

# Assignment 6

*Frank Woodling*

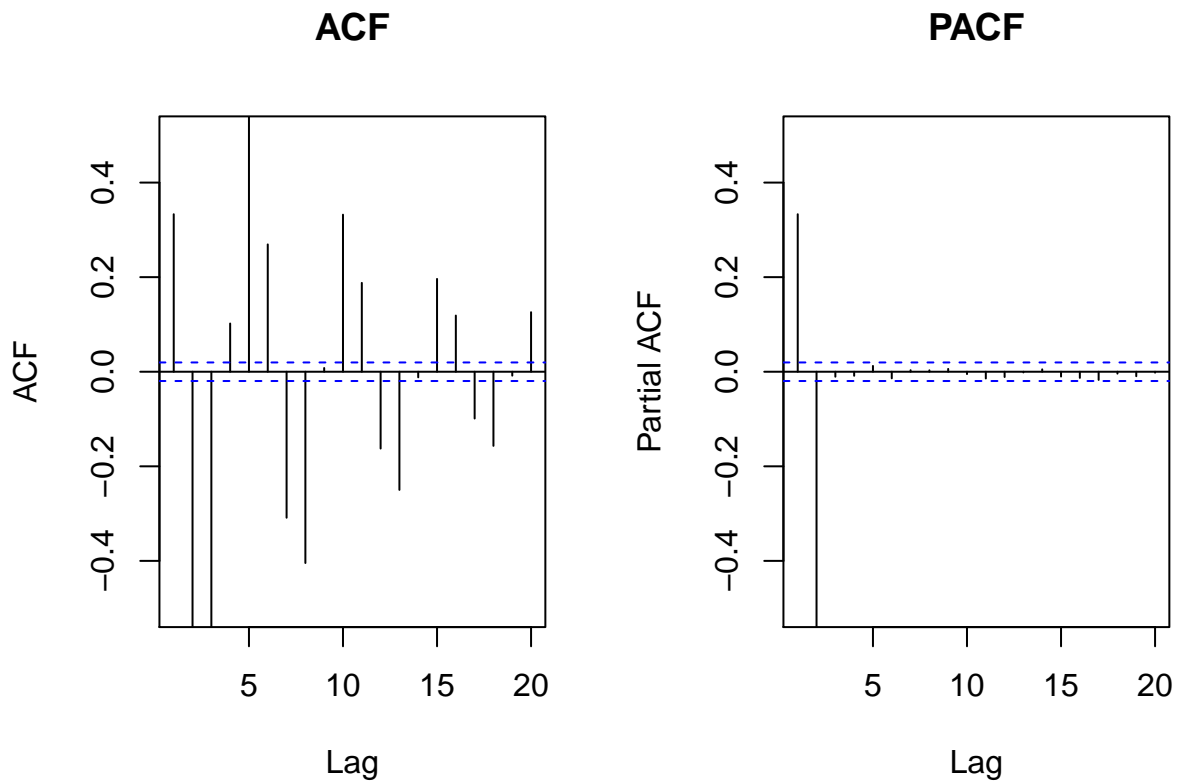
*March 25, 2016*

1.

a.

```
source("armasim.R")
x1 <- armasim(c(0.6, -.8),c(0),1,10000)

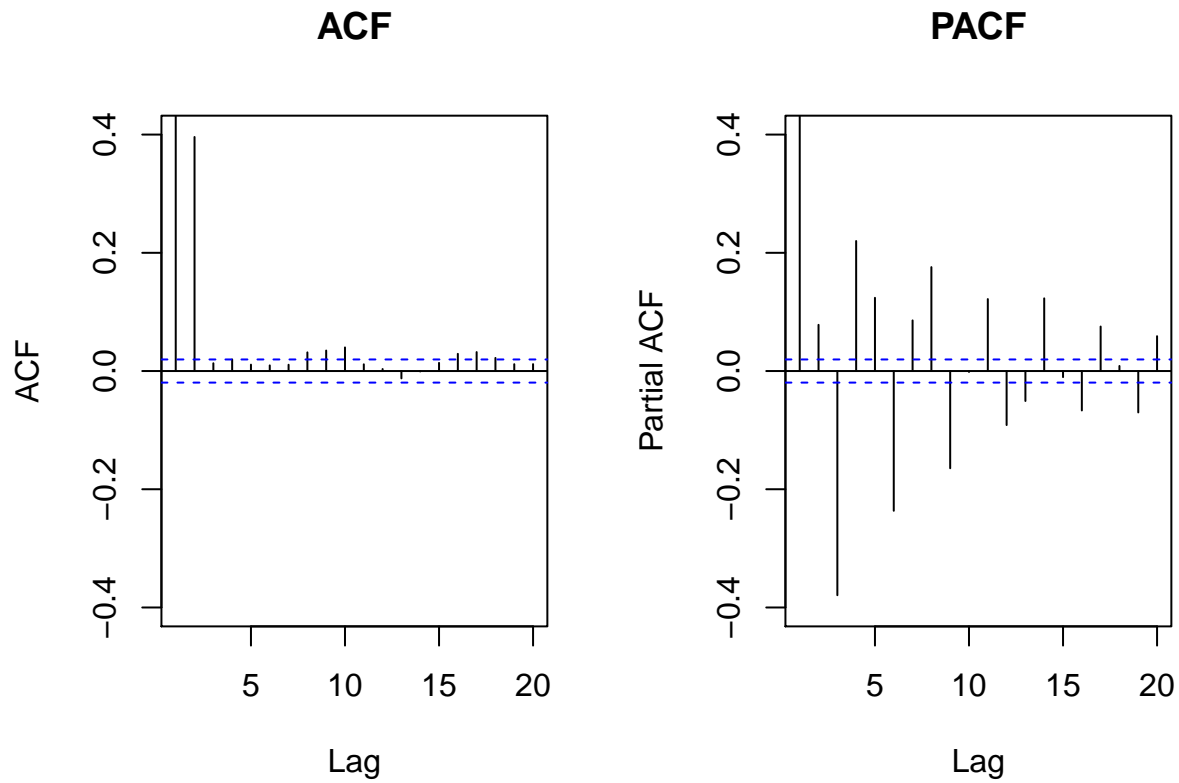
par(mfrow=c(1,2))
acf(x1, 20, xlim=c(1,20), ylim=c(-0.5,0.5), main="ACF")
pacf(x1, 20, ylim=c(-0.5,0.5), main="PACF")
```



b.

```
x2 <- armasim(c(0),c(.8, 1.1),1,10000)

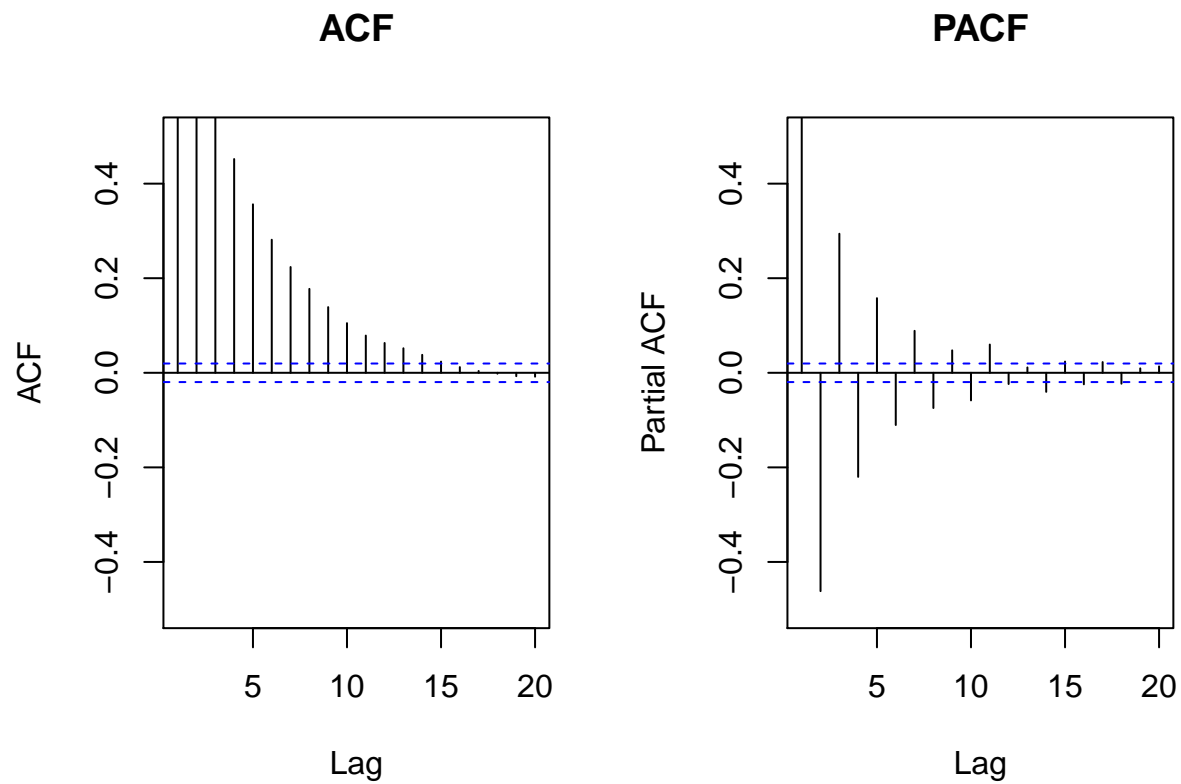
par(mfrow=c(1,2))
acf(x2, 20, xlim=c(1,20), ylim=c(-0.4,0.4), main="ACF")
pacf(x2, 20, ylim=c(-0.4,0.4), main="PACF")
```



c.

```
x3 <- armasim(c(.8),c(.8),1,10000)

par(mfrow=c(1,2))
acf(x3, 20, xlim=c(1,20), ylim=c(-0.5,0.5), main="ACF")
pacf(x3, 20, ylim=c(-0.5,0.5), main="PACF")
```

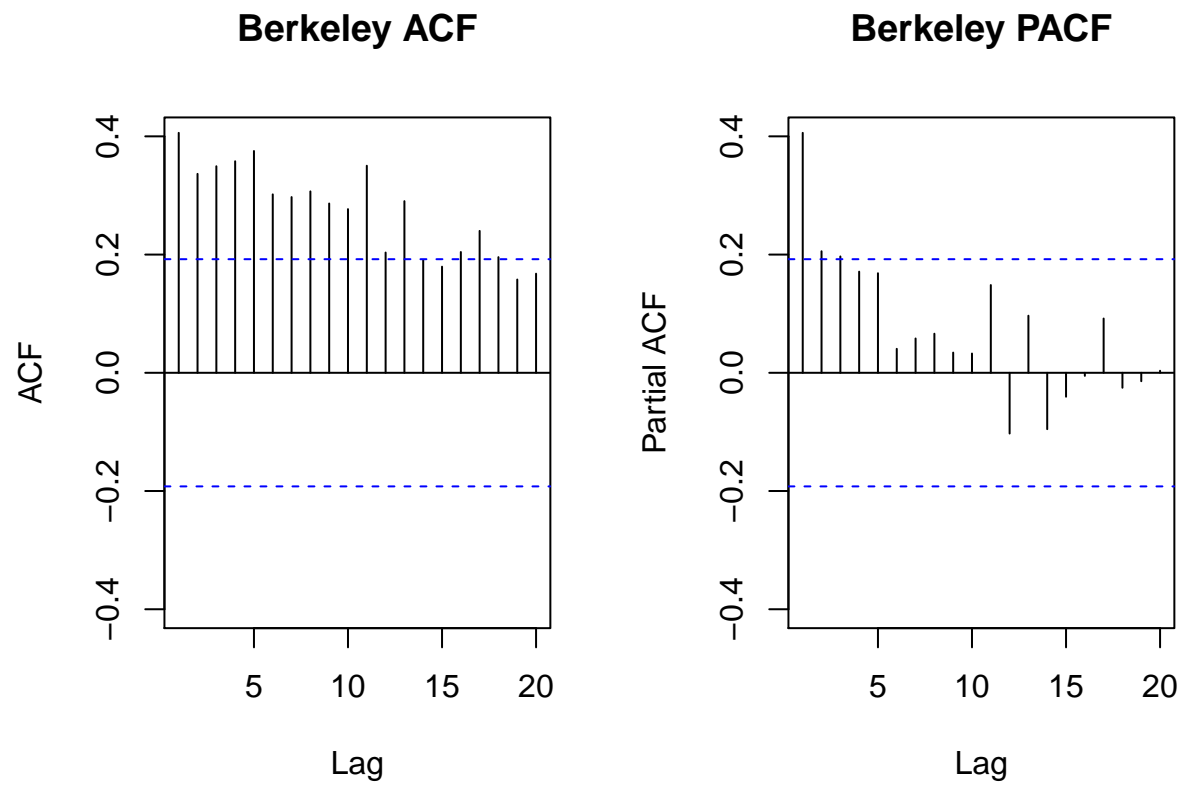


2.

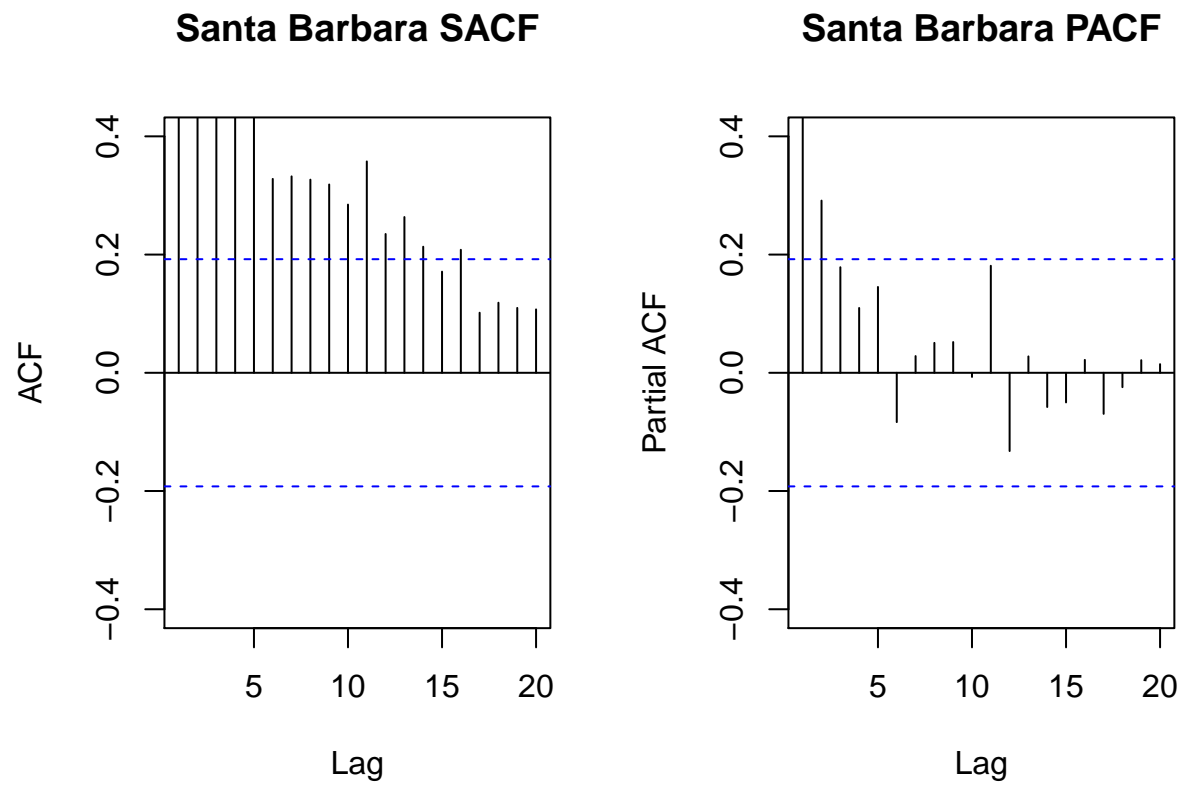
```
berk <- scan("berkeley.dat", what=list(double(0),double(0),double(0)))
time <- berk[[1]]
berkeley <- berk[[2]]
stbarb <- berk[[3]]

berk_diff <- diff(berkeley)
stbarb_diff <- diff(stbarb)

par(mfrow=c(1,2))
acf(berkeley, 20, xlim=c(1,20), ylim=c(-0.4,0.4), main="Berkeley ACF")
pacf(berkeley, 20, ylim=c(-0.4,0.4), main="Berkeley PACF")
```

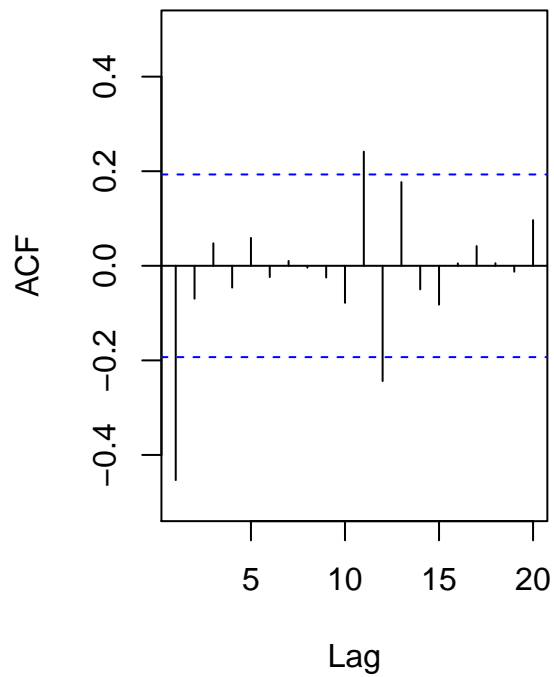


```
par(mfrow=c(1,2))
acf(stbarb, 20, xlim=c(1,20), ylim=c(-0.4,0.4), main="Santa Barbara SACF")
pacf(stbarb, 20, ylim=c(-0.4,0.4), main="Santa Barbara PACF")
```

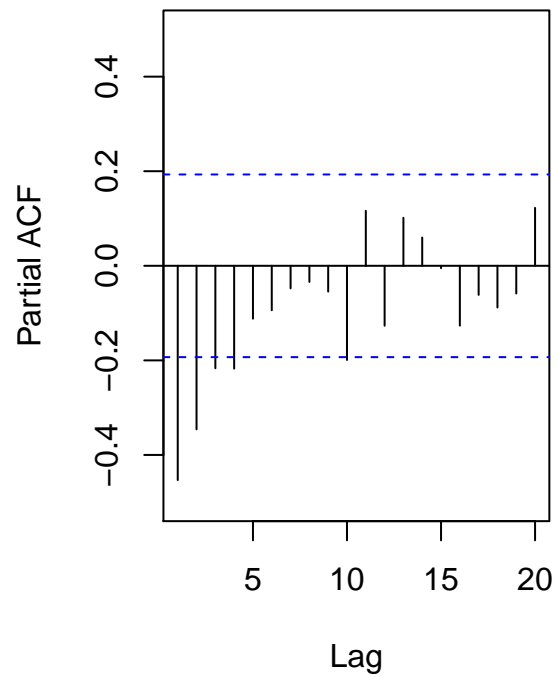


```
par(mfrow=c(1,2))
acf(berk_diff, 20, xlim=c(1,20), ylim=c(-.5,.5), main="Berkeley Differenced SACF")
pacf(berk_diff, 20, ylim=c(-.5,.5), main="Berkeley Differenced PACF")
```

**Berkeley Differenced SACF**

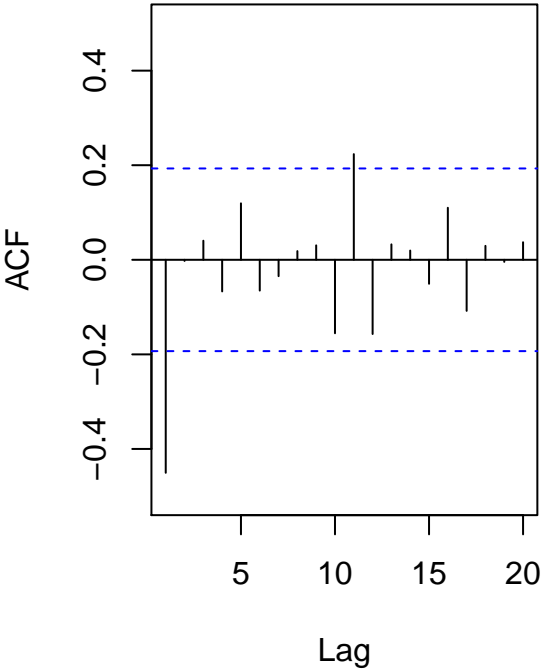


**Berkeley Differenced PACF**



```
par(mfrow=c(1,2))
acf(stbarb_diff, 20, xlim=c(1,20), ylim=c(-.5,.5), main="Santa Barbara Differenced SACF")
pacf(stbarb_diff, 20, ylim=c(-.5,.5), main="Santa Barbara Differenced PACF")
```

**Santa Barbara Differenced SACI**



**Santa Barbara Differenced PACI**

