

PERSONAL INFORMATION

Julien MADER



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Sex Male | Date of birth 30/06/1975 | Nationality French

POSITION

Director of Marine Technology, AZTI

WORK EXPERIENCE

September 2022 – Present

Director of Marine Technology
 AZTI, Pasaia, Gipuzkoa, SPAIN

April 2014 – August 2022

Head of Marine Technologies Area
 AZTI, Pasaia, Gipuzkoa, SPAIN

- Coordination of technological developments, transfer and innovation applied to maritime, marine and littoral activities (Operational oceanography, Fisheries, Aquaculture, Maritime Transport, Ocean energy, Tourism and nautical activities)

Business or sector Transforming science into sustainable development

2007 – 2014

Head of Operational Oceanography Area
 AZTI, Pasaia, Gipuzkoa, SPAIN

- Coordination of Operational Oceanography developments and applications. Both observing and modelling tools and products provide hindcast, nowcast, and forecast of oceanographic conditions at several time-scales for marine and littoral resources assessment, design, active management of marine activities or environmental assessment.

Business or sector Applied Operational oceanography

2000 – 2006

Engineer-researcher in Operational Oceanography
 AZTI, Pasaia, Gipuzkoa, SPAIN

- Main qualifications and domains of expertise are in oceanographic instrumentation, data processing and modelling in marine dynamics and coastal processes.

EDUCATION AND TRAINING

1997-1999

Engineer in Marine Technologies (M.Eng.)

EQF 7
 300 ECTS

Institute of Engineering Sciences of Toulon and the Var, FRANCE

- Skills in marine technology, offshore petroleum industry, coastal engineering, underwater robotics, remote sensing (ocean acoustics and optics), and in the basic sciences required to understand and describe the marine environment, hydrodynamics and fluid mechanics, oceanography, soil physics, strength of materials, corrosion, etc.

1999

5 months training period in Compagnie Générale de Géophysique, Paris, France

Geophysical marine and terrestrial studies. Project on streams behaviour prediction to improve marine geophysical data quality.

- 1998 3 months training period in AZTI, San Sebastian, Gipuzkoa, Spain
Studies in Oceanography and sedimentology.
- 1997 2 months training period in SOGERMA, Aerospaciale, Rochefort, France
Experience of relationships into a professional group.

PERSONAL SKILLS

Mother tongue(s) French

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Spanish	C2	C2	C2	C2	C2
English	B2	C1	B2	B2	B2
Basque	A1	A1	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills ▪ Good communication skills obtained through my experience as team coordinator (10 years), as project manager, in scientific and technical networking, and with close contacts with stakeholders and clients from the marine sectors.

Organisational / managerial skills ▪ Leadership (currently responsible for a team of 13 people)

Driving licence ▪ B
▪ French Yacht Master offshore (Permis Hauturier)

ADDITIONAL INFORMATION

Networking Co-chair of IBIROOS, Ireland-Biscay-Iberia Regional Operational Oceanographic System (since 2015). <http://eurogoos.eu/roos/ireland-biscay-iberia-regional-operational-oceanographic-system-ibiroos/>
Chair of the EuroGOOS High Frequency Radar Task Team (since 2015). <http://eurogoos.eu/high-frequency-radar-task-team/>
Member of DATAMEQ, Data Management, Exchange and Quality Working Group (since 2013). <http://eurogoos.eu/data-management-exchange-quality-working-group-data-meq/>
Member of ICES-IOC Steering Group on GOOS, SGGOOS (2006-2008).

European Projects JERICO-S3, Joint European Research Infrastructure of Coastal Observatories: Science, Service, Sustainability. H2020- INFRAIA-01-2019. Grant agreement No 871153. Leading Work package on Harmonisation of integrated Multiplatform & Multidisciplinary systems. 2020-2023.
SUSTUNABLE, Sustainable tuna fisheries through advanced earth observation tools. 2020-2023. H2020-SC5-2019-2. 2020-2023
EUROSEA, Improving and Integrating European Ocean Observing and Forecasting Systems for Sustainable use of the Oceans. H2020 BG-07-2019-[B]. Grant agreement No 862626. 2019-2022.
MARLIT, Means of assessing and mitigating local coastal risks due to storm surges. INTERREG -Va POCTEFA. EFA344/19. Transferring observing and forecasting tools and mitigation solutions for maritime extreme events in the Bay of Biscay. 2020-2022.
FML-TRACK, operational service to support the reduction of Floating Marine Litter (FML) in the coastal area. Copernicus Marine Service User Uptake. 110-UU-DEM5-CMEMS. 2019-2021.
IBISAR, Skill Assessment service to provide real-time met-ocean data ranking in the IBI area for emergency responders (SAR operators). Copernicus Marine Service User Uptake. 67-UU-DO-CMEMS-DEM4. 2018-2020.
COMBAT, Combination of Altimetry and HF radar observations for coastal data assimilation. Copernicus Service Evolution project; 66-SE-CMEMS-CALL2. 2018-2020
CMEMS-TAC-INSITU, Copernicus Marine Environment Monitoring Service, provision of in-situ ocean observation

products. 2018-2021.

MYCOAST, Coordinated Atlantic Coastal Operational Oceanographic Observatory. INTERREG Atlantic Area. PI of the project. 2017-2021

LIFE LEMA: Intelligent marine Litter removal and management for local authorities. Demonstration of the feasibility of a sustainable management strategy to address floating marine litter. Operational oceanography services. LIFE15 ENV/ES/000252. 2016-2019.

MAREA: Modelling and management support against coastal risks in the Basque Coast. INTERREG Va. Innovative observing and warning systems; Impact of extreme stormy events. 2016-2019.

INCREASE, Innovation and Networking for the integration of Coastal Radars into European mARine Services. Copernicus Service Evolution project; Lot5. PI of the project. 2016-2018.

JERICO-NEXT, Joint European Research Infrastructure network for Coastal Observatory – Novel. European eXperts for coastal observatories. H2020-INFRAIA-2014-2015. Main contributions in HF Radar activities are: Harmonization, Networking, Products developments, Data management, Virtual access. 2015-2019.

JERICO, Towards a joint European research infrastructure network for coastal observatories (FP7/2007-2013). The project proposes a Pan European approach for a European coastal marine observatory network, integrating infrastructure and technologies such as moorings, drifters, ferrybox and gliders. 2011-2015.

SPRES, Oil Spill Prevention and Responses at Local Scales. INTERREG IVb. Generates both operational forecasting systems and planning tools, at local scale (estuaries and ports) by developing a set of high resolution operational oceanographic systems, establishing local oil spill response plans for these local areas based on risk assessment. 2012-2014.

LOREA, Interregional coastal oceanography operational system in Euskadi-Aquitania. Coastal modelling and model validation. Response against pollution, Oil spill, Bathing water quality, littoral applications. EU – INTERREG IVa. 2009-2011.

ECASA, Ecosystem Approach to Sustainable Aquaculture, FP6 RTD project with 16 partners. ECASA Toolbox is an innovative environmental management resource developed specifically for European marine aquaculture. 2004-2008.

HiPRwind project started in November 2010 and is a part of the EU 7th Framework Programme for energy research. Participation in bimep characterization and instrumentation. 2010-2012.

ECOOP European COastal-shelf sea Operational observing and forecasting system Regional modelling and observations for model validation EU Directorate D - Water and Environmental Programmes 2007- 2009.

COSTASAT Estimation of biophysical parameters from Medium resolution remote sensors for coastal water quality assessment. Developing bio-optical modules for prognostic modelling of optical properties of the upper ocean Spanish Government (ESP2006-10411) 2006- 2009.

SPILLREC Enhanced Design and Manufacturing of Waterborne Spills Recovery Systems, FP6-2004-SME-COOP. Enhancing competitiveness in the area of waterborne spill response by innovating on design, computer analysis, materials, and manufacture of spill recovery structures and systems. 2006-2008.

BIOMEX Assessment of BIOMass EXport from marine protected areas and its impacts on fisheries in the western Mediterranean Sea. DG FISHERIES (Ref: Q5RS-2002-00891) 2003-2005.

Publications

High-frequency radar-derived coastal upwelling index. Lorente P., Rubio A., Reyes E., Solabarrieta L., Piedracoba S., Tintoré J., Mader J. in: 7th edition of the Copernicus Ocean State Report (OSR7), edited by: von Schuckmann, K., Moreira, L., Le Traon, P.-Y., Grégoire, M., Marcos, M., Staneva, J., Brasseur, P., Garric, G., Lionello, P., Karstensen, J., and Neukermans, G., Copernicus Publications, State Planet, 1-osr7, 8, <https://doi.org/10.5194/sp-1-osr7-8-2023> (2023)

Revamping data system and portal in the Basque Operational Oceanography. Solabarrieta L., del Campo A., Alvarez D., Abalia A., Nieto A., Epelde I., de Santiago I., Zubiaur I., Ferrer L., Manso I., Saez I., Garnier R., González M., Rubio A., Mader J., Liria P., Aranda J.A., Alba M., Asioli A., Novellino A., Misurale F. 2022 IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters (MetroSea) 193-197 (2022)

Recommendations on data harmonization for ocean observation networks. Obaton D., El Rahman Hassoun A., Perez Gomez B., Novellino A., Carval T., Mader J., Giorgetti A., Soeren T., Pouliquen S., Turpin V., Coppola L. 2022 IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters (MetroSea) 01-03 (2022)

Modelling the morphological response of the Oka estuary (SE Bay of Biscay) to 1 climate change. Garnier R., Townend I., Monge-Ganuzas M., de Santiago I., Liria P., Abalia A., Epelde I., del Campo A., Chust G., Valle M., González M., Mader J., Gómez M., Castillo C., Uriarte A. Estuarine, Coastal and Shelf Science. (2022)

Recommendations on data harmonization for ocean observation networks. Obaton D, Novellino A, Giorgetti A, Turpin V, Rahman Hassoun A, Carval T, Soeren T, Coppola L, Perez Gomez B, Mader J, Pouliquen S. 2022 IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters (MetroSea) (2022)

Characterization of the wave resource variability in the French Basque coastal area based on a high-resolution hindcast. M. Delpey, X. Lastiri, S. Abadie, V. Roeber, P. Maron, P. Liria, J. Mader. *Renewable Energy* 178 <https://doi.org/10.1016/j.renene.2021.05.167> (2021)

KOSTASystem, a coastal videometry technology: development and applications. Liria, P., Epelde, I., de Santiago, I., Garnier, R., Abalia, A., & Mader, J. *Proceedings of the 9th EuroGOOS International Conference 'Advances in Operational Oceanography: Expanding Europe's Observing and Forecasting Capacity'*. 3 – 5 May 2021. V. Fernández, A. Lara-López, D. Eparkhina, L. Cocquempot, C. Lochet, I. Lips (Eds). EuroGOOS. Brussels, Belgium. <https://doi.org/10.13155/83160> (2021)

Wave Energy Assessment in the South Aquitaine Nearshore Zone from a 44-Year Hindcast. X. Lastiri, S. Abadie, P. Maron, M. Delpey, P. Liria, J. Mader and V. Roeber. *J. Mar. Sci. Eng.* 2020, 8(3), 199; <https://doi.org/10.3390/jmse8030199> (2020)

Litter Windrows in the South-East Coast of the Bay of Biscay: An Ocean Process Enabling Effective Active Fishing for Litter. Ruiz I, Basurko OC, Rubio A, Delpey M, Granado I, Declerck A, Mader J and Cózar A. *Front. Mar. Sci.* 7:308. doi: 10.3389/fmars.2020.00308 (2020)

Best practices on High Frequency Radar deployment and operation for ocean current measurement. Mantovani, C., L.P. Corgnati, J. Horstmann, A. Rubio, E. Reyes, C. Quentin, S. Cosoli, J.L. Asensio, J. Mader, A. Griffa. *Front. Mar. Sci. - Ocean Observation* <https://doi.org/10.3389/fmars.2020.00210> (2020).

A new Lagrangian based short term prediction methodology for HF radar currents. Solabarrieta, L., Hernandez-Carrasco, I., Rubio, A., Orfila, A., Campbell, M., Esnaola, G., Mader, J., and Jones, B. H., *Ocean Sci. Discuss.*, <https://doi.org/10.5194/os-2019-125>, in review, 2020.

Wave Energy Assessment in the South Aquitaine Nearshore Zone from a 44-Year Hindcast. Lastiri, X.; Abadie, S.; Maron, P.; Delpey, M.; Liria, P.; Mader, J.; Roeber, V.; *J. Mar. Sci. Eng.* 2020, 8, 199. doi:<https://doi.org/10.3390/jmse8030199> (2020).

The seasonal intensification of the slope Iberian Poleward Current. Rubio, A., Manso-Narvarte, I., Caballero, A., Corgnati, L., Mantovani, C., Reyes, E., Griffa, A., and Mader, J. in: *Copernicus Marine Service Ocean State Report, J. Oper. Oceanogr.*, Issue 3, 13-18, doi: 10.1080/1755876X.2019.1633075 (2019).

Transport of floating marine litter in the coastal area of the south-eastern Bay of Biscay: A Lagrangian approach using modelling and observations. Declerck A., Delpey M., Rubio A., Ferrer L., Basurko O. C., Mader J., Louzao M. *Journal of Operational Oceanography*, doi: 10.1080/1755876X.2019.1611708 (2019).

The Global High Frequency Radar Network. Roarty H, Cook T, Hazard L, George D, Harlan J, Cosoli S, Wyatt L, Alvarez Fanjul E, Terrill E, Otero M, Largier J, Glenn S, Ebuchi N, Whitehouse B, Bartlett K, Mader J, Rubio A, Corgnati L, Mantovani C, Griffa A, Reyes E, Lorente P, Flores-Vidal X, Saavedra-Matta KJ, Rogowski P, Prukpitikul S, Lee S-H, Lai J-W, Guerin C-A, Sanchez J, Hansen B and Grilli S. *Front. Mar. Sci.* 6:164. doi: 10.3389/fmars.2019.00164 (2019).

Eddy-induced cross-shelf export of high Chl-a coastal waters in the SE Bay of Biscay. Rubio, A., Caballero, A., Orfila, A., Hernández-Carrasco, I., Ferrer, L., González, M., Solabarrieta, L., Mader, J. *Remote Sensing of Environment*, 205, 290-304, doi: 10.1016/j.rse.2017.10.037 (2018).

HF Radar Activity in European Coastal Seas: Next Steps Towards a Pan-European HF Radar Network. 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, Goringe P, Melet A and Puillat I (2017). *Front. Mar. Sci.* 4:8. doi: 10.3389/fmars.2017.00008 (2017).

Skill assessment of HF radar-derived products for lagrangian simulations in the Bay of Biscay. Solabarrieta L., Frolov S., Cook M., Paduan J., Rubio A., González M., Mader J., Charria G., *Journal of Atmospheric and Oceanic Technology*. *Journal of Atmospheric and Oceanic Technology* 33(12) August 2016 (2016).

South-Eastern Bay of Biscay eddy-induced anomalies and their effect on Chlorophyll distribution. Caballero, A., Rubio, A., Ruiz, S., Le Cann, B., Testor, P., Mader, J., Hernández, C., *Journal of Marine Systems* April 2016. DOI: 10.1016/j.jmarsys.2016.04.001 (2016).

Mathematical Modeling of Oscillating Water Columns Wave-Structure Interaction in Ocean Energy Plants. Garrido A.J., Otaola, E., Garrido, I., Lekube, J., Maseda, F.J., Liria, P, Mader, J., *Mathematical Problems in Engineering* 2015(4):1-11 (2015).

Operational protocol for the sighting and tracking of Portuguese man-of-war in the southeastern Bay of Biscay: observations and modelling. Ferrer, L., N. Zaldúa-Mendizabal, A. Del Campo, J. Franco, J. Mader, U. Cotano, I. Fraile, A. Rubio, Ad. Uriarte, A. Caballero. *Continental Shelf Research* (2015).

Seasonal to tidal variability of currents and temperature in waters of the continental slope, southeastern Bay of Biscay. Rubio, A., A. Fontán, P. Lazure, M. González, V. Valencia, L. Ferrer, J. Mader, C. Hernández. *Journal of Marine Systems*; s 109–110:S121–S133 (2013)

Water renewal and risk assessment of water pollution in semi-enclosed domains: application to Bilbao Harbour (Bay of Biscay). Grifoll, M., Del Campo, A, Espino, M., Mader, J., González, M., Borja, A. *Journal of Marine System* 109-110(Supplement):S241-S251 (2013).

- Coastal water circulation response to radiational and gravitational tides within the South-eastern Bay of Biscay. Fontán, A., Sáenz J., González M., Rubio A., Esnaola G., Mader J., Liria P., Hernandez C., Ganzedo U., Collins M. *J. Mar. Syst.*, Vol.109-110: S95-S204 (2013).
- Instructions for the use of the AMBI index software (Version 5.0). Borja A., Mader J., Muxika I. *Revista de Investigación Marina (RIM)*, Vol.19(3), (2012).
- Mapping near-inertial variability in the SE Bay of Biscay from HF radar data and two offshore moored buoys. Rubio A., Reverdin G, Fontán A., González M., Mader J. *Geophysical Research Letters*, VOL. 38, L19607, (2011)
- Water renewal and risk assessment of water pollution in semi-enclosed 6 domains: Application to Bilbao Harbour (Bay of Biscay). Grifoll M., Del Campo A., Espino M., Mader J., González M., Borja A. *J. Mar. Syst.* (2011)
- Fisheries replenishment of early life taxa: potential export of fish eggs and larvae from a temperate marine protected area. Crech'riou, R., Alemany, F., Roussel, E., Chassanite, A., Marinaro, J.Y., Mader, J., Rochel, E., Planes, S. *Fisheries Oceanography*, Vol. 19:2, 135-150 (2010)
- Trend analysis of multidecadal datasets of air and sea surface temperatures within the southeastern Bay of Biscay. González M.; Fontán A.; Borja A.; Del Campo A.; Esnaola G.; Ferrer L.; Goikoetxea N.; Mader J.; Uriarte A.; Valencia V. *Thalassas*, Vol. 26(2), 23-31 (2010)
- Implementation of an operational oceano-meteorological system for the Basque Country. Gaztelumendi, S., González, M., Egaña, J., Rubio, A., Gelpi, I.R., Fontán, A., Otxoa de Alda, K., Ferrer, L., Alchaarani, N., Mader, J., Uriarte, Ad. *Thalassas*, 26 (2), pp. 151-167. (2010)
- Relative influences of space, time and environment on coastal ichthyoplankton assemblages along a temperate rocky shore. Roussel E.; Crechriou R.; Lenfant P.; Mader J.; Planes S. *Journal of Plankton Research*, Vol. 32(10), 1443-1457 (2010).
- Tidal and wind-induced circulation within the Southeastern limit of the Bay of Biscay: Pasaia Bay, Basque Coast. Fontán, A, M. González, N. Wells, M. Collins, J. Mader, L. Ferrer, G. Esnaola, Ad. Uriarte. *Continental Shelf Research* 04/2009; 29(8-29):998-1007 (2009)
- Low- salinity plumes in the oceanic region of the Basque Country. Ferrer, L., Fontán A., Mader, J., Chust, G., González M., Valencia, V., Uriarte, Ad., Collins, M.B. *Continental Shelf Research*, vol. 29 : 970-984. (2009)
- 3D hydrodynamic characterisation of a meso-tidal harbour: The case of Bilbao (northern Spain). Grifoll, M., A. Fontán, L. Ferrer, J. Mader, M., González y M. Espino. *Coastal Engineering* 56, 907–918. (2009)
- Operational tools in the Basque Country (South-eastern Bay of Biscay) for water quality management within harbours. Del Campo, A., Ferrer, L., Fontán, A., González, M., Mader, J., Rubio, A., Uriarte, Ad. *WIT Transactions on Ecology and Environment*, Vol. 126, WIT Press, C.A. Brebbia, G. Benassai, G.R. Rodríguez (Eds.), pp. 225-234. (2009)
- Using M-AMBI in assessing benthic quality within the Water Framework Directive: Some remarks and recommendations. Borja A., J. Mader, I. Muxika, J. G. Rodríguez, J. Bald. *Marine Pollution Bulletin* 08/2008; 56(7):1377-9. (2008)
- Distribution, growth and survival of anchovy larvae (*Engraulis encrasicolus* L.) in relation to hydrodynamic and trophic environment in the Bay of Biscay. Cotano, U., Irigoien, X., Etxebeste, E., Álvarez, P., Zarauz, L., Mader, J., Ferrer, L. *Journal of Plankton Research*, 30 (4), pp. 467-481. (2008)