



## Radboud University Nijmegen

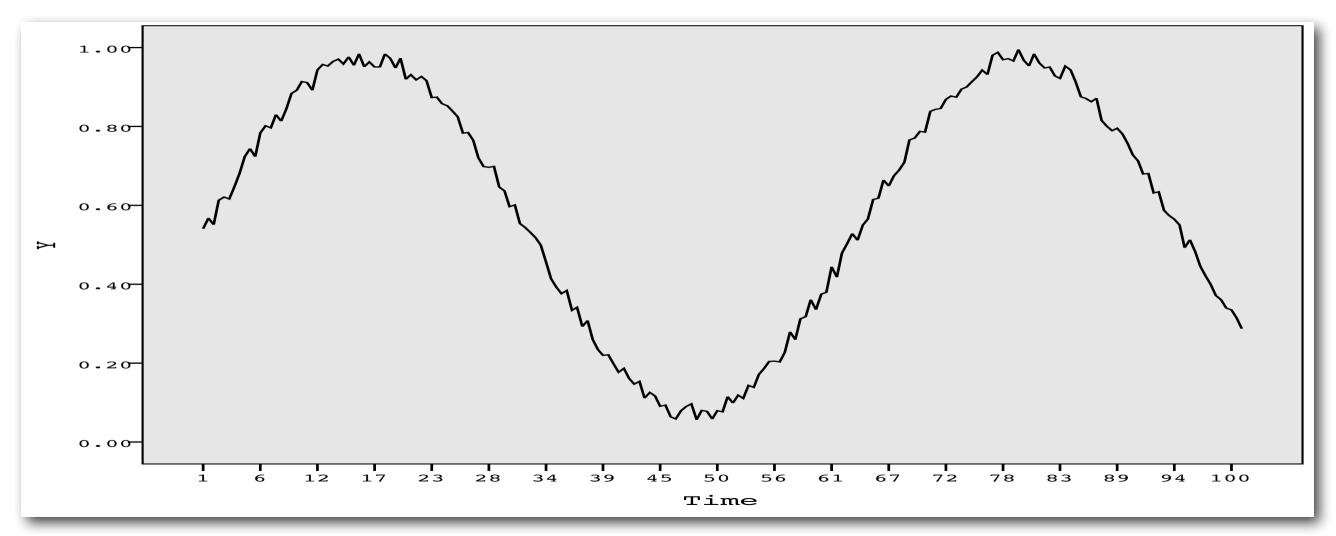
## **Behavioural Science Institute**

## (Partial) Autocorrelation Function - (P)ACF

The average correlation **r** between data points that are a distance (lag) **k** apart in time This holds only for stationary, random processes. So X measured here is a random variable.

ACF and the Partial ACF are used to decide which AR(fI)MA model you need (how many AR and/or MA parameters you need).

 $R(k) = \frac{E[(X_i - \mu)(X_{i+k} - \mu)]}{E[(X_i - \mu)(X_{i+k} - \mu)]}$ 









TS length = 100 data points