



## **Biophysical regions in the South Western Atlantic as seen by remote sensing data using artificial neuronal network: a case study.**

**M. Saraceno** (1), C. Provost (1), M. Lebbah (1) and A. R. Piola (2)

(1) Laboratoire d'Océanographie Dynamique et de Climatologie (LODYC), Université Pierre et Marie Curie - Tour 45, Etage 5, Boite 100, 4 Place Jussieu, 75252 Paris cedex 05. France,  
(2) Departamento de Oceanografía, Servicio de Hidrografía Naval, Av. Montes de Oca 2124, (1271) Buenos Aires and Departamento de Ciencias de la Atmósfera y los Océanos, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Buenos Aires, Argentina  
(Contact : saraceno@lodyc.jussieu.fr )

Monthly climatologies and global means of satellite retrieved chlorophyll-a, sea surface temperature and sea surface temperature gradient are used to identify biophysical regions in the South Western Atlantic (SWA). Data are used as input in an artificial neuronal network, a probabilistic version of the Kohonen's self-organizing map (PR-SOM). The dimension of the output is further reduced using a hierarchical ascending clustering methodology. The resulting classes are interpreted as the biophysical regions in the SWA. Results from global means show very good agreement with main regions previously defined in the SWA. Results using monthly means show a first approach to quantify the time displacement of the biophysical regions.