

CURRICULUM VITAE

Personal Data

- Name: Fernando
- Surname: Domínguez Castro
- Date and place of birth: 27-May-1980, Madrid, Spain
- Nationality: Spanish
- Work address: Escuela Politécnica Nacional, Departamento de Ingeniería Civil y Ambiental, Ladrón de Guevara E11-253, 17-01-2759, EC170112, Quito, Ecuador. Phone: (+593) 0999807937
- e-mail: f.dominguez.castro@gmail.com



Research Interest

Natural hazards, Climate variability, Mediterranean region, South America region, proxy records, documentary sources, early instrumental measurements, space weather, solar variability.

Academic Achievements

- **December 2009 Ph.D.** in Sciences, “Universidad Pablo de Olavide (UPO)”, Seville, Spain. Thesis title: “Variabilidad de los extremos hídricos en la Península Ibérica a partir de fuentes documentales [Hydrological extremes variability in the Iberian Peninsula from documentary sources]” Thesis supervisors: Dr. Pedro Ribera Rodríguez and Dr. Ricardo García Herrera.
- **September 2004 M.Sc. Thesis** in Earth Sciences, Spanish Geological Survey (IGME) and “Universidad Autónoma de Madrid (UAM)”, Spain. M.Sc. Thesis title: “Evolución climática de la meseta sur de la Península Ibérica a través del estudio de las rogativas realizadas en el cabildo de toledo entre 1506 y 1850 [Climatic variability of the Iberian southern plateau from the rogations celebrated at the Toledo chapter from 1506 to 1850]”
- **June 2003 Postgraduate courses**, Program of Earth Sciences, “Universidad Autónoma de Madrid (UAM)”, Spain.
- **June 2002 B.Sc.** in Environmental Science, “Universidad Europea de Madrid (UEM)”, Spain.

Professional and Research Experience

January 2014- February 2015, Postdoctoral contract (PROMETEO) at the “Departamento de Ingeniería Civil y Ambiental” of the “Escuela Politécnica Nacional”. Funding: SENESCYT

September 2010 – September 2013, Postdoctoral contract at the “Departamento de Física” of the “Universidad de Extremadura (UEX)”. Funding: Secretariat of Higher Learning, Science, Technology and Innovation (Ecuador Government).

July 2009 – August 2010, Project research assistant at the “Departamento de Astrofísica y Ciencias de la Atmósfera”, “Facultad de Ciencias Físicas”, “Universidad Complutense de Madrid (UCM)”, Madrid, Spain. Funding: Spanish Ministry of Environment, Marine and Rural Affairs (Salvà-Sinobas project).

September 2008 – July 2009, Project research assistant at the “Departamento de Astrofísica y Ciencias de la Atmósfera”, “Facultad de Ciencias Físicas”, “Universidad Complutense de Madrid (UCM)”, Madrid, Spain. Funding: European Union (CIRCE project).

March 2008 – August 2008, Scientific Visitor at “Istituto di Scienze dell’Atmosfera e del Clima” of the “Consiglio Nazionale delle Ricerche (CNR)”, Padova, Italy. Funding: MedClivar ESF Exchange Grants.

May 2003 – May 2007, Ph.D. Research Student at “Dirección de Geología y Geofísica” of the Spanish Geological Survey (IGME), Madrid, Spain. Funding: Spanish Ministry of Education and Science.

Stays in researching centers

2004 Visiting researcher, 8 weeks stay with Prof. Walter E. Dean at the United States Geological Survey, Denver (Colorado), USA. Propose: Sediments Geochemistry and Carbon Cycle.

2005 Visiting researcher, 16 weeks stay with Prof. Walter E. Dean at the United States Geological Survey, Denver (Colorado), USA. Propose: Sediments Geochemistry and Carbon Cycle.

2008 Visiting researcher, 20 weeks stay with Prof. Dario Camuffo at the “Consiglio Nazionale delle Ricerche”, “Istituto di Scienze dell’Atmosfera e del Clima”, Padova, Italy Propose: Climatic reconstruction from documentary sources.

2012 Visiting researcher, 4 weeks stay with Prof. Dario Camuffo at the “Consiglio Nazionale delle Ricerche”, “Istituto di Scienze dell’Atmosfera e del Clima”, Padova, Italy Propose: Reconstruction of solar activity from low latitude Aurora Borealis from documentary sources.

Participating in scientific projects

2014-2015: Estudio de la variabilidad climática de largo periodo en Ecuador siglos [Long period climatic variability in Ecuador]. Funding: Secretariat of Higher Learning, Science, Technology and Innovation (Ecuador Government). Coordinator: Fernando Domínguez Castro.

2014-2015: Reconstrucción de las fluctuaciones glaciares en Ecuador a través de fuentes documentales desde el siglo XIX. Reconstruction of glacier fluctuations in Ecuador from documentary sources from 19th century. Funding: Escuela Politécnica Nacional. Coordinator: Marcos Villacís

2012-2014: Recuperación y análisis de datos para el estudio del clima espacial en los últimos siglos [Rescue and data analysis for the study of Space weather during the last centuries]. (AYA2011-25945). Funding: Spanish Ministry of Science and Innovation. Coordinator: José Manuel Vaquero.

2009-2012: Salvà-Sinobas: Caracterización del clima de la Península Ibérica durante el periodo 1750-1850 [Salvà-Sinobas project: Characterization of Iberia climate during the 1750-1850 period] (200800050083542). Funding: Spanish Ministry of Environment, Marine and Rural Affairs Coordinator: Dr. Ricardo García Herrera and Dr. Jesús Fidel González Rouco.

2009-2011: Avances en la reconstrucción de la actividad solar [Advances in the solar activity reconstruction] (AYA2008-04864). Funding: Spanish Ministry of Science and Innovation. Coordinator: José Manuel Vaquero.

2007-2010: CIRCE, Climate Change and Impact Research: the Mediterranean Environment (GOCE036961). Funding: European Union Coordinator: Dr. Antonio Navarra.

2006-2008: Reconstrucción paleoambiental y paleoclimática a corto y medio plazo en el Parque Natural de Peñalara y su zona de protección periférica [Short and medium term paleoenvironmental and paleoclimatic reconstructions in Peñalara Natural Park and its peripheral protected zone] (CCG06-UAH/AMB-0614). Funding: Community of Madrid and Universidad de Alcalá. Coordinator: Blanca Ruiz Zapata.

2005-2008: Influencia del clima y la actividad humana en la degradación de zonas húmedas protegidas (Parque Nacional de Las Tablas de Daimiel) [Climate and human activity influence in protected wetlands deterioration (Las Tablas de Daimiel National Park)]. (CGL2005-06458-C02-01/HID). Funding: Spanish Ministry of Science and Innovation Coordinator: Rosa María Mediavilla López

2002-2005: Análisis de la evolución reciente de los sedimentos, aguas y biomasa en el entorno de Las Tablas de Daimiel [Analysis of sediments, water and biomass in Las Tablas de Daimiel National Park]. Funding: Spanish Ministry of Science and Innovation (REN2002-04433-C02-01). Coordinator: Rosa María Mediavilla López

Languages

Spanish (mother language)

English (Advanced)

Italian (Elementary)

Portuguese (Beginner)

Publications

JCR Article

1. **Domínguez-Castro, F.**, Trigo, R.M., Vaquero, J.M., 2013. The first meteorological measurements in the Iberian Peninsula: evaluating the storm of November 1724. *Climatic Change*, 118(2), 443-455. Impact Factor: 4.622
2. **Domínguez-Castro, F.**, de Miguel J.C., Vaquero J.M., Gallego M.C., García-Herrera R. 2014. Climatic potential of Islamic chronicles in Iberia: Extreme droughts (AD 711-1010). *The Holocene* 24 (3), 370-374. Impact Factor: 3.218
3. Fernánde-Fernández, M.I., Gallego, M.C., **Domínguez-Castro, F.**, Trigo, R.M., García, J.A., Vaquero, J.M., Moreno González, J.M., Castillo Durán, J., 2014. The climate in Zafra from 1750 to 1840: history and description of weather observations. *Climatic Change*, first online DOI 10.1007/s10584-014-1201-5. Impact Factor: 4.622
4. **Domínguez-Castro, F.**, Vaquero, J.M., Rodrigo, F.S., Farrona, A.M.M., Gallego, M.C., García-Herrera, R., Barriendos, M., Sanchez-Lorenzo A., 2014. Early Spanish meteorological records (1780-1850). *International Journal of Climatology*, 34(3), 593-603. Impact Factor: 3.398
5. **Domínguez-Castro, F.**, Ramos, A.M., García-Herrera, R., Trigo R.M., 2014. Iberian extreme precipitation 1855/1856: an analysis from early instrumental observations and documentary sources. *International Journal of Climatology*, first online. Impact Factor: 3.398
6. Vaquero, J.M., Gallego, M.C., **Domínguez-Castro, F.**, 2013. A possible case of Sporadic Aurora in 1843 from Mexico. *Geofísica Internacional*, 52(1), 87-92. Impact Factor: 0.407
7. **Domínguez-Castro, F.**, Ribera P., García-Herrera, R., Vaquero J.M., Barriendos M., Cuadrat J.M., Moreno J.M., 2012. Assessing extreme droughts in the Iberian Peninsula during 1750-1850 from rogation ceremonies. *Climate of the Past*, 8, 705-722. Impact Factor: 3.482
8. **Domínguez-Castro, F.**, Vaquero J.M., Marín, M., Gallego, M.C., García-Herrera, R., 2012. How useful could be the Arabic documentary sources to reconstruct past climate?. *Weather*, 67, 76-82. Impact Factor: 1.038
9. Camuffo, D., Bertolin, C., Diodato, N., Cocheo, C., Enzi, S., Sghedoni, M., Barriendos, M., **Domínguez-Castro, F.**, Garnier, E., Alcoforado, M.J., Nunes M.F., 2012. Western Mediterranean precipitation over the last 300 years from instrumental observations. *Climatic Change*, 117(1-2), 85-101. Impact Factor: 4.622
10. Vaquero, J.M., Trigo, R.M., Gallego, M.C., **Domínguez-Castro, F.**, 2012. Improving sunspot records: solar drawings of the late 19th century from the Royal Astronomical Observatory of Lisbon. *The Observatory*, *In Press*. Impact Factor: 0.405

11. Gallego M.C., **Domínguez-Castro F.**, Vaquero J.M., García-Herrera R., 2011. The hidden role of women in monitoring nineteenth-century African weather: Instrumental observations in Equatorial Guinea. *Bulletin of the American Meteorological Society*. 92, 315-324. Impact Factor: 11.574
12. Farrona, A.M.M., Gallego M.C., Vaquero J.M., **Domínguez-Castro, F.**, 2011. Spanish eyewitness reports of the great space weather event of 1859. *Acta Geodaetica et Geophysica Hungarica*, 46 (3), 370-377. Impact Factor: 0.394
13. **Domínguez-Castro, F.**, García-Herrera, R., Ribera, P., Barriendos, M. 2010. A shift in the spatial pattern of Iberian droughts during the 17th century. *Climate of the Past* 6, 1111-1137. Impact Factor: 3.482
14. Camuffo, D., Bertolin, C., Barriendos, M., **Dominguez-Castro, F.**, Cocheo, C., della Valle, A., Garnier, E., Alcoforado, M.-J., Diodato, N., 2010. The Western Mediterranean Climate: how will It Respond to Global Warming?. *Climatic Change*, 100(1), 137-142. Impact Factor: 4.622
15. Camuffo, D., Bertolin, C., Barriendos, M., **Dominguez-Castro, F.**, Cocheo, C., Enzi, S., Sghedoni, M., della Valle, A., Garnier, E., Alcoforado, M.-J., Xoplaki, E., Luterbacher, J., Diodato, N., Maugeri, M., Nunes, M.F., Rodríguez, R., 2010. 500-year temperature reconstruction in the Mediterranean Basin. *Climatic Change*, 101(1-2), 169-199. Impact Factor: 4.622
16. **Domínguez-Castro, F.**, Santiesteban, J.I., Barriendos, M., Mediavilla, R., 2008. Reconstruction of the evolution of drought episodes for central Spain from rogation ceremonies recorded at Toledo Cathedral from 1506 to 1900: a methodological approach. *Global and Planetary Change*, 63(2-3), 230-242. Impact Factor: 3.707
17. **Domínguez-Castro, F.**, Santisteban, J.I., Mediavilla, R., Dean, W.E., López-Pamo, E., Gil-García, M.J., Ruiz-Zapata, M.B., 2006. Environmental and geochemical record of human-induced changes in C storage during the last millennium in a temperate wetland (Las Tablas de Daimiel National Park, central Spain). *Tellus B*, 58, 573-585. Impact Factor: 3.760
18. **Domínguez-Castro, F.**, García Herrera, R., Vaquero J.M., 2014. An early weather diary from Iberia (Lisbon, 1631-1632). *Weather*, *in press*. Impact Factor: 1.038
19. Esper, J., Grobjean, J., Camarero, J.J., García-Cervigón Morales, A.I., Olano, J.M., González-Rouco, J.F., **Domínguez-Castro, F.**, Büngtgen, U., 2014. Atlantic and Mediterranean synoptic drivers of central Spanish juniper growth. *Theoretical and Applied Climatology*. *Under review*. Impact Factor: 1.742
20. Fernández-Fernández, M.I., Gallego, M.C., **Domínguez-Castro, F.**, Trigo, R.M., Vaquero, J.M., 2014. The climate in Zafra from 1750 to 1840: Precipitation. *Climatic Change*, *under review*. Impact Factor: 4.622

Article not included in JCR

21. **Domínguez-Castro, F.**, 2012. Reconstrucción de Sequías. Investigación y Ciencia (Spanish Edition of Scientific American) 424, 16-17.
22. Fernández-Fernández, M.I., Gallego, M.C., **Domínguez-Castro, F.**, Vaquero, J.M., Moreno González, J.M., Castillo Durán J., 2012. Reconstruction of rainfall in Zafrá (southwest Spain) from 1750 to 1840 from documentary sources. *Climate of the Past Discussion* 7, 3895-3918.
23. Santisteban, J. I., Mediavilla, R., Gil García, M.J., **Domínguez-Castro F.**, Ruiz Zapata, M. B., 2009. La historia a través de los sedimentos: Cambios climáticos y de usos del suelo en el registro reciente de un humedal mediterráneo (Las Tablas de Daimiel, Ciudad Real). *Boletín Geológico y Minero de España*, 120(3), 497-508.
24. Gil-García, M.J., Ruiz-Zapata, M.B., Mediavilla López, R., Santisteban, J.I., **Domínguez-Castro, F.**, Dabrio Gonzalez, C., 2008. Registro de los cambios humanos y naturales en el humedal de las Tablas de Daimiel (Ciudad Real. España). *GeoTemas* 10, 1471-1474.
25. Ruiz Zapata, M.B., Gómez Gonzalez, C., López Sáez, J.A, Gil García, M.J., Vera, M.S., Mediavilla, R., **Domínguez-Castro, F.**, Santiesteban, J.I., 2006. Cambios en la vegetación durante el holoceno reciente en el valle del Lozoya (Sierra de Guadarrama Madrid). *Revista Española de Paleontología* 22(1), 95-102.
26. **Domínguez-Castro, F.**, Santisteban, J.I., Mediavilla, R., Dean, W.A., López- Pamo, E., Gil- Gracia, M. J., Ruiz-Zapata, M.B., 2006. Cambios en el almacenamiento de C en Las Tablas de Daimiel en los últimos 1000 años. *Boletín Geológico y Minero de España*, 22(1), 95-102.

Chapter Books

27. Camuffo, D., Bertolin, C., della Valle, A., Cocheo, C., Diodato, N., Enzi, S., Sghedoni, M., Barriendos, M., Rodriguez, R., **Domínguez-Castro, F.**, Garnier, E., Alcoforado, M.J., Nunes, M.F., 2011. Climate Change in the Mediterranean over the Last Five Hundred Years. In: *Planet Earth 2011 - Global Warming Challenges and Opportunities for Policy and Practice*, 1-26.
28. Ruiz-Zapata, M.B., Gómez-Gonzalez, C., Santisteban, J.I., Mediavilla López, R., **Domínguez-Castro, F.**, Gil-García, M.J., López Sáez J.A., Vera M.S., 2009. Reconstrucción paleoambiental y paleoclimática en el entorno del valle del Lozoya: Valoración del impacto humano. In: *Sextas Jornada Científicas del Parque Natural de Peñalara y del Valle de El Paular*, 87-96.
29. **Domínguez-Castro, F.**, Santiesteban, J.I., Barriendos, M., Mediavilla, R., 2007. Evolución de eventos climáticos extremos (inundaciones y sequías) para la zona central de la Península Ibérica desde el siglo XVI a partir del registro de rogativas e inundaciones históricas. In: *II Semana de Jóvenes Investigadores del IGME*, 57-63.

Other merits

Guest Editor Climate of the Past: **Domínguez-Castro, F.**, Wheeler, D., Rath, V., Ziveri, P. "Characterization of climatic variability in the Iberian Peninsula during the last centuries" Special Issue. http://www.clim-past-discuss.net/special_issue46.html

Reviewer: International Journal of Climatology, Climatic Change, The Holocene, Journal of Climatology.

Consultant project "Reconstruction and model simulations of past climate in Portugal using documentary and early instrumental sources (17th-19h century) (Klimhist)." Founding: Ministério da Ciência, Tecnologia e Ensino Superior (Portugal). Coordinator: Maria Joao Alcoforado.

More than 25 communications in international congress.