

Fecha del CVA	25/01/2024
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Parte A. DATOS PERSONALES

Nombre	Swen		
Apellidos	Brands		
Sexo	Hombre	Fecha de Nacimiento	
DNI/NIE/Pasaporte			
URL Web	https://www.researchgate.net/profile/Swen-Brands		
Dirección Email	brandssf@ifca.unican.es		
Open Researcher and Contributor ID (ORCID)	0000-0002-3254-0277		

A.1. Situación profesional actual

Puesto	postdoctoral		
Fecha inicio	2023		
Organismo / Institución	Consejo Superior de Investigaciones Científicas		
Departamento / Centro	Climate and Data Science / Instituto de Física de Cantabria		
País	España	Teléfono	(0034) 942202086 - 018
Palabras clave	Climatología		

A.2. Situación profesional anterior (incluye interrupciones en la carrera investigadora - indicar meses totales, según texto convocatoria-)

Periodo	Puesto / Institución / País
2015 - 2023	licenciado y postdoctoral / MeteoGalicia, Dpto. de Predicción Numérica e Investigación
2011 - 2015	JAE Predoc / Consejo Superior de Investigaciones Científicas
2009 - 2011	licenciado / Universidad de Cantabria

A.3. Formación académica

Grado/Master/Tesis	Universidad / País	Año
Programa Oficial de Posgrado en ciencias, tecnología y computación	Universidad de Cantabria / España	2017
Magsiter Artium	RWTH Aachen / Alemania	2009

Parte B. RESUMEN DEL CV

I hold a first-class Magister degree from RWTH Aachen University (Germany) with main subject Physical Geography, obtained in September 2009. The Magister degree is equivalent to a Bachelor and Master degree and during the Master phase I gave classes in Climatology to Bachelor students (60 hours). Being funded by a 12-month Leonardo grant, I developed my Magister thesis at MeteoGalicia in Santiago de Compostela. It provided the first regional climate change projections for the northwestern Iberian Peninsula based on statistical downscaling methods and was a pioneer study at the time it was published (see <https://zenodo.org/records/7697351> and Brands et al. 2011). In November 2009, I was contracted by the University of Cantabria (Dr. José Manuel Gutiérrez) in the ESTCENA project, dedicated to the generation of climate change projections for the Iberian Peninsula based on statistical downscaling methods. In November 2011, I was admitted in the PhD programme "Ciencias, Tecnología y Computación" and in CSIC's JAE-Predoc programme. During the PhD studies at the Instituto de Física de Cantabria (IFCA), I developed 3 independent research lines dedicated to 1. the evaluation of global climate models (GCMs), 2. climate teleconnections and 3. atmospheric river research. I also actively participated in the EU-Cost action VALUE, chaired by Dr. Douglas Maraun, and accomplished two research stays at EPhysLab, UVigo, Dr. María de las Nieves Lorenzo, and at the Nonlinear Physics Group, USC, Dr. Gonzalo Miguez-Macho. In July 2015, I was contracted full-time by MeteoGalicia's Department of Numerical Prediction and Investigation. In addition to developing and supervising their numerical model chain, I continued pursuing the 3 aforementioned research lines on my own, partly at leisure and even paying

article fees from my own private savings, and opened a fourth research line dedicated to numerical air chemistry modelling that led to the development of the official, fully operational air quality prediction system of the Xunta de Galicia. I also developed the regional climate change visualization tool of the Xunta de Galicia and supervised the traineeships of 8 undergraduate and graduate students. In 2018, as the only person from Spanish research institutes, I was invited to participate in the intercontinental research initiative ARTMIP, lead by NCAR, and my efforts there are still ongoing. At the same time, I largely extended my GCM evaluation research line in terms of considered methods and data, which led to 3 first-authored publications (2 of them on my own) published in 2022 and 2023 and to an invitation to participate in the GCM evaluation task team of the EURO-CORDEX initiative, led by Dr. Stefan Sobolowski. I have reviewed many research articles and also evaluated research proposals for the Deutsche Forschungsgesellschaft (DFG). In April 2023, I returned to IFCA to work full-time in the PTI Climate platform. A full list of my congress contributions (i.e. the C2 part of the CVA) can be found at <https://sandbox.zenodo.org/doi/10.5072/zenodo.23706>

Parte C. LISTADO DE APORTACIONES MÁS RELEVANTES

C.1. Publicaciones más importantes en libros y revistas con “peer review” y conferencias

AC: Autor de correspondencia; (nº x / nº y): posición firma solicitante / total autores. Si aplica, indique el número de citaciones

- 1 **Artículo científico.** (1/5) Brands, S. (AC); Fernández-Granja, J. A.; Bedia, J.; Casanueva, A.; Fernández, J.2023. A global climate model performance atlas for the Southern Hemisphere extratropics based on regional atmospheric circulation patterns. *Geophysical Research Letters*. American Geophysical Union. 50, pp.e2023GL103531. Google Scholar (1) <https://doi.org/10.1029/2023GL103531>
- 2 **Artículo científico.** Fernández-Granja, J. A.; (2/5) Brands, S.; Bedia, J.; Casanueva, A.; Fernández, J.2023. Exploring the limits of the Jenkinson-Collison weather types classification scheme: a global assessment based on various reanalyses. *Climate Dynamics*. Springer. 61, pp.1829-1845. SCOPUS (3) <https://doi.org/10.1007/s00382-022-06658-7>
- 3 **Artículo científico.** (1/1) Brands, S. (AC). 2022. Common error patterns in the regional atmospheric circulation simulated by the CMIP multi-model ensemble. *Geophysical Research Letters*. American Geophysical Union. 49, pp.e2022GL101446. SCOPUS (3) <https://doi.org/10.1029/2022GL101446>
- 4 **Artículo científico.** (1/1) Brands, S. (AC). 2022. A circulation-based performance atlas of the CMIP5 and 6 models for regional climate studies in the Northern Hemisphere mid-to-high latitudes. *Geoscientific Model Development*. European Geosciences Union. 15, pp.1375-1411. SCOPUS (11) <https://doi.org/10.5194/gmd-15-1375-2022>
- 5 **Artículo científico.** (1/13) Brands, S. (AC); Fernández-García, G.; García-Vivanco; et al; Taboada, J.2020. An exploratory performance assessment of the CHIMERE model (version 2017r4) for the northwestern Iberian Peninsula and the summer season. *Geoscientific Model Development*. European Geosciences Union. 13, pp.3947-3973. SCOPUS (2) <https://doi.org/10.5194/gmd-13-3947-2020>
- 6 **Artículo científico.** O'Brien, T. A.; Payne, A. E.; Shields, C. A.; et al; Zhou, Y.; (5/30) Brands, S.2020. Detection Uncertainty Matters for Understanding Atmospheric Rivers. *Bulletin of the American Meteorological Society*. American Meteorological Society. 101, pp.E790-E796. SCOPUS (23) <https://doi.org/10.1175/BAMS-D-19-0348.1>
- 7 **Artículo científico.** Rutz, J. J.; Shields, C. A.; Lora, J. M.; et al; Viale, M.; (11/37) Brands, S.2019. The atmospheric river tracking method intercomparison project (ARTMIP): quantifying uncertainties in atmospheric river climatology. *Journal of Geophysical Research Atmospheres*. American Geophysical Union. 124, pp.13777-13802. SCOPUS (118) <https://doi.org/10.1029/2019JD030936>

- 8 Artículo científico.** Soares, P. M. M.; Maraun, D.; et al; Obermann-Hellund, A.2019. Process-based evaluation of the VALUE perfect predictor experiment of statistical downscaling methods. *International Journal of Climatology. Royal Meteorological Society.* 39, pp.3868-3893. SCOPUS (19) <https://doi.org/10.1002/joc.5911>
- 9 Artículo científico.** Ummenhofer, C. C.; Seo, H.; Kwon, Y.-O.; Parfitt, R.; (5/6) Brands, S.; Joyce, T. M.2017. Emerging European winter precipitation pattern linked to atmospheric circulation changes over the North Atlantic region in recent decades. *Geophysical Research Letters. American Geophysical Union.* 44, pp.8557-8566. SCOPUS (12) <https://doi.org/10.1002/2017GL074188>
- 10 Artículo científico.** (1/1) Brands, S. (AC). 2017. Which ENSO teleconnections are robust to internal atmospheric variability?. *Geophysical Research Letters. American Geophysical Union.* 44, pp.1483-1493. Google Scholar (30) <https://doi.org/10.1002/2016GL071529>
- 11 Artículo científico.** Gutiérrez, J. M.; San-Martín, D.; (3/5) Manzanas, R.; Brands, S.; Herrera, S.2017. Reassessing Model Uncertainty for Regional Projections of Precipitation with an Ensemble of Statistical Downscaling Methods. *Journal of Climate. American Meteorological Society.* 30, pp.203-223. Google Scholar (75) <https://doi.org/10.1175/JCLI-D-16-0366.1>
- 12 Artículo científico.** (1/3) Brands, S. (AC); Gutiérrez, J.M.; San-Martín, D.2017. Twentieth-century atmospheric river activity along the west coasts of Europe and North America: algorithm formulation, reanalysis uncertainty and links to atmospheric circulation patterns. *Climate Dynamics. Springer.* 48, pp.2771-2795. Google Scholar (84) <https://doi.org/10.1007/s00382-016-3095-6>
- 13 Artículo científico.** Eiras-Barca, J.; (2/3) Brands, S.; Miguez-Macho, G.2015. Seasonal variations in North Atlantic atmospheric river activity and associations with anomalous precipitation over the Iberian Atlantic Margin. *Journal of Geophysical Research Atmospheres. American Geophysical Union.* 121, pp.931-948. Google Scholar (68) <https://doi.org/10.1002/2015JD023379>
- 14 Artículo científico.** Lorenzo, M.; (2/3) Ramos, A. M.; Brands, S.2015. Present and future climate conditions for winegrowing in Spain. *Regional Environmental Change. Springer.* 16, pp.617-627. Google Scholar (28) <https://doi.org/10.1007/s10113-015-0883-1>
- 15 Artículo científico.** Bedia, J.; Herrera, S.; Gutiérrez, J. M.; Benali, A.; (5/7) Brands, S.; Mota, B.; Moreno, J. M.2015. Global patterns in the sensitivity of burned area to fire-weather: Implications for climate change. *Agricultural and Forest Meteorology. Elsevier.* 214-215, pp.369-379. Google Scholar (190) <https://doi.org/10.1016/j.agrformet.2015.09.002>
- 16 Artículo científico.** Manzanas, R.; (2/6) Brands, S.; San-Martín, D.; Lucero, A.; Limbo, C.; José Manuel. 2015. Statistical Downscaling in the Tropics Can Be Sensitive to Reanalysis Choice: A Case Study for Precipitation in the Philippines. *Journal of Climate. American Meteorological Society.* 28, pp.4171-4184. Google Scholar (51) <https://doi.org/10.1175/JCLI-D-14-00331.1>
- 17 Artículo científico.** (1/1) Brands, S. (AC). 2014. Predicting average wintertime wind and wave conditions in the North Atlantic sector from Eurasian snow cover in October. *Environmental Resarch Letters. IOPscience.* 9, pp.045006. Google Scholar (6) <https://doi.org/10.1088/1748-9326/9/4/045006>
- 18 Artículo científico.** (1/3) Brands, S. (AC); Herrera, S.; Gutiérrez, J.M.2014. Is Eurasian snow cover in October a reliable statistical predictor for the wintertime climate on the Iberian Peninsula?. *International Journal of Climatology. Royal Meteorological Society.* 34, pp.1615-1627. Google Scholar (21) <https://doi.org/10.1002/joc.3788>
- 19 Artículo científico.** (1/1) Brands, S. (AC). 2013. Seasonal Predictions of Boreal Winter Accumulated Heating Degree-Days and Relevance for the Weather Derivative Market. *Journal of Applied Meteorology and Climatology. American Meteorological Society.* 52, pp.1297-1302. Google Scholar (8) <https://doi.org/10.1175/JAMC-D-12-0303.1>
- 20 Artículo científico.** (1/4) Brands, S. (AC); Herrera, S.; Fernández, J.; Gutiérrez, J. M.2013. How well do CMIP5 Earth System Models simulate present climate conditions in Europe and Africa?. *Climate Dynamics. Springer.* 41, pp.803-817. <https://doi.org/10.1007/s00382-013-1742-8>

- 21 Artículo científico.** Gutiérrez, J.M.; San-Martín, D.; (3/5) Brands, S. (AC); Manzanas, R.; Herrera, S.2013. Reassessing Statistical Downscaling Techniques for Their Robust Application under Climate Change Conditions. *Journal of Climate. American Meteorological Society.* 26, pp.171-188. Google Scholar (218) <https://doi.org/10.1175/JCLI-D-11-00687.1>
- 22 Artículo científico.** (1/4) Brands, S. (AC); Gutiérrez, J. M.; Cofiño, A. S.; Herrera, S.2012. Comments on “Global and Regional Comparison of Daily 2-m and 1000-hPa Maximum and Minimum Temperatures in Three Global Reanalyses”. *Journal of Climate. American Meteorological Society.* 255, pp.8004-8006. Google Scholar (1) <https://doi.org/10.1175/JCLI-D-12-00122.1>
- 23 Artículo científico.** (1/4) Brands, S. (AC); Manzanas, R.; Gutiérrez, J. M.; Cohen, J.2012. Seasonal Predictability of Wintertime Precipitation in Europe Using the Snow Advance Index. *Journal of Climate. American Meteorological Society.* 25, pp.4023-4028. Google Scholar (41) <https://doi.org/10.1175/JCLI-D-12-00083.1>
- 24 Artículo científico.** (1/4) Brands, S. (AC); Herrera, S.; Gutiérrez, J. M.; Cofiño, A. S.2012. On the Use of Reanalysis Data for Downscaling. *Journal of Climate. American Meteorological Society.* 25, pp.2517-2526. Google Scholar (106) <https://doi.org/10.1175/JCLI-D-11-00251.1>
- 25 Artículo científico.** (1/5) Brands, S. (AC); Taboada, J. J.; Cofiño, A. S.; Sauter, T.; Schneider, C.2011. Statistical downscaling of daily temperatures in the NW Iberian Peninsula from global climate models: validation and future scenarios. *Climate Research. Inter-Research.* 48, pp.163-176. Google Scholar (44) <https://doi.org/10.3354/cr00906>
- 26 Artículo científico.** (1/4) Brands, S. (AC); Herrera, S., San-Martín, D.; Gutiérrez, J. M.2011. Validation of the ENSEMBLES global climate models over southwestern Europe using probability density functions, from a downscaling perspective. *Climate Research. Inter-Research.* 48, pp.145-161. Google Scholar (65)
- 27 Capítulo de libro.** (1/6) Brands, S. (AC); Fernández-Granja, J. A.; Fernández, J.; Bedia, J.; Casanueva, S.; Taboada, J.2022. Performance of the CMIP6 global climate models over the Iberian Peninsula and relationships with the simulated climate system complexity. *Retos del Cambio Climático: Impactos, Mitigación y Adaptación.* AEC. Serie A-12, pp.67-79. ISBN 978-84-125772-1-1. <https://doi.org/10.5281/zenodo.7702476>
- 28 Capítulo de libro.** Fernández-Granja, J.; (2/5) Brands, S.; Bedia, J.; Casanueva, A.; Fernández, J.2022. Regional assessment of the Jenkinson-Collison Weather Types classification and Observational Uncertainty based on different reanalyses over the Mediterranean region. *Retos del Cambio Climático: impactos, mitigación y adaptación.* AEC. Serie A-12, pp.55-66. ISBN 978-84-125772-1-1.

C.2. Congresos

Brands, S.. An exhaustive global climate model performance assessment based on Lamb weather types. EMS Annual Meeting 2022. European Meteorological Society. 2022. Participativo - Ponencia invitada/ Keynote. Congreso.

C.3. Proyectos o líneas de investigación

- 1 Proyecto.** Regulation EU 2020/2094, CSIC's Interdisciplinary Thematic Platform Clima (PTI-Clima). PTI Clima. (Instituto de Física de Cantabria). 01/01/2023-30/06/2026. 6.200.000 €. Miembro de equipo.
- 2 Proyecto.** COST-ES1102, VALUE: COST Action ES1102. CENTRO DE ACUSTICA APLICADA Y EVALUACION NO DESTRUCTIVA; Acción COST del VII Programa Marco de la UE. Douglas Maraun. (Instituto de Física de Cantabria). 01/11/2012-31/12/2016. 2.000.000 €. Miembro de equipo.
- 3 Proyecto.** QWeCI: Quantifying Weather and Climate Impacts on Health in Developing Countries, FP7-ENV-2009-1-243964. Small-Medium Scale Focused Project del VII Programa Marco de la UE. Andy Morse. (Instituto de Física de Cantabria). 01/02/2010-30/06/2013. 2.000.000 €. Miembro de equipo.
- 4 Proyecto.** 200800050084078, ESTCENA. José Manuel Gutiérrez. (Universidad de Cantabria). 01/01/2009-31/12/2011. 801.009 €. Miembro de equipo.