

# **"On the dynamics of ocean currents over the Israeli shelf and slope"**

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## **Abstract:**

The ocean circulation in the Israeli coastal region is characterized by a northward along slope flow which intensifies into a jet over the shelf break area. The winds in the region have a strong onshore component. The shear within the jet inhibits the transport of water across it. This creates a barrier between coastal waters and deep sea water, which restricts the exchange of nutrients and plankton as well as the spreading of pollution. Exchange can occur by the meandering of the along slope current or through mesoscale and submesoscale flow features on the current. We present the dynamics of the circulation system on the shelf break and the continental slope, which involves the interaction between wind forcing, stratification and bathymetry.