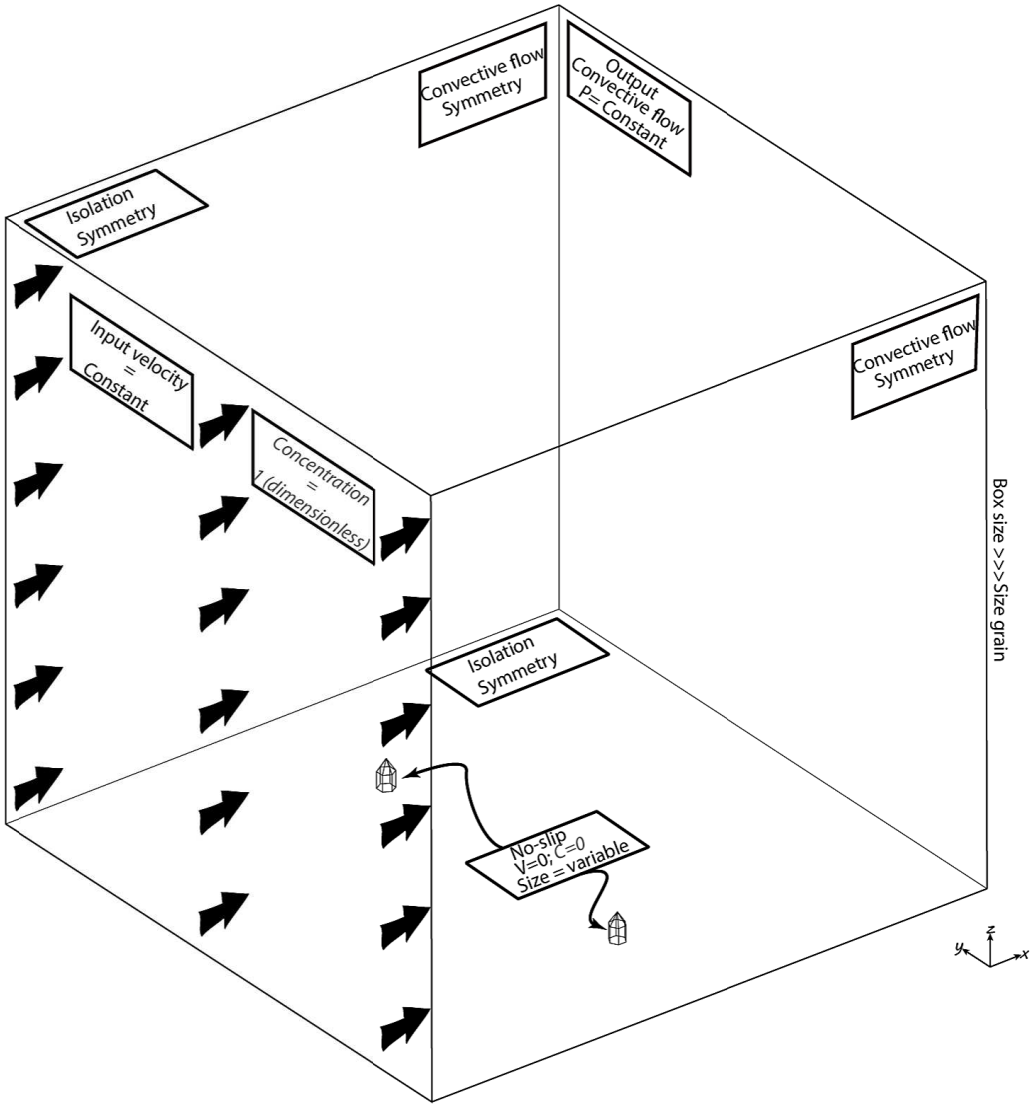

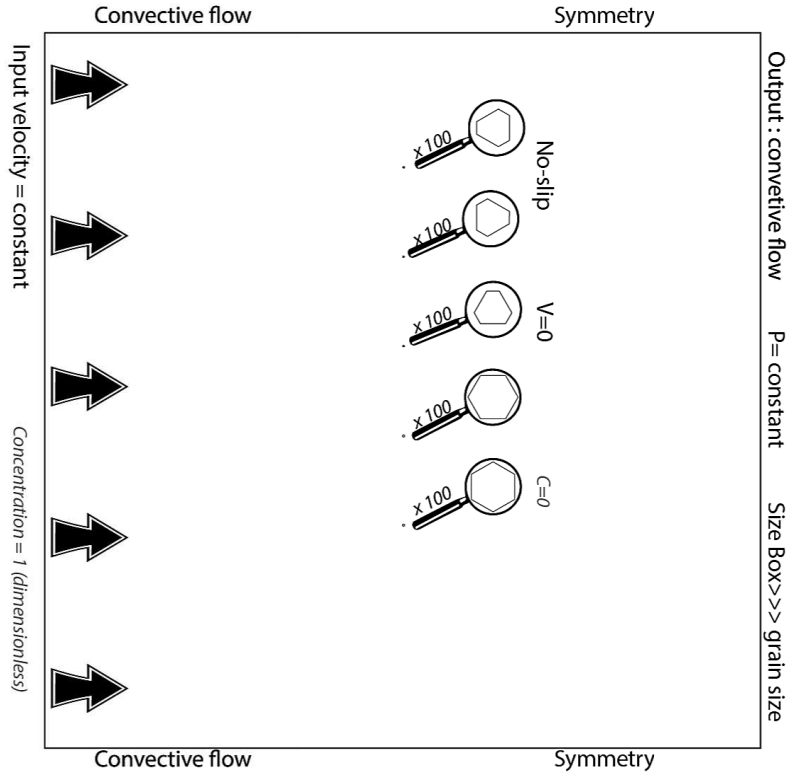

Transport equations

$$\frac{\partial C}{\partial t} = D\nabla^2 C - V \cdot \nabla C$$

Navier Stokes equation

$$V \begin{cases} \nabla \cdot V_{N\text{-}S} = 0 \\ \frac{\delta \vec{V}_{N\text{-}S}}{\partial t} + (\vec{V}_{N\text{-}S} \cdot \vec{\nabla}) \vec{V}_{N\text{-}S} = -\frac{1}{\rho} \nabla P + \upsilon \nabla^2 \vec{V}_{N\text{-}S} + f \end{cases}$$

Dimensionless concentration

$$\chi(x,y) = \frac{C_w - C(x,y)}{C_w - C_\infty}$$