Significant Wave Height Forecasting using GMDH Model

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Abstract

Forecasting of significant wave height (SWH) is necessary for most of ocean engineering activities. Different models have been applied to forecast SWH at various lead times. Here, group method of data handling as a data learning machine method is used to forecast the SWH for next 3, 6 and 12. The SWH data are collected from station 41036 located in the North Atlantic Ocean. The model performance was evaluated using three different index including root mean square error (RMSE), coefficient of correlation (R) and index of agreement (Ia). The results shows that in short lead times, the predicted significant wave height mostly correlated to the observed significant wave height but in larger lead times this correlation decreased.

References


Index Terms

Computer Science Artificial Intelligence

Keywords

GMDH, lead time, significant wave height, time series.