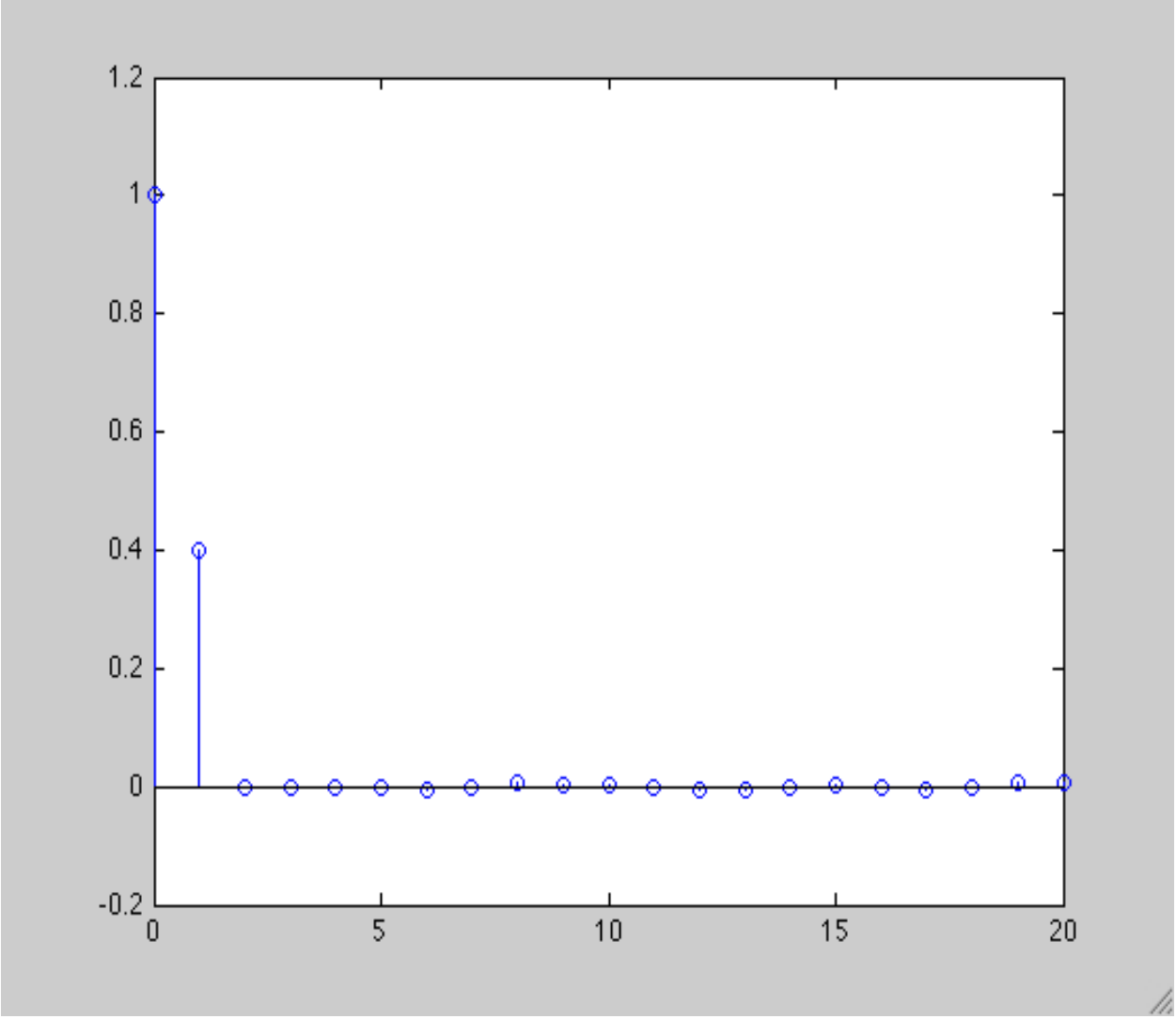
Analysis of signals using the Auto-Correlation function

ACF of a 1st order MA process

```
>> en=randn(100000,1);
>> y=filter([1 0.5],1,en);
>> [acf,lags,bounds]=autocorr(y,20,2);
>> stem(lags,acf)
>> acf(1:5)'

ans =

   1.0000    0.4006   -0.0003   -0.0021   -0.0021
```



ACF of 1st order AR process

```
>> y=filter(1,[1 -.8],en);
>> [acf,lags,bounds]=autocorr(y,20,2);
>> figure;
>> stem(lags,acf)

>> acf(1:10)'

ans =

 Columns 1 through 8

   1.0000    0.7996    0.6387    0.5098    0.4070    0.3255    0.2598    0.2091

 Columns 9 through 10

   0.1689    0.1350
```