

## عنوان مقاله:

AN ANALYTIC MODEL FOR THE STRUCTURE OF THE GRAVITY CURRENT FROM THE MIDDLE TO THE SOUTHERN BASIN OF THE CASPIAN SEA

## محل انتشار:

دوازدهمین همایش بین المللی سواحل، بنادر و سازه های دریایی (سال: 1395)

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## خلاصه مقاله:

Bottom-trapped currents play an integral role in thermohaline circulation and are a vehicle for the transport of heat, salt, oxygen and nutrients over long distances [3]. The ability of abyssal flows to transport and deposit sediment is also of geological interest [6]. The density difference between the deeper water of the middle basin and that of southern basin of the Caspian Sea leads to an overflow gravity current over the Abshoran sill. This difference is mainly due to the temperature difference between these two basins as a result of cold water sinking in the northern part of this Sea, at about 48 degrees latitude. Similar outflow from the semi-enclosed sea, as that from the Persian Gulf to the Oman Sea, but mainly due to salinity difference, also exist [1, 5]. In this study an analytic model for the overflow gravity current over the Abshouran sill, with inertial and frictional effect is presented. The deep baroclinic flow is over the inclined surface is then studied using this model. The dynamical characteristics of the flow are investigated with different initial and boundary conditions. These conditions are taken from the physical oceanographic and hydrographic data.

## کلمات کلیدی:

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