



Mercator Ocean is the French ocean analysis and forecasting centre. It designs, develops, operates and maintains state-of-the-art scientific numerical-modelling systems which are able to describe, analyse and forecast the state of the ocean in 3D, continuously and in real time. Mercator Ocean is a subsidiary of French public institutions and European organisms involved in the development of operational oceanography – CNRS, IFREMER, IRD, Météo-France and SHOM are the French public institutions and CMCC (Italy), Met Office (United Kingdom), NERSC (Norway) and Puertos Del Estado (Spain) are the European organisms.

Mercator Ocean's activities extend from R&D to operational systems and from forecasters' expertise to services provided worldwide to users (scientists, public agencies, industry, etc.). The company is located in Ramonville Saint-Agne, near Toulouse.

In November 2014, the European Commission delegated the implementation of the Copernicus Marine Environment Monitoring Service to Mercator Ocean. The service is provided and ensured since spring 2015.

We are now opening a temporary position:

Oceanographer and developer of scientific applications (M/F)

Within the « Research and Development » department, you will be in charge of porting STAMM (Sea Turtle Active Movement Model, <https://doi.org/10.1371/journal.pone.0181595>) into the Parcels toolbox (www.oceanparcels.org). You will calibrate the STAMM model using a dataset of young turtles positions. You will then run numerical experiments which aim at demonstrating the added value of Mercator Ocean's products for marine biology applications:

- After handling the STAMM and Parcels software, you will use the Parcels toolbox to move the turtles according to the speed of the current (Mercator Ocean model product) and a swimming speed linked to the habitat gradients, the habitat being itself a simple function of oceanic parameters (Mercator Ocean model products).
- You will calibrate STAMM, choosing and using an estimation technique to determine the values of the 7 parameters of the STAMM model in order to best reproduce the observed dispersion of a large number (> 200) of satellite-monitored juvenile loggerhead turtles in the North Pacific.
- You will contribute to the writing of technical reports and scientific publications showing the benefit of your work, and the interest of using Mercator Ocean's product as input of the STAM model.

After five years of higher education in engineering, you have strong skills in oceanography, fluids mechanics, numerical analysis (including optimal estimation techniques) and developed proficiency in scientific computing, and in programming languages (in Python, Fortran, C++).

Rigorous, well-organized and responsive, your skills and your ideas will contribute to ambitious projects and to international collaborations. You speak and write English fluently.



Send your letter stating your reasons for applying, including a detailed CV as well as letters of recommendation with the reference *2019-07/RD/ODAS* to: recruitment@mercator-ocean.fr no later than 07/31/2019.

Date of publication : 07/08/2019