

# Abstract

**Akram S Soliman**

## **Evaluation of Numerical Model for the Design of Artificial Submerged Reef**

Shore erosion is considered one of the major problems not only in Egypt coasts but also around the world coasts, mainly due to excessive human activities (e.g. construction & development works along coastline), and /or due to natural factors (e.g. wind, wave, current & sea level rise). In recent years, most of the scientific investigations are looking for new techniques, which can be used to reduce the rate of coastline erosion & even add new beaches. These commonly techniques are friendly acting to the environment. Submerged breakwaters are constructed from rubble mound & plain concrete materials however other cheaper materials & systems were introduced. One of these alternatives is geo-textile tube technology this technique is becoming one of the most effective, cheapest & most friendly options for developing countries (Oh & Shin, 2006). In this study, a numerical model "MIKE 21" of DHI Water & Environment Morphological Modeling System is applied. The result of numerical model "MIKE 21" was validated using other numerical models & experimental data. Details of the validation results were presented & discussed.