors:** Julián Villamayor, Tercio Ambrizzi and Elsa Mohino. **Conference:** European Geoscience Union General Assembly, 2016, Viena, Austria.
- **Title:** “Mean SST bias and variability at inter-annual and decadal time-scales in CMIP5 models” (Poster presentation). **Authors:** Irene Polo, Julián Villamayor, Belén Rodríguez-Fonseca, Elsa Mohino and Teresa Losada. **Conference:** European Geoscience Union General Assembly, 2016, Viena, Austria.
- **Title:** “Robust Sahel drought due to the Interdecadal Pacific Oscillation in CMIP5 simulations” (Poster presentation). **Authors:** Julián Villamayor and Elsa Mohino. **Conference:** CLIVAR-ICTP International Workshop on Decadal Climate Variability and Predictability: Challenge and Opportunity, 2015, Trieste, Italy.
- **Title:** “Robust Sahel drought due to the Interdecadal Pacific Oscillation in CMIP5 simulations” (Poster presentation). **Authors:** Julián Villamayor and Elsa Mohino. **Conference:** European Geoscience Union General Assembly, 2015, Viena, Austria.
- **Title:** “Robust Sahel drought due to the Interdecadal Pacific Oscillation in CMIP5 simulations” (Poster presentation). **Authors:** Julián Villamayor Moreno and Elsa Mohino. **Conference:** Simposio Internacional CLIMA-ES 2015. Avances en la detección y proyecciones del cambio climático en España a la luz del 5º informe del IPCC. Tortosa, Spain.
- **Title:** “Impact of decadal modes like IPO and AMO on West African rainfall with CMIP5 simulations” (Oral presentation). **Authors:** Elsa Mohino and Julián Villamayor. **Conference:** PREFACE General Assembly 2014. Casablanca, Morocco.

- **Title:** “AMO simulated by CMIP5 models and its impact on Sahel rainfall” (Oral presentation). **Authors:** Julián Villamayor Moreno and Elsa Mohino. **Conference:** CLIVAR Tropical Atlantic Variability (TAV) Prediction and Research Moored Array in the Tropical Atlantic (PIRATA) Meeting., 2013. Venice, Italy.
- **Title:** “Low-frequency variability of Sahel rainfall driven by sea surface temperature patterns in CMIP5 models” (Poster presentation). **Authors:** Julián Villamayor Moreno and Elsa Mohino. **Conference:** European Geosciences Union General Assembly 2013. Viena, Austria.
- **Title:** “Multidecadal variability of the North Atlantic in CMIP5 models and relationship with sahelian rainfall” (Oral presentation). **Authors:** Julián Villamayor Moreno and Elsa Mohino. **Conference:** Seminario España-Brasil en Variabilidad Climática del Atlántico Tropical y Teleconexiones, 2012. Madrid, Spain.
- **Title:** “Multidecadal variability of the North Atlantic in CMIP5 models and relationship with sahelian rainfall” (Poster presentation). **Authors:** Julián Villamayor Moreno and Elsa Mohino. **Conference:** 4th AMMA International Conference, 2012. Toulouse, France.
- **Title:** “Variabilidad multidecadal del Atlántico norte en modelos del CMIP5” (Poster presentation). **Authors:** Julián Villamayor Moreno and Elsa Mohino. **Conference:** XXXII Jornadas Científicas de la Asociación Meteorológica Española, 2012. Madrid, Spain.

#### **ORGANIZATION OF SEMINARS AND WORKSHOPS:**

- Coordination of cycle of seminars in Atmospheric Physics at University Complutense of Madrid, September 2013 - June 2014.
- Workshop Spain-Brazil on Atlantic Climate Variability and Teleconnections (ref PHB2011-0113-TA) (Assistant in the organization). Madrid, October 15-19, 2012.
- International MedCLIVAR Meeting “The Climate of the Mediterranean region: understanding its evolution and effects on environment and societies” (Assistant in the organization and development). Madrid, September 26-28, 2012.

#### **SCIENCE DISSEMINATION:**

- Invited to give the talk “The mystery of the expanding tropics” by the BNP Paribas International Retail Banking and the BNP Paribas foundation in Paris (France). Language: French. December 13, 2018.
- Invited to give the talk “The mystery of the expanding tropics” at the French Institute of Sofia (Bulgaria) in the frame of the “360 Climate Exhibition” (La Cité des Sciences, UN Environment, Fondation BNP Paribas, Institut Français), October 30, 2018.
- Invited to give the talk “The mystery of the expanding tropics” at the University of Sofia "St. Kliment Ohridski" (Bulgaria), October 29, 2018.
- Participation in the “Workshop of Atmosphere and Ocean: Feeling the atmosphere and the ocean”, Museum of Science and Technology in Madrid (Spain), January 25, 2014.
- Participation in the workshop on Atmosphere and Ocean in the frame of the Public Primary School “República de Venezuela” in Madrid (Spain), May 18, 2012
- Participation in the development of the Virtual Laboratory of Climate and Meteorology METEOLAB (<http://meteolab.fis.ucm.es/>), 2011-2012.
- Participation in the “Workshop of Atmosphere and Ocean” in the Science Week organized by the Comunidad de Madrid, 2011, 2012, 2013, 2014, 2015 and 2016.

**COURSES:**

**Course:** The Nansen Tutu Summer School on Ocean, Climate and Marine Ecosystem: A focus on the Agullas Current, the Benguela upwelling system and the Tropical Atlantinc. **City:** Cape Town (Republic of South Africa). **Duration:** December 1-8, 2014.