

Advanced Control System

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Content

✓ 1. Design of Linear feedback Control System

✓ 2. Observers

✓ 3. Observer State Feedback control
Reduced Order Observer

✓ 4. Linear Quadratic (LQ) Optimal Control Problem

→ Continuous time case

→ Stationary Case

→ Discrete time case

✓ 5. Robustness of LQ Regulators

Steady state property of LQ System

✓ 6. The Closed loop eigenvalues of LQ system

where F is a matrix.

the closed loop system is stable if

$$\begin{bmatrix} \dot{x}(t) = [A - BK]x(t) + Bv(t) \\ y(t) = [C - DK]x(t) + Dv(t) \end{bmatrix}$$