STAT 485/685 Lecture 3
Fall 2017
14 September 2017

- We covered slides 13-16 of "Basics" and slides 1-7 of "Stationary series". I will move the "trends" to a separate set of notes.
- I discussed the mean μ_t, autocovariance $\gamma_{t,s}$ and autocorrelation $\rho_{t,s}$ functions for 3 specific series: white noise, MA(1) and random walk.
- I defined *strongly* or *strictly stationary* and *second order* or *weakly* stationary.
- I pointed out strongly stationary implies weakly stationary if variances are finite and the other way around for Gaussian (normal) data.
- I showed how means are constant and autocorrelations are functions only of a *lag* (or time difference) for weakly stationary processes.
- In the text I finisehd Chapter 2.
- You should be Reading all of Chapters 1, 2, and 3.
- Next class I will 'Trends' and start 'estimating trends'.
- I showed `R` code to simulate white noise, MA(1) processes and a random walk.
- The code is here.
- I used `acf` to compute estimates of the autocorrelations I worked out in theory in the class.
- Handwritten slides.