nyquist-plot

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In [3]:
```python
import scipy.signal as signal
import control
```
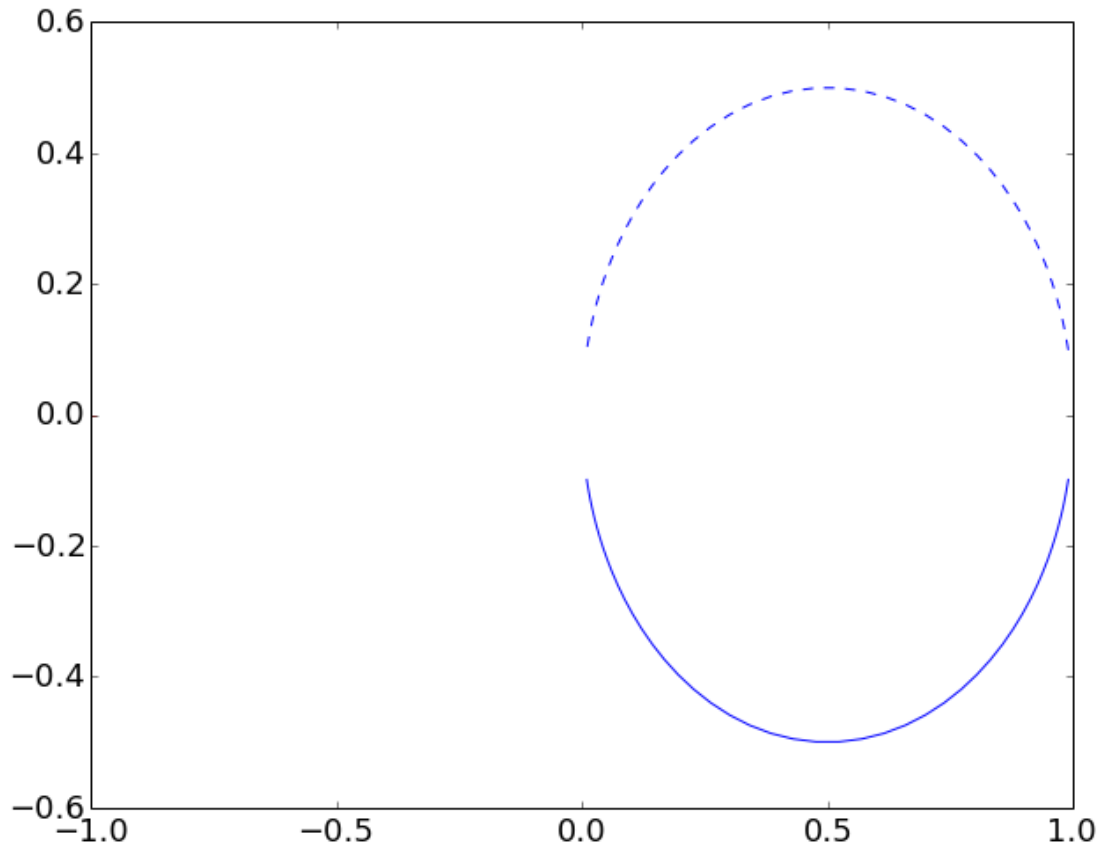
In [6]:
```python
control.nyquist_plot?
```

In [7]:
```python
control.tf2ss?
```

In [9]:
```python
control.nyquist_plot(control.tf2ss(1, [1, 1]))
```
/usr/lib/python2.7/dist-packages/scipy/signal/filter_design.py:338:
BadCoefficients: Badly conditioned filter coefficients (numerator):
the results may be meaningless
  "results may be meaningless", BadCoefficients)

Out [9]:
```
(array([ 0.99009901,  0.98807597,  0.98564557,  0.98272844,
0.97923099,
         0.9750433 ,  0.97003707,  0.96406362,  0.95695215,
0.94850855,
         0.93851519,  0.92673216,  0.91290057,  0.89674876,
0.87800202,
         0.8563966 ,  0.83169838,  0.80372587,  0.77237662,  0.7376546
,
         0.69969535,  0.65878433,  0.61536371,  0.57002403,
0.52347849,
         0.47652151,  0.42997597,  0.38463629,  0.34121567,
0.30030465,
         0.2623454 ,  0.22762338,  0.19627413,  0.16830162,  0.1436034
,
         0.12199798,  0.10325124,  0.08709943,  0.07326784,
0.06148481,
         0.05149145,  0.04304785,  0.03593638,  0.02996293,  0.0249567
,
         0.02076901,  0.01727156,  0.01435443,  0.01192403,
0.00990099]),
 array([-0.0990099 , -0.10854421, -0.11894698, -0.13028143,
-0.14261016,
        -0.15599315, -0.17048505, -0.18613155, -0.20296485,
-0.22099792,
        -0.24021746, -0.26057565, -0.28198071, -0.30428674,
-0.32728348,
```

```
       -0.35068713, -0.37413392, -0.39717829, -0.4192982 ,
-0.43990941,
       -0.45839041, -0.47411764, -0.48650921, -0.49507235,
-0.49944846,
       -0.49944846, -0.49507235, -0.48650921, -0.47411764,
-0.45839041,
       -0.43990941, -0.4192982 , -0.39717829, -0.37413392,
-0.35068713,
       -0.32728348, -0.30428674, -0.28198071, -0.26057565,
-0.24021746,
       -0.22099792, -0.20296485, -0.18613155, -0.17048505,
-0.15599315,
       -0.14261016, -0.13028143, -0.11894698, -0.10854421, -0.0990099
]),
 array([  0.1       ,   0.10985411,   0.12067926,   0.13257114,
          0.14563485,   0.15998587,   0.17575106,   0.19306977,
          0.21209509,   0.23299518,   0.25595479,   0.28117687,
          0.30888436,   0.33932218,   0.37275937,   0.40949151,
          0.44984327,   0.49417134,   0.54286754,   0.59636233,
          0.65512856,   0.71968567,   0.79060432,   0.86851137,
          0.95409548,   1.04811313,   1.1513954 ,   1.26485522,
          1.38949549,   1.52641797,   1.67683294,   1.84206997,
          2.02358965,   2.22299648,   2.44205309,   2.6826958 ,
          2.9470517 ,   3.23745754,   3.55648031,   3.90693994,
          4.29193426,   4.71486636,   5.17947468,   5.68986603,
          6.25055193,   6.86648845,   7.54312006,   8.28642773,
          9.10298178,  10.        ]))
```