$$\vec{f}_i^{\text{nearest neighbors}} = (-k\Delta l_{i,i+1} + c|\Delta\vec{v}_{i,i+1}|)\hat{n}_{i,i+1} + (-k\Delta l_{i,i-1} + c|\Delta\vec{v}_{i,i-1}|)\hat{n}_{i,i-1}$$