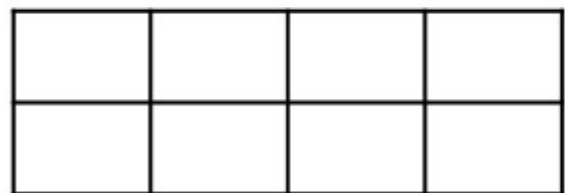


Parametric domain:

$$\boldsymbol{\xi} \in \mathcal{P}$$



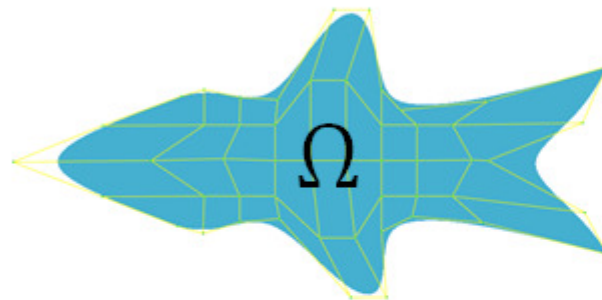
Basis functions:

$$\{N_{\alpha}(\boldsymbol{\xi})\}_{\alpha=1}^N$$



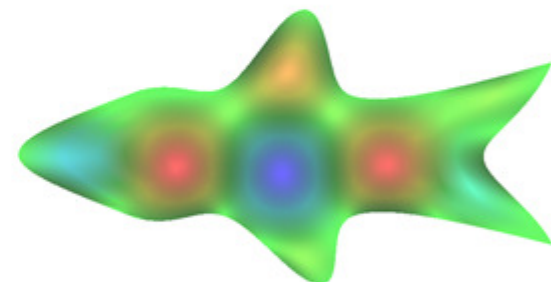
Physical domain $\boldsymbol{x} \in \Omega$

$$\boldsymbol{x} = \boldsymbol{F}(\boldsymbol{\xi}) = \sum_{\alpha=1}^N \boldsymbol{C}_{\alpha} N_{\alpha}(\boldsymbol{\xi})$$



Solution:

$$U^I(\boldsymbol{x}) = U^I(\boldsymbol{\xi}) \circ \boldsymbol{F}^{-1}$$



Solution approximation:

$$U^I(\boldsymbol{\xi}) = \sum_{\alpha=1}^N U_{\alpha}^I N_{\alpha}(\boldsymbol{\xi})$$

