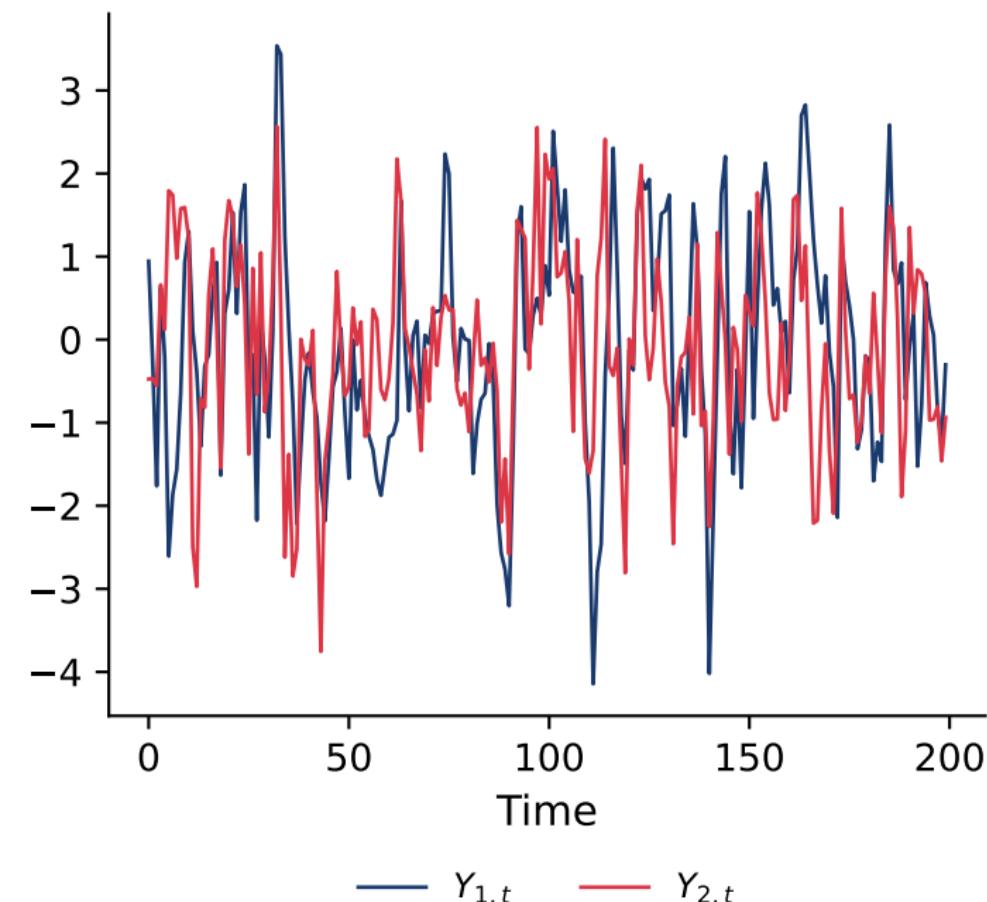
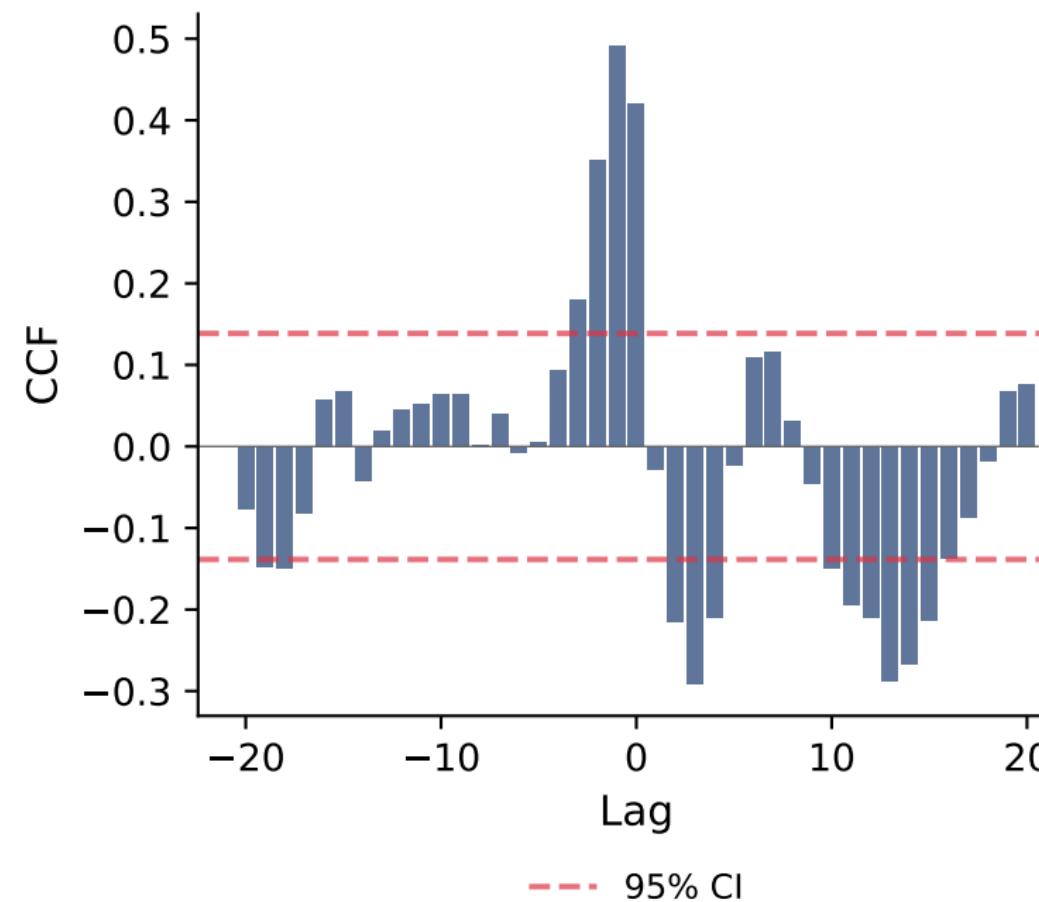


### Two Interrelated Series



### Cross-Correlation Function



### Univariate AR(1)

$$Y_{1,t} = \phi_1 Y_{1,t-1} + \varepsilon_t$$

→ Ignores  $Y_2$

### VAR(1)

$$\mathbf{Y}_t = \mathbf{A}\mathbf{Y}_{t-1} + \boldsymbol{\varepsilon}_t$$

→ Captures all cross-dynamics