

18, 19: navod: uzi Laplaceovu transformaci

$$v = (v_1, \dots, v_m)$$

$$\underline{x} = (x_1(t), \dots, x_m(t))$$

$$\mathcal{L}\underline{x} = (Y_1(p), \dots, Y_m(p))$$

$$\dot{x}(t) \xrightarrow{\mathcal{L}} p \begin{pmatrix} Y_1 \\ \vdots \\ Y_m \end{pmatrix} - \begin{pmatrix} x_1(0) \\ \vdots \\ x_m(0) \end{pmatrix}$$

↑ polozivci = (0, ..., 0).

$\mathbb{R}$  celkem:

$$p \begin{pmatrix} Y_1 \\ \vdots \\ Y_m \end{pmatrix} = A \begin{pmatrix} Y_1 \\ \vdots \\ Y_m \end{pmatrix} + \begin{pmatrix} v_1 \\ \vdots \\ v_m \end{pmatrix}$$

dy:

$$\begin{pmatrix} Y_1 \\ \vdots \\ Y_m \end{pmatrix} = \cancel{pA} (p \cdot I - A)^{-1} v$$