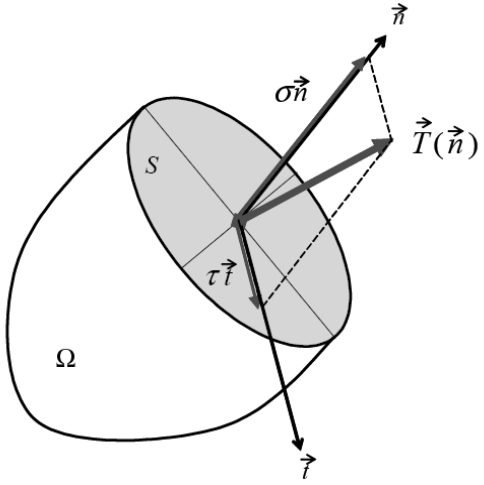
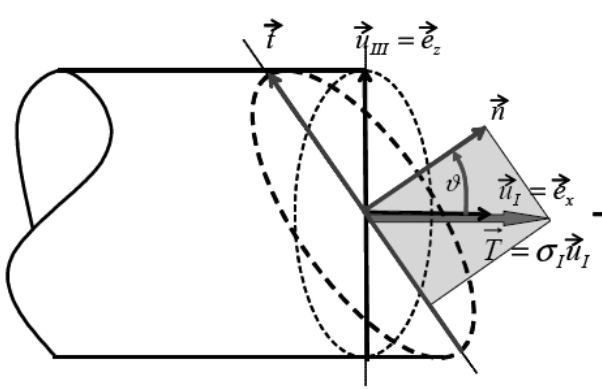
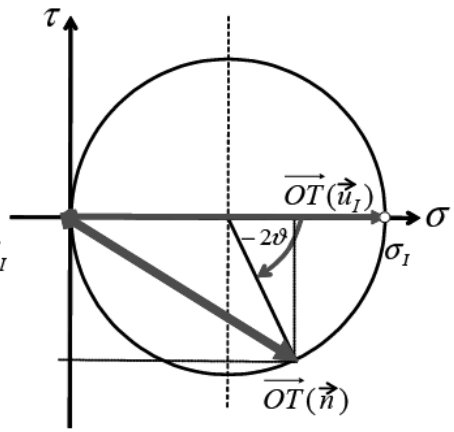
Lecture 11- summary

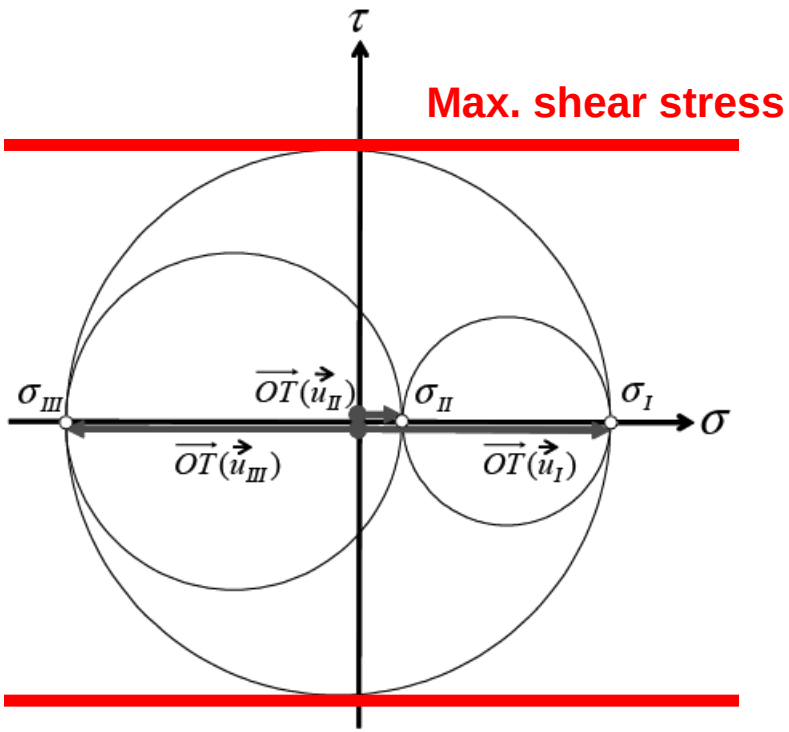
Representation of stress vector in normal and shear component

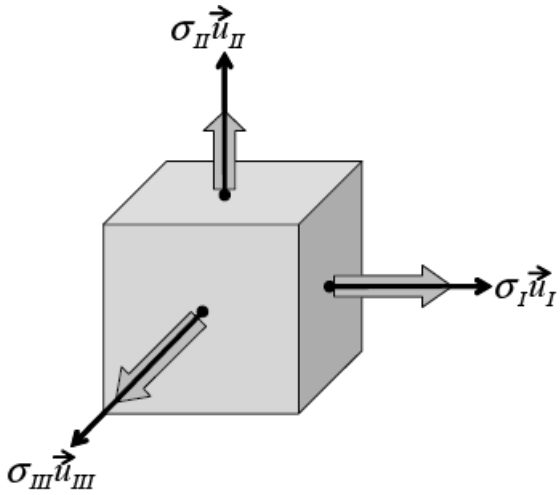


$$\vec{T}(\vec{n}) = \sigma\vec{n} + \tau\vec{t} \quad \begin{cases} \sigma = \vec{n}\cdot\vec{T}(\vec{n}) = \vec{n}\cdot\boldsymbol{\sigma}\cdot\vec{n} \\ \tau = \vec{t}\cdot\vec{T}(\vec{n}) = \vec{t}\cdot\boldsymbol{\sigma}\cdot\vec{n} \end{cases}$$









Stress tensor diagonalization

Can immediately draw three Mohr circles → then apply strength criteria