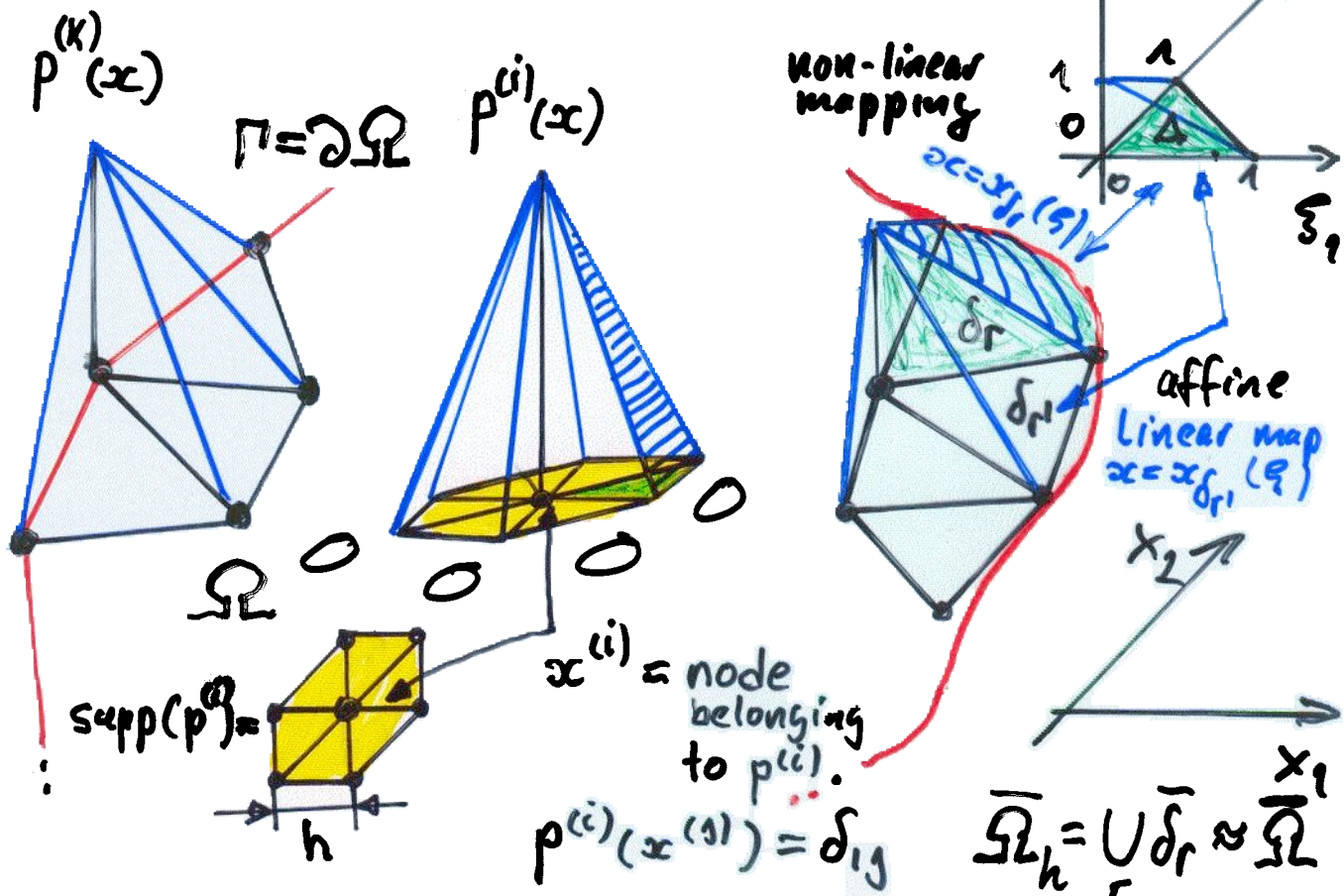




use basis (ansatz / test (=trial)) functions  $p^{(i)} = p^{(i)}(x)$  with Local supports, where the  $p^{(i)}$ 's can be defined elementwise by so-called shape functions:



$\text{diam supp}(p^{(i)}) = O(h) \rightarrow 0$  nodal basis  
 $\text{meas supp}(p^{(i)}) = O(h^2) \rightarrow 0$

**$C^0$ -elements**

$$\Rightarrow u_h(x) = \sum_{i \in \bar{\omega}_h} u^{(i)} p^{(i)}(x) \in W_2^1(\Omega) \cap C^0(\Omega)$$

$\uparrow$   
 $u(x^{(i)})$       MMS