CHINESE LUNAR CALENDAR-BASED TIDAL PREDICTION SYSTEM AND METHOD THEREOF

ABSTRACT

The present invention provides a Chinese lunar calendar-based tidal prediction system and method that generate tidal predictions using empirical prediction models, wherein the empirical prediction models are generated using Genetic Algorithms-based regression analysis for a given set of observed tidal data collected at a water level station during a period of one year which is referred as reference year. In one aspect of the present invention, there is provided a tidal prediction system comprising an electronic device having a memory capacity as a storage medium for storing input, intermediate, and output information, and a processing capacity for executing embedded programs; a regression model creator program; and a tidal height predictor program; wherein both of programs are implemented in the electronic device. In another aspect of the present invention, there is provided a Chinese lunar calendar-based tidal prediction method comprising the steps of inputting a prediction date of which the tidal prediction is requested for a location; selecting a reference year from which the tidal prediction for the prediction date will be made; obtaining actual tidal data in the reference year near the location, wherein the actual tidal data is formatted according to Chinese lunar calendar; generating a regression prediction model for the actual tidal data of the reference year by performing genetic algorithm evolution of the actual tidal data; and predicting the tidal heights for the requested prediction date in accordance with the regression prediction model.

FIG. 1 accompanies the abstract.