

3836841 SCAM/M : MAJOR : APPLIED MATHEMATICS ;
M.Sc. (APPLIED MATHEMATICS)
KEYWORDS : TIDAL ANALYSIS / TIDAL WAVE / MIXED TIDE /
DATA ASSIMILATION

SURATTANA SRIJUKKRAWALWUT : TIDAL WAVE HEIGHT
ANALYSIS AT THE COAST PAK NAM TACHIN, KO SICHANG AND HUA-HIN.
THESIS ADVISORS : I MING TANG, Ph.D. , MONTIP TIENSUWAN, Ph.D.
87 p. ISBN 974-664-213-8

The heights of the tides at a particular location and at a particular time are often needed. Direct observation of the heights of the tides can only be made at some limited number of sites. Therefore to forecasting the heights of the tides at other locations, methods have to be developed to give predicted heights. Two methods will be reviewed, Least Square Best Fit model and the Data Assimilation method.

The latter method is called the Data Assimilation method. This method is based on the use of the equation of fluid motion as constraints as the values of the parameters in a model which will approximate the full set of hydrodynamic equations.

To compare the two methods, we have analyzed the observation data on the tidal height at three stations, Pak Nam Tachin , Ko Sichang and Hua-Hin in 1996. The sum square error method has been used to determine which techniques provides for both prediction.