

$$\mathbf{A} = \left[\begin{array}{c|c|c|c} \mathbf{u}_1 & \mathbf{u}_2 & \cdots & \mathbf{u}_Q \end{array} \right] \left[\begin{array}{cccc} s_1 & 0 & \cdots & 0 \\ 0 & s_2 & \cdots & 0 \\ \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & \cdots & s_N \\ 0 & 0 & \cdots & 0 \\ \vdots & \vdots & \cdots & \vdots \end{array} \right] \left[\begin{array}{c} \frac{\mathbf{v}_1}{} \\ \frac{\mathbf{v}_2}{} \\ \vdots \\ \mathbf{v}_N \end{array} \right]$$