

$$\rho_{ij}(\Delta t) = \frac{\langle (X_{i,t} - \bar{X}_i)(X_{j,t+\Delta t} - \bar{X}_j) \rangle}{\sqrt{\langle (X_{i,t} - \bar{X}_i)(X_{i,t} - \bar{X}_i) \rangle \langle (X_{j,t} - \bar{X}_j)(X_{j,t} - \bar{X}_j) \rangle}}$$