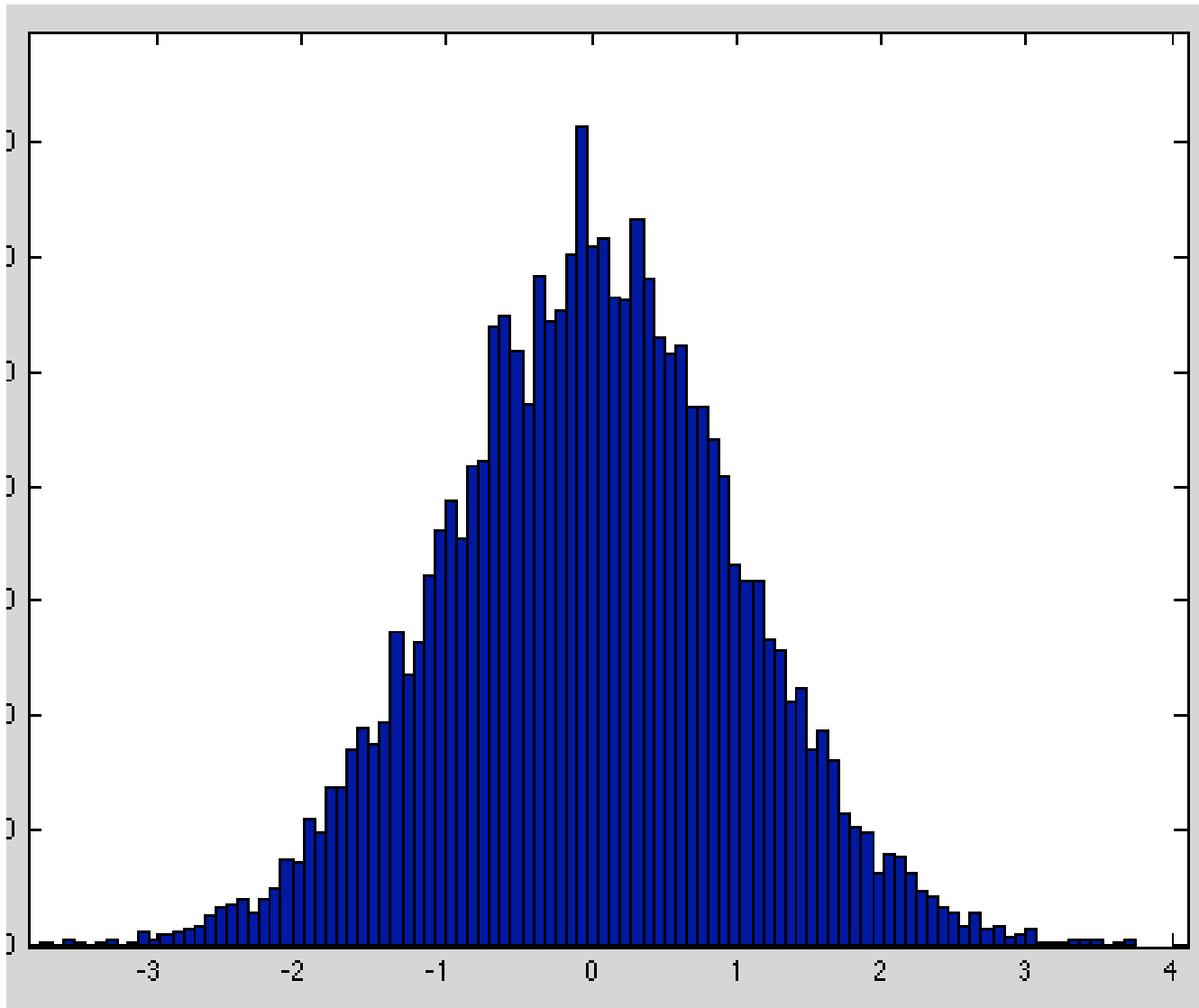
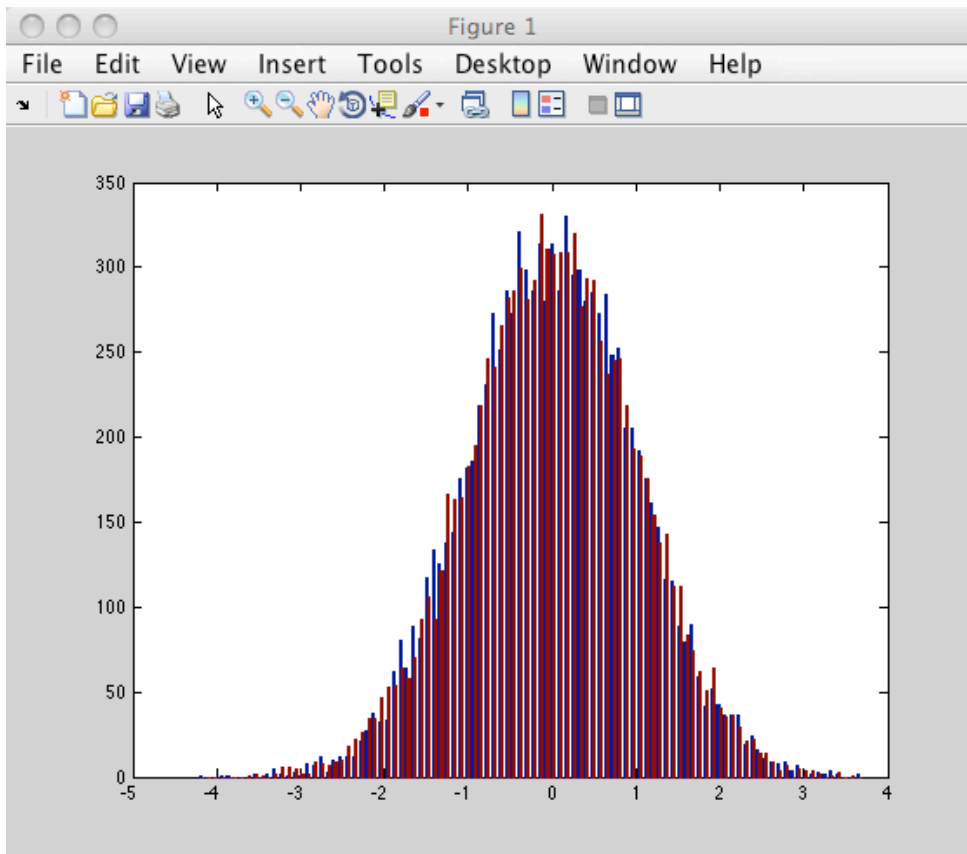


Modeling And Identifying Neurosystems

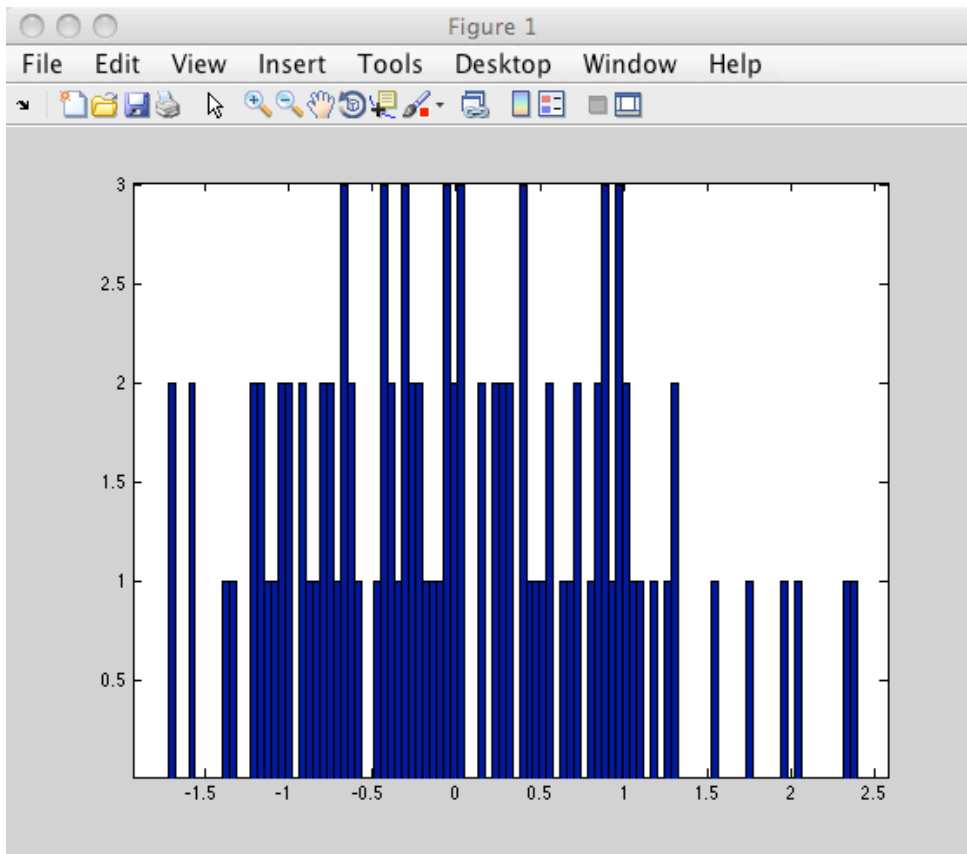
Lecture 2: Probability and Likelihood



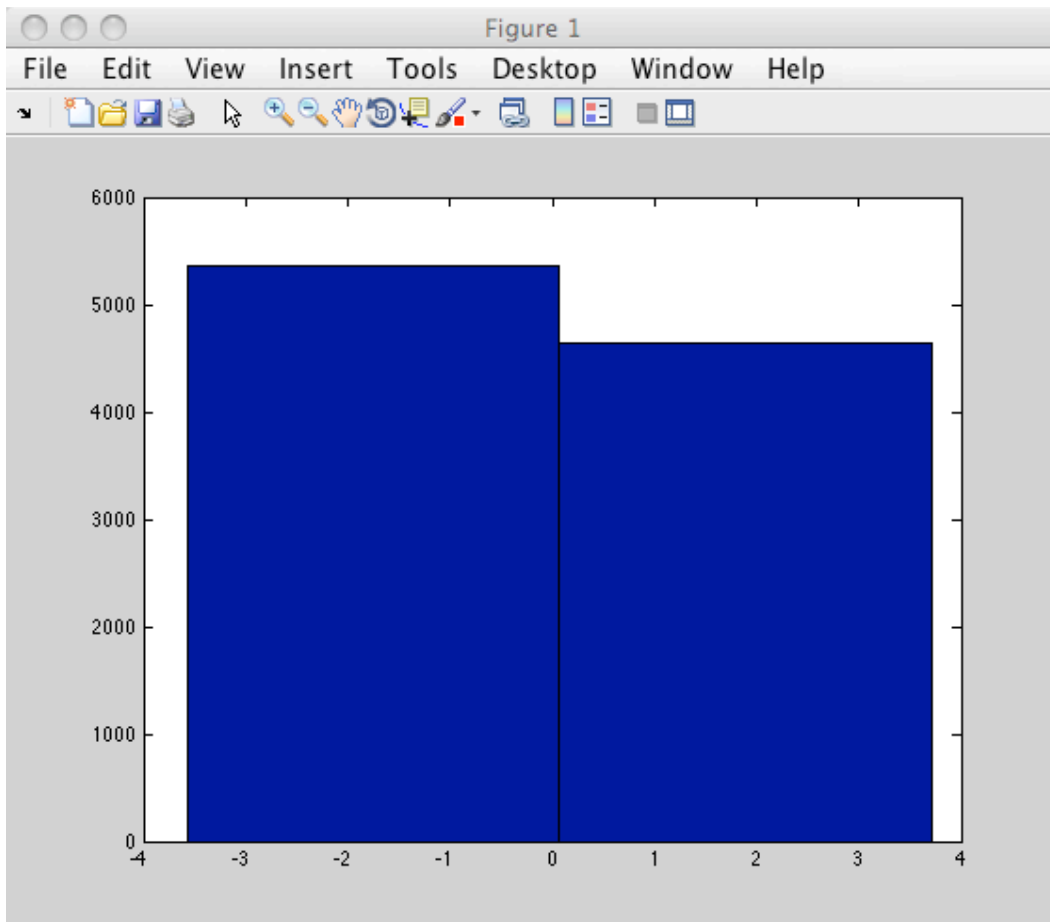
Olivia Tong



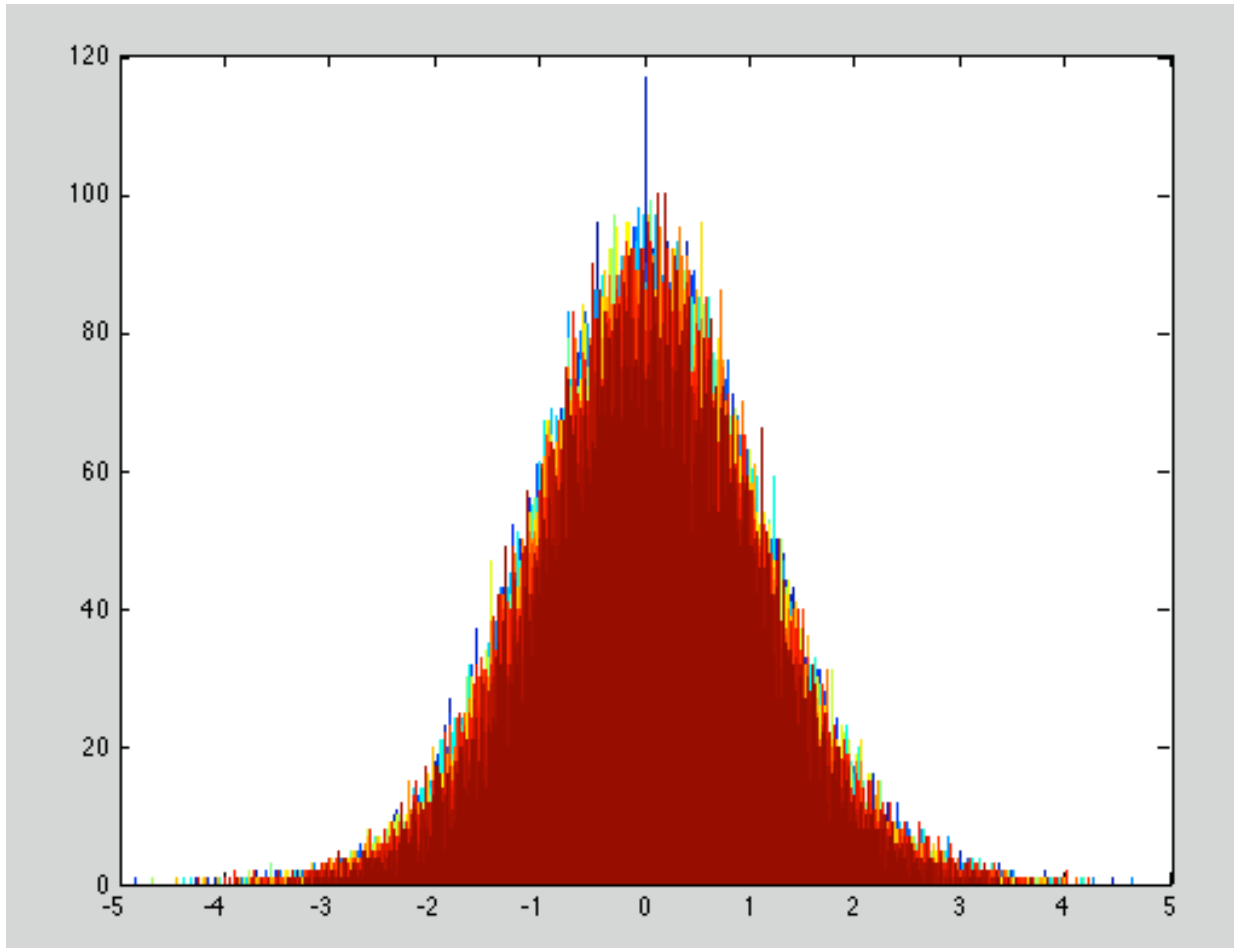
- $A = \text{randn}(10000, 2)$
- $\text{hist}(A, 100)$
- two sets of bars,
randomly generated
2 columns of 10000
numbers



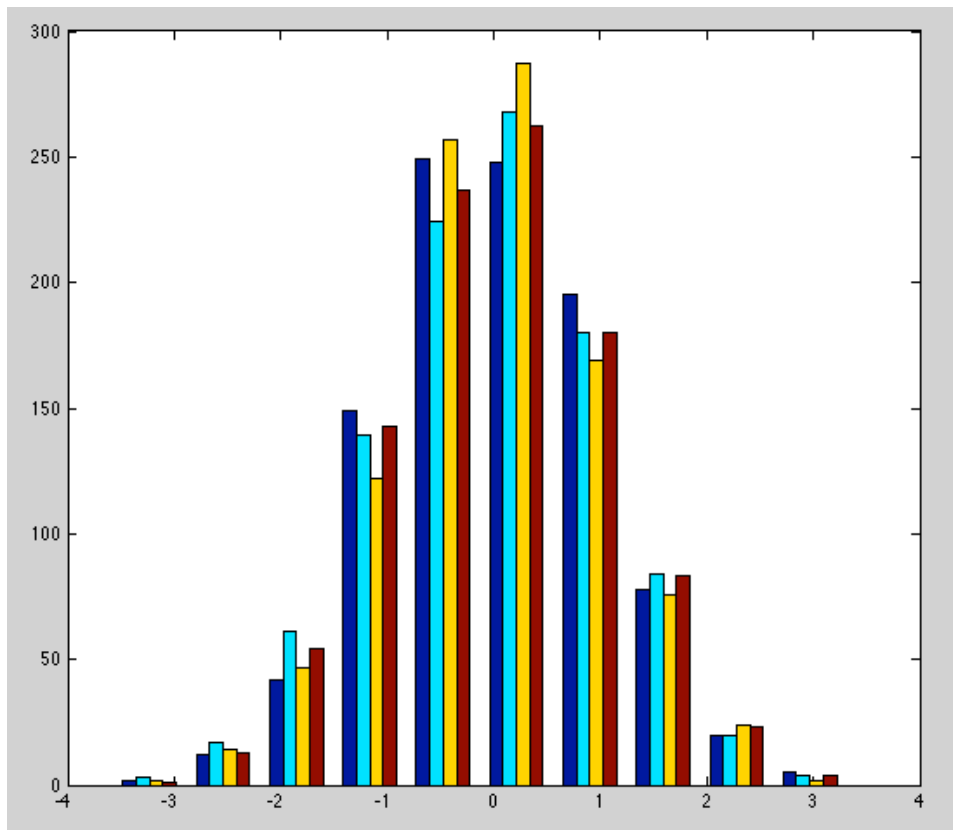
- $A = \text{randn}(100,1)$
- $\text{hist}(A,100)$
- fewer values, only 100 random values generated



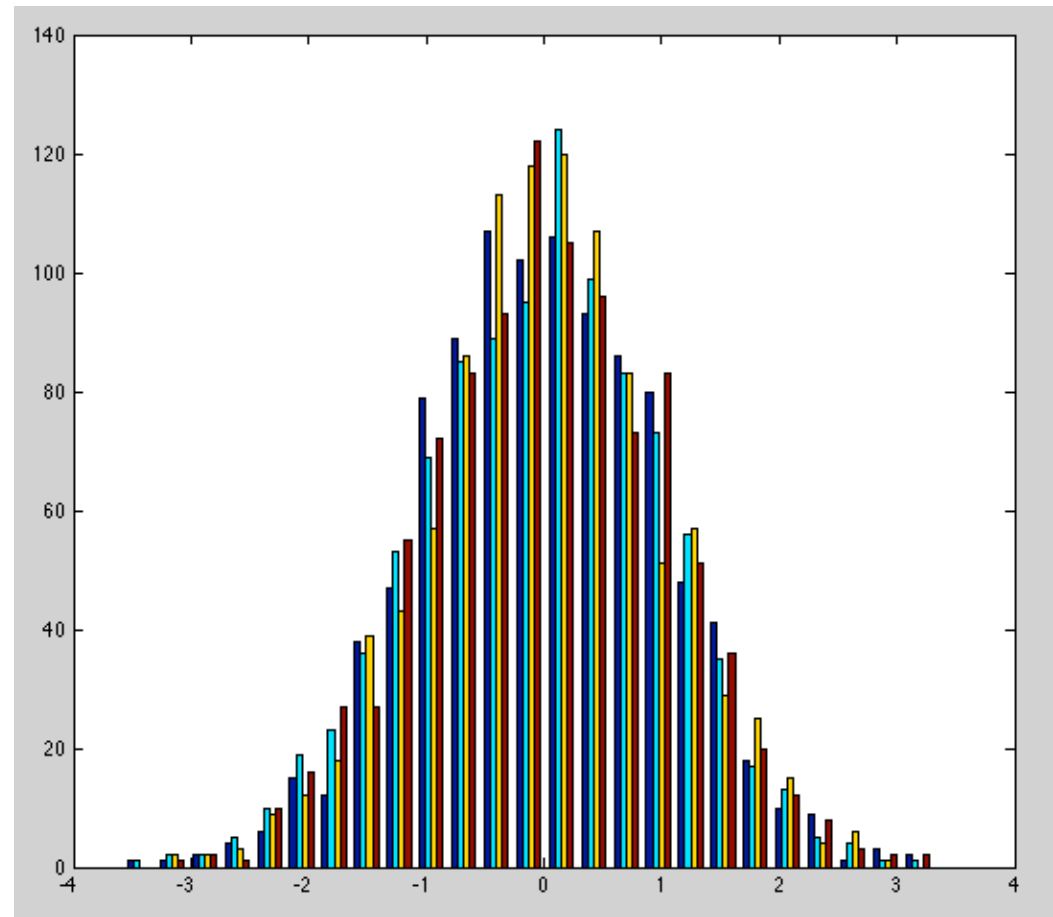
- $A = \text{randn}(10000,1)$
- $\text{hist}(A,2)$
- histogram chose 2 values from the 10000 randomly generated numbers



- Commands used: `A = randn(10000,50); hist(A,500)`
- A appears to have been set to a 2d array with 10000 rows and 50 columns, with numbers randomly assigned on what appears to be a normal distribution. The histogram was broken into 500 segments as opposed to the 100 in the assignment. (so there are fewer at each point/ each point covers a small numerical value.) As each column is represented by a distinct color on the histogram it has 50 colors. (The histogram is effectively a collection of 50 differently colored histograms overlayed on top of each other.



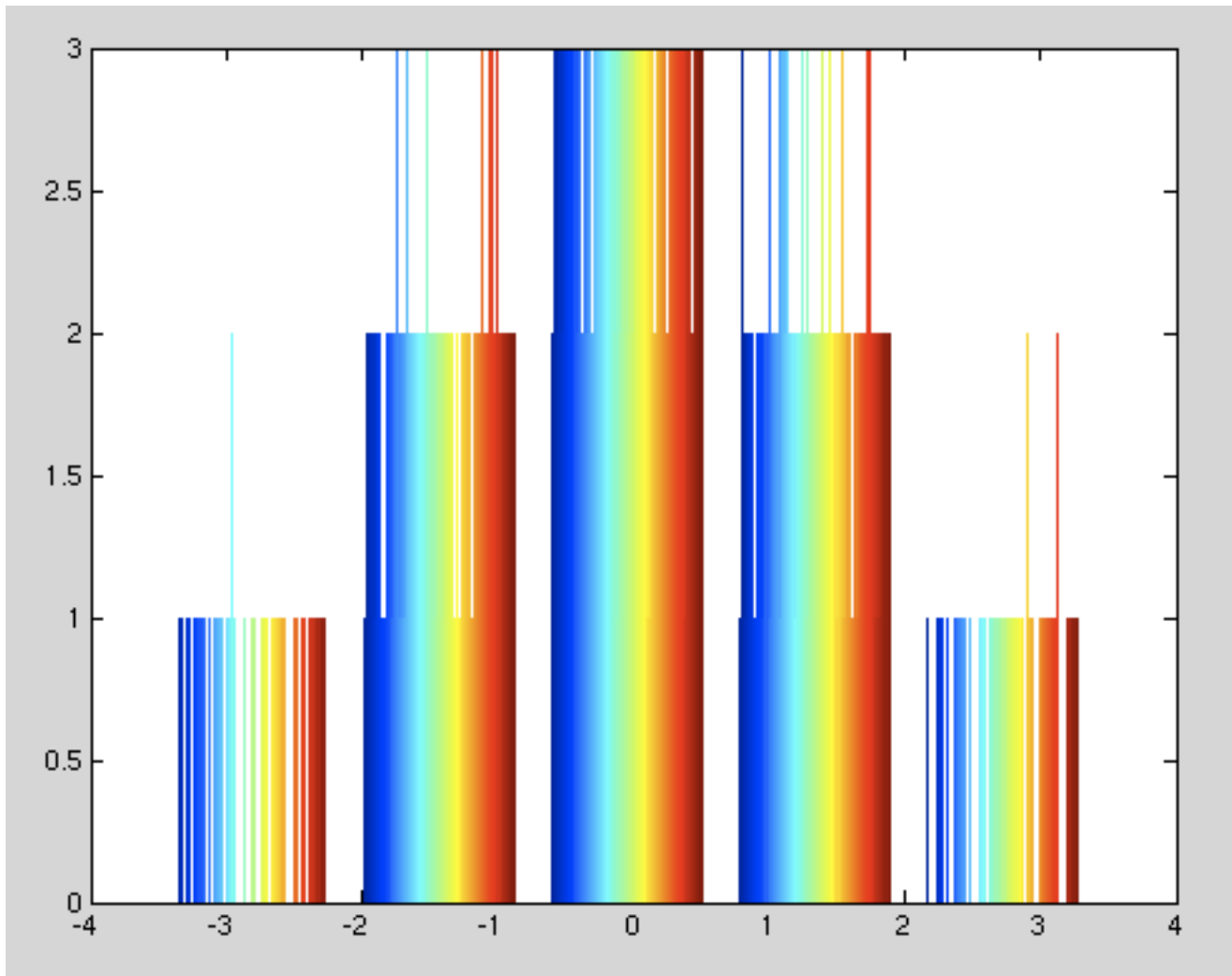
```
A=randn(1000,4);  
hist(A,10)
```



```
A=randn(1000,4);  
hist(A,25)
```

What else could you do?

What about:
A = randn(3,1000);
hist(A,5)



New tools for doing new things in MATLAB

- Will be given at the top of the lab.