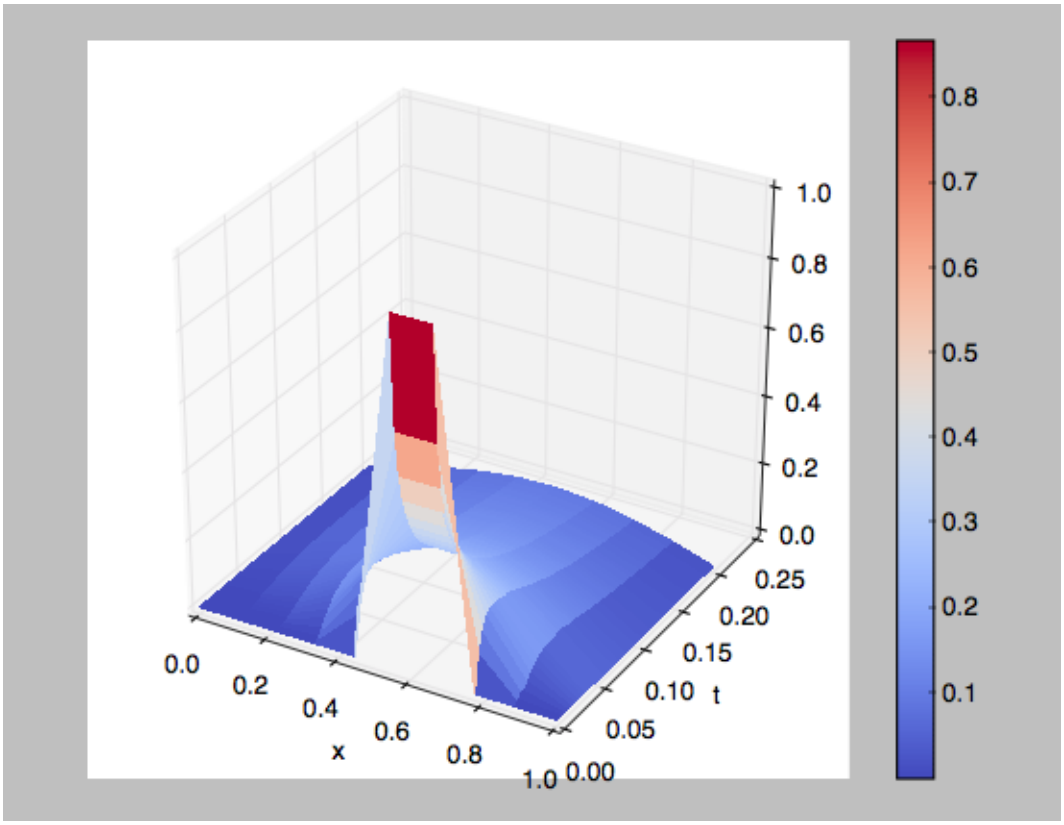
Math 578
Homework 2
Due: Sept 13 in class
Prof. J. H. Chaudhry
Student: Brad M. Philipbar

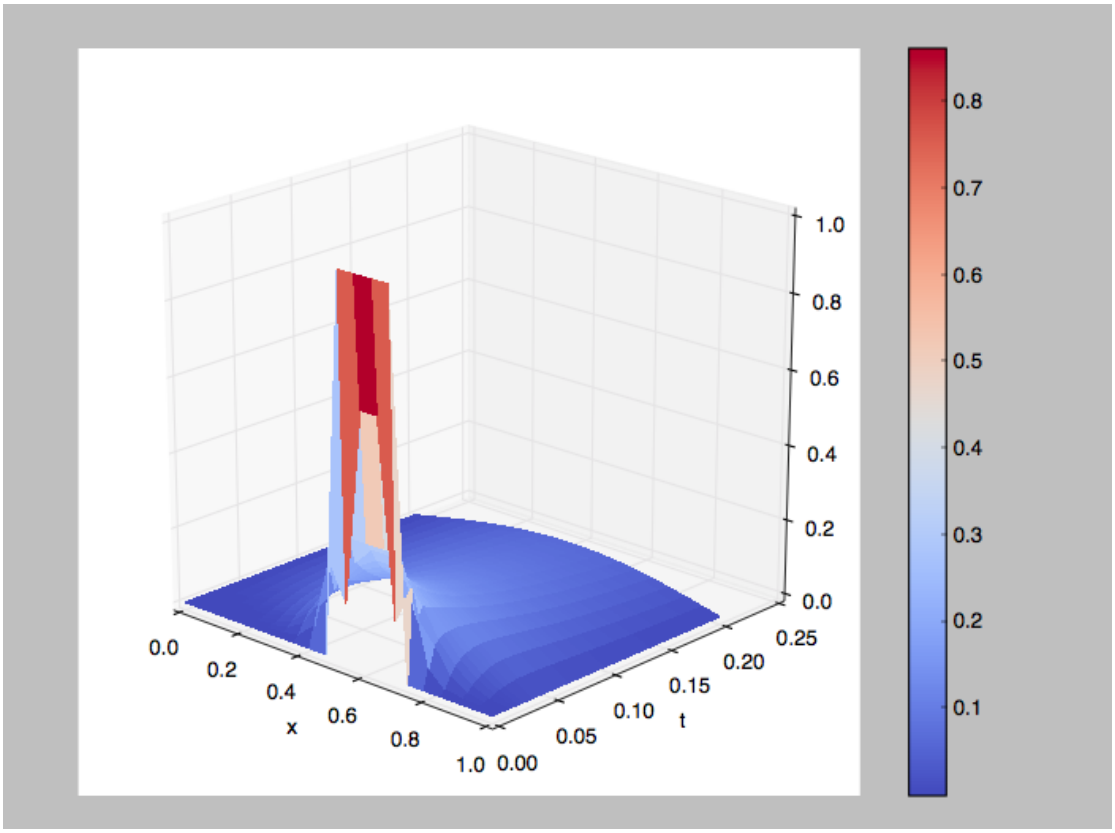
Plots:

Problem 1)

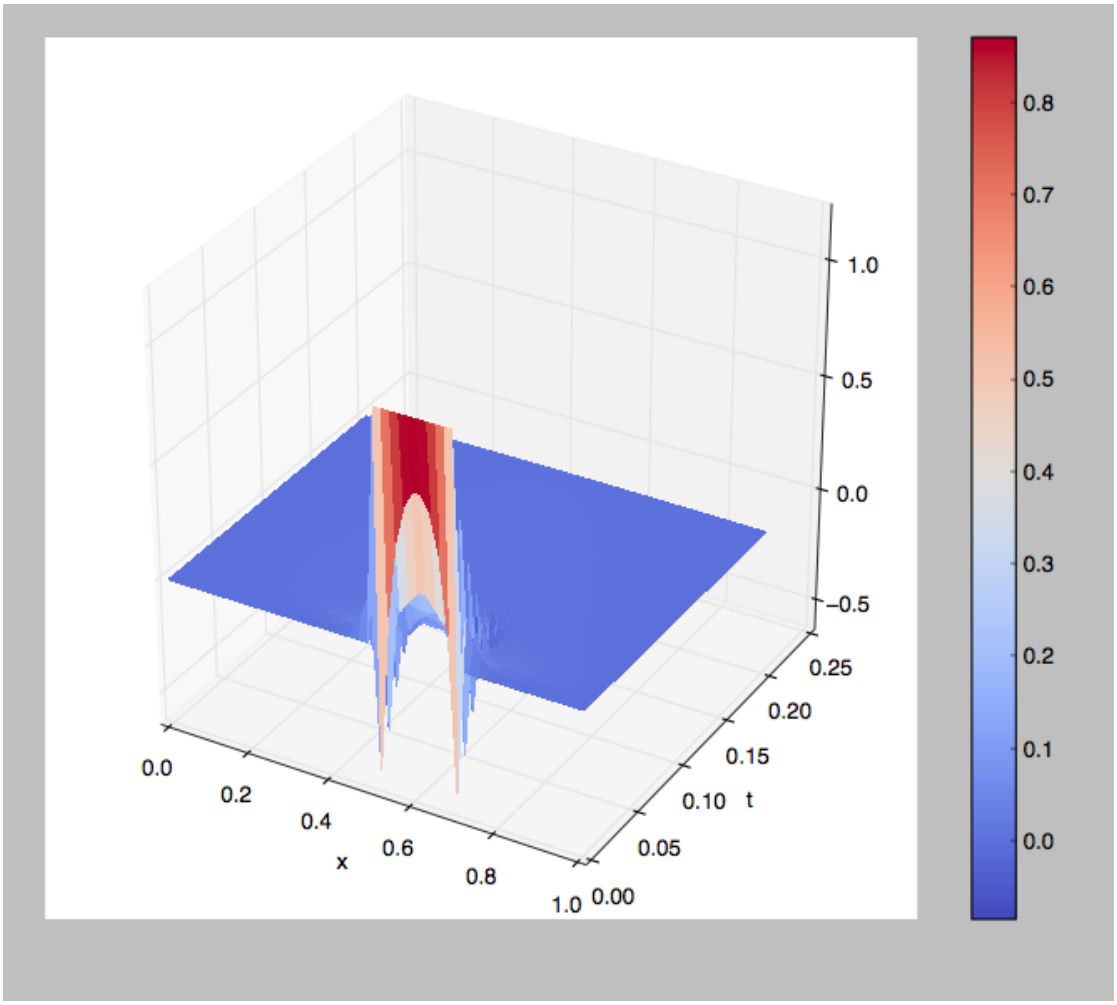
Plot1, Below: Nx=10, Nt=51



Plot2, Below: Nx=20, Nt=51

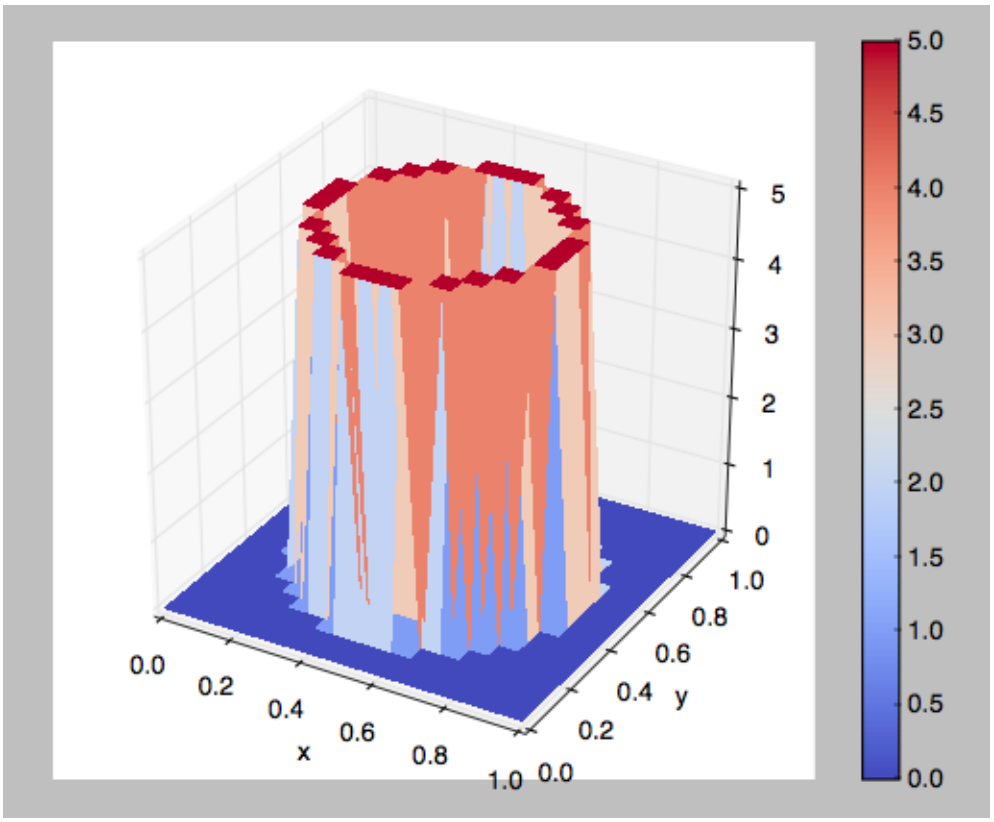


Plot3, Below: Nx=50, Nt=51

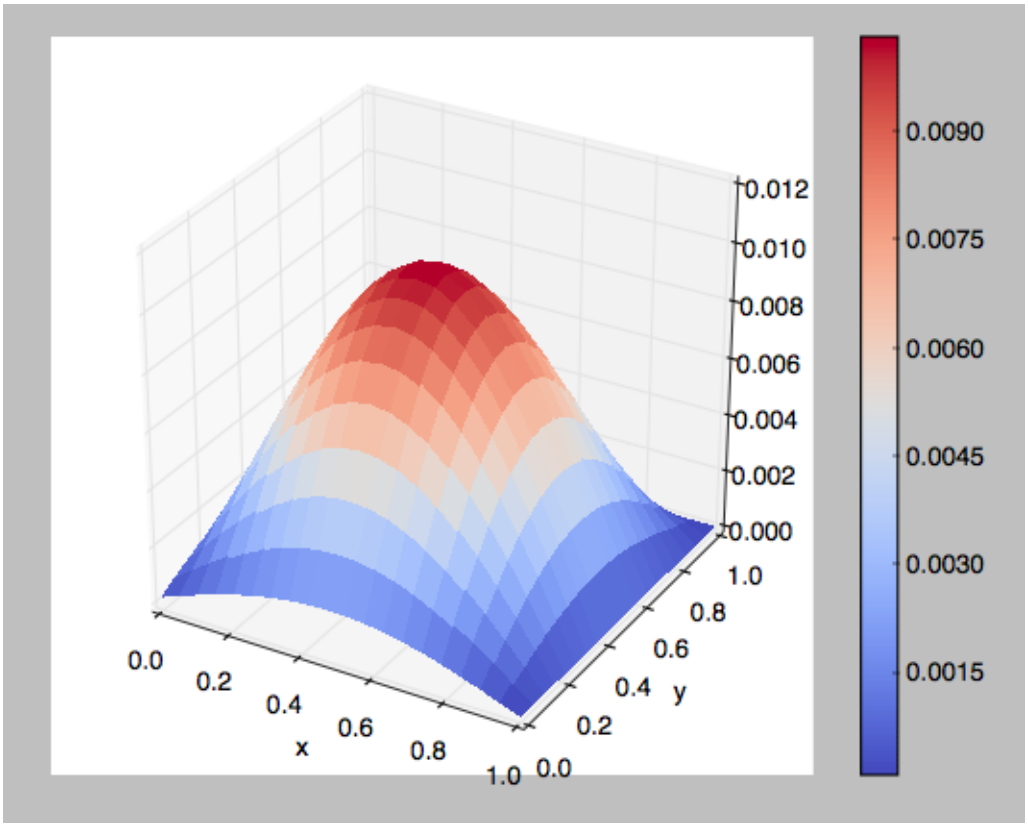


Problem 3)

Plot I , Below: Nx=20, Nt=20, Nt=51, tf=.2, ti=0

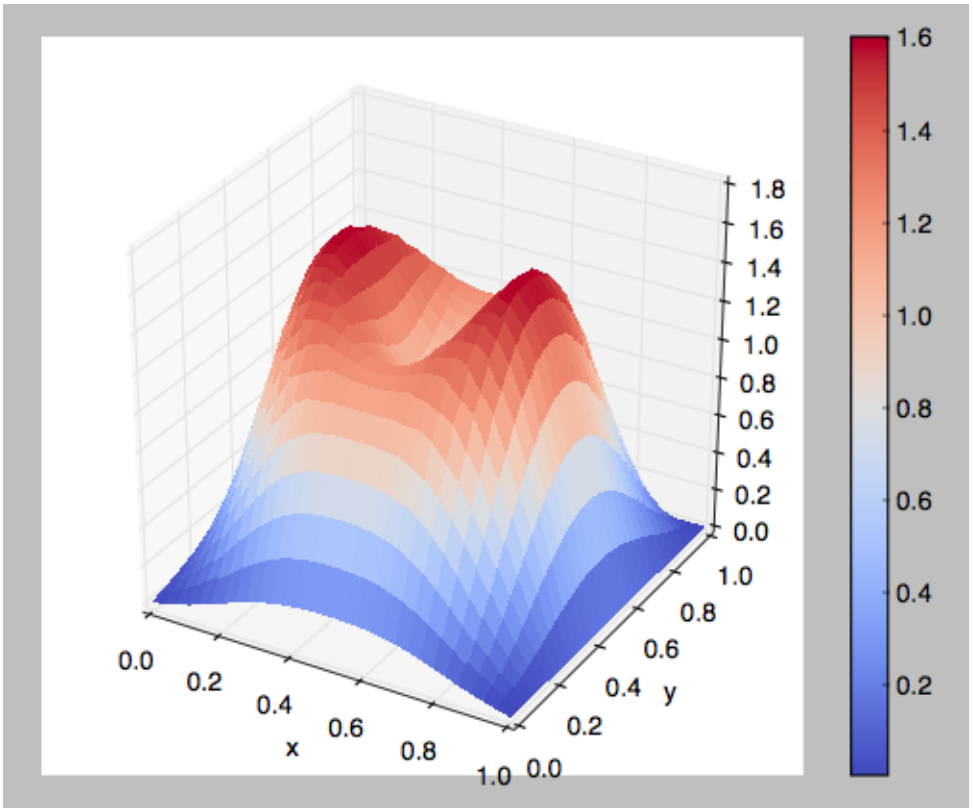


above is ICs. below is plot

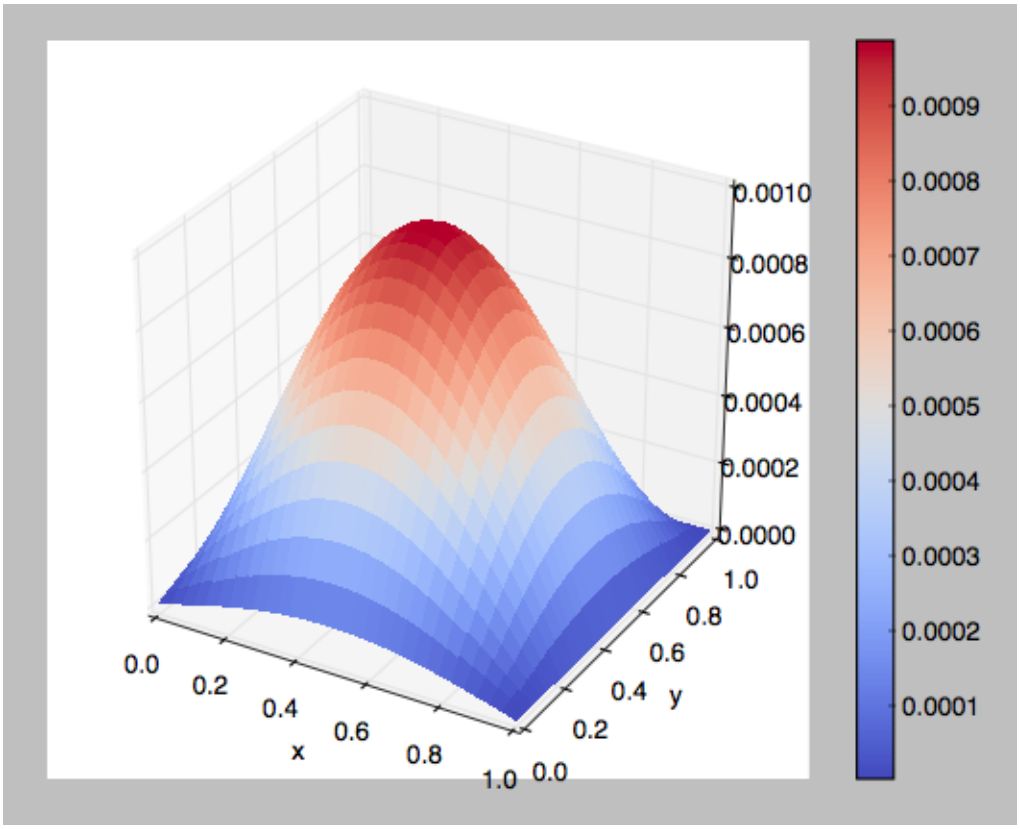


Plot2, Below: interesting behavior, diffues differently in different directions..as it should.

```
Nx = 30  # NOT including the “fake” value on left
Ny = 30  # NOT including the “fake” value on bottom
Nt = 300
tf = 0.28
#ti=0;
ti=round(Nt/30)-1;
```

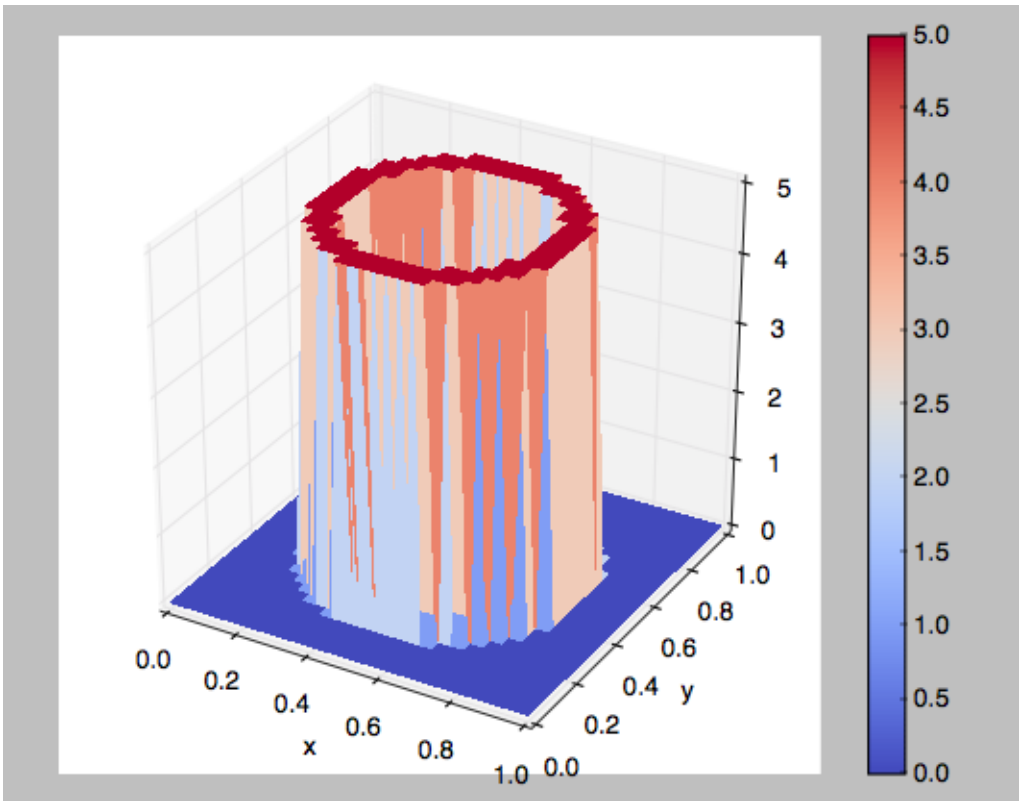


ICs above, plot below

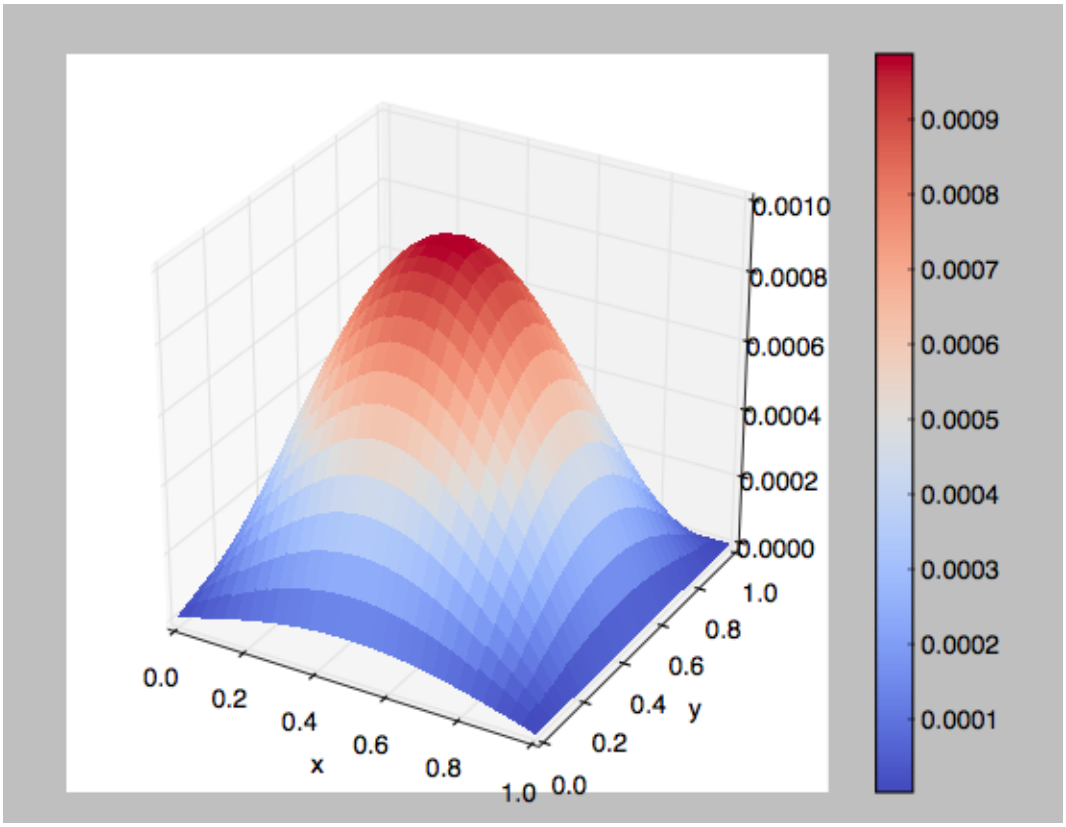


Plot3, Below:

Nx = 30 # NOT including the “fake” value on left
Ny = 30 # NOT including the “fake” value on bottom
Nt = 300
tf = 0.28 #how long it takes before max value of num sol’n is less than 10^-3 in mag.
ti=0



ICs above, plot below.



Link to code below: