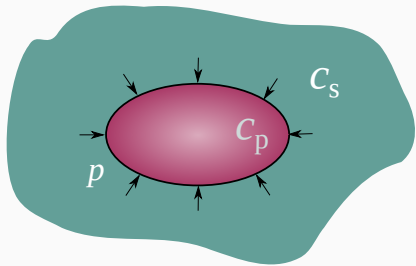


Equation of state

$$F(c_p, c_s) = F_{conf}(c_p) + F_{int}(c_p, \chi) + F_{ion}(c_p, c_s) + F_{\alpha}(c_p, c_s, pK)$$

pK and χ are the parameters of the model



Partial pressure of the gel network

$$\left(\frac{\partial F}{\partial V} \right)_{c_s} = -p$$

Figure 4: Gel particle under compression in equilibrium with aqueous solution of salinity c_s