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

where

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