

$$\frac{\mathrm{d}}{\mathrm{d}t} \begin{pmatrix} u_C \\ i \end{pmatrix} = \begin{pmatrix} 0 & \frac{1}{C} \\ -\frac{1}{L} & -\frac{R}{L} \end{pmatrix} \begin{pmatrix} u_C \\ i \end{pmatrix} + \begin{pmatrix} 0 \\ \frac{1}{L} \end{pmatrix} u_1$$

$$y(t) = \begin{pmatrix} 1 & R \end{pmatrix} \begin{pmatrix} u_C \\ i \end{pmatrix}$$

$$\begin{pmatrix} u_C \\ i \end{pmatrix} \Big|_{t=0} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}$$