$$E_LSCM = \sum_{T} A_{T} \| M_{T} v_{T} - \begin{bmatrix} 0 & -1 \\ 1 & 0 \end{bmatrix} M_{T} u_{T} \|_{2}^{2}$$

where

- $v_i \in \mathbb{R}^3$
- $u_i \in \mathbb{R}^3$
- $M_i \in \mathbb{R}^{2 \times 3}$
- $A_i \in \mathbb{R}$