

EECS 16B

Designing Information Devices and Systems II

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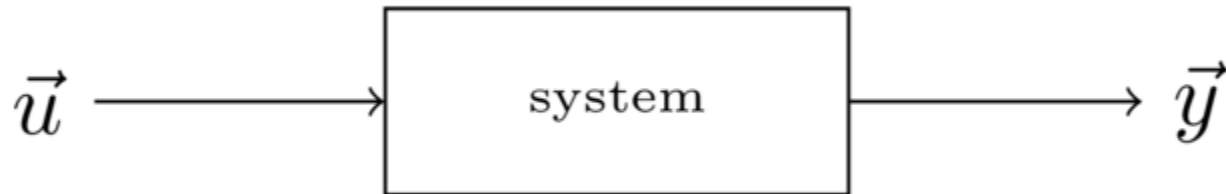
Some notes regarding lab:

1. Midterm Lab Report is due on Oct 6 @ 11:59pm.
2. Starting today, 2 buffer weeks. Use these to:
 - catch up on previous lab
 - get help with Midterm Lab Report
3. Lab Makeup Tool is no longer required.

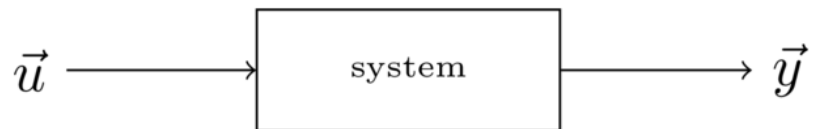
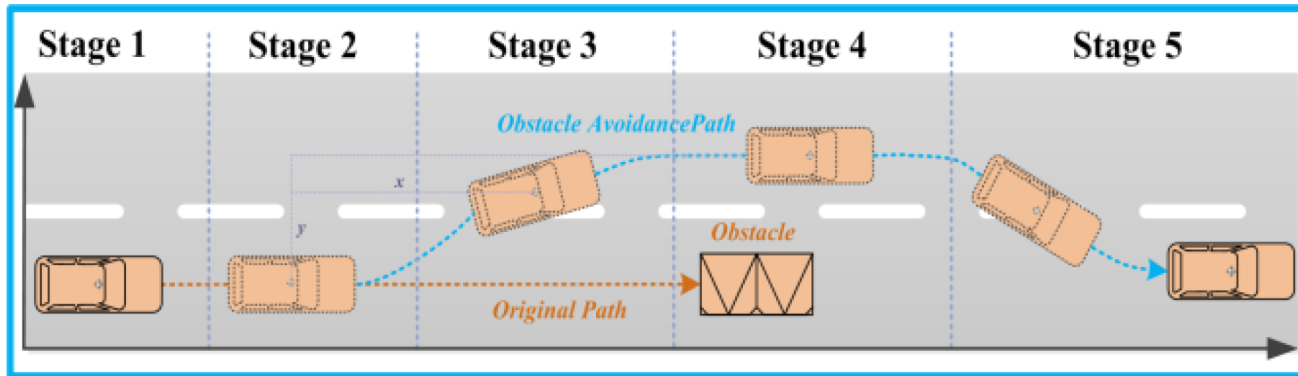
Linear Time-Invariant (LTI) Vector Differential Equations

$$\frac{d\vec{x}}{dt} = A\vec{x} + B\vec{u}$$

$$\vec{y} = C\vec{x}$$



How should I model this vehicle?:



$$\frac{d\vec{x}}{dt} = A\vec{x} + B\vec{u}$$

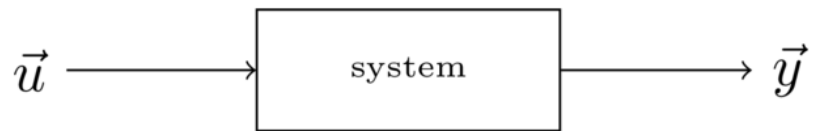
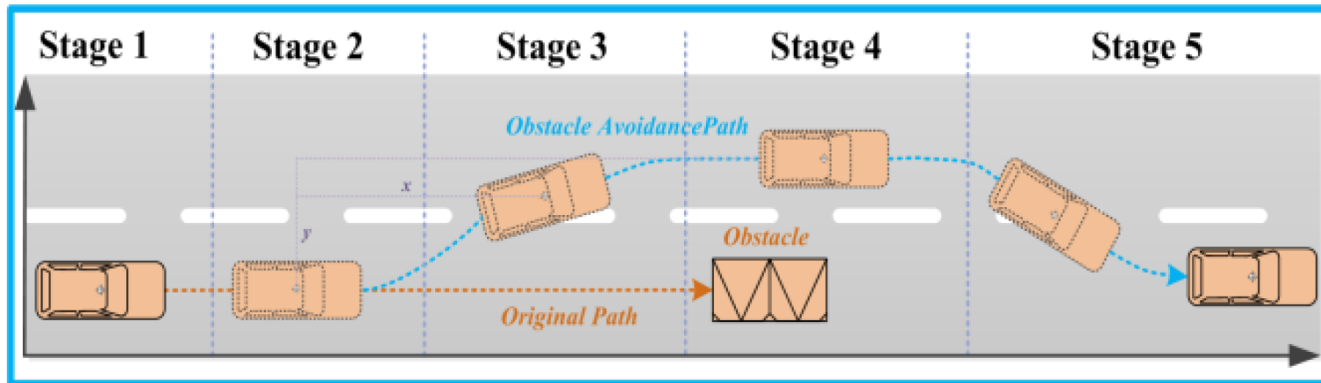
$$\vec{y} = C\vec{x}$$

State variables:

Inputs:

Outputs:

Analysis, Path Planning, and Control



$$\frac{d\vec{x}}{dt} = A\vec{x} + B\vec{u}$$
$$\vec{y} = C\vec{x}$$