

$$\dot{\overrightarrow{x}} = \mathbf{A} \overrightarrow{x} + \mathbf{B} \overrightarrow{u}$$

$$\overrightarrow{y} = \mathbf{C} \overrightarrow{x} + \mathbf{D} \overrightarrow{u}$$

$$\overrightarrow{x_0} = \overrightarrow{x}(0)$$