

$$\begin{pmatrix} \mathbf{R}_1 & \mathbf{t}_1 \\ 0 & 1 \end{pmatrix} \begin{pmatrix} \mathbf{R}_2 & \mathbf{t}_2 \\ 0 & 1 \end{pmatrix} = \begin{pmatrix} \mathbf{R}_1 \mathbf{R}_2 & \mathbf{R}_1 \mathbf{t}_2 + \mathbf{t}_1 \\ 0 & 1 \end{pmatrix}$$