

# AAE 440 - Q2 part (a) - matlab code

Author: Tomoki Koike

```
C22 = [0.8208 -0.8696]; % The 2 possible values for C_22
```

```
% C matrix for first possible value of C_22 (will be denoted as C1 from  
% here on)
```

```
C_mat1 = [[0.4638 0.3607 0.8091];[-0.6082 C22(1) -0.0052]; [-0.6442 -0.4897 0.5876]]
```

```
C_mat1 = 3x3
```

```
    0.4638    0.3607    0.8091  
   -0.6082    0.8208   -0.0052  
   -0.6442   -0.4897    0.5876
```

```
% C matrix for second possible value of C_22 (will be denoted as C2 from  
% here on)
```

```
C_mat2 = [[0.4638 0.3607 0.8091];[-0.6082 C22(2) -0.0052]; [-0.6442 -0.4897 0.5876]]
```

```
C_mat2 = 3x3
```

```
    0.4638    0.3607    0.8091  
   -0.6082   -0.8696   -0.0052  
   -0.6442   -0.4897    0.5876
```

```
C_mat1_sq = C_mat1.^2 % Square of matrix C1
```

```
C_mat1_sq = 3x3
```

```
    0.2151    0.1301    0.6546  
    0.3699    0.6737    0.0000  
    0.4150    0.2398    0.3453
```

```
C_mat2_sq = C_mat2.^2 % Square of matrix C2
```

```
C_mat2_sq = 3x3
```

```
    0.2151    0.1301    0.6546  
    0.3699    0.7562    0.0000  
    0.4150    0.2398    0.3453
```

```
Cmat1_row = sum(C_mat1_sq, 2) % Sum of rows for C1_squared
```

```
Cmat1_row = 3x1
```

```
    0.9999  
    1.0436  
    1.0001
```

```
Cmat1_col = sum(C_mat1_sq, 1) % Sum of cols for C1_squared
```

```
Cmat1_col = 1x3
```

```
    1.0000    1.0436    0.9999
```

```
Cmat2_row = sum(C_mat2_sq, 2) % Sum of rows for C2_squared
```

```
Cmat2_row = 3x1
```

```
    0.9999  
    1.1261  
    1.0001
```

```
Cmat2_col = sum(C_mat2_sq, 1) % Sum of cols for C2_squared
```

```
Cmat2_col = 1x3  
    1.0000    1.1261    0.9999
```