

## MODEL ORDER SELECTION CRITERION FOR MONITORING HAEMOGLOBIN STATUS IN DENGUE PATIENTS USING ARMAX MODEL

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**Abstract** - This paper describes the development of linear autoregressive moving average with exogenous input (ARMAX) models to monitor the progression of dengue infection based on hemoglobin status. Three different ARMAX model order selection criteria namely Final Prediction Error (FPE), Akaike's Information Criteria (AIC) and Lipschitz number have been evaluated and analyzed. The results showed that Lipschitz number has better accuracy compared to FPE and AIC. Finally based on Lipschitz number, appropriate model orders have been selected to monitor the progression of dengue patients based on hemoglobin status. Further work is to apply this appropriate model orders to nonlinear Autoregressive (NARMAX) model.