SuperficieContornos

June 9, 2018

In [2]:
```
import numpy as np
import pylab as pl
from mpl_toolkits.mplot3d import Axes3D
%matplotlib inline

Nt = 50
Ny = 50

a = 0
b = 2
ay = -5
by = 5
t = np.linspace(a,b,Nt)
y = np.linspace(ay,by,Ny)
xg,yg = np.meshgrid(t,y)

def f(x,y):
    return 1 + t * np.sin(t*y)

u = f(xg,yg)

pl.contourf(xg,yg,u,5,alpha=.75,cmap=pl.cm.hot)
C = pl.contour(xg,yg,u,5, colors='black', linewidth=.5)
pl.clabel(C,inline=1,fontsize=10)
pl.xlabel('$t$')
pl.ylabel('$y(t)$')
pl.grid()
pl.xlim(a - 0.2,b + 0.2)
pl.ylim(ay - 0.2, by + 0.2)

fig = pl.figure()
ax = Axes3D(fig)
ax.plot_surface(xg,yg,u, rstride=1, cstride=1, alpha=.85,cmap=pl.cm.hot)
ax.contour(xg,yg,u,5, colors='black', linewidth=.5)

ax.set_zlim(-2,3)
```

```
        pl.xlabel('$t$')
        pl.ylabel('$y(t)$')

        pl.show()
```

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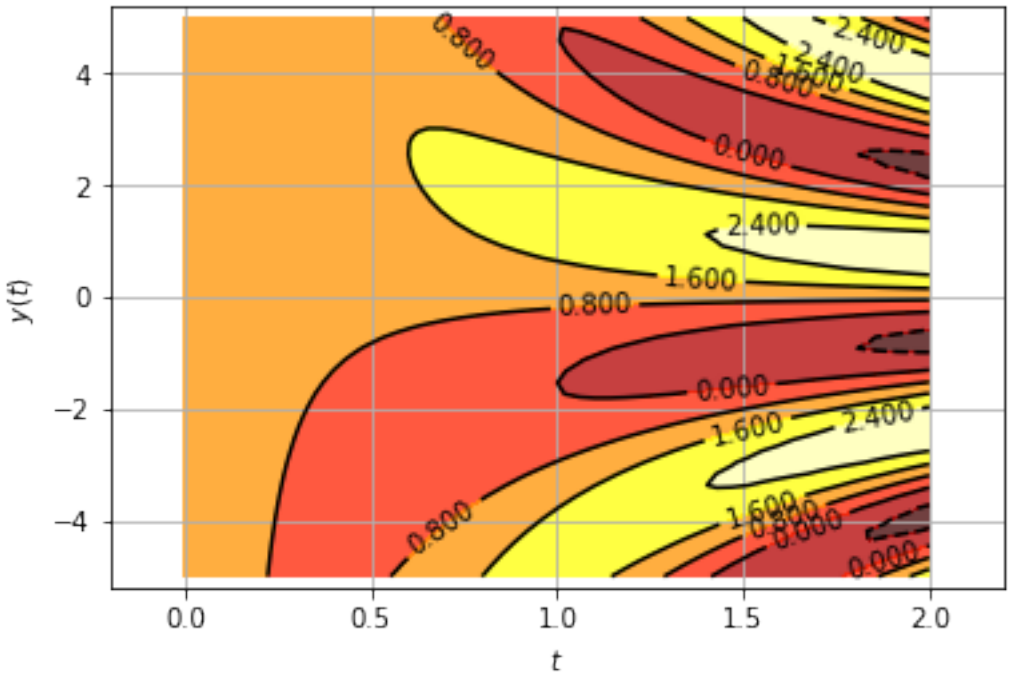
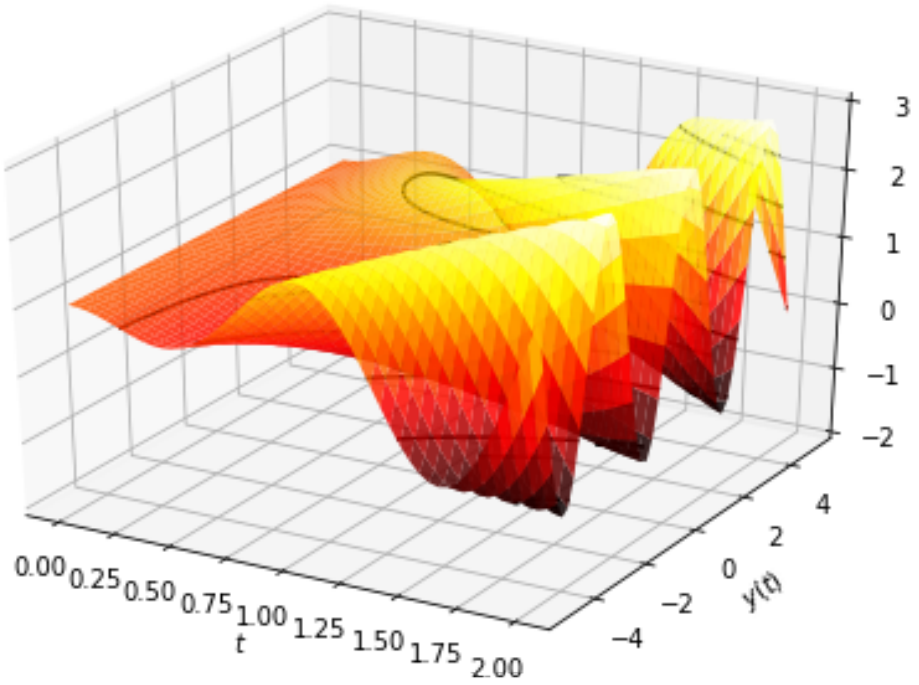
/Users/luiggi/anaconda3/lib/python3.6/site-packages/matplotlib/contour.py:967: UserWarning: The
  s)
```




3
2
1
0
−1
−2
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2.00
t
−4
−2
0
2
4
y(t)