

$$\text{dof } \mathcal{L}^m : \mathcal{A}^m : \mathcal{A} : \mathcal{A} \in \mathbb{R}^D \times \mathbb{R}^D \times \mathbb{R}^{d(d+1)/2} \times \mathbb{R}^{d(d+1)/2}$$

$$\begin{bmatrix} \mathcal{L} & \mathcal{A} \\ \mathcal{A} & \mathcal{A} \end{bmatrix} = \begin{bmatrix} \mathcal{L}^m & \mathcal{A}^m \\ \mathcal{A} & \mathcal{A} \end{bmatrix} = \frac{1/2}{\sqrt{\mathcal{A}}} \mathfrak{h}^{\sigma\tau} \mathcal{A}^m \eta_{mn} \mathcal{A}^n$$

$$\begin{bmatrix} \mathcal{L}^m \\ \mathcal{A} \\ \mathcal{A} \end{bmatrix} = \frac{1/2}{\sqrt{x \mathcal{A}}} x \mathfrak{h}^{\alpha\beta} x \mathcal{A}^m \eta_{mn} x \mathcal{A}^n$$