

Date of the CVA

02/10/2019

Section A. PERSONAL DATA

Name and Surname	Jon Saenz Agirre		
DNI	30556968L	Age	56
Researcher's identification number	Researcher ID	A-7500-2011	
	Scopus Author ID	7006174511	
	ORCID	0000-0002-5920-7570	

A.1. Current professional situation

Institution	Universidad del País Vasco		
Dpt. / Centre	Departamento de Física Aplicada II / Facultad de Ciencia y Tecnología		
Address	Depto. Física Aplicada II-Fac. Ciencia y Tecnología, Barrio Sarriena s/n, 48940, Leioa		
Phone	(34) 696412488	Email	jon.saenz@ehu.es
Professional category	Profesor Titular de Universidad a dedicación completa	Start date	2003
UNESCO spec. code	250121 - Numerical modelling		
Keywords	Atmospheric circulation; Earth atmosphere		

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Ingeniería Física	Universidad del País Vasco	2000
Licenciado en Física de la Tierra y del Cosmos	Universidad Complutense de Madrid	1988

A.3. General quality indicators of scientific production

Con fecha 1/10/2019:

Indice H: 16

Cuarenta y ocho publicaciones en la base de datos Web of Knowledge Core Collection.
772 citas en total.

Tres sexenios de investigación (2004, 2010 y 2016)

Ocho tesis doctorales dirigidas o codirigidas.

Venticinco publicaciones en el primer tercil (T1)

Diez publicaciones en el primer decil (D1)

Publons: <https://publons.com/researcher/1444531/jon-saenz/>

Section B. SUMMARY OF THE CURRICULUM

Tanto mediante publicaciones como mediante las tesis doctorales dirigidas, se acredita experiencia en los siguientes campos:

* Predicción y análisis de recursos energéticos renovables.

Ibarra-Berastegi et al., 2016, DOI: 10.1109/JOE.2016.2529400 , Ulazia et al., 2016, DOI: 10.1016/j.apenergy.2016.08.033 , Ulazia et al., 2017, DOI: 10.1016/j.apenergy.2017.09.030, Ulazia et al., 2019, doi: 10.1016/j.energy.2019.115938

* Estudios de variabilidad climática

Codirector de la tesis doctoral de Iñigo Errasti Arrieta (2013) , Sáenz et al., 2001, DOI : 10.1029/2001JD900247 , Borja et al., 2008, DOI : 10.1111/j.1365-2419.2008.00494.x , Errasti et al., 2014, DOI : 10.1007/s00704-013-0842-z

* Estudios de regionalización estadística, aplicación y desarrollo de metodologías.

Codirector de las tesis de María Dolores Frías Domínguez (2006) y Santos J. González-Rojí (2018).

Frías et al., 2005, DOI : 10.1111/j.1600-0870.2005.00105.x, Ibarra-Berastegi et al., 2015, DOI: 10.1016/j.oceaneng.2015.05.038, González-Rojí et al., 2019, doi: 10.1007/s00382-019-04673-9

*Aplicación de modelos de mesoescala al estudio de la variabilidad climática y la predicción de precipitación.

Codirector de las tesis de Jesús Fernández Fernández (2005) y Alejandro Fernández Ferrero (2010).

Fernández et al., 2007, DOI : 10.1029/2005JD006649 , Fernández-Ferrero et al., 2009, DOI: 10.1016/j.atmosres.2009.07.007 , González-Rojí et al., 2018, DOI: 10.1002/2017JD027511

* Acoplamiento de momento y energía entre el océano y la atmósfera

Director de la tesis de Almudena Fontán Gómez y codirector de la tesis de Ganix Esnaola Aldanondo.

Fontán et al., 2012, DOI : 10.1016/j.jmarsys.2011.10.011 , Esnaola et al., 2012, DOI : 10.1029/2011JC007692 , Esnaola et al., 2013, DOI : 10.5194/os-9-655-2013

* Desarrollo de software científico de uso libre:

PyClimate (Sáenz et al., 2002 doi: 10.1016/S0098-3004(0100086-3) disponible en <http://www.ehu.es/eolo/pyclimate-2004.tgz>

Código C en paralelo para estimación de PDFs multidimensionales de forma muy eficiente (López-Novoa et al., 2015 <http://dx.doi.org/10.1016/j.envsoft.2014.09.019>) disponible en http://www.sc.ehu.es/ccwbayes/isg/index.php?option=com_remository&Itemid=13&func=download&id=18&chk=58a4f35a6557d7059c070a06a19400c1&noaiRthermo, rutinas para analizar aspectos termodinámicos del aire empleando el lenguaje R. <https://cran.r-project.org/package=aiRthermo>

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

- 1 **Scientific paper.** S. J. González-Rojí; R. L. Wilby; J. Sáenz. 2019. Harmonized evaluation of daily precipitation downscaled using SDSM and WRF+WRFDA models over the Iberian Peninsula Climate Dynamics. Springer. 53, pp.1413-1433. ISSN 0930-7575.
- 2 **Scientific paper.** Benito, Denis; et al. 2019. Influence of season-depending ecological variables on biomarker baseline levels in mussels (*Mytilus trossulus*) from two Baltic Sea subregions SCIENCE OF THE TOTAL ENVIRONMENT. ELSEVIER. 689, pp.1087-1103. ISSN 0048-9697.
- 3 **Scientific paper.** Serras, P.; et al. 2019. Combining random forests and physics-based models to forecast the electricity generated by ocean waves: A case study of the Mutriku wave farm Ocean Engineering. 189.
- 4 **Scientific paper.** Ulazia, A.; et al. 2019. Global estimations of wind energy potential considering seasonal air density changes Energy. 187.
- 5 **Scientific paper.** Ulazia, Alain; et al. 2019. Reduction of the capture width of wave energy converters due to long-term seasonal wave energy trends Renewable and Sustainable Energy Reviews. 113, pp.109267-109267. ISSN 1364-0321.
- 6 **Scientific paper.** Ulazia, Alain; et al. 2019. Seasonal Correction of Offshore Wind Energy Potential due to Air Density: Case of the Iberian Peninsula Sustainability. 11-13. ISSN 2071-1050.
- 7 **Scientific paper.** A. Rabanal; et al. (5/4). 2018. MIDAS: A Benchmarking Multi-Criteria Method for the Identification of Defective Anemometers in Wind Farms Energies. MDPI. 12-1, pp.28.
- 8 **Scientific paper.** Jon Sáenz; et al. (4/1). 2018. Analysis of atmospheric thermodynamics using the R package aiRthermo Computers & Geosciences. Elsevier. 122, pp.113-119.

- 9 **Scientific paper.** A. Ulazia; et al. (5/4). 2018. Historical Evolution of the Wave Resource and Energy Production off the Chilean Coast over the 20th Century Energies. MDPI. 11-9, pp.2289.
- 10 **Scientific paper.** M. Penalba; et al. 2018. Wave Energy Resource Variation off the West Coast of Ireland and its Impact on Realistic Wave Energy Converters' Power Absorption. Applied Energy. 224, pp.205-219. ISSN 0306-2619.
- 11 **Scientific paper.** Ibarra-Berastegi, Gabriel; et al. 2018. Electricity production, capacity factor, and plant efficiency index at the Mutriku wave farm (2014–2016) Ocean Engineering. 147, pp.20-29. ISSN 0029-8018.
- 12 **Scientific paper.** González-Rojí, Santos J.; et al. 2018. Moisture Balance Over the Iberian Peninsula According to a Regional Climate Model: The Impact of 3DVAR Data Assimilation Journal of Geophysical Research: Atmospheres. American Geophysical Union - Wiley. 123-2, pp.708-729. ISSN 2169-8996.
- 13 **Scientific paper.** Ulazia, Alain; et al. 2017. Using 3DVAR data assimilation to measure offshore wind energy potential at different turbine heights in the West Mediterranean APPLIED ENERGY. 208, pp.1232-1245. ISSN 0306-2619.
- 14 **Scientific paper.** A. Ulazia; et al. 2017. Wave energy trends over the Bay of Biscay and the consequences for wave energy converters Energy. Elsevier. 141, pp.624-634.
- 15 **Scientific paper.** A. Ulazia; J. Sáenz; G. Ibarra-Berastegi. 2016. Sensitivity to the use of 3DVAR data assimilation in a mesoscale model for estimating offshore wind energy potential. A case study of the Iberian northern coastline Applied Energy. Elsevier. 180, pp.617-627.
- 16 **Scientific paper.** J. Díaz-de-Argandoña; et al. 2016. Climatology and temporal evolution of the atmospheric semidiurnal tide in present-day reanalyses Journal of Geophysical Research Atmospheres. American Geophysical Union - Wiley. 121-9, pp.4614-4626.
- 17 **Scientific paper.** Ibarra-Berastegi, G.; et al. 2016. Wave Energy Forecasting at Three Coastal Buoys in the Bay of Biscay IEEE Journal of Oceanic Engineering. 41, pp.923-929.
- 18 **Scientific paper.** Lopez-Novoa, U.; et al. 2015. Multi-objective environmental model evaluation by means of multidimensional kernel density estimators: Efficient and multi-core implementations Environmental Modelling and Software. 63, pp.123-136.
- 19 **Scientific paper.** Ibarra-Berastegi, G.; et al. 2015. Short-term forecasting of the wave energy flux: Analogues, random forests, and physics-based models Ocean Engineering. 104, pp.530-539.
- 20 **Scientific paper.** Fontán, A.; et al. 2013. Coastal water circulation response to radiational and gravitational tides within the southeastern Bay of Biscay Journal of Marine Systems. 109-110-SUPPL., pp.S95-S104.
- 21 **Scientific paper.** Errasti, I.; et al. 2013. Comparison of the main characteristics of the daily zonally averaged surface air temperature as represented by reanalysis and seven CMIP3 models Theoretical and Applied Climatology. 114-3-4, pp.417-436.
- 22 **Scientific paper.** Esnaola, G.; et al. 2013. Daily scale wintertime sea surface temperature and IPC-Navidad variability in the southern Bay of Biscay from 1981 to 2010 Ocean Science. 9-4, pp.655-679.
- 23 **Scientific paper.** Fontán, A.; et al. 2013. Variability in the air-sea interaction patterns and timescales within the south-eastern Bay of Biscay, as observed by HF radar data Ocean Science. 9-2, pp.399-410.
- 24 **Scientific paper.** Esnaola, G.; et al. 2012. Coupled air-sea interaction patterns and surface heat-flux feedback in the Bay of Biscay Journal of Geophysical Research: Oceans. 117-6, pp.C06030.
- 25 **Scientific paper.** Chust, Guillem; et al. 2011. Climate change impacts on coastal and pelagic environments in the southeastern Bay of Biscay Climate Research. 48-2-3, pp.307-332.
- 26 **Scientific paper.** Ibarra-Berastegi, G.; et al. 2011. Downscaling of surface moisture flux and precipitation in the Ebro Valley (Spain) using analogues and analogues followed by random forests and multiple linear regression Hydrology and Earth System Sciences. 15-6, pp.1895-1907.
- 27 **Scientific paper.** Errasti, I.; et al. 2011. Validation of IPCC AR4 models over the Iberian Peninsula Theoretical and Applied Climatology. 103-1, pp.61-79.

- 28 Scientific paper.** Díaz de Argandoña, J.; et al. 2010. Atmospheric tides over the Pyrenees: Observational study and numerical simulation Quarterly Journal of the Royal Meteorological Society. 136-650, pp.1263-1274.
- 29 Scientific paper.** Fernández-Ferrero, A.; Sáenz, J.; Ibarra-Berastegi, G.2010. Comparison of the performance of different analog-based bayesian probabilistic precipitation forecasts over Bilbao, Spain Monthly Weather Review. 138-8, pp.3107-3119.
- 30 Scientific paper.** Fernández-Ferrero, A.; et al. 2009. Evaluation of statistical downscaling in short range precipitation forecasting Atmospheric Research. 94-3, pp.448-461.

C.2. Participation in R&D and Innovation projects

- 1** CGL2016-76561-R, SISTEMA GLOBAL DE ASIMILACION DE DATOS CON RESOLUCION AUMENTADA SOBRE LA PENINSULA IBERICA. APLICABILIDAD EN DOWNSCALING NUMERICO. VERIFICACION DEL CICLO HIDROLOGICO. Ministerio de Ciencia e Innovación. Jon Sáenz Agirre. (Universidad del País Vasco). 01/01/2017-31/12/2019. 72.000 €.
- 2** CGL2013-45198-C2-1-R, Ciclo hidrológico y viento superficial en la Península Ibérica. Predicción de lluvia y corriente superficial en zonas costeras del Golfo de Vizcaya Ministerio de Economía y Competitividad. Jon Sáenz Agirre. (Facultad de Ciencia y Tecnología). 01/01/2014-31/12/2016. 43.000 €.
- 3** GIU14/03, Subvención a grupos de universidad. Grupo EOLO. GIU14/03 Universidad del País Vasco. Gabriel Ibarra Berastegi. (Universidad del País Vasco). 22/12/2014-07/10/2016. 18.600 €.
- 4** UNPV13-4E-1785, Centro de Investigación en Biología y Biotecnología Marinas Experimentales Plentziako Itsas Estazioa (PIE-UPV/EHU) Infraestructura FEDER. Juan A. Marigómez Allende. (Universidad del País Vasco). 01/01/2013-31/12/2015. 1.354.631 €.
- 5** CGL2008-03321/CLI, Comparación de metodologías de estimación del reciclaje de humedad sobre la Península Ibérica. Climatología del reciclaje de humedad sobre la Península Ibérica. Ministerio de Ciencia e Innovación. Investigación. Jon Sáenz Agirre. (Facultad de Ciencia y Tecnología). 01/01/2009-31/12/2011. 101.640 €.

C.3. Participation in R&D and Innovation contracts

C.4. Patents