

ABSTRACT

In this work we introduce an identifier and state observer used to identify the parameters of unknown system and to estimate the state of the system. System under study is of unknown order, (a pre-assigned integer is assumed to be the expected order of the system which is may be greater than the actual order). When the pre-assigned integer is greater than the actual order, there will be an estimate of uncontrollable parameters; and hence minimal realization is needed to reduce the estimated parameters to controllable one.

Finally the controllable parameters with the observed state feedback used to design a feedback gain matrix to assign the eigenvalues of the estimated system. A control law generated now to move all the eigenvalues of the system to a prespecified locations.