

$$\dot{\mathbf{x}} = \underbrace{n \left\{ \begin{bmatrix} \mathbf{A} \end{bmatrix} \right\}}_n \underbrace{\begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \end{bmatrix}}_1 + n \underbrace{\left\{ \begin{bmatrix} \mathbf{B} \end{bmatrix} \right\}}_p \underbrace{u}_{1}^p$$

$$\underbrace{m \left\{ \begin{bmatrix} \mathbf{y} \end{bmatrix} \right\}}_1 = m \underbrace{\left\{ \begin{bmatrix} \mathbf{C} \end{bmatrix} \right\}}_n \underbrace{\begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \end{bmatrix}}_1 \qquad m \underbrace{\left\{ \begin{bmatrix} \mathbf{v} \end{bmatrix} \right\}}_1 \qquad n \underbrace{\left\{ \begin{bmatrix} \mathbf{w} \end{bmatrix} \right\}}_1$$

$$n \underbrace{\left\{ \begin{bmatrix} \mathbf{P} \end{bmatrix} \right\}}_n \qquad n \underbrace{\left\{ \begin{bmatrix} \mathbf{Q} \end{bmatrix} \right\}}_n \qquad m \underbrace{\left\{ \begin{bmatrix} \mathbf{R} \end{bmatrix} \right\}}_m \qquad n \underbrace{\left\{ \begin{bmatrix} \mathbf{K} \end{bmatrix} \right\}}_m$$