

EE 380

Linear Control Systems

Lecture 4

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Lecture 4 Topics

- State-Space Representation
 - Advantages
 - Definitions
 - Transfer function from State-Space Matrices
- Example

Advantages

- Facilitates the use of linear algebra tools in the design and analysis of feedback control systems
 - Nonlinear systems
 - Time-varying systems
- Easily represents multiple-input multi-output (MIMO) systems
- Provides a complete internal model of the plant dynamics
 - Pole-zero cancellations in the transfer function (input/output) description may hide poorly damped (oscillatory) or unstable modes