

$$\left[\begin{array}{c} A \end{array} \right] \left[\begin{array}{c} v_1 \\ v_2 \\ \cdots \\ v_n \end{array} \right] = \left[\begin{array}{c} u_1 \\ u_2 \\ \cdots \\ u_n \end{array} \right] \left[\begin{array}{c} \sigma_1 \\ \sigma_2 \\ \ddots \\ \sigma_n \end{array} \right]$$