# Sequential process of feature extraction methods for artificial neural network in short term load forecasting


## ABSTRACT

The first stage of feature extraction involves a transformation of raw data that is from the chronological hourly peak loads to the multiple time lags of hourly peak loads. This is followed by the next feature extraction wherein the principal component analysis (PCA) is used to further improve the input data which will significantly enhance the performance of ANN in forecasting the hourly peak loads with less error. The output of ANN is then converted to a non-stationary form which represents as the forecasted hourly peak load for the next 24 hour. The Malaysian hourly peak loads in the year 2002 is used as case study to verify the effectiveness of ANN in STLF.



**Keyword**: Artificial neural network; Multiple time lags; Principal component analysis; Short-term load forecasting