

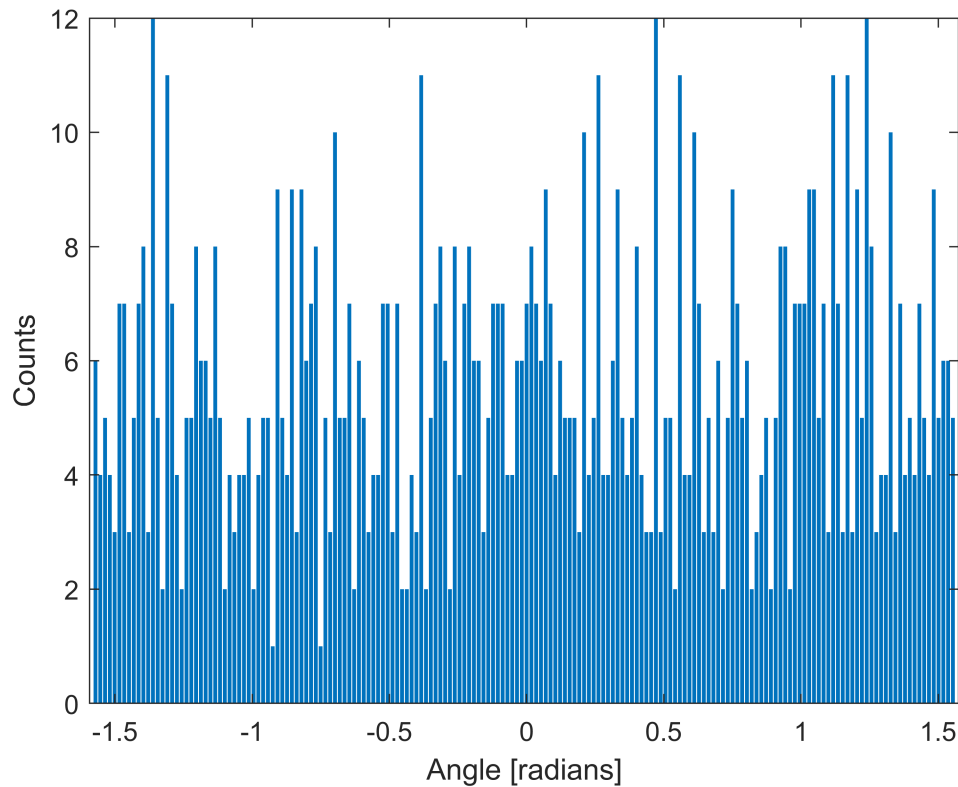
# Calculate summary statistics

Generate a random array of angles ranging between  $(-\pi/2)$  and  $(\pi/2)$

```
angs = rand(1,1000);  
angs = (angs*pi)-(pi/2);
```

Visualize the data

```
figure; bar((-pi/2:pi/180:pi/2-(pi/180)),histcounts(angs,(-pi/2:pi/180:pi/2)));  
ylabel('Counts'); xlabel('Angle [radians]');
```



Calculate the (non-weighted) mean direction and directional variance

```
[meanc,varc,~] = circmean2(angs,ones(size(angs)));  
disp(['Mean Direction: ',num2str(meanc*(180/pi),3), ' degrees.'])
```

Mean Direction: 46 degrees.

```
disp(['Directional Variance: ',num2str(varc,3), '.'])
```

Directional Variance: 0.97.