

# CURRICULUM VITAE

Family Name: **Martín del Rey**      First Name: **Marta**      Date: **December,2021**

## CURRENT PROFESSIONAL POSITION

Post-doctoral Juan de la Cierva Incorporación, Departamento de Física de la Tierra yAstrofísica, Universidad Complutense de Madrid, Madrid, Spain  
Email: [martam01@ucm.es](mailto:martam01@ucm.es)

## RESEARCH INTERESTS

Tropical climate variability. Air-sea interactions. El Niño-Southern Oscillation (ENSO), Atlantic Niño, Meridional Mode. Global climate teleconnections. Oceanic waves. Climate modelling.

## CLIMATE MODELLING SKILLS

- Highly advance knowledge of the climate global coupled CNRM-CM model.
- Highly advance knowledge of the Tropical Atlantic configuration of NEMO Ocean Circulation Model.
- Basic knowledge of the UCLA Atmospheric General Circulation Model (AGCM)

## SCIENTIFIC SKILLS

-Knowledge of Linux and Microsoft Windows.  
-Knowledge of Matlab, GrADs, NCL, CDO, NCO, python.

## ACADEMIC ACHIEVEMENTS

- **PhD by the Complutense University of Madrid** (July, 2015)  
*“Tropical Atlantic influence on the Pacific: Air-sea interactions and modulations”*  
(supervised by Dr. Belén Rodríguez de Fonseca and Dr. Irene Polo Sánchez).
- **Master in Geophysics and Meteorology by the Complutense University of Madrid** (June 2010)
- **Five year's Degree in Physics, specialized in Atmospheric Physics by the University of Salamanca** (September 2008)

## COMPETITIVE GRANTS

- **2021-2024:** Postdoctoral grant Juan de la Cierva Incorporación. Spanish Ministry of Science and Innovation.
- **2019- 2021:** Postdoctoral individual grant Marie Slodowska Curie (MSCA-IF-EF-ST FESTIVAL project, grant agreement 797236). European Commission. H2020.

## RESEARCH FUNDING

**2019- 2021: MSCA-IF-EF-ST FESTIVAL (H2020-EU project 797236)** *“From boreal spring to summer Tropical Atlantic inter-annual variability”*. Funding: European Commission. Quantity: 168 000€

## SCIENTIFIC EXPERIENCE

- **Post-Doctoral Researcher under contract “Juan de la Cierva Incorporación”**

Department of Geophysics and Meteorology, UCM, Madrid, February 2021-up to present

- **Post-Doctoral Researcher under contract “From boreal spring to summer Tropical Atlantic inter-annual variability (FESTIVAL, H2020-EU project 797236).**

Department of Physical Oceanography and Technology, ICM-CSIC, Barcelona, January 2019-January 2021

- **Post-Doctoral Researcher under contract “Mechanisms for climate Oscillations and Retroactions at Decadal timescale: Uncertainties and Sensitivity” (MORDICUS, ANR-13-SENV-0002).**

CECI-GLOBC, CERFACS, Toulouse, October 2017-December 2018

- **Post-Doctoral Researcher under contract “Enhancing prediction of Tropical Atlantic climate and its impacts” (PREFACE, ref.603521).**

LOCEAN-IPSL, Université Pierre et Marie Curie (UPMC) Sorbonnes Universités, Paris, France, May 2015-September 2017

- **PhD Researcher under contract “Enhancing prediction of Tropical Atlantic climate and its impacts” (PREFACE, ref.603521).**

Department of Geophysics and Meteorology, Faculty of Physical Sciences, Complutense University of Madrid (Spain), February-April 2015

- **PhD Researcher under contract “Multiscale Climate Variability. Agronomical and Economic impacts” (MULCLIVAR, ref: CGL2012-38923-C02-01).**

Department of Geophysics and Meteorology, Faculty of Physical Sciences, Complutense University of Madrid (Spain), July 2013- January 2015

- **PhD Researcher under contract, “Short term climate change predictability and projections” (ref CGL2011-13564-E)**

Department of Geophysics and Meteorology, Faculty of Physical Sciences, Complutense University of Madrid (Spain), August 1 2012- December 31 2012

- **PhD Researcher under contract, “Tropical Atlantic variability and the Climate Shift “(TRACS, ref CGL2009-10285)**

Department of Geophysics and Meteorology, Faculty of Physical Sciences, Complutense University of Madrid (Spain), April 1 2010- July 31 2012

## SCIENTIFIC-TECHNICAL PUBLICATIONS

Google scholar: <https://scholar.google.es/citations?user=D8xoPGEAAAAJ&hl=es>  
h-index: 10; index i10: 10; Total number of Citations: 672

1. Ruprich-Robert Y, E Moreno-Chamarro, A Belucci, C Cassou, F Castruccio, R Eade, G Gastineau, L Hermanson, D Hodson, K Lohmann, J Lopez-Parages, PA Monerie, D Nicoli, S Qasmi, C Roberts, G Danabasoglu, N Dunstone, **M Martín-Rey**, D Smith, S Corti, Belén Rodríguez-Fonseca, T Losada, Rym Msadek, Jon Robson (2020), Impacts of the Observed Atlantic Multidecadal Variability on Tropical Pacific: a multi-model study. *npj Climate and Atmospheric Science*, 4(1), 1-11. <https://doi.org/10.1038/s41612-021-00188-5>. (*citations: 2*)
2. B Rodríguez-Fonseca, Y-G Ham, S-K Lee, **M Martín-Rey**, I Polo and R Rodrigues (2020), Interacting Interannual Variability of the Pacific and Atlantic Oceans, In C.R. Mechoso of book, *Interacting Climates of Ocean Basins: Observations, Mechanisms, Predictability, and Impacts*. Cambridge University Press, ISBN: 9781108492706 (<https://www.cambridge.org/es/academic/subjects/earth-and-environmental-science/oceanography-and-marine-science/interacting-climates-ocean-basins-observations-mechanisms-predictability-and-impacts?format=HB>).
3. **Martín-Rey, M.**, Polo, I., Rodríguez-Fonseca, B., Lazar, A., & Losada, T. (2019). Ocean dynamics shapes the structure and timing of Atlantic Equatorial Modes. *Journal of Geophysical Research: Oceans*, 124, 7529-7544, <https://doi.org/10.1029/2019JC015030>. (*citations: 3*)
4. **Martín-Rey M** and A Lazar (2019), Is the boreal spring tropical Atlantic variability a precursor of the Equatorial Mode?, *Clim Dyn*, 53(3), 2339-2353, DOI: 10.1007/s00382-019-04851-9. (*citations: 5*)
5. Foltz G.R, P. Brandt, I. Richter, M. Rodríguez-Fonseca, F. Hernandez, M. Dengler, R.R. Rodrigues, J. Schmidt, L. Yu, N. Lefevre, L. Cotrim, M.J. McPhaden, M. Araujo, J. Karstensen2, J. Hahn, **M. Martín-Rey**, C.M. Patricola, P. Poli, P. Zuidema, R. Hummels, R.C. Perez, V. Hatje, J.F. Lübbecke, I. Polo, R. Lumpkin, B. Bourlès, F.E. Asuquo, P. Lehodey, A. Conchon, P. Chang, P. Dandin, C. Schmid, A. Sutton, H. Giordani, Y. Xue, S. Illig, T. Losada, S.A. Grodsky, F. Gasparin, T. Lee, E. Mohino, P. Nobre, R. Wanninkhof, N. Keenlyside, V. Garcon, E. Sánchez-Gómez, H.C. Nnamchi, M. Drévilion, A. Storto, E. Remy, A. Lazar, S. Speich, M. Goes, T. Dorrington, W.E. Johns, J.N. Moum, C. Robinson, C. Perruche, R.B. de Souza, A. Gaye, J. López-Parages, P.A. Monerie, P. Castellanos, N.U. Benson, M.N. Hounkonnou, J. Trotte-Duhá (2019), The Tropical Atlantic Observing System, *Frontiers in Marine Science*, 6, 206, doi: 10.3389/fmars.2019.00206. (*citations: 53*)
6. Cai W, L Wu, M Lengaigne, T Li, S McGregor, J-S Kug, J-Y Yu, MF Stuecker, A Santoso, X Li, Y-G Ham, Y Chikamoto, B Ng, MJ McPhaden, Y Du, D Dommenges, F Jia, JB Kajtar, N Keenlyside, X Lin, J-J Luo, **M Martín-Rey**, Y Ruprich-Robert, G Wang, S-P Xie, Y Yang, S Kang, J-Y Choi, B Gan , G-I Kim, C-E Kim, S Kim, J-H Kim, P Chang (2019) Pan-tropical climate interactions, *Science*, Vol. 363, Issue 6430, eaav4236, DOI: 10.1126/science.aav4236. (*citations: 246*)

7. Lübbecke J, Rodríguez-Fonseca B, Richter I, **Martín-Rey M**, Losada T, Polo I, Keenlyside N (2018) Equatorial Atlantic variability – modes, mechanisms, and global teleconnections. *Wiley interdisciplinary Reviews (WIREs) Climate Change*, 9(4), e527. DOI: <https://doi.org/10.1002/wcc.527>. (*citations: 56*)

8. **Martín-Rey M**, I Polo, B Rodríguez-Fonseca, T Losada, A Lazar (2018) Is there evidence of changes in Tropical Atlantic Variability modes under AMO phases in the observational record? *Journal of Climate*, 31 (2), 515-536, doi: <https://doi.org/10.1175/JCLI-D-16-0459.1>. (*citations: 44*)

9. Fred Kucharski, Afroja Parvin, Belen Rodriguez-Fonseca, Riccardo Farneti, **Marta Martín-Rey**, Irene Polo, Elsa Mohino, Teresa Losada, Carlos-Roberto Mechoso (2016), The Teleconnection of the Tropical Atlantic to Indo-Pacific Sea Surface Temperatures on Inter-annual to Centennial Time Scales: A Review of Recent Findings, *Atmosphere*, 7(2), 29; doi:[10.3390/atmos7020029](https://doi.org/10.3390/atmos7020029). (*citations:53*)

10. **Martín-Rey M**, B Rodríguez-Fonseca, I Polo (2015) Atlantic opportunities for ENSO prediction, *Geophys Res Lett*, 42(16), 6802-6810, doi:10.1002/2015GL065062. (*citations:38*)

11. Polo I, **M Martín-Rey**, B Rodríguez-Fonseca, CR Mechoso, F Kucharski (2015) Processes in the Pacific La Niña onset triggered by the Atlantic Niño, *Clim Dyn*, 44(1), 115-131, DOI 10.1007/s00382-014-2354-7. (*citations:74*)

12. **Martín-Rey M**, B Rodríguez-Fonseca, I Polo, F Kucharski (2014) On the Atlantic-Pacific Niños connection: An Atlantic Multidecadal Oscillation modulated mode, *Clim Dyn*, 43(11), 3163-3178, DOI: 10.1007/s00382-014-2305-3. (*citations:53*)

13. 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*, 25, 11-39, ISSN 0214-4557.

14. **Martín-Rey M**, I Polo, B Rodríguez-Fonseca and F Kucharski (2012) Changes in the interannual variability of the Tropical Pacific related to the equatorial Atlantic, *Sci Mar*, 76S1, 105-116, doi: 103989/scimar.03610.19A. (*citations:32*)

#### STAYS IN FOREIGN CENTRES

**Institution:** CERFACS. **City:** Toulouse, France. **Type of stay:** Postdoctoral. **Period:** 15 months, October 2017- December 2018.

**Institution:** LOCEAN-UPMC. **City:** Paris, France. **Type of stay:** Postdoctoral. **Period:** 28 months, May 2015- September 2017.

**Institution:** LOCEAN-UPMC. **City:** Paris, France. **Type of stay:** Pre-doctoral. **Period:** 3 months, September 2011-December 2011.

**Institution:** LOCEAN-UPMC. **City:** Paris, France. **Type of stay:** Pre-doctoral. **Period:** 2.5 months, October 2012- December 2012.

## PARTICIPATION IN RESEARCH PROJECTS

- 1. Project:** Multidecadal Modulations of Tropical Basins Interactions (TBI-MULMOD). Ref: LINKA20411. **Principal Investigator:** Belén Rodríguez de Fonseca. **Place:** UCM (Madrid, Spain). **Funding:** CSIC i-Link action. **Period:** 1 January 2022- 31 December 2023.
- 2. Project:** Red inter-universitaria MigrAcioneS Climáticas y RefugiAd@S (MASCARAS). Nº Ref. VR: 21. **Principal Investigator:** Irene Polo Sánchez. **Place:** UCM (Madrid, Spain). **Funding:** University Complutense of Madrid. **Period:** 5 May 2021- 31 December 2021.
- 3. Project:** Multi-model comparison of interannual-to-decadal Atlantic variability modes (MODELANT). **Principal Investigator:** Marta Martín del Rey. **Place:** UCM (Madrid, Spain). **Funding:** IS-ENES3 (Grant agreement ID: 824084). **Period:** February 2021-July 2021.
- 4. Project:** CLIMATE-COVID19: Cross-analysis of climatic and COVID19 data (PIM-E-202030E222) **Principal Investigator:** Jose Luis Pelegrí. **Place:** ICM-CSIC (Barcelona, Spain). **Funding:** CSIC-ISCI. **Period:** July 2020-July 2021.
- 3. Project:** From boreal spring to summer Tropical Atlantic inter-annual variability (MSCA-IF-EF-ST FESTIVAL, H2020-EU project 797236). **Principal Investigator:** Marta Martín del Rey; **Research Coordinator:** Jose Luis Pelegrí. **Place:** ICM-CSIC (Barcelona, Spain). **Funding:** H2020-EU. **Period:** 2019-2021.
- 4. Project:** Predictibilidad del clima en el sector Atlántico (PRE4CAST, CGL2017-86415-R). **Principal Investigator:** Elsa Mohino and Belén Rodríguez de Fonseca. **Place:** Universidad Complutense de Madrid (Madrid, Spain). **Funding:** Spanish Ministry of Economy, Industry and Competitiveness. **Period:** 2018-2020.
- 5. Project:** Mechanisms for climate Oscillations and Retroactions at Decadal timescale: Uncertainties and Sensitivity (MORDICUS, ANR-13-SENV-0002). **Principal Investigator:** Christophe Cassou. **Place:** CECI-CERFACS (France). **Funding:** French National Research Agency, ANR grant. **Period:** 2014-2018.
- 6. Project:** A study of intra-seasonal planetary wave impacts in the Tropical Atlantic upwellings & an assessment of climatological mean vertical velocities of the Atlantic thermocline (IMPOCATO & GTW). **Principal Investigator:** Alban Lazar. **Place:** LOCEAN, UPMC (France). **Funding:** EUMETSAT/CNES (CNES-DIA/TEC-2016.8595, EUM/LEO-JAS3/DOC/16/852054). **Period:** 2017-2020.
- 7. Project:** Enhancing prediction of Tropical Atlantic climate and its impacts (PREFACE, ref. 603521). **Principal Investigator:** Noel Keenlyside. **Place:** LOCEAN, UPMC (France) and University Complutense of Madrid, UCM (Spain). **Funding:** European Union. **Period:** 2013-2017.
- 8. Project:** Project for extension and improvement of the Virtual Laboratory of Meteorology and Climate. **Principal Investigator:** Marisa Montoya. **Place:** University Complutense of Madrid. **Funding:** University Complutense of Madrid. **Period:** 2015-2016.
- 9. Project:** Multiscale climate variability. Agricultural and Economic Impacts (MULCLIVAR, CGL2012-38923-C02-01). **Principal Investigator:** Belén Rodríguez de Fonseca. **Place:** University Complutense of Madrid (Spain). **Funding:** Spanish Ministry of Economy and Competitiveness. **Period:** 2013-2015.
- 10. Project:** Actualization of resources at the Simeon Fongang Laboratory of Atmospheric and Ocean Physics at UCAD (Senegal). **Principal Investigator:** Elsa Mohino. **Place:** University

Complutense of Madrid (Spain). **Funding:** University Complutense of Madrid. **Period:** 2013-2014.

**11. Project:** Short term climate change predictability and projections (CGL2011-13564-E). **Principal Investigator:** Elsa Mohino. **Place:** University Complutense of Madrid (Spain). **Funding:** Spanish Ministry of Science and Innovation. **Period:** 2012-2013.

**12. Project:** Creation and Donation of a forecast statistical model of Sahel rainfall. **Principal Investigator:** Belén Rodríguez de Fonseca. **Place:** University Complutense of Madrid (Spain). **Funding:** University Complutense of Madrid. **Period:** 2011- 2012.

**13. Project:** Project for Innovation and Improvement of the quality of teaching activity: Virtual Laboratory of Meteorology and Climate. **Principal Investigator:** Belén Rodríguez de Fonseca. **Place:** University Complutense of Madrid (Spain). **Funding:** University Complutense of Madrid. **Period:** 2011-2012.

**14. Project:** Tropical Atlantic variability and the Climate Shift (TRACS, CGL2009-10285). **Principal Investigator:** Belén Rodríguez de Fonseca. **Place:** University Complutense of Madrid (Spain). **Funding:** Spanish Ministry of Science and Innovation. **Period:** 2010-2012.

**15. Project:** Global Climate modelization by means of a hierarchy of climatic models. Application to the Iberian Peninsula (MOVAC). **Principal Investigator:** Marisa Montoya. **Place:** University Complutense of Madrid (Spain). **Funding:** Spanish Ministry of Environment. **Period:** 2008-2011.

**16. Project:** Micrometeorology and climate variability. **Place:** University Complutense of Madrid (Spain). **Principal Investigator:** Belén Rodríguez de Fonseca and Carlos Yagüe-. **Funding:** Universidad Complutense de Madrid y Banco Santander Central Hispano. **Period:** 2007-up to the present.

## CONTRIBUTIONS TO NATIONAL AND INTERNATIONAL SCIENTIFIC CONGRESSES

### 2021

1. M Portabella, G Grieco, E Makarova, A Stoffelen, **M Martín-Rey**, E Exarchou, P Ortega, I Gómara W Lin, F Polverari, F Cossu, A S Rabaneda, G P. King (2021) The role of scatterometry in ocean model forcing, Oral presentation in VI Expanding Ocean Frontiers conference (EOF 2021), 5th - 7th July 2021, (online)
2. ATrindade, **M Martín-Rey**, M Portabella, E Exarchou, P Ortega, and I Gómara (2021) Dominant role of North tropical Atlantic 2017 warm event on equatorial variability. vPico presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 19th to April 30th, 2021.
3. I Vallès Casanova, JL Pelegrí, **M Martín-Rey**, E van Sebille, and A Olivé Abelló (2021) From weekly to seasonal variability of the North Brazil - Equatorial Undercurrent retroflection. vPico presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 19th to April 30th, 2021.

### 2019

4. **Martín-Rey M**, JL Pelegrí, E Sánchez-Gómez and C Cassou (2019), Interaction between the boreal spring and summer Tropical Atlantic interannual variability modes, Poster presentation in American Geosciences Union (AGU) Fall Meeting, San Francisco (EEUU), from December 8<sup>th</sup>-13<sup>th</sup>, 2019.

5. Yohan Ruprich-Robert, Eduardo Moreno-Chamarro, Alessio Bellucci, Christophe Cassou, Frederic S Castruccio, Paolo Davini, Guillaume Gastineau, Katja Lohmann, Jorge Lopez-Parages, Dario Nicoli, Said Qasmi, Christopher Roberts, Doug M Smith, Susanna Corti, Gokhan Danabasoglu, Belen Rodriguez-Fonseca, Teresa Losada Doval, **Marta Martín-Rey**, Rym Msadek and Jon Robson (2019), The Impacts of the Atlantic Multidecadal Variability on Tropical Pacific as Assessed from CMIP6/DCPP-C Idealized Simulations, Oral presentation in American Geosciences Union (AGU) Fall Meeting, San Francisco (EEUU), from December 8<sup>th</sup>-13<sup>th</sup>, 2019.
6. **Martín-Rey M**, JL Pelegrí, E Sánchez-Gómez and C Cassou (2019), Observational evidence of multidecadal modulation of the Meridional Mode-Equatorial Mode connection, Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 7th to April 12th, 2019.
7. **Martín-Rey M**, JL Pelegrí, E Sánchez-Gómez and C Cassou (2019), Observational evidence of multidecadal modulation of the Meridional Mode-Equatorial Mode connection, Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 7th to April 12th, 2019.
8. Belen Rodriguez-Fonseca, Irene Polo, Elsa Mohino, Teresa Losada, **Marta Martín-Rey**, Noel Keenlyside, and Roberto Mechoso (2019), Conciliating tropical Atlantic impact on ENSO, Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 7th to April 12th, 2019.
9. López-Parages J, **M Martín-Rey**, T Losada, I Polo, B Rodríguez-Fonseca and L Terray (2019), Tropical North Atlantic as a potential non-stationary modulator of the ENSO -European rainfall teleconnection, Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 7th to April 12th, 2019.
10. López-Parages J, **Martín-Rey M**, Terray L, Rodríguez-Fonseca B, Polo I and Losada T (2019), Tropical North Atlantic as a potential non-stationary modulator of the ENSO impact on European rainfall, poster presentation in PRIMAVERA General Assembly, Barcelona (Spain), from March 26<sup>th</sup> to March 29<sup>th</sup>, 2019.

## **2018**

11. **M Martín-Rey**, B Rodríguez-Fonseca and I Polo (2018) Atlantic-Pacific connection, The second workshop on “Pan-tropical inter-basin climate interactions”, Jeju (South Korea), from August 22<sup>nd</sup> to August 25<sup>th</sup>, 2018.
12. **M Martín-Rey**, C Cassou, E Sánchez-Gómez and M Drouard (2018), Role of the ocean dynamics in ENSO-tropical Atlantic teleconnection under warmer climate Poster presentation in PREFACE INTERNATIONAL CONFERENCE on Ocean, Climate and Ecosystems, Arrecife, Lanzarote (Spain), from April 17th to April 20th, 2018.
13. **M Martín-Rey** and A Lazar (2018), Is the boreal spring Tropical Atlantic SST variability a precursor for the Equatorial Mode?, Poster presentation in PREFACE INTERNATIONAL CONFERENCE on Ocean, Climate and Ecosystems Arrecife, Lanzarote (Spain) , from April 17th to April 20th, 2018.
14. B Rodríguez-Fonseca, I Polo, E Mohino, T Losada, **M Martín-Rey**, CR Mechoso, N Keenlyside (2018), Conciliating tropical Atlantic impact on ENSO, Oral presentation in PREFACE INTERNATIONAL CONFERENCE on Ocean, Climate and Ecosystems Arrecife, Lanzarote (Spain), from April 17th to April 20th, 2018
15. E Sánchez-Gómez, **M Martín-Rey**, R Msadek, L Bessières (2018) Impact of the ocean stochastic parameterization on the simulated mean state and variability of a coupled model, Poster presentation in PREFACE INTERNATIONAL CONFERENCE on Ocean, Climate and Ecosystems Arrecife, Lanzarote (Spain), from April 17th to April 20th, 2018.
16. **M Martín-Rey**, C Cassou, E Sánchez-Gómez and M Drouard (2018) Role of the ocean dynamics in ENSO-tropical Atlantic teleconnection under warmer climate Poster

presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 8th to April 13th, 2018.

17. **M Martín-Rey** and A Lazar, Is the boreal spring Tropical Atlantic SST variability a precursor for the Equatorial Mode? (2018), Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 8th to April 13th, 2018.
18. J Lopez-Parages, **M Martín-Rey**, B Rodríguez-Fonseca, and I Polo (2018), Tropical North Atlantic as a non-stationary switch-on for ENSO-European rainfall teleconnection, Oral presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 8th to April 13th, 2018.

## **2017**

19. N Keenlyside, H Ding, **M Martín-Rey**, B Rodríguez-Fonseca and M Latif (2017) Role of the Tropical Atlantic in the mid-70's ENSO shift, Oral presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 23th to April 28th, 2017.

## **2016**

20. **M Martín-Rey** and A Lazar (2016), Oceanic processes involved in the development and decay of the Meridional Mode, AGU meeting, Poster presentation in San Francisco (California, US), from December 12th to December 18nd, 2016.
21. **M Martín-Rey** and A Lazar, Oceanic processes involved in the development and decay of the Meridional Mode, CLIVAR-TAV PIRATA-PREFACE meeting, Poster presentation in Paris (France), from November 28th to December 2nd , 2016.
22. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, T Losada and A Lazar (2016), On the inter-annual tropical Atlantic variability modes under negative AMO phases, Oral presentation in CLIVAR-TAV PIRATA-PREFACE meeting, Paris (France), from November 28th to December 2nd , 2016.
23. B Rodríguez-Fonseca, I Polo, E Mohino, T Losada, **M Martín-Rey** and Noel Keenlyside (2016), A mechanism for the changing impact of the tropical Atlantic on the Pacific. Influence of the bias, Oral presentation in CLIVAR-TAV PIRATA-PREFACE meeting, Paris (France), from November 28th to December 2nd, 2016
24. N Keenlyside, H Ding, **M Martín-Rey**, B Rodríguez-Fonseca, M Latif, Role of tropical Atlantic in ENSO variability, Oral presentation in CLIVAR-TAV PIRATA-PREFACE meeting, Paris (France), from November 28th to December 2nd , 2016
25. B Rodríguez-Fonseca, I Polo, E Mohino, T Losada and **M Martín-Rey** (2016), A mechanism for the multidecadal modulation of the tropical inter-basin teleconnections, Oral presentation in ICTP Workshop on Teleconnections in the Present and Future Climate, Trieste (Italy), from November 24th-28th, 2016.
26. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, T Losada and A Lazar (2016), On the inter-annual tropical Atlantic variability under negative AMO phases, Poster presentation in ICTP Workshop on Teleconnections in the Present and Future Climate, Trieste (Italy), from November 24th-28th, 2016.
27. A Lazar, D Dause, M Diakhaté, **M Martín-Rey**, D Dagonne, E Machu, S Faye, A Thierno Gaye (2016), First year of an ocean-atmosphere mooring in the Senegalese coastal upwelling, Poster presentation in International Conference ICAWA, December 13th-15th, Dakar (Senegal).
28. A Lazar, D Dause, M Diakhaté, **M Martín-Rey**, D Dagonne, E Machu, S Faye, A Thierno Gaye (2016), Eastern boundary upwelling systems (EBUS) First year of an ocean-atmosphere mooring in the Senegalese coastal upwelling, Poster presentation in CLIVAR Open Science Conference, September 20th-22nd, Qingdao (China).



29. **M Martín-Rey**, A Lazar (2016), Oceanic processes involved in the development of Tropical Atlantic variability modes, Oral presentation in Journées LEFE-IMAGO Dynamique de l'ITCZ et processus associés, June 1st- 2nd , Toulouse (France), 2016
30. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, and A Lazar (2016), Air-sea interactions and oceanic processes in the development of different Atlantic Niño patterns, Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 17th to April 22nd, 2016.
31. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, T Losada and A Lazar (2016), On the configurations of the Atlantic Niño phenomena under negative AMO phases, Oral presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 17th to April 22nd, 2016.
32. **M Martín-Rey**, A Lazar (2016), On the impact of the resolution on the surface and subsurface Eastern Tropical Atlantic warm bias, Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 17th to April 22nd, 2016.
33. **M Martín-Rey** and A Lazar (2016), On the relationship between the Meridional mode and the equatorial SST anomalies, Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 17th to April 22nd, 2016.
34. **M Martín-Rey** and A Lazar (2016), On the impact of the resolution on the Eastern Tropical Atlantic Ocean bias, Oral presentation in the DRAKKAR meeting, Grenoble (France), from January 25 to January 27, 2016

## **2015**

35. A Lazar, D Dausse, M Diakhaté, **M Martín-Rey**, D Dagherne, E Machu, S Faye, A Thierno Gaye (2015), First year of an ocean-atmosphere mooring in the Senegalese coastal upwelling, Poster presentation in International Conference ICAWA, November 17th-19nd, Dakar (Senegal).
36. A Lazar, **M Martín-Rey**, M Diakhaté, S Faye, E Machu, D. Dausse, A.T. Gaye, D Dagherne (2015), First results of an ocean-atmosphere mooring in the Senegalese upwelling, Oral presentation in the Tropical Atlantic Variability (TAV)-PIRATA Meeting, Cape Town (South Africa), from August 25 to August 27, 2015
37. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca and A Lazar (2015), Dynamics associated to different Atlantic Niño configurations, Poster presentation in the Tropical Atlantic Variability (TAV)-PIRATA Meeting, Cape Town (South Africa), from August 25 to August 27, 2015
38. **M Martín-Rey**, B Rodríguez-Fonseca and I Polo (2015), Atlantic opportunities for ENSO prediction, Oral presentation in the Tropical Atlantic Variability (TAV)-PIRATA Meeting, CapeTown (South Africa), from August 25 to August 27, 2015
39. I Polo, **M Martín-Rey**, B Rodriguez-Fonseca, F Kucharski, and CR Mechoso (2015), Processes in the Pacific La Niña onset triggered by the Atlantic Niño, Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 12 to April 17, 2015
40. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca and A Lazar (2015), Dynamics associated to different Atlantic Niño configurations, Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 12 to April 17, 2015
41. **M Martín-Rey**, B Rodríguez-Fonseca, I Polo and F Kucharski (2015), On the Atlantic-Pacific Niños connection: A multidecadal modulated mode, Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 12 to April 17, 2015
42. **M Martín-Rey**, B Rodríguez-Fonseca and I Polo (2015), Atlantic opportunities for ENSO prediction, Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 12 to April 17, 2015

43. **M Martín-Rey**, B Rodríguez-Fonseca, I Polo (2015), Atlantic Opportunities for ENSO prediction. Poster presentation in 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), from March 11 to March 13, 2015.

## **2014**

44. **M Martín-Rey**, I Polo, A Lazar and B Rodríguez-Fonseca (2014), On the influence of Subtropical Highs in the development of Atlantic Niños, Oral presentation in IV Encuentro de Oceanografía Española (EOF2014), Las Palmas de Gran Canaria (Spain), from June 11 to 13, 2014
45. **M Martín-Rey**, I Polo, A Lazar and B Rodríguez-Fonseca (2014), On the influence of Subtropical Highs in the development of Atlantic Niños. Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 27 to May 2, 2014
46. **M Martín-Rey**, B Rodríguez-Fonseca, I Polo, Atlantic Opportunities for ENSO prediction (2014). Oral presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), from April 27 to May 2, 2014.

## **2013**

47. B Rodríguez-Fonseca, I Polo, E Mohino, T Losada and **M Martín-Rey** (2013) Multidecadal modulations of the Atlantic Niño influence on the Pacific ENSO in CMIP5 simulations. Poster presentation in Tropical Atlantic Variability (TAV)-PIRATA Meeting, Venice (Italy), October from 21 to 24, 2013.
48. **M Martín-Rey**, Belén Rodríguez-Fonseca, Irene. Polo, Fred Kucharski (2013) The Atlantic-Pacific connection: A multidecadal variability mode. Oral presentation in Tropical Atlantic Variability (TAV)-PIRATA Meeting, Venice (Italy), October from 21 to 24, 2013.
49. **M Martín-Rey**, Irene Polo, Alban Lazar and Belén Rodríguez-Fonseca (2013) On the influence of the Subtropical Highs in the development of the Atlantic Niños. Poster presentation in Tropical Atlantic Variability (TAV)-PIRATA Meeting, Venice (Italy), October from 21 to 24, 2013.
50. **M Martín-Rey**, B Rodríguez-Fonseca, I Polo, F Kucharski (2013) The role of the Atlantic and Pacific basins in the connection between Atlantic and Pacific Niños. Poster presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), April, from 9 to 13, 2013
51. **M Martín-Rey**, B Rodríguez-Fonseca, I Polo, A Lazar (2013) The role of the subtropical and equatorial forcing in the development of the Atlantic Niños after 1970s. Oral presentation in the European Geosciences Union (EGU) General Assembly, Viena (Austria), April, from 9 to 13, 2013
52. B Rodríguez-Fonseca, I Polo, E Mohino, **M Martín-Rey** and T Losada (2013) Multidecadal modulations of the Atlantic Niño influence on the Pacific ENSO in CMIP5 simulations. Poster presentation in the European Geosciences Union (EGU) General Assembly, April, from 9 to 13, 2013.

## **2012**

53. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, F Kucharski (2012) The role of the Atlantic and Pacific basins in the connection between Atlantic and Pacific Niños. Poster presentation in the II Encuentro de Oceanografía Física, Madrid (Spain), November from 14 to 16, 2012

54. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca: Análisis de la Influencia del Atlántico en la Variabilidad Interanual del Pacífico Tropical. Oral presentation in XXXII Jornadas Científicas de la AME. Meteorología y calidad del aire, 7, Madrid (Spain), May from 26 to 30, 2012
55. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, Alban Lazar (2012) The influence of the Subtropical Highs in the development of the Atlantic Niños since 1970. Poster presentation in European Geosciences Union (EGU) General Assembly in Viena (Austria), April from 22 to 27, 2012
56. B Rodríguez -Fonseca, I Polo, E Mohino, T Losada, **M Martín-Rey** (2012) Multidecadal Modulation of Tropical Atlantic impact on ENSO. Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), April from 22 to 27, 2012
57. I Polo, **M Martín-Rey**, B Rodríguez-Fonseca, CR Mechoso and F Kucharski (2012) Processes in the Influence of Tropical Atlantic Sea Surface Temperatures on Pacific la Nina Onset . Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), April from 22 to 27, 2012.

## 2011

58. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca and Fred Kucharski (2011) The Atlantic impact on Pacific El Niño: A important source of predictability for the Euro-Atlantic region. Poster presentation in World Climate Research Programme Open Science Conference (WCRP OSC), Denver (Colorado), October from 24 to 28, 2011
59. B Rodríguez-Fonseca, I Polo, T Losada, E Mohino, **M Martín-Rey** (2011) The relation between the Atlantic and Pacific Niños in CMIP simulations. A multidecadal modulation. Poster presentation in World Climate Research Programme Open Science Conference (WCRP OSC), Denver (Colorado), October from 24 to 28, 2011
60. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, J García-Serrano , T Losada, E Mohino , CR Mechoso and F Kucharski (2011) Analysis of El Niño events from the Atlantic remote influence. Poster presentation in European Conference on Applications of Meteorology, EMS Annual Meeting, Berlin (Germany), September, from 12 to 16, 2011
61. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, J García-Serrano, T Losada, E Mohino, Carlos Roberto Mechoso and Fred Kucharski (2011) Analysis of El Niño events from the Atlantic remote influence. Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), April from 3 to 8, 2011.
62. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca and F Kucharski (2011) Multidecadal variability of El Niño types due to Atlantic remote influence. Oral presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), April from 3 to 8, 2011

## 2010

63. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca, J García-Serrano , T Losada, E Mohino , CR Mechoso and F Kucharski (2010) Changes in the Tropical Pacific background state and La Niña development from Atlantic remote influence. Poster presentation in I Encuentro de Oceanografía Física Española (EOF), Barcelona (Spain), October, from 13 to 15, 2010
64. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca , J García-Serrano , T Losada, E Mohino , CR Mechoso and F Kucharski (2010) Changes in the Tropical Pacific background state and La Niña development from Atlantic remote influence. Poster presentation in European Geosciences Union (EGU) General Assembly, Viena (Austria), May from 2 to 7, 2010
65. **M Martín-Rey**, I Polo, B Rodríguez-Fonseca (2010). Estudio del océano superior del Pacifico Tropical y su relación con un forzamiento del Atlántico, Oral presentation in XXXI Jornadas Científicas de la Asociación Meteorológica Española, Seville(Spain), March from 1 to 3,2010.

## **FOREIGN LANGUAGES SKILLS**

- **ENGLISH:** High level of fluency both written, read and spoken.
- **FRENCH:** High level of fluency both written, read and spoken
- **SPANISH:** Mother tongue.

## **TEACHING EXPERIENCE**

### *Supervision of Master/Degree thesis*

**2017-2021:** Co-advisor of the PhD thesis entitled “Retroreflections in the tropical Atlantic Ocean” by Ignasi Vallès-Casanova. Instituto de Ciencias del Mar & Universidad Politécnica de Cataluña.

**2018-2019:** Co-advisor of the Master thesis entitled “Analysis of the ENSO-Tropical Atlantic-European precipitation teleconnection in the seasonal forecast systemn DePreSys3” by Enrique Prego Tabuyo (4 ETCs). University Complutense of Madrid.

**2018-2019:** Co-advisor of the Degree thesis entitled “Temperature-salinity clustering of the Atlantic Ocean” by Naina González (6 ETCs). University of Barcelona.

**2015-2016:** Co-advisor of the Master thesis entitled “Influencia del ENSO en la variabilidad del Atlántico tropical” by Nerea Betancort (12 ETCS). University Complutense of Madrid.

### *Official teaching*

**2021-2022:** Subject: Laboratory of Programming and Numerical Methods (70 hours). Type of teaching: Official teaching. Programme: Bachelor degree in Physics. Institution: Universidad Complutense de Madrid.

**2013-2014:** Subject: Physical Oceanography (15 hours). Type of teaching: Official teaching. Programme: Bachelor degree in Physics. Institution: Universidad Complutense de Madrid.

**2010-2011:** Subject: Physical Oceanography (12 hours). Type of teaching: Official teaching. Programme: Bachelor degree in Physics. Institution: Universidad Complutense de Madrid.

**2010-2011:** Subject: Computational Laboratory (90 hours). Type of teaching: Official teaching – Tutor-Collaborator. Programme: Bachelor degree in Physics. Institution: Universidad Complutense de Madrid.

## **ORGANIZATION OF SEMINARS AND WORKSHOPS**

**2021:** Convener in the session OS1.4/AS2/CL4 Tropical Atlantic climate: ocean processes, air-sea interactions, remote impacts, and climate change. Viena (Austria), April 19th-30th 2021

**2021:** Co-chair in the session Approaches for understanding interbasin linkage, WCRP-CLIVAR Workshop on: Climate Interactions Among the Tropical Basins, February 24th-26th 2021

**2019:** Co-convener in the session CL4.24/AS1.20/OS1.32 Dynamics and impacts of tropical-extratropical variability and teleconnections from interannual to multidecadal time scales, including tropical Atlantic. Viena (Austria), April 7<sup>th</sup>-12<sup>th</sup> 2019

**2016:** International CLIVAR-TAV PIRATA-PREFACE Meeting (Co-organization and development). Paris, November 28th –December 2nd 2016.

**2013:** International PREFACE Kick-OFF Meeting (Assistant in the organization and development). Madrid, December 2nd - 4th 2013.

**2012:** Seminar Spain-Brazil on Atlantic Climate Variability and Teleconnections (ref PHB2011-0113-TA) (Assistant in the organization). Madrid, October 15th -19th 2012.

**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 26th -28th 2012.

### SCIENTIFIC SEMINARS

**November 2019:** *Air-sea interactions in the development of distinct Equatorial Modes*, Department of Physical Oceanography and Technology, ICM-CSIC, Barcelone (Spain)

**February 2019:** *From Boreal Spring to Summer Interannual Tropical Atlantic Variability*, Department of Physical Oceanography and Technology, ICM-CSIC, Barcelone (Spain)

**June 2018:** *Role of ocean dynamics in ENSO-Tropical Atlantic teleconnection under a warmer climate*, CERFACS, Toulouse (France).

**June 2018:** *Role of ocean dynamics in ENSO-Tropical Atlantic teleconnection under a warmer climate*, CNRM, Toulouse (France).

**February 2016:** *Tropical Atlantic variability and its impacts on the Pacific (invited talk)*, CERFACS, Toulouse (France).

**July 2015:** *Tropical Atlantic influence on the Pacific: Air-sea interactions and modulations*, LOCEAN-IPSL, UPMC, Paris (France).

**November 2013:** *Working with NETCDF in Matlab (3hours)*, TROPA-UCM group, Department of Geophysics and Meteorology, University Complutense of Madrid, Madrid (Spain).

**May 2013:** *On the connection of the Atlantic Niños on the Pacific Niñas and vice versa*, Department of Geophysics and Meteorology, University Complutense of Madrid, Madrid (Spain).

**November 2012:** *The influence of the Atlantic Ocean over the Tropical Pacific since 1970*, LOCEAN-IPSL, UPMC, Paris (France).

**January 2012:** *The influence of the Atlantic Ocean over the Tropical Pacific since 1970*, Department of Geophysics and Meteorology, University Complutense of Madrid, Madrid (Spain).

**December 2011:** *The “El Niño-Southern Oscillation”. Relation with the Atlantic Niño*, Colegio de España, Paris (France)

### SCIENCE OUTREACH ACTIVITIES

**Nov 2021:** Creation of scientific news for educational activities in the framework of “Geociencias en el cole” for Primary and High Schools in Madrid (Spain).

**May 2021:** Workshop “Meteolab. Las claves del cambio climático” in the frame of the project “Ciencia en el barrio” in the High School IES Arcipreste de Hita in Madrid (Spain), May 12th.

**March, 2019:** Interview in the radio programme Planeta Vivo: <http://planetavivoradio.com/2019/03/13/programa-528-interacciones-climaticas-en-los-grandes-oceanos-03-03-2019/>

**February, 2019:** ‘El Niño-Oscilación del Sur (ENSO): Motor del Clima global’, in the framework of the week for ‘Women in Science’ in the public High School IES Pablo Neruda in Madrid.

**February, 2019:** ‘El Niño-Oscilación del Sur (ENSO): Motor del Clima global’, in the framework of the week for ‘Women in Science’ in the public High School IES Pedro Duque in Madrid.

**February, 2019:** ‘El Niño-Oscilación del Sur (ENSO): Motor del Clima global’, in the framework of the week for ‘Women in Science’ in the public High School IES Leonardo da Vinci in Alba de Tormes (Salamanca) .

**2018:** Euroscience Open Forum position (ESOF2018). Femmes & Sciences and CNRS, Toulouse, June 9th.

**2016:** Exposition “ConScience Climatique”, Colegio de España, CIUP, Paris, January 20th-31st

**2014:** Participation of the “Workshop of Atmosphere and Ocean” in the frame of the Museum of Technology and Science in Madrid (Spain), January 25th.

**2012:** Participation in the “Workshop of Atmosphere and Ocean” in the Complutense University for the visit of “Fundación Aprocór” in Madrid (Spain), March 16th.

**2012:** Participation in the workshop on Atmosphere and Ocean in the frame of the Public Primary School “República de Venezuela” in Madrid (Spain), May 18th.

**2011 - 2012:** Participation in the Virtual Laboratory of Climate and Meteorology (<http://meteolab.fis.ucm.es/>).

**2011:** Seminar “The El Niño-Southern Oscillation. Relation with the Atlantic Niño” in Colegio de España, Paris (France), December 5th.

**2009 – 2010 – 2013 – 2014:** Participation in the “Workshop of Atmosphere and Ocean” in the “Science week” organized by the Comunidad de Madrid.

## **OTHER MERITS**

ANECA Accreditation as “Profesor Contratado Doctor” and “Profesor de Universidad Privada” (2020).

ANECA Accreditation as “Profesor Ayudante Doctor” (2017).

Official Teaching certificate (Curso de Aptitud Pedagógica, CAP). University of Salamanca (128 hours). (2008-2009)

Reviewer for Nature npj Climate and Atmospheric Science, Climate Dynamics, Journal of Climate, Journal of Geophysical Research Atmosphere, Journal of Geophysical Research Ocean, International Journal of Climatology, Geophysical Research Letters.