(1) Building up shear stress:

We must define strain, elasticity, and stress (shear stress and normal stress). First: strain and then how we get it from the GPS displacement field.













$$\Delta \mathbf{u} = \begin{bmatrix} \Delta u_1 \\ \Delta u_2 \end{bmatrix} \qquad \qquad d\mathbf{u} = \begin{bmatrix} du_1 \\ du_2 \end{bmatrix}$$

For small deformations you can write:

