

Turn-in needs to be submitted through the coursesite link in PDF format, which could be done by

- *Scan the manual write-up into PDF file.*
- *Typeset your turn-in in editors and convert into PDF.*
- *Prepare your turn-in through software like OneNote, Notable, ... and then save/export as PDF.*

1. Prove equation (5.14) in the textbook for MA(1) process.
2. Prove for AR(2) process

$$\phi_1 + \phi_2 < 1$$

$$\phi_2 - \phi_1 < 1$$

$$|\phi_2| < 1$$

3. Exercise 5.7 (a)(c)(d)
 - e. Generate a series of length 100 with using your LIN as the random seed, plot the time-series plot and ACF plot.
4. Exercise 5.4
 - e. Generate a series of length 100 with using your LIN as the random seed, plot the time-series plot, ACF plot and PACF plot (use type="partial" in acf function).