

Generating ARGO salinity and temperature contours in Indian Ocean and predicting desired fish species locations

U.R.S.C. Dharmadasa, D.B. Guruge*, M.M.R. Prasad and G.N.P. Ariyasinghe

Department of Computer Science, Faculty of Science, University of Ruhuna, Sri Lanka

In this study, Argo temperature and salinity profiles taken from the upper 2000 m of the ice-free global ocean and currents from intermediate depths are used to draw contours. The system interpolates missing data values in the ARGO database using the user selected interpolation technique. Then interpolated data is inserted into the grid and contours of depth values of a given temperature or salinity values are generated according to a user specified criteria. Parameters such as fish density and species richness at different locations can be predicted using these contour plots. Furthermore, the path of the float trajectory plotted by the system would help to identify patterns of sea surface water currents and patterns of air or wind direction. System captures these contour plots for a given time period and generates videos which provides valuable information about environmental changes.

Key words: Argo data, float trajectory, salinity profiles

*deepani@cc.ruh.ac.lk