

$$\min_{u \in \mathbb{R}^6} u^T \left(\sum_i \begin{bmatrix} x_i \times n_i \\ n_i \end{bmatrix} \begin{bmatrix} (x_i \times n_i)^T & n_i^T \end{bmatrix} \right) u - 2u^T \left(\sum_i \begin{bmatrix} x_i \times n_i \\ n_i \end{bmatrix} n_i^T (p_i - x_i) \right) + \sum_i (p_i - x_i)^T n_i n_i^T (p_i - x_i)$$

where

- $x_i \in \mathbb{R}^3$
- $n_i \in \mathbb{R}^3$
- $p_i \in \mathbb{R}^3$