HW10.2.5

April 6, 2018

In [2]:
```
import matplotlib.pyplot as plt
from math import *
from math import pi
```

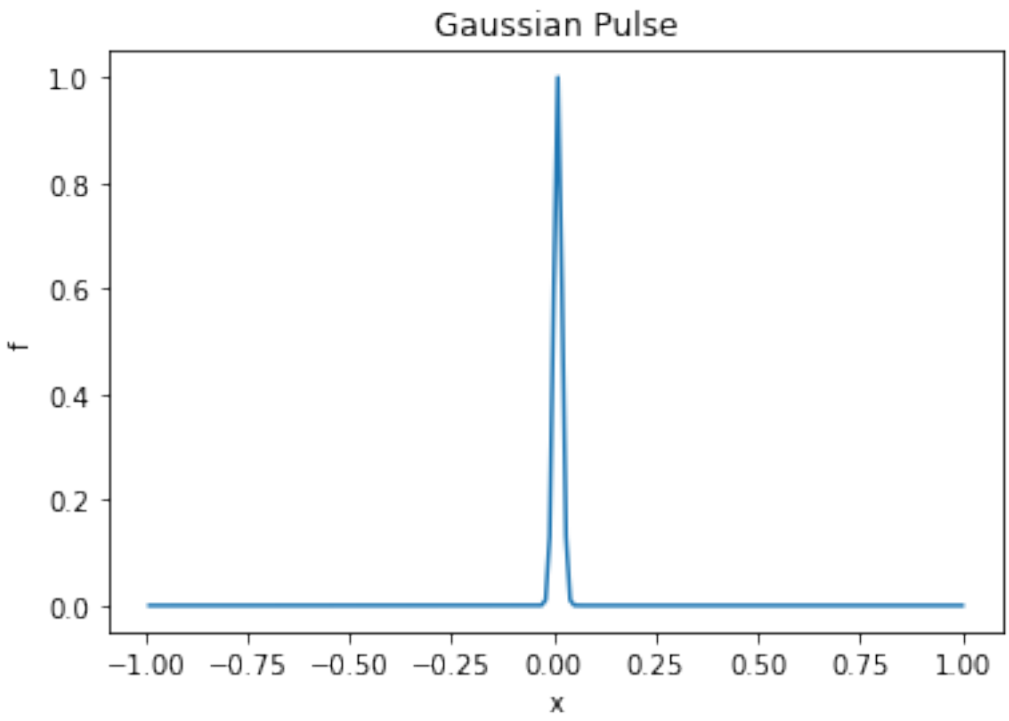
In [11]:
```
sigma = 100
kk=2*pi/(4.95*10**-7) #k naught

x = -1
xf = 1
dx=0.01

X = []
F = []

while x < xf:
    f = exp(0.5*sigma**2*((kk**2)/(sigma**4)-x**2)-(kk**2)/(2*sigma**2))*cos(kk*x)
    x = x + dx
    X.append(x)
    F.append(f)

plt.plot(X, F)
plt.xlabel('x')
plt.ylabel('f')
plt.title('Gaussian Pulse')
plt.show()
```


Gaussian Pulse
1.0
0.8
0.6
0.4
0.2
0.0
f
−1.00
−0.75
−0.50
−0.25
0.00
0.25
0.50
0.75
1.00
x