



PERSONAL INFORMATION

Anna Rubio



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 Research Gate: www.researchgate.net/profile/Anna_Rubio
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Sex female | Date of birth 15/04/1977 | Nationality Spanish

WORK EXPERIENCE

Oct. 2008 – today

SENIOR RESEARCHER

Marine Research Division of AZTI-TECNALIA, Gipuzkoa (Spain).

My current research is mainly focused on the shelf-slope circulation and mesoscale activity in the Bay of Biscay. My work is mainly based on the analysis of in-situ Eulerian and Lagrangian measurements and remote sensing data, including high frequency observations of ocean surface currents from HF radars.

Oct. 2007 – Oct. 2008

POSTDOCTORAL FELLOWSHIP

Laboratoire de Physique des Océans (UMR: UBO-IFREMER-CNRS-IRD), Brest, France; under the supervision of Dr. Bruno Blanke

Study of mesoscale activity in the Southern Benguela eastern boundary upwelling system (South Africa) and the impact of this mesoscale activity on the exchanges between this coastal system and the open ocean

Sep. 2006 – Sep. 2007

POSTDOCTORAL FELLOWSHIP

French research institute IFREMER (September 2006 - September 2007) at the Laboratoire Environnement et Ressources Provence-Azur-Corse (LER/PAC), under the supervision of Dr. Pierre Garreau

Study of mesoscale dynamics in the NW Mediterranean from in situ Lagrangian data and numerical modelling.

Jan. 2001 – Jul. 2006

PREDOCTORAL FELLOWSHIPS

Laboratori d'Enginyeria Marítima of the Universitat Politècnica de Catalunya, LIM-UPC (Barcelona, Spain), under the supervision of Dr. Manuel Espino. PhD grant from the SPANISH SCIENCE AND EDUCATION MINISTRY (Jan. 2001 – Dec 2015) and PhD grant from the Universitat Politècnica de Catalunya (Jan 2006 – Jul.2006).

- PhD research stay (travel grant from the SPANISH SCIENCE AND EDUCATION MINISTRY: June – Dec. 2004) at the "Laboratoire des Ecoulements Géophysiques et Industriels" LEGI, Université Joseph Fourier, Grenoble (France). Numerical modelling of the mesoscale variability in the NW Mediterranean. Supervisor: Dr. Bernard Barnier.
- PhD research stay (travel grant from the SPANISH SCIENCE AND EDUCATION MINISTRY: Oct. – Dec. 2002) at the "Centre de Formation et de Recherche sur L'Environnement Marin" CEFREM, Université de Perpignan, Perpignan (France). Hydrographic and ADCP data processing, geostrophic circulation inferring and analysis. Supervisor: Dr. Xavier Durrieu de Madron

EDUCATION AND TRAINING

Sep. 2001 - Jun. 2016

PhD in Physical Oceanography

PhD thesis entitled: "Mesoscale eddies in the NW Mediterranean: origin and evolution". LIM-UPC Laboratori d'Enginyeria Marítima of the Universitat Politècnica de Catalunya (Barcelona, Spain). Supervisor: Dr. Manuel Espino Infantes.

Sep. 2001 - Sep. 2003

DEA in Physical Oceanography

Laboratori d'Enginyeria Marítima of the Universitat Politècnica de Catalunya (Barcelona, Spain).

Sep. 1995 – June 2000

MSc Marine Sciences

Universitat de Alcant (Alacant, Spain)

PERSONAL SKILLS

Mother tongue(s) SPANISH, CATALAN

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
ENGLISH	C1/C2	C1/C2	C1/C2	C1/C2	C1/C2
FRENCH	C1/C2	C1/C2	C1/C2	C1/C2	C1/C2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Digital competence Programming skills: Advanced MATLAB, Basic Fortran, LINUX environment

ADDITIONAL INFORMATION

- Publications
1. **Rubio** A., Caballero A., Orfila, A., Hernández-Carrasco, I., Ferrer L., González M., Solabarrieta, L., Mader, J. (2017). Eddy-induced cross-shelf export of high Chl-a coastal waters in the SE Bay of Biscay. *Remote Sensing of Environment*, 205, 290-304, doi: 10.1016/j.rse.2017.10.037
 2. **Rubio** A, Mader J, Corgnati L, Mantovani C, Griffa A, Novellino A, Quentin C, Wyatt L, Schulz-Stellenfleth J, Horstmann J, Lorente P, Zambianchi E, Hartnett M, Fernandes C, Zervakis V, Gorringer P, Melet A and Puillat I (2017). HF Radar Activity in European Coastal Seas: Next Steps Towards a Pan-European HF Radar Network. *Front. Mar. Sci.* 4:8. doi: 10.3389/fmars.2017.00008
 3. Progress towards a French high frequency ocean surface wave radar network (2017). Quentin, C., B. Zakardjian, L. Marié, **A. Rubio**, A.-C. Bennis, F. Dumas, A. Sentchev, G. Sicot, Y. Barbin, S. Jousset, A. Bonnat, J. Mader, Y. Ourmières, G. Charria, S. Tarot et D. Mallarino. *Mercator Ocean Journal*, Special Issue Coriolis, Vol. 55, pp25-38.
 4. Solabarrieta, L., S. Frolov, M. Cook, J. Paduan, **A. Rubio**, M. González, J. Mader, and G. Charria (2016). Skill Assessment of HF Radar-Derived Products for Lagrangian Simulations in the Bay of Biscay. *J. Atmos. Oceanic Technol.*, 33, 2585–2597, doi: 10.1175/JTECH-D-16-0045.1.
 5. Boyra, G., Peña, M., Cotano, U., Irigoien, X., **Rubio**, A. and Nogueira, E. (2016). Spatial dynamics of juvenile anchovy in the Bay of Biscay. *Fish. Oceanogr.*, 25: 529–543. doi:10.1111/fog.12170
 6. Caballero A., **Rubio**, A., Ruiz, S., Le Cann, B., Testor, P., Mader, J., Hernández, C. South-Eastern Bay of Biscay eddy-induced anomalies and their effect on Chlorophyll distribution. *Journal of Marine Systems* (2016). DOI: 10.1016/j.jmarsys.2016.04.001
 7. Kersalé, M., Marié, L., Le Cann, B., Serpette, A. Lathuilière, C., Le Boyer, A., **Rubio**, A., Lazure P. (2016) Poleward along-shore current pulses on the inner shelf of the Bay of Biscay. *Estuarine, Coastal and Shelf Science*, 179, 155-171, ISSN 0272-7714, doi:10.1016/j.ecss.2015.11.018.
 8. Probabilistic relationships between wind and surface water circulation patterns in the SE Bay of Biscay. L. Solabarrieta, **A. Rubio**, M. Cárdenas, S. Castanedo, G. Esnaola, F. J. Méndez · R. Medina, L. Ferrer. *Ocean Dynamics*, vol. 65, issue 9, pp. 1289-1303. DOI: 10.1007/s10236-015-0871-5.
 9. Fishing for floating marine litter in SE Bay of Biscay: Review and feasibility study. O. C.Basurko, G.Gabiña, M.Andrés, **A.Rubio**, A.Uriarte, I.Krug. *Marine Policy*, 61(2015)103–112.
 10. Operational protocol for the sighting and tracking of Portuguese man-of-war in the southeastern Bay of Biscay: Observations and modeling. Ferrer, L., Zaldua-Mendizabal, N., Del Campo, A., Franco, J., Mader, J., Cotano, U., Fraile, I., **Rubio**, A., Uriarte, Ad., Caballero, A., 2015. *Continental Shelf Research*, 95, 39-53. (DOI: 10.1016/j.csr.2014.12.011).
 11. Surface water circulation patterns in the south-eastern Bay of Biscay: new evidences from HF radar data. L. Solabarrieta, **A. Rubio**, S. Castanedo, R. Medina, G. Charria, V. Fernández, C. Hernández. 2013. *Continental Shelf Research*, 74, 60-76
 12. Monitoring of a quasi-stationary eddy by means of satellite, in-situ and model data. A. Caballero, L. Ferrer, **A. Rubio**, G. Charria, B.H. Taylor and N. Grima. *Deep-Sea Res. II.*, 10.1016/j.dsr2.2013.09.029
 13. Fresh water from the Bay of Biscay shelves in 2009. Reverdin G, Marié L., Lazure P., d'Ovidio, F., Boutin J., Testor P., Martin N., Lourenco A., Gaillard F., Lavin A., Rodriguez C., Somavilla R., Mader J., **Rubio** A. , Blouch P., Rolland J., Bozec Y., Charria G, Batifoulier F., Dumas F., Louazel S., Chanut J. *Journal of marine Systems*. 109–110, S134-S143 (2013)
 14. Seasonal to tidal variability of currents and temperature in waters of the continental slope, SE Bay of Biscay. **A. Rubio**, A. Fontán, P. Lazure (IFREMER/DYNECO, France), M. González, V. Valencia, L. Ferrer, J. Mader and C. Hernández. *Journal of Marine Systems*. 109–110, S121-S133 (2013)

Publications

15. Coastal water circulation response to radiational and gravitational tides within the southeastern Bay of Biscay. Authors: A. Fontán, J. Sáenz, M. González, A. Rubio, G. Esnaola, P. Liria, U. Ganzedo, C. Hernández, M. Collins. *Journal of Marine Systems*. 109–110, S95-S104 (2013)
16. Mapping near-inertial variability in the SE Bay of Biscay from HF radar data and two offshore moored buoys. Rubio, A., G. Reverdin, A. Fontán, M. González, and J. Mader, *Geophys. Res. Lett.*, 38, L19607, doi:10.1029/2011GL048783. (2011)
17. Implementation of an operational oceano-meteorological System for the basque country. S. Gaztelumendi, M. González, J. Egaña, A. Rubio, I.R. Gelpi, A. Fontán, K. Otxoa De Alda, L. Ferrer, N. Alchaarani, J. Mader & Ad. Uriarte. *Thalassas An International Journal of Marine Sciences*, 25 (3) Special issue: 151-167 (2010).
18. Operational tools in the Basque Country (SE Bay of Biscay) for water quality management within harbours. Del Campo A.; Ferrer L.; Fontán A.; González M.; Mader J.; Rubio A.; Uriarte A. *WIT Transactions on Ecology and Environment*, Vol. 126, WIT Press, C.A. Brebbia, G. Benassai, G.R. Rodríguez (Eds.), . 225-234 (2009)
19. Explosive cyclogenesis of extra-tropical cyclone Klaus and its impact on the water column stability in the Bay of Biscay. González M.; Ferrer L.; Fontán A.; Rubio A.; Mader J.; Del Campo A.; Liria P.; Hernandez C.; Cuesta L.; Berregi J.; Uriarte A.; Collins M. *GLOBEC International Newsletter*, Vol. 15, No. 2, 2009, 59
20. The Canary Eddy Corridor: a major pathway for long-lived eddies in the subtropical North Atlantic. Pablo Sangrà, Ananda Pascual, Ángel Rodríguez-Santana, Francisco Machín, Evan Mason, James C. McWilliams, Josep L. Pelegrí, Changming Dong, Anna Rubio, Javier Aristegui, Ángeles Marrero-Díaz, Alonso Hernández-Guerra, Antonio Martínez-Marrero, Maricel Auladell. *Deep Sea Research Part I: Oceanographic Research Papers*, 56, 12, (2009), 2100-2114, DOI: 10.1016/j.dsr.2009.08.008.
21. Mapping mesoscale eddy activity in the southern Benguela upwelling system from satellite altimetry and model data. A. Rubio, B. Blanke, N. Grima and S. Speich. *Progress In Oceanography*, 83, 1-4, Eastern Boundary Upwelling Ecosystems Symposium, 2009, 288-295, DOI: 10.1016/j.pocean.2009.07.029.
22. Reconstruction of the Mediterranean Northern Current variability and associated cross shelf transports in the Gulf of Lions from satellite tracked drifters and model outputs. A. Rubio, V. Taillandier and P. Garreau. *Journal of Marine Systems*, 78, S63-S78, ISSN 0924-7963, DOI: 10.1016/j.jmarsys.2009.01.011
23. Estimating geostrophic and total velocities from CTD and ADCP data: Intercomparison of different methods. A. Rubio, D. Gomis, G. Jordà and M. Espino. *Journal of Marine Systems*, 77, 1-2, (2009), Pages 61-76. (doi:10.1016/j.jmarsys.2008.11.009)
24. Origin and dynamics of mesoscale anticyclonic eddies in the Catalan sea (NW Mediterranean): Insight from a numerical model study. A. Rubio, B. Barnier, G. Jordà, M. Espino and P. Marsaleix. *Journal of Geophysical Research*, 114, C06009, doi:10.1029/2007JC004245 (2009)
25. Circulation over a submarine canyon in the NW Mediterranean. M.M. Flexas, D. L. Boyer, M. Espino, J. Puigdefàbregas, A. Rubio and J.B. Company. *Journal of Geophysical Research*, 113, C12002, doi:10.1029/2006JC003998 (2008).
26. Mesoscale anticyclonic eddies in the catalan sea: origin and dynamics (2007). A. Rubio, M. Espino, B. Barnier and G. Jordà. *CIESM 38th Congress Proceedings. Int. Mer. Medit. Vol. 38 - page 193.*
27. A field study of the behaviour of an anticyclonic eddy on the Catalan continental shelf (NW Mediterranean). A. Rubio, P-A. Arnau, M. Espino, M. Flexas, G. Jordà, J. Salat, J. Puigdefàbregas & A. S.-Arcilla. *Progress in Oceanography*, 66 (2005) 142-156.

Selected Conferences (last 2 years)

1. A Lagrangian approach to study the coastal surface transport of marine litter in the south-eastern Bay of Biscay using modelling and observations. Declerck, A., Delpey, M., Rubio A., Ferrer, L., Cabezas, O., Mader, J. *Geophysical Research Abstracts*, Vol. 20, EGU2018-19711, 2018, EGU 2018. Oral
2. The European common data and metadata model for real-time High Frequency Radar surface current data. Corgnati, L., Mantovani, C., Rubio, A., Reyes, E., Quentin C., Cosoli, S., Novellino, A. Mader, J., Griffa, A. Vol. 20, EGU2018-13317, 2018, poster EGU 2018. Poster.
3. Skill assessment of gap filling methodologies for HF-radar currents. Hernández-Carrasco, I., Solabarrieta, L., Esnaola, G., Reyes E., Rubio A., Orfila, A. *Geophysical Research Abstracts* Vol. 20, EGU2018-8453, 2018, EGU General Assembly 2018. Poster.
4. Joint analysis of coastal altimetry and HF radar data: insight to the shelf slope seasonal and mesoscale dynamics within the Bay of Biscay Manso, I., Caballero, A., Rubio, A., Dufau, C., Birol, F. *Geophysical Research Abstracts* Vol. 20, EGU2018-17006, EGU General Assembly 2018. Poster
5. Exploring a new Lagrangian based Short Term Prediction methodology for HF Radar currents. Solabarrieta, L., Orfila, A., Rubio, A., Hernández-Carrasco, I., Mader, Jones, B.J., *Geophysical Research Abstracts* Vol. 20, EGU2018-17858. EGU General Assembly 2018. Oral.
6. Exploring the potential of HF radar data to monitor upwelling events in the SE Bay of Biscay. Caballero, A., Rubio, A., Manso, I. *Geophysical Research Abstracts* Vol. 20, EGU2018-13624, EGU 2018. Poster
7. INCREASE: Innovation and Networking for the integration of Coastal Radars into European mArine Services, J. Mader, A. Rubio, A. Igoa, L. Jose, L. Corgnati, C. Mantovani, A. Griffa, P. Goringe, M. Alba, A. Novellino, was presented at the EGU General Assembly 2017 (*Geophysical Research Abstracts*, Vol. 19, EGU2017-19261, 2017). Oral
8. Deployment of new observing systems within the JERICO-RI. Puillat I., Carlier A., Facq JV., Rubio A., Lazure P., Delauney L., Petihakis G., Karlson B., Artigas F., Farcy P. *Proceedings of EuroGOOS International Conference: Operational Oceanography serving sustainable marine development*, 3-5 October 2017, Bergen, Norway. Oral

Selected Conferences (last 2 years)

9. Exploring synergies between HFR and coastal altimetry in the SE Bay of Biscay. I. Manso, **A. Rubio**, C. Dufau, A. Caballero. ROW2017. Lunenburg, Germany, 19-21 September 2017. Oral
10. Joint Efforts Towards European HF Radar Integration Mader, J., **Rubio**, A., Griffa, A., Mantovani, C., Corgnati, L., Novellino, A., Schulz-Stellenfleth, J., Quentin, C., Wyatt, L., Ruiz, M.I., Lorente, P., Hartnett, M., Gorringer, P. OS13B Session of AGU- Fall Meeting, San Francisco, USA, 12 December 2016. Oral
11. HF Radar Insight Into Coastal Mesoscale Eddies And Associated Cross-Shelf Transports In The South Eastern Bay Of Biscay (NE Atlantic) (OS11C-02, Invited). **Rubio** A., Caballero, A., Orfila, A., González M., Ferrer, L., Solabarrieta, L., Mader, J. , AGU- Fall Meeting, San Francisco, USA, 12 December 2016. Oral
12. HF radar insight into rapidly evolving mesoscale structures in the SE Bay of Biscay. A. **Rubio**, A. Caballero, L. Solabarrieta, L. Ferrer and J. Mader. EOF2016. Alicante, Spain, July 2016. Oral

Projects (last 10 years)

- MyCoast: A Coordinated Atlantic Coastal Operational Oceanographic Observatory. Interreg Atlantic Area, 2017-2020. PI: Julien Mader AZTI
- LIFE LEMA: Intelligent marine Litter removal and Management for local Authorities LIFE15 ENV/ES/000252, 2016-2019. PI: Diputación Foral de Gipuzkoa.
- INCREASE: Innovation and Networking for the integration of Coastal Radars into EuropeAn marine Services - CMEMS SE, 03/2016-03/2018. PI: J. Mader AZTI
- JERICO_NEXT: Joint European Research Infrastructure network for Coastal Observatory – Novel European eXpertise for coastal observatories. H2020 INFRAIA, 09/2015 – 09/2019. A. **Rubio** leading JRAP4 in WP4. PI: P. Farcy IFREMER
- DREAMER: Dinámica del reclutamiento de la merluza europea. Plan Nacional I+D+i. 2016-2019. PI: Fran Saborido Rey.
- MESOANCHOA: Impacto de remolinos oceánicos MESOescalares en la distribución, abundancia y crecimiento de la ANCHOA europea (Engraulis encrasicolus). Ministerio de Ciencia e Innovación. Plan Nacional I+D+i (CTM2013-45423-R), 01/01/2014- 31/12/2016. PI: A. Caballero (AZTI-TECNALIA).
- ENIGME Evolution Interannuelle de la dynamique dans le golfe de Gascogne et la Manche. ANR LEFE GMMC (FRANCE), 01/03/2014 – 28/02/2017. PI: G. Charria (IFREMER, France).
- GESSEB TNA within JERICO FP7: Towards a joint European research infrastructure network for coastal observatories TNA CALL_1_7. GESEEB: Glider campaign to estimate the 3D structure of an Eddy in the Southeastern Bay of Biscay. 07/2013-09/2013
- PREVIM: Herramienta operacional de vigilancia y previsión de deriva multiplataforma aplicada a contingencias de infraestructuras de energías marina. Caso de aplicación: bimep. Programa SAIOTEK (Gobierno Vasco), 2012-2013. PI: Anna **Rubio** (AZTI-TECNALIA).
- ESTIBB: Eddy spatio-temporal patterns in the Bay of Biscay. Ministerio de Ciencia e Innovación. Plan Nacional I+D+i. (CTM2009-12339) 2009-2012. PI: A. **Rubio** (AZTI-TECNALIA).
- EPIGRAM: Dynamics of the French Atlantic marginal and coastal areas (Bay of Biscay and Channel). French Government (LEFE/IDAO – ANR). 2009-2013. PI: Yves Morel (SHOM, France)
- EMODIS: Explotación de las medidas operacionales de la dinámica superficial del mar obtenidas a partir de radares HF. Programa SAIOTEK (Gobierno Vasco), 2009-2011. PI: Anna **Rubio** (AZTI-TECNALIA).
- LOREA: Interregional coastal oceanography operational system in Euskadi-Aquitania. EU – INTERREG Iva (2009-2011). PI: J. Mader (AZTI-TECNALIA).
- ITSASEUS: Un avance en la predicción océano-meteorológica en el País Vasco y el desarrollo de productos y aplicaciones. AZTI-TECNALIA, EUVE (since October 2008). PI: L. Ferrer (AZTI-TECNALIA).
- ECO-UP: Structure and functioning of exploited upwelling ecosystems: comparative analysis within the framework of an ecosystem approach to fisheries. IRD-LPO IFREMER (since October 2007)

Project evaluation and peer-review

Agencia Nacional de Evaluación y Prospectiva (ANEP), since 2011 (>9 evaluations)
 Peer-review: Ocean Science Discussion (2013), Scientia Marina (2011), Journal of Marine Systems (2008, 2010), Progress in Oceanography (2008), ELSEVIER Book: Coastal Ocean Observing Systems: Advances and Syntheses (2014), Continental Shelf Research (2015,2016) Journal of Geophysical Research (2017), Remote Sensing of Environment (2017, 2018)

Participation in Working Groups

EuroGOOS Coastal Working Group (since 2018)
 EuroGOOS HFR Task Team (since 2015)
 GEO Global HF radar Component (Since 2013)
 IBERORED – HFR (Since 2010)