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RESEARCH INTERESTS:

General circulation & climate modelling - Observational studies of tropical circulation systems - Climate Diagnosis - Climatic Change - STE - Atmospheric Variability - Synoptic Meteorology - Sources of Moisture and Moisture Transport (FLEXPART)

EDUCATION/TRAINING:

2005 - Phd in Physics at the Universidade de Vigo - Spain

2000 – Degree in Physics at the Universidade de Vigo - Spain

POSITIONS & EMPLOYMENT:

- since 2012 Profesor Titular Universidad, Vigo University, Spain
- from 2006 to 2011: Research Scientist. Vigo University, Spain Teaching Activities: several courses in PRE-GRADUATE in Physics Degree and PhD COURSES about Meteorology, Climatology, Teledetection, Energy and Environment, Weather and Forecasting, Climatic Models and Climate Variability.
- from 2001 to 2006: Junior Research Scientist; from 2005 Postdoc position in CGUL, Univ. of Lisbon, Portugal;

DOCTORAL THESIS:

- Linking Extremes Precipitation Events and the associated Moisture Transport. Danica Ciric. Supervisors: Raquel-Olalla Nieto Muñiz & Luis Gimeno Presa, Universidad de Vigo, Facultad de Ciencias; Sobresaliente cum Laude (2018)
- Atmospheric moisture transport: the bridge between ocean evaporation and hydrological extremes in major tropical river basins. Rogert Sorí. Supervisors: Raquel-Olalla Nieto Muñiz & Luis Gimeno Presa, Universidad de Vigo, Facultad de Ciencias; Sobresaliente cum Laude (2018)
- Fuentes oceánicas y terrestres de precipitación en el ártico: nuevas metas y orientaciones desde una aproximación lagrangiana Marta Vázquez. Supervisors:

Raquel-Olalla Nieto Muñiz & Luis Gimeno Presa, Universidad de Vigo, Facultad de Ciencias; Sobresaliente cum Laude (2018)

- Fuentes Globales de Humedad: Caracterización y Estudio de su Variabilidad. Rodrigo Alberto Castillo Rodríguez. Supervisors: Raquel-Olalla Nieto Muñiz & Luis Gimeno Presa ; Universidad de Vigo, Facultad de Ciencias; Sobresaliente (2015)

RESEARCH SUPPORT:

Participation on 40 Extramural Research Projects funded including projects from the European Commission and the Spanish and Portuguese Ministries of Science.

Member of research Networks: 7 COST Actions, 2 CYTED Programs and 6 International Cooperation (by the Spanish Ministry of Education and Science with 5 Universities)

Participation on International Seminars, Workshops or Congress with oral and poster presentations (EGU, EGS, EMS,AGU, COSPAR, IAMAS, SPARC,...)

PRIZES AND AWARDS

2018 Premio Especial de investigación al mejor trabajo en el área de Ecología y Biodiversidad en el XVII Certamen Universitario Arquímedes. Ministerio de Ciencia, Innovación y Universidades de España

2017 Premio Investigación Campus del Agua 2017 al trabajo ‘Major Mechanisms of Atmospheric Moisture Transport and Their Role in Extreme Precipitation Events’ publicado en la revista Annual Review of Environment and Resources en 2016. Universidad de Vigo

2013 Premio Internacional 2013 de Meteorología ‘Eduard Fontserè’ al trabajo “Trends and extremes of drought indices throughout the 20th century in the Mediterranean” en la revista Natural Hazards and Earth System Science Associació Catalana de Meteorologia (ACAM)

2011 Premio Internacional 2011 Outstanding Young Scientist de la EGU –Unión Europea de Geofísica-. EGU –Unión Europea de Geofísica

2009 Premio Internacional de la Sociedad Europea de Meteorología (EMSEuropean Meteorological Society) para investigadores menores de 35 años EMS-European Meteorological Society

PUBLICATIONS: over 100 peer-reviewed publications included in SCI

11 BOOK CHAPTERS

[103] R. Nieto, L. Gimeno (2019) A database of optimal integration times for Lagrangian studies of atmospheric moisture sources and sinks, Scientific Data, May, Vol. 6, Pages 1-10, DOI: <https://doi.org/10.1038/s41597-019-0068-8>

[102] M. Vázquez, I. Algarra, J. Eiras-Barca, A.M. Ramos, R. Nieto, L. Gimeno (2019) Atmospheric Rivers over the Arctic: Lagrangian Characterisation of Their Moisture Sources, Water, 2019, 11(1), 41. Pages 1-14 doi:10.3390/w11010041

[101] C. Salvador, R. Nieto, C. Linares, J. Díaz, L. Gimeno (2019) Effects on daily mortality of droughts in Galicia (NW Spain) from 1983 to 2013, Science of The Total Environment, VOL 662 Pages 121-133 DOI: <https://doi.org/10.1016/j.scitotenv.2019.01.217>

[100] P. Ordoñez, R. Nieto, L. Gimeno, P. Ribera, D. Gallego, C. A. Ochoa-Moya, A. I. Quintanar (2019) Climatological moisture sources for the Western North American Monsoon through

- a Lagrangian approach: their influence on precipitation intensity, *Earth System Dynamics*, Vol. 10, Pages 59-72, DOI:<https://doi.org/10.5194/esd-10-59-2019>
- [99] A.M. Ramos, R.C. Blamey, I. Algarra, R. Nieto, L. Gimeno, R. Tomé, C. Reason, R.M. Trigo (2019) From Amazonia to southern Africa: atmospheric moisture transport through low-level jets and atmospheric rivers, *Annals of the New York Academy of Sciences*, Vol. 1436, Issue1 Pages 217-230 DOI: 10.1111/nyas.13960
- [98] I. Algarra, J. Eiras-Barca, G. Miguez-Macho, R. Nieto, L. Gimeno (2019) On the assessment of the moisture transport by the Great Plains low-level jet, *Earth System Dynamics*, Vol. 10 Issue 1, pages 107-119 DOI: <https://doi.org/10.5194/esd-10-107-2019>
- [97] L. Gimeno-Sotelo, R. Nieto, M. Vázquez, L. Gimeno (2019) The role of moisture transport for precipitation in the inter-annual and inter-daily fluctuations of the Arctic sea ice extension, *Earth System Dynamics*, Vol. 10, Pages 121-133, DOI: <https://doi.org/10.5194/esd-10-121-2019>
- [96] R. Garcia-Herrera, J.M. Garrido-Perez, D. Barriopedro, C. Ordóñez, S.M. Vicente-Serrano, R. Nieto, L. Gimeno, R. Sorí, P. Yiou (2019) The European 2016/2017 drought, *Journal of Climate*, Vol. 32 Issue 7, April 2019 Pages DOI: <https://doi.org/10.1175/JCLI-D-18-0331.1>
- [95] R. Sorí, R. Nieto, A. Drumond, M. Stojanovic, L. Gimeno (2019) On the Connection between Atmospheric Moisture Transport and Dry Conditions in Rainfall Climatological Zones of the Niger River Basin, *Water*, 2019, Volume: 11 Issue: 3, Pages 1-20 DOI: <https://doi.org/10.3390/w11030622>
- [94] A. Drumond, M. Stojanovic, R. Nieto, S.M. Vicente-Serrano, L. Gimeno (2019) Linking Anomalous Moisture Transport and Drought Episodes in the IPCC Reference Regions, *Bulletin of the American Meteorological Society*, March 2019, Pages 1-54 , DOI: <https://doi.org/10.1175/BAMS-D-18-0111.1>
- [93] M. Vázquez, R. Nieto, A. Drumond, L. Gimeno (2018) Moisture transport from the Arctic: a characterization from a Lagrangian perspective, *Cuadernos de Investigación Geográfica*, P 1-12 <http://doi.org/10.18172/cig.3477>
- [92] S.M. Vicente-Serrano, M. Bidegain, M. Tomas-Burguera, F. Domínguez-Castro, A.E. Kenawy, T. McVicar, C. Azorin-Molina, J.I. Lopez-Moreno, R. Nieto, L. Gimeno, A. Giménez (2018) A comparison of temporal variability of observed and model-based pan evaporation over Uruguay (1973–2014), *International Journal of Climatology*, doi:10.1002/joc.5179
- [91] S.M. Vicente-Serrano, J.I. Lopez-Moreno, K. Correa, G. Avalos, J. Bazo, C. Azorin-Molina, F. Domínguez-Castro, A. El Kenawy, L. Gimeno, R. Nieto (2018) Recent changes in monthly surface air temperature over Peru, 1964-2014, *International Journal of Climatology*, doi:10.1002/joc.5176
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- [88] M. Stojanovic, A. Drumond, R. Nieto, L. Gimeno (2018) Anomalies in Moisture Supply during the 2003 Drought Event in Europe: A Lagrangian Analysis, *Water*, 2018, 10(4), 467. Pages 1-19. doi:10.3390/w10040467
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- [79] M. Heydarizad, E. Raeisi, R. Sorí, L. Gimeno, R. Nieto (2018) The Role of Moisture Sources and Climatic Teleconnections in Northeastern and South-Central Iran's Hydro-Climatology, *Water*, 2018, 10(11), 1550; Pages 1-18 DOI: <https://doi.org/10.3390/w10111550>
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- [55] R. Nieto, R. Castillo, A. Drumond, L. Gimeno Título: A catalogue of moisture sources for continental climatic regions Revista: *Water Resources Research*; doi:10.1002/2013WR013901 Volumen: 50 Páginas: 5322-5328 Fecha: 2014
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- the discount of the net evaporation term affects the resulting net precipitation pattern in the moisture budget using a 3-D Lagrangian approach Revista: PLoS ONE; doi:10.1371/journal.pone.0099046 Volumen: 9 (6) Páginas: 1-9 Fecha: 2014
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- [48] L. Gimeno, A. Stohl, R.M. Trigo, F. Domínguez, K. Yoshimura, L. Yu, A. Drumond, A.M. Durán-Quesada, R. Nieto Título: Oceanic and Terrestrial Sources of Continental Precipitation Revista: *Reviews of Geophysics* ; doi:10.1029/2012RG000389 Volumen: 50 Páginas: RG4003, 41 PP Fecha: 2012 FI: 12.364 Posición y campo: 2 (76) Geochemistry & Geophysics
- [47] S.M. Vicente-Serrano, S. Bergueria, L. Gimeno, L. Eklundh, G. Giuliani, D. Weston, A. El Kenawy, J.I. LopezMoreno, R. Nieto, T. Ayenew, D. Konte, J. Ardo, G.G.S. Pegram Título: Challenges for mitigating drought impacts in Africa: the potential use of geospatial data and drought information systems. Revista: *Applied Geography Journal* Volumen: 34 Páginas: 471-486 Fecha: 2012 FI: 3.395 Posición y campo:
- [46] A. Drumond, R. Nieto, E. Hernández, L. Gimeno Título: A Lagrangian analysis of the variation in moisture sources related to drier and wetter conditions in regions around the Mediterranean Basin Revista: *Natural Hazards and Earth System Sciences. Special Issue: Understanding dynamics and current developments of climate extremes in the Mediterranean region*; doi: 10.5194/nhess-11-2307-2011 Volumen: 11 Páginas: 2307-2320 Fecha: 2011 FI: 1.357 Posición y campo: 70 (155) Geosciences Multidisciplinary
- [45] A. Drumond, R. Nieto, L. Gimeno Título: A preliminary analysis of the sources of moisture for China and their variations during drier and wetter conditions in 2000-2004: a Lagrangian approach Revista: *Climate Research. Special Issue: Changes in climatic extremes over mainland China*; doi: 10.3354/cr01043 Volumen: 50 Páginas: 215-225 Fecha: 2011 FI: 2.250 Posición y campo: 19 (63) Meteorology and Atmospheric Sciences
- [44] S.M. Vicente-Serrano, J.I. López-Moreno, L. Gimeno, R. Nieto, E. Morán-Tejada, J. Lorenzo-Lacruz, S. Beguería, C. Azorín-Molina Título: A multi-scalar global evaluation of the impact of ENSO on droughts Revista: *Journal of Geophysical Research*, doi:10.1029/2011JD016039 Volumen: 116 Páginas: D20109 Fecha: 2011 FI: 3.082 Posición y campo: 18 (155) Geosciences Multidisciplinary
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- Hemisphere Warm Pool source of moisture to the Northern Hemisphere precipitation through a Lagrangian approach Revista: Journal of Geophysical Research; doi:10.1029/2010JD015397 Volumen: 116 Paginas: D00Q04, 9 pp Fecha: 2011 FI: 3.082 Posición y campo: 18 (155) Geosciences Multidisciplinary
- [41] M. Gómez-Gesteira, L. Gimeno, M. de Castro, M.N. Lorenzo, I. Álvarez, R. Nieto, A.J.C. Crespo, A.M. Ramos, J.J. Taboada, F.E. Santo, D. Barriopedro, I.F. Trigo Título: The state of climate in NW Iberia Revista: Climate Research. Special Issue 27: Regional climate change in the northwestern Iberian Peninsula; doi: 10.3354/cr00967 Volumen: 48(2-3) Paginas: 109-144 Fecha: 2011 FI: 2.250 Posición y campo: 19 (63) Meteorology and Atmospheric Sciences
- [40] A. Drumond, R. Nieto, L. Gimeno, S.M. Vicente-Serrano, J.I. López-Moreno Título: Characterization of the atmospheric component of the winter hydrological cycle on the Galicia/North of Portugal Euroregion: a Lagrangian approach Revista: Climate Research. Special Issue 27: Regional climate change in the NW Iberian Peninsula; doi: 10.3354/cr00987 Volumen: 48(2-3) Paginas: 193-201 Fecha: 2011 FI: 2.250 Posición y campo: 19 (63) Meteorology and Atmospheric Sciences
- [39] S.M. Vicente-Serrano, J.I. López-Moreno, A. Drumond, L. Gimeno, R. Nieto, E. Morán-Tejeda, J. Lorenzo-Lacruz, S. Beguería, J. Zabalza Título: Effects of warming processes on droughts and water resources in the NW Iberian Peninsula (1930-2006) Revista: Climate Research. Special Issue 27: Regional climate change in the NW Iberian Peninsula; doi: 10.3354/cr01002 Volumen: 48(2-3) Paginas: 203-212 Fecha: 2011 FI: 2.250 Posición y campo: 19 (63) Meteorology and Atmospheric Sciences
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