

$$u^{t+1} = u^t + \tau f(u^{t+1})$$

$$u_i^{t+1} = u_i^t + 0.5\tau \sum_j (\cot \alpha_{ij} + \cot \beta_{ij})(u_j^{t+1} - u_i^{t+1})$$

$$0 = 0.5\tau \sum_j (\cot \alpha_{ij} + \cot \beta_{ij})u_j^{t+1} - (0.5\tau \sum_j (\cot \alpha_{ij} + \cot \beta_{ij}) - 1)u_i^{t+1} + u_i^t$$

$$Bu = 0$$

$$\mathbf{Initialization} \quad u^{t+1} = u^t$$

$$\mathbf{Loop \ until \ convergence} \quad u^{t+1} = u^t + \tau f(u^{t+1})$$

$$u^{t+1} = u^t + 0.5\tau(f(u^t) + f(u^{t+1}))$$

$$u^{t+1} = u^t + 0.5\tau(f(u^t) + f(u^t + \tau f(u^t)))$$