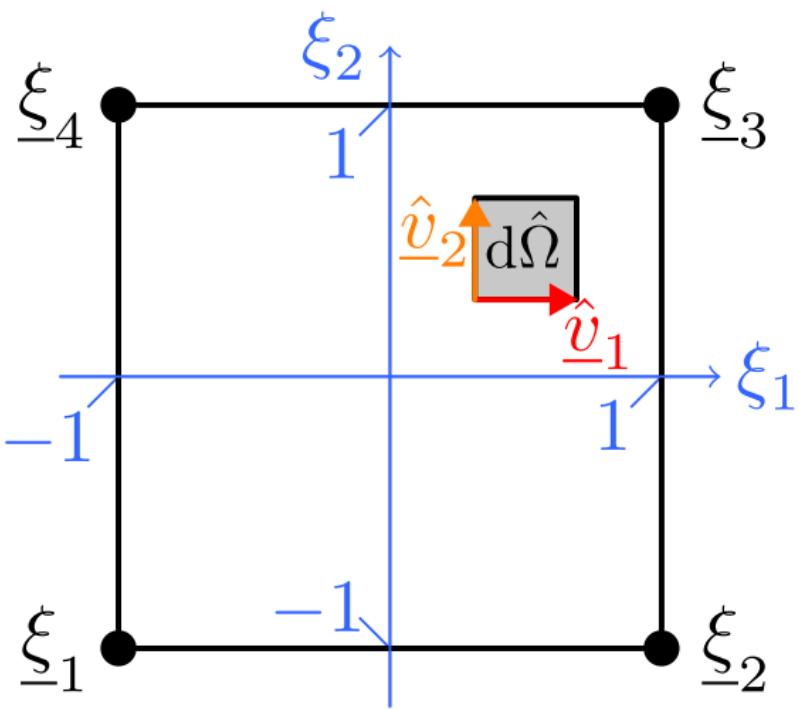
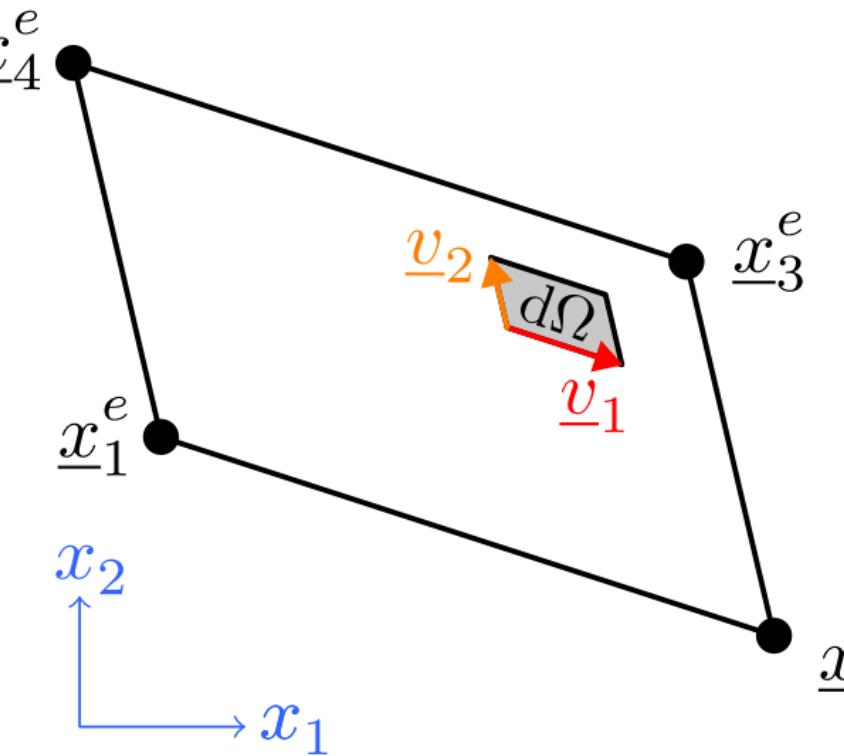


Reference element



$$\hat{v}_1 = \begin{bmatrix} d\xi_1 \\ 0 \\ 0 \\ d\xi_2 \end{bmatrix}$$

Physical element



$$\underline{v}_1 = \frac{dx}{d\xi_1} d\xi_1 = \frac{dx}{d\xi} \hat{v}_1 = \underline{J} \hat{v}_1$$
$$\underline{v}_2 = \frac{dx}{d\xi_2} d\xi_2 = \frac{dx}{d\xi} \hat{v}_2 = \underline{J} \hat{v}_2$$