

$$\nabla u = \sum_i \sum_j \frac{\hat{e}_i}{h_i} \left(\frac{\partial u_{\langle j \rangle}}{\partial \xi^i} \hat{e}_j + u_{\langle j \rangle} \frac{\partial \hat{e}_j}{\partial \xi^i} \right) = \sum_i \frac{\hat{e}_i}{h_i} \left(\frac{\partial u_{\langle 1 \rangle}}{\partial \xi^i} \hat{e}_r + u_{\langle 1 \rangle} \frac{\partial \hat{e}_r}{\partial \xi^i} \right) +$$

$$\sum_i \frac{\hat{e}_i}{h_i} \left(\frac{\partial u_{\langle 2 \rangle}}{\partial \xi^i} \hat{e}_\theta + u_{\langle 2 \rangle} \frac{\partial \hat{e}_\theta}{\partial \xi^i} \right) + \sum_i \frac{\hat{e}_i}{h_i} \left(\frac{\partial u_{\langle 3 \rangle}}{\partial \xi^i} \hat{e}_\phi + u_{\langle 3 \rangle} \frac{\partial \hat{e}_\phi}{\partial \xi^i} \right)$$