

Undergraduate thesis proposals

Research Line A1 - Biogeochemical forecast skill assessment for Operational Oceanography

- a) Optimization of the biogeochemical code BFMv5 stand-alone.
- b) Implementation of the free surface formulation in the parameterization of the horizontal transport of the code OGSTM.
- c) Increase of spatial resolution of physical-biogeochemical coupled model OGSTM-BFM from 1/16 to 1/24 degree:
 1. resolution of informatics problem;
 2. study on the parameterization of horizontal diffusion;
 3. study on the parameterization of vertical diffusion;
 4. study on effects on biogeochemical dynamics.

Research Line A4 - Parallelization of hydrodynamic finite element models

- a) Design and implementation of a memory model to increase data localization for a finite element model used for hydrodynamic, biogeochemical and ecological applications in lagoons.