

$$\mathcal{L}_{FP}(\Phi) = -\frac{\partial}{\partial \Phi_i} \left[F_i(\Phi) + \alpha G_{lj}(\Phi) \frac{\partial G_{ij}(\Phi)}{\partial \Phi_l} \right] + \frac{1}{2} \frac{\partial^2}{\partial \Phi_i \partial \Phi_j} G_{il}(\Phi) G_{jl}(\Phi)$$