europass

ETIENNE Hélène

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Date of birth: 16/02/1976 **Nationality:** French

WORK EXPERIENCE

[2022 – Current]

Leader manager of the Multi Observation Thematic Assembly of the european Copernicus Marine Service.

Project manager

Scientific coordination between ocean products covering biochemistry physics, from in-situ to space observations.

[2013 – Current]

Scientist Executive in the "In situ & Composites" Department of the Environmental Business Unit

CLS

City: Ramonville Saint Agne

Development of a near real-time and hindcast analysis system of observed ocean currents (altimetry and in-situ) and operational maintenance for the european Copernus Marine Service project (Multi Observation Thematic Assembly Center.)

R&D on wind slippage correction of the drifting buoys current database for the CMEMS In Situ Thematic Assembly.

R&D on synergy between altimetry and in situ observations.

Machine Learning approach for synergetic use of ocean multiobservations.

Support to new earth explorer satellite mission scientific qualification.

[2002 – 2014]

Research Engineer in the Operational Oceanography Department - Space Oceanography Division (DOS),

CLS

City: Ramonville Saint Agne | **Country:** France

Data assimilation expert: optimisation of the successive assimilation schemes of Mercator Ocean systems. Development of the validation procedures.

Contribution to the validation tools for the Mercator Ocean operational systems.

High resolution 2D ocean current operational system, including genetic algorithm optimisation, ensemble methods, data fitting: Oil & Gaz activities, pollution monitoring, marine security.

Regional ocean modelling configuration setup, based on NEMO, ROMS, HYCOM (initialization and open boundary conditions.)

[1998 – 2003]

PhD Thesis in Physical Oceanography

CLS

City: Ramonville Saint Agne

Research Student in the Operational Oceanography Department - Space Oceanography Division (DOS).

Study of model error in a quasi-geostrophic ocean model to improve the assimilation scheme.

EDUCATION AND TRAINING

[2002] **PhD Thesis in Physical Oceanography**

Paul Sabatier University

City: Toulouse | **Country:** France |

Forecast error in ocean data assimilation. Ensemble method estimation in the North Atlantic

[1998] **M.Sc. in Oceanography**

Paul Sabatier University

City: Toulouse | **Country:** France |

[1997] **B.S. in Physics**

Paul Sabatier University

City: Toulouse | **Country:** France |

LANGUAGE SKILLS

Mother tongue(s): French

Other language(s):

English

LISTENING C1 **READING** C1 **WRITING** C1

SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

Programming language

Fortran | Python | shell

On system

Unix / Linux | Windows

PUBLICATIONS

The new CNES-CLS18 Global Mean Dynamic Topography

Mulet, S., Rio, M.-H., Etienne, H., Artana, C., Cancet, M., Dibarboure, G., Feng, H., Husson, R., Picot, N., Provost, C., and Strub, P. T.: The new CNES-CLS18 Global Mean Dynamic Topography, Ocean Sci. Discuss. https://doi.org/10.5194/os-2020-117, in review, 2021

Synergy between surface drifters and altimetry to increase the accuracy of sea level anomaly and geostrophic current maps in the Gulf of Mexico

S. Mulet, H. Etienne, M. Ballarotta, Y. Faugère, M.-H. Rio, G. Dibarboure and N. Picot, 2020: Synergy between surface drifters and altimetry to increase the accuracy of sea level anomaly and geostrophic current maps in the Gulf of Mexico, Advances in Space Research, https://doi.org/10.1016/j.asr.2019.12.024

Improving the Altimeter-Derived Surface Currents Using Sea Surface Temperature (SST) Data: A Sensitivity Study to SST Products

Ciani, D., Rio, M. H., Nardelli, B. B., Etienne, H., & Santoleri, R.,
2020. Improving the Altimeter-
Derived Surface Currents Using Sea Surface Temperature (SST) Data: A Sensitivity Study to SST Products. Remote Sensing, 12(10), 1601.

The Copernicus Marine Environment Service Ocean State Report, Issue 2

Drévillon, M., Tinker, J., Bourdallé-Badie, R., Greiner, E., Etienne, H., Rio, M-H., Drillet, Y., Hernandez, F. 2018: Currents, Copernicus Marine Service Ocean State Report, Issue 2, Journal of Operational Oceanography, 11:sup1, s13–s16, DOI: 10.1080/1755876X.2018.1489208

The Copernicus Marine Environment Monitoring Service Ocean State Report

Reference: Journal of Operational Oceanography, 9(sup2), s235–s320.

Drévillon, M., Etienne, H., Tintoré, J., Guinehut, S., Greiner, E., Drillet, Y, and Mulet, S. 2016: Currents, Copernicus Marine Service Ocean State Report, Journal of Operational Oceanography, 9(sup2), s235–s320, DOI: 10.1080/1755876X.2016.1273446

Authors:

Using satellite data to compute near-real-time sea surface velocities

Lucas M., Etienne, H.,Greiner, E. 2013: Using satellite data to compute near-real-time sea surface velocities, Sea Technology, Vol 54, N°3, 30-33.

A new approach to surface currents monitoring

Lucas M., Etienne,H., Greiner,E., Benkiran, M., 2012: A new approach to surface currents monitoring, Journal of operational Oceanography, vol 5,No 2

Multivariate assimilation in MERCATOR project: new statistical parameters from forecast error estimation

Etienne H.**,** Benkiran, M., 2007: Multivariate assimilation in MERCATOR project: new statistical parameters from forecast error estimation, J. Mar. Sys. 65(1 - 4): 430 - 449, 2007.

Estimation of the optimal interpolation parameters in a quasi-geostrophic model of the Northeast Atlantic using ensemble methods

Etienne H., Dombrowsky, E., 2003: Estimation of the optimal interpolation parameters in a quasi-geostrophic model of the Northeast Atlantic using ensemble methods, J. Mar. Sys., 40 - 41, 317 – 339.

Significance of cyclonic Subtropical Oceanic Rings of Magnitude (STORM) eddies in the carbon budget of the euphotic layer in the subtropical northeast Atlantic

Mouriño B., Fernández E., Etienne H., Hernandez F., Giraud S., 2003: Significance of cyclonic Subtropical Oceanic Rings of Magnitude (STORM) eddies in the carbon budget of the euphotic layer in the subtropical northeast Atlantic, Journal of. Geophysical Research, 108, 3383 - 13:1-14.