

Observability and State Estimation

As we will show next:

If the system is observable, then there exists an observer (state estimator) that provides an asymptotically convergent estimate \hat{x} of the state x based on the observed output y .



The particular type of observer we will construct is called the **Luenberger observer** after David G. Luenberger, who developed this idea in his 1963 Ph.D. dissertation.

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