

# DATA130013: Homework 4

Due in class on April 6, 2017

1. Shumway's book Problems 3.6.
2. In Example 3.9 case (iii) on Shumway's book, when the AR(2) polynomial has two conjugate complex roots, show that the general solution form is

$$\rho(h) = a|z_1|^{-h} \cos(h\theta + b).$$

Then repeat Example 3.10 with this general solution. Display the ACF plot to see the exponential decay phenomenon with sinusoid pattern.