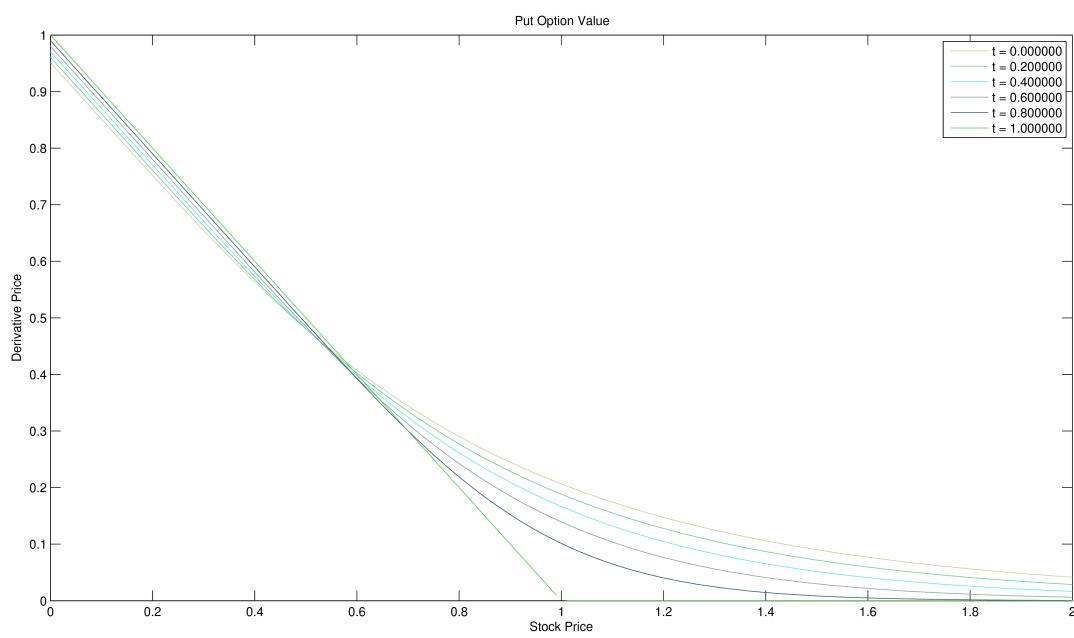
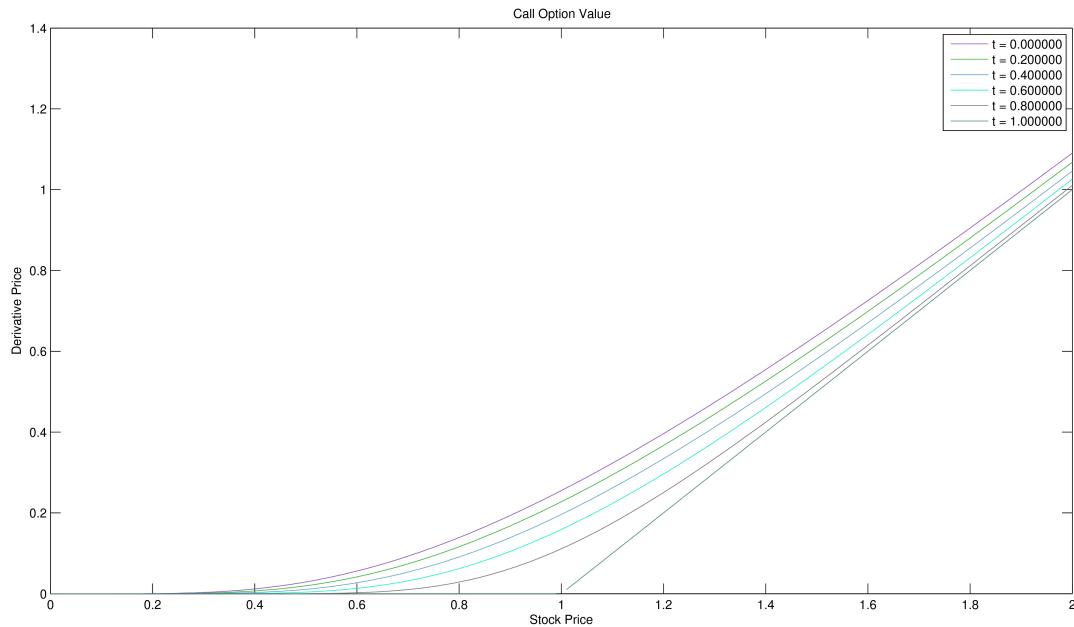


MA 374: Financial Engineering Lab
LAB 7 Report
Abheek Ghosh - 140123047

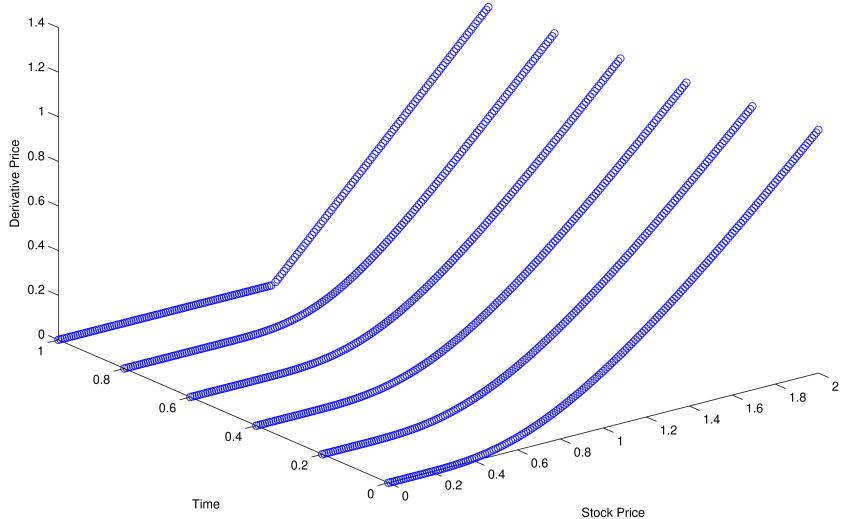
Question 1

Only program required.

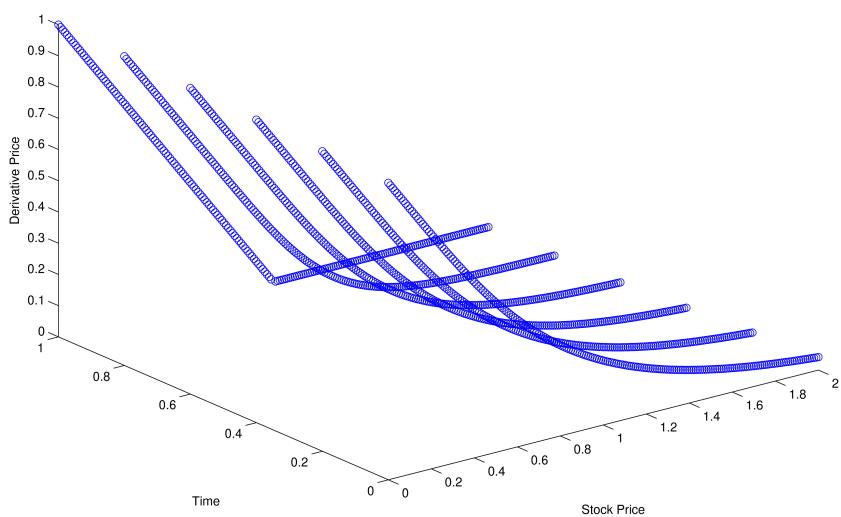
Question 2



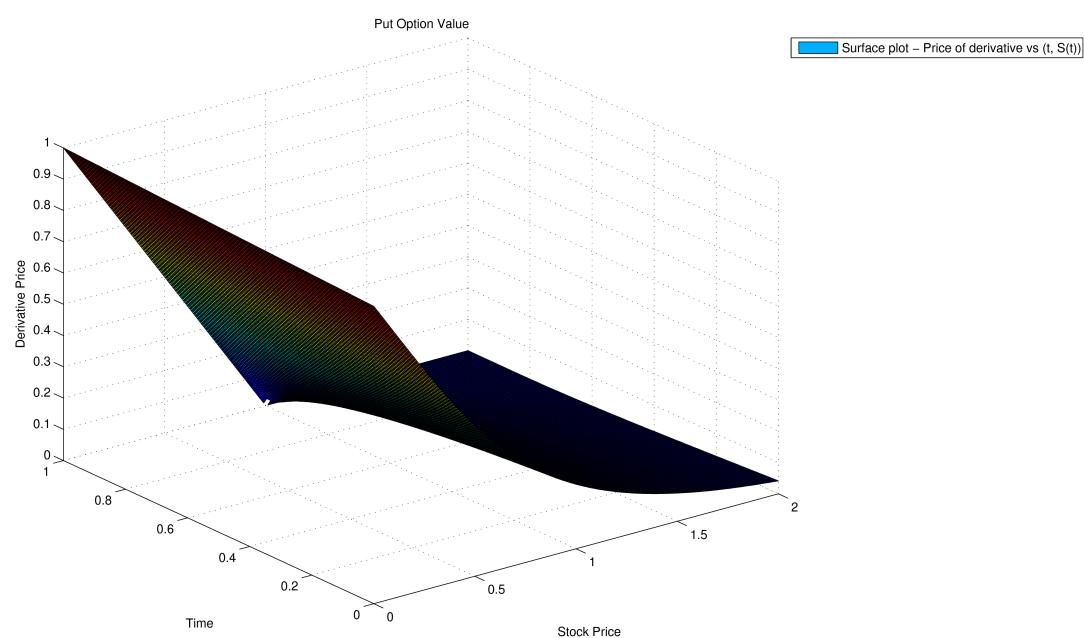
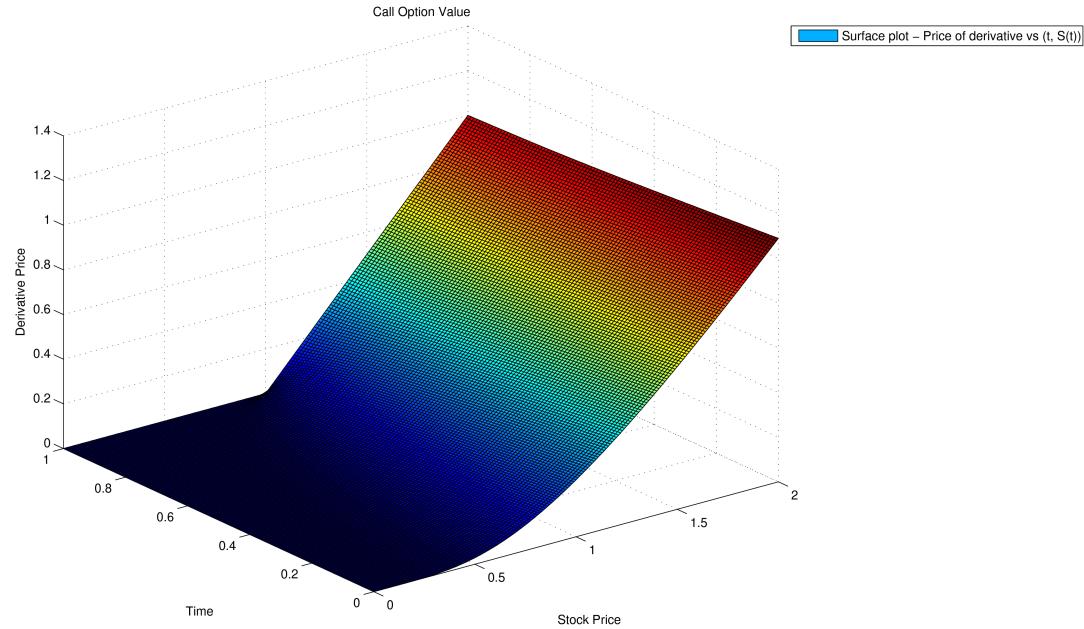
Call Option Value



Put Option Value



Question 3



Question 4

Original Parameters

T = 1
K = 1
r = 0.0500
sig = 0.6000
t = 0
s = 1

Call Option Prices varying with T

T	Prices
0.200000	0.111245
0.400000	0.159100
0.600000	0.196188
0.800000	0.227573
1.000000	0.255232
1.200000	0.280189
1.400000	0.303058
1.600000	0.324242
1.800000	0.344025
2.000000	0.362613

Put Option Prices varying with T

T	Prices
0.200000	0.101294
0.400000	0.139298
0.600000	0.166634
0.800000	0.188363
1.000000	0.206461
1.200000	0.221954
1.400000	0.235452
1.600000	0.247359
1.800000	0.257956
2.000000	0.267451

Call Option Prices varying with K

K	Prices
0.500000	0.545176
0.600000	0.470788
0.700000	0.404961
0.800000	0.347515
0.900000	0.297865
1.000000	0.255232
1.100000	0.218779
1.200000	0.187690
1.300000	0.161211
1.400000	0.138667
1.500000	0.119470

Put Option Prices varying with K

K	Prices
0.500000	0.020791
0.600000	0.041526
0.700000	0.070822
0.800000	0.108499
0.900000	0.153971
1.000000	0.206461
1.100000	0.265132
1.200000	0.329166

1.300000	0.397809
1.400000	0.470389
1.500000	0.546314

Call Option Prices varying with r

r	Prices
0.020000	0.243515
0.040000	0.251303
0.060000	0.259183
0.080000	0.267151
0.100000	0.275200
0.120000	0.283326
0.140000	0.291524
0.160000	0.299788
0.180000	0.308112
0.200000	0.316491

Put Option Prices varying with r

r	Prices
0.020000	0.223713
0.040000	0.212092
0.060000	0.200948
0.080000	0.190267
0.100000	0.180038
0.120000	0.170247
0.140000	0.160882
0.160000	0.151931
0.180000	0.143382
0.200000	0.135222

Call Option Prices varying with sig

sig	Prices
0.200000	0.104506
0.300000	0.142313
0.400000	0.180230
0.500000	0.217926
0.600000	0.255232
0.700000	0.292027
0.800000	0.328210
0.900000	0.363694
1.000000	0.398402

Put Option Prices varying with sig

sig	Prices
0.200000	0.055735
0.300000	0.093542
0.400000	0.131459
0.500000	0.169155
0.600000	0.206461
0.700000	0.243256
0.800000	0.279439
0.900000	0.314924
1.000000	0.349631

Call Option Prices varying with t

t	Prices
0.000000	0.255232
0.100000	0.241791
0.200000	0.227573
0.300000	0.21243

0.400000	0.196188
0.500000	0.178551
0.600000	0.159100
0.700000	0.137124
0.800000	0.111245
0.900000	0.077912

Put Option Prices varying with t

t	Prices
0.000000	0.206461
0.100000	0.197788
0.200000	0.188363
0.300000	0.178042
0.400000	0.166634
0.500000	0.153861
0.600000	0.139298
0.700000	0.122236
0.800000	0.101294
0.900000	0.072924

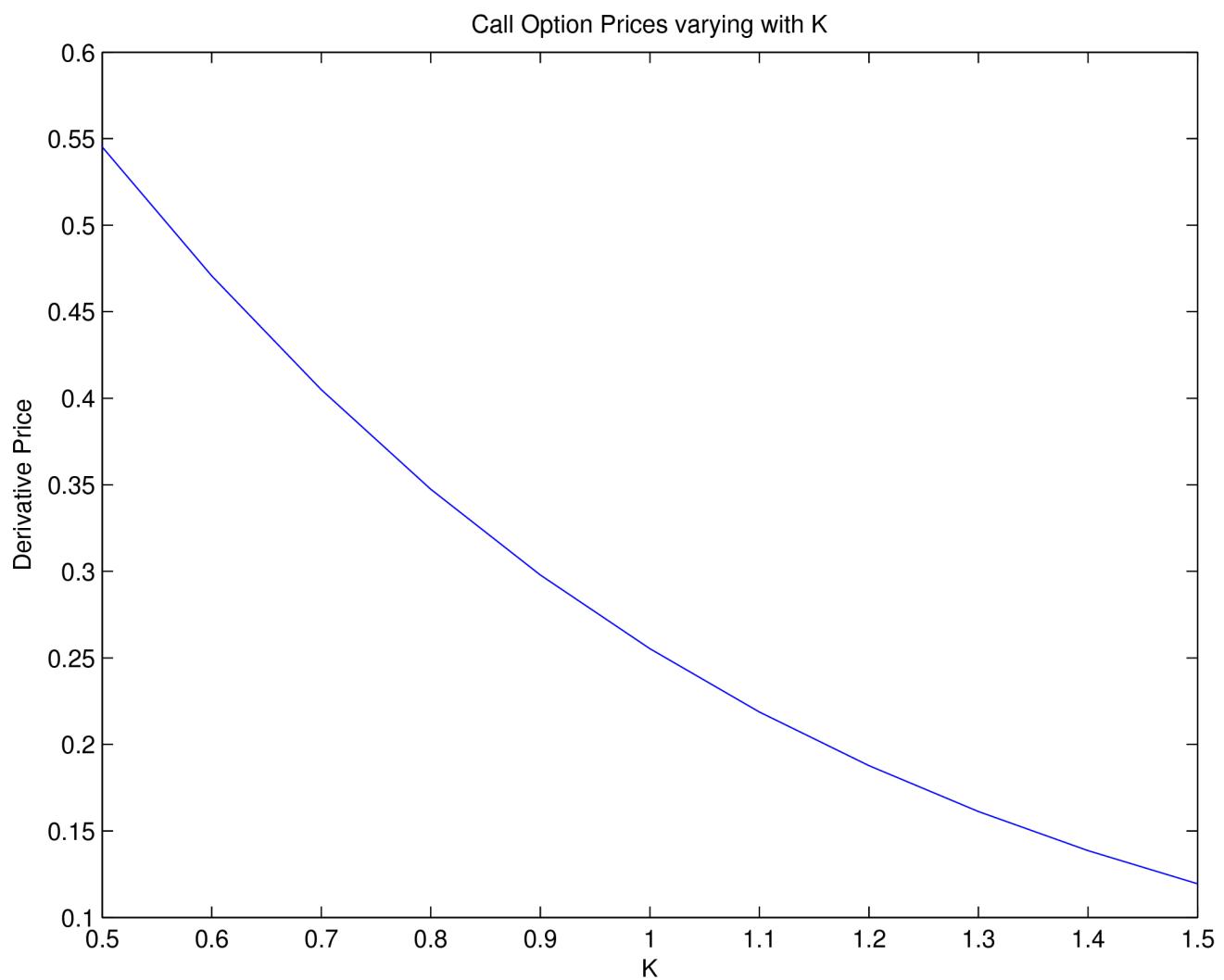
Call Option Prices varying with S

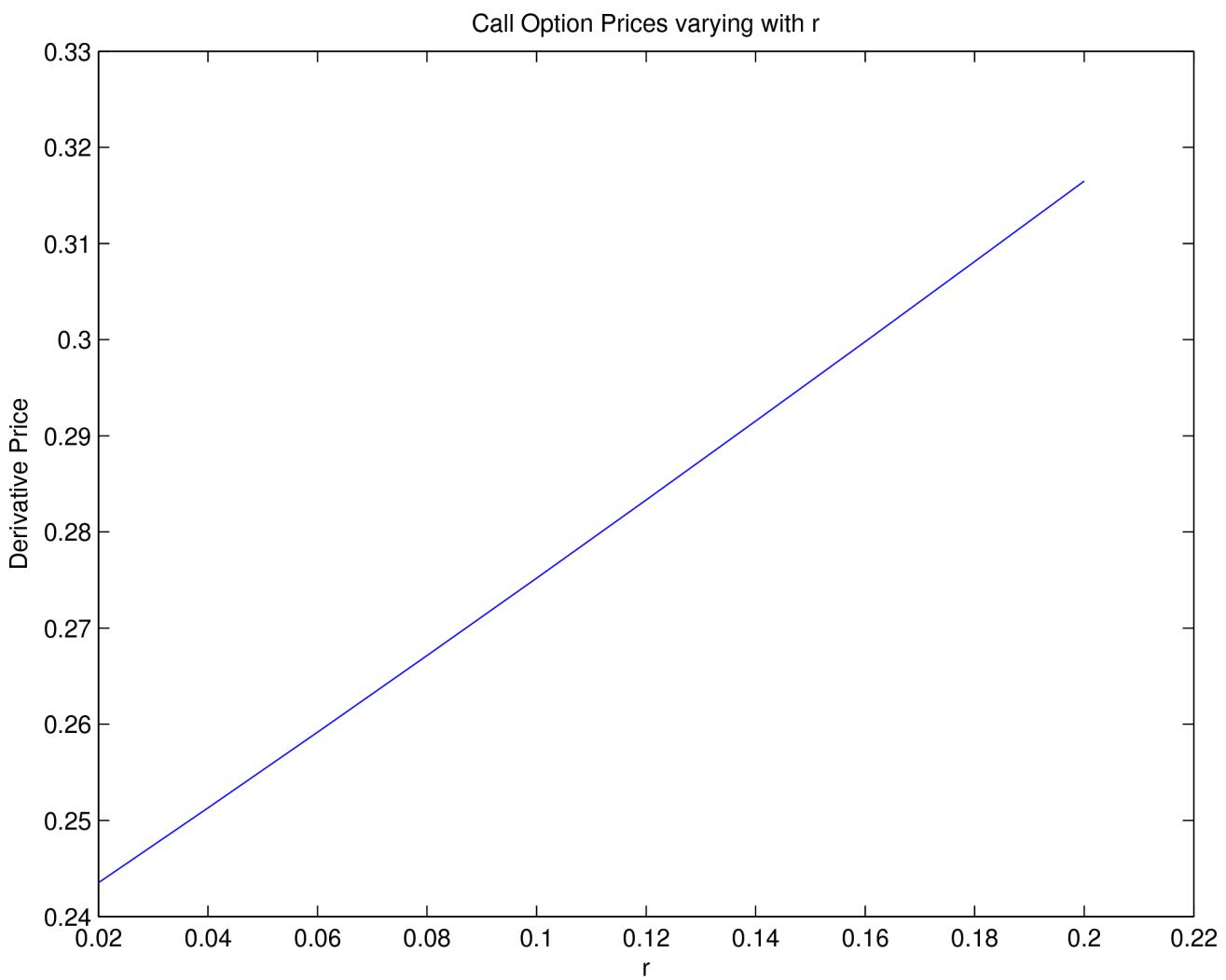
S	Prices
0.200000	0.000370
0.400000	0.011924
0.600000	0.056138
0.800000	0.139135
1.000000	0.255232
1.200000	0.396162
1.400000	0.554753
1.600000	0.725642
1.800000	0.905045
2.000000	1.090352

Put Option Prices varying with S

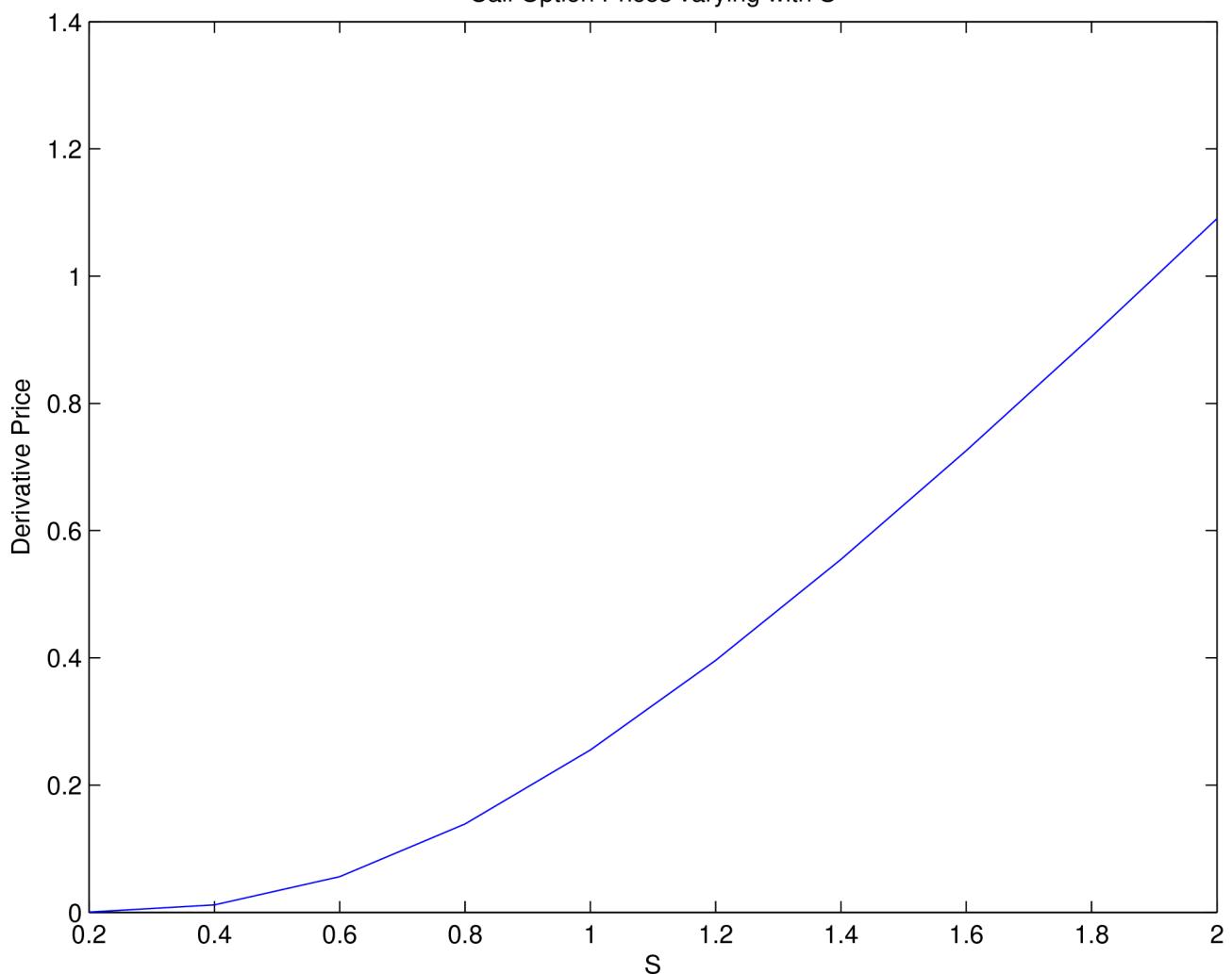
S	Prices
0.200000	0.751599
0.400000	0.563154
0.600000	0.407367
0.800000	0.290364
1.000000	0.206461
1.200000	0.147391
1.400000	0.105982
1.600000	0.076872
1.800000	0.056275
2.000000	0.041582

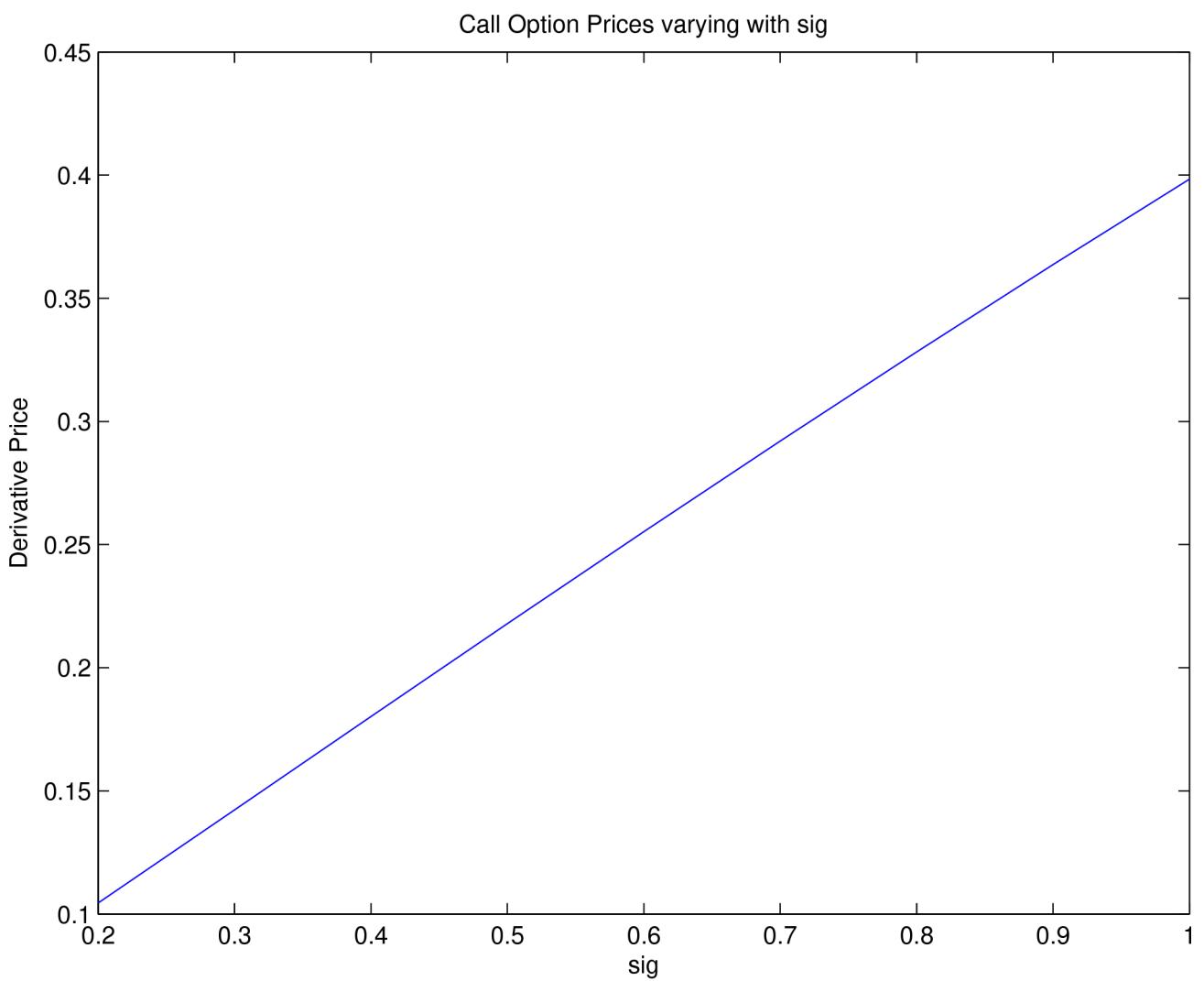
Two dimentional Plots



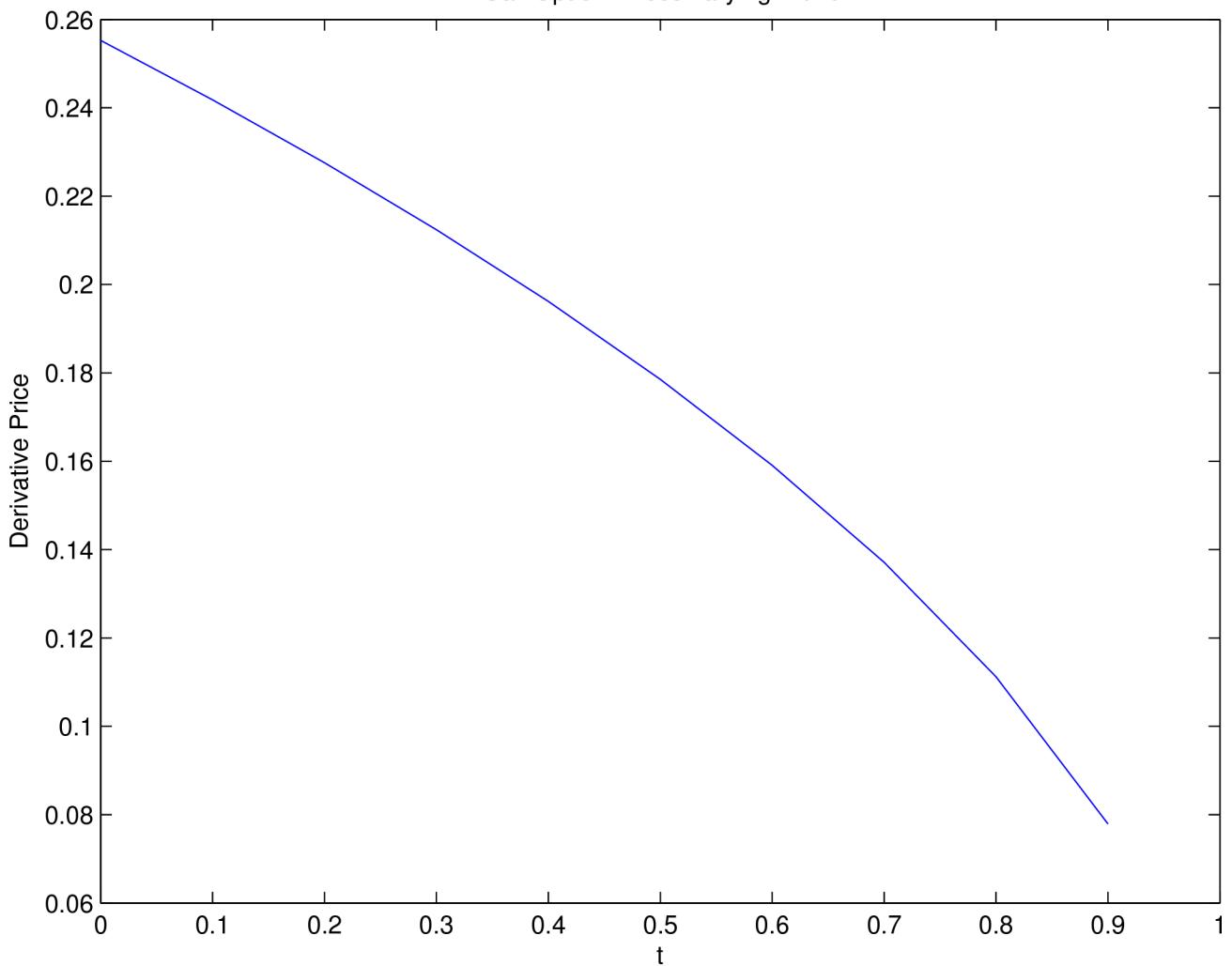


Call Option Prices varying with S

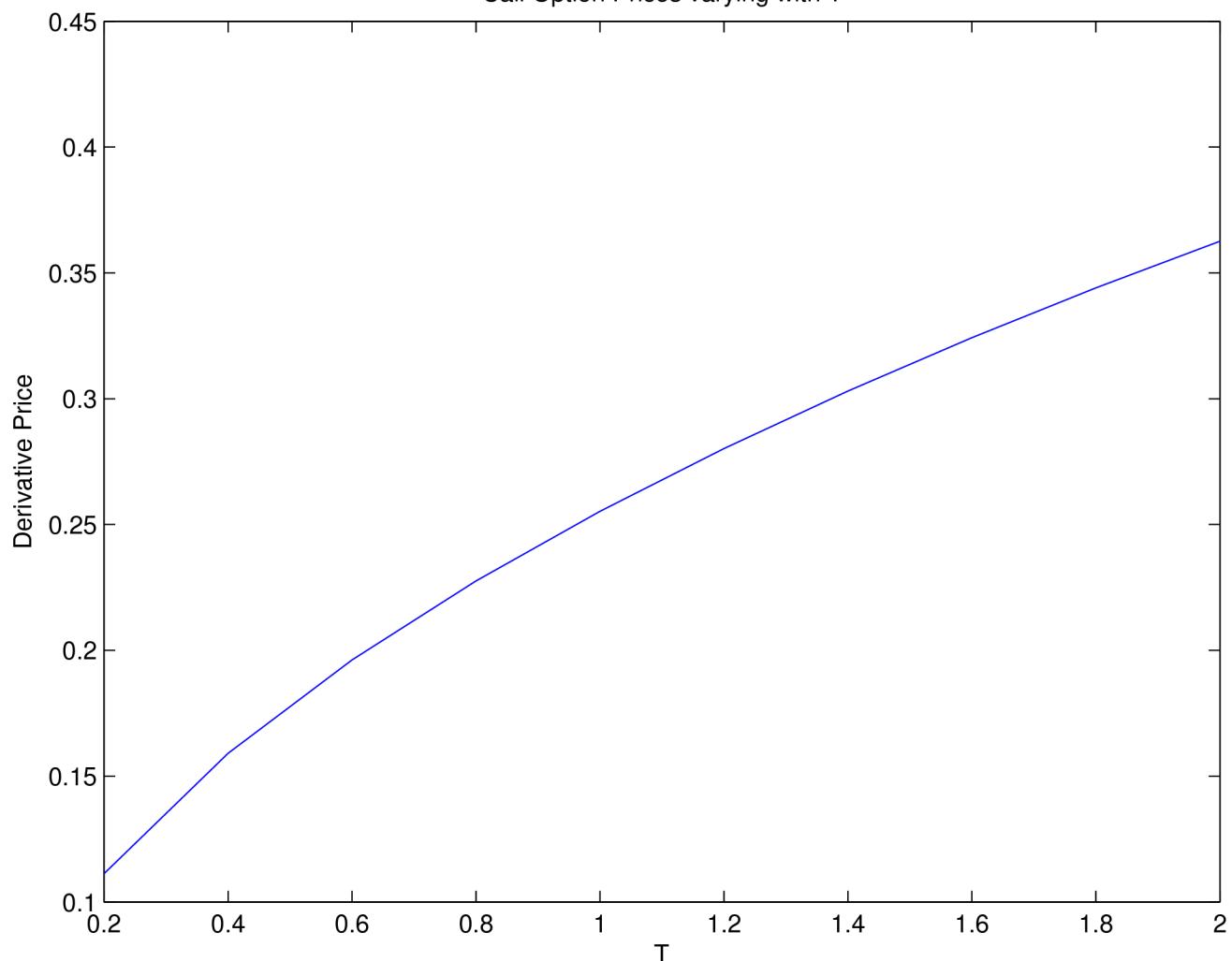




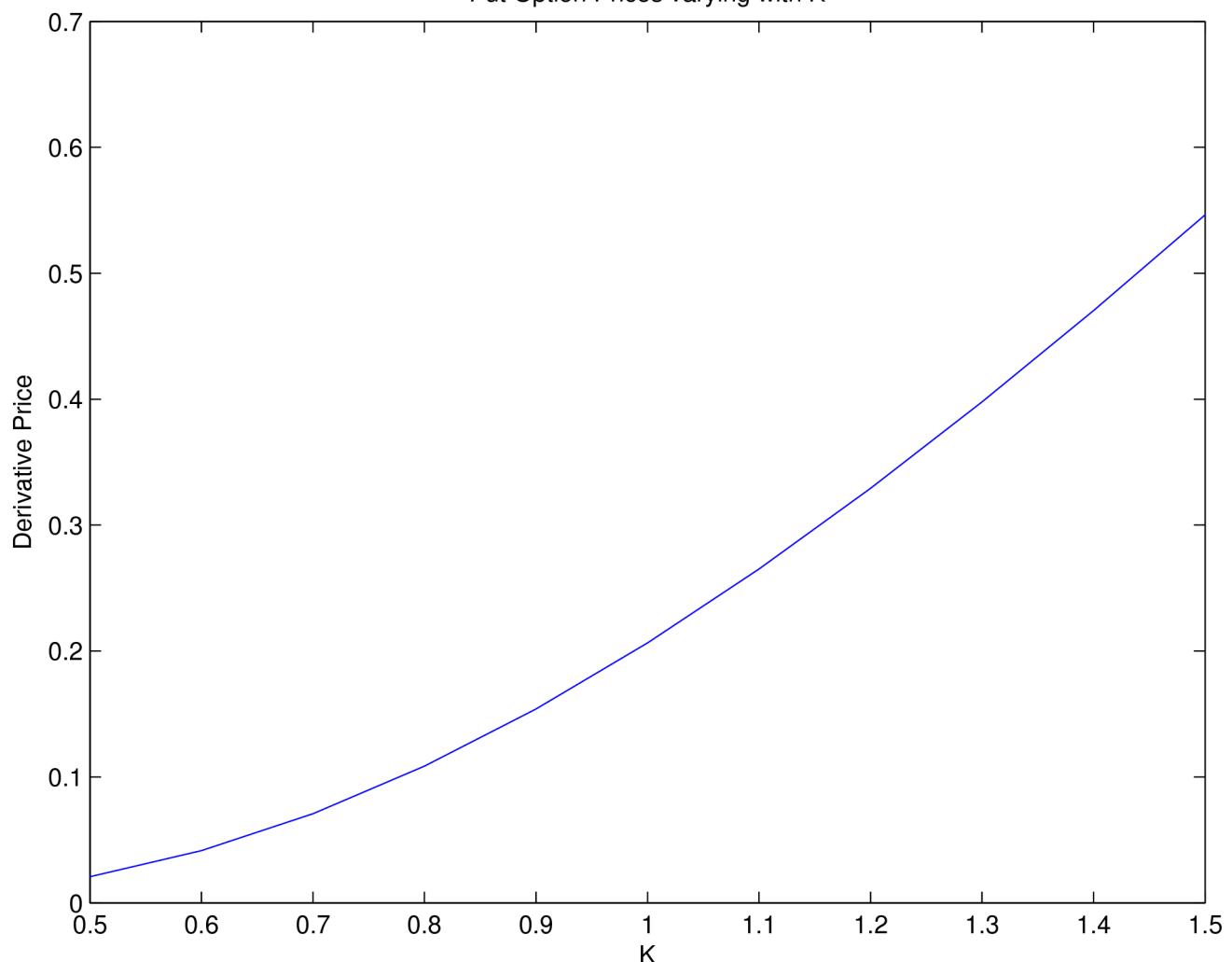
Call Option Prices varying with t



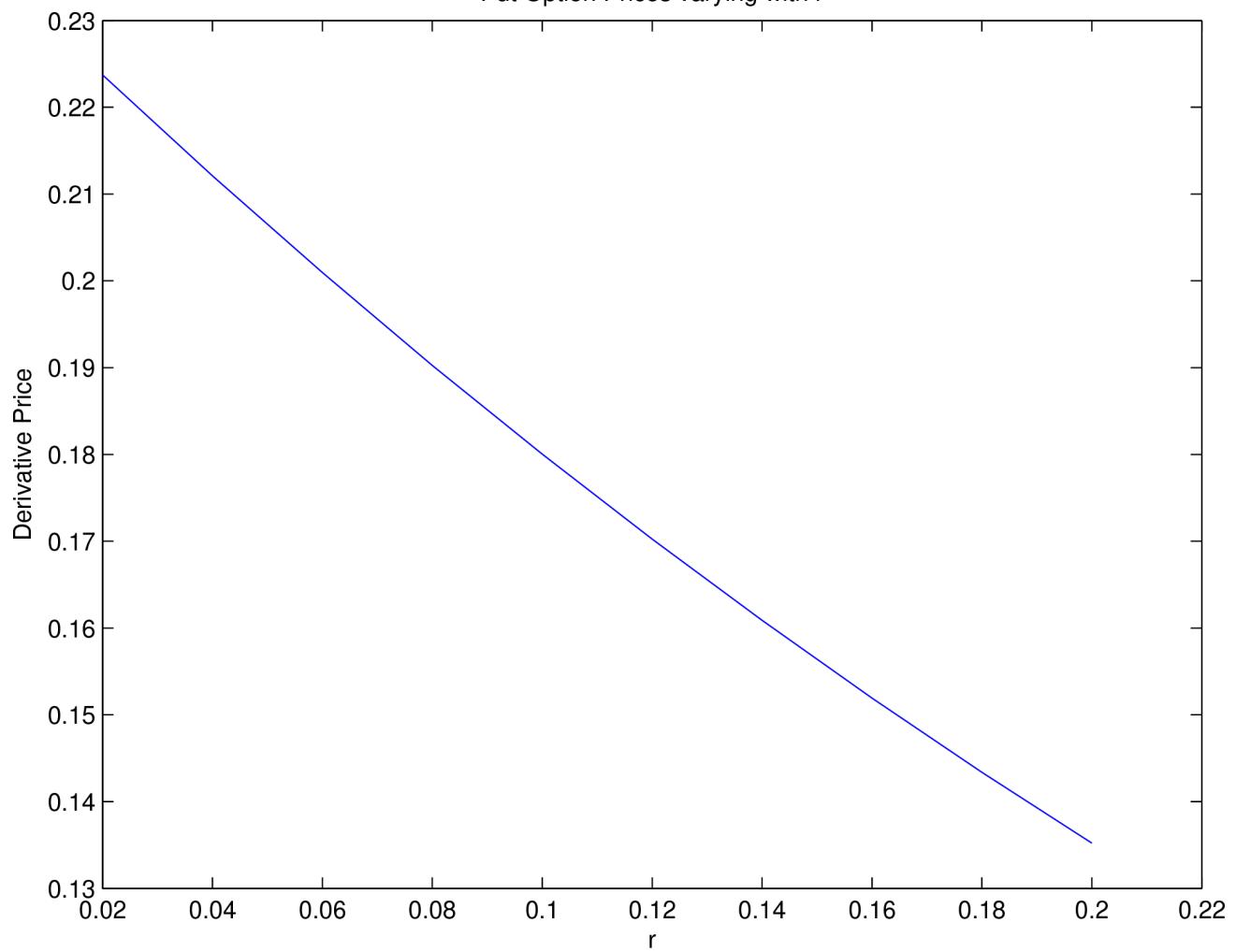
Call Option Prices varying with T

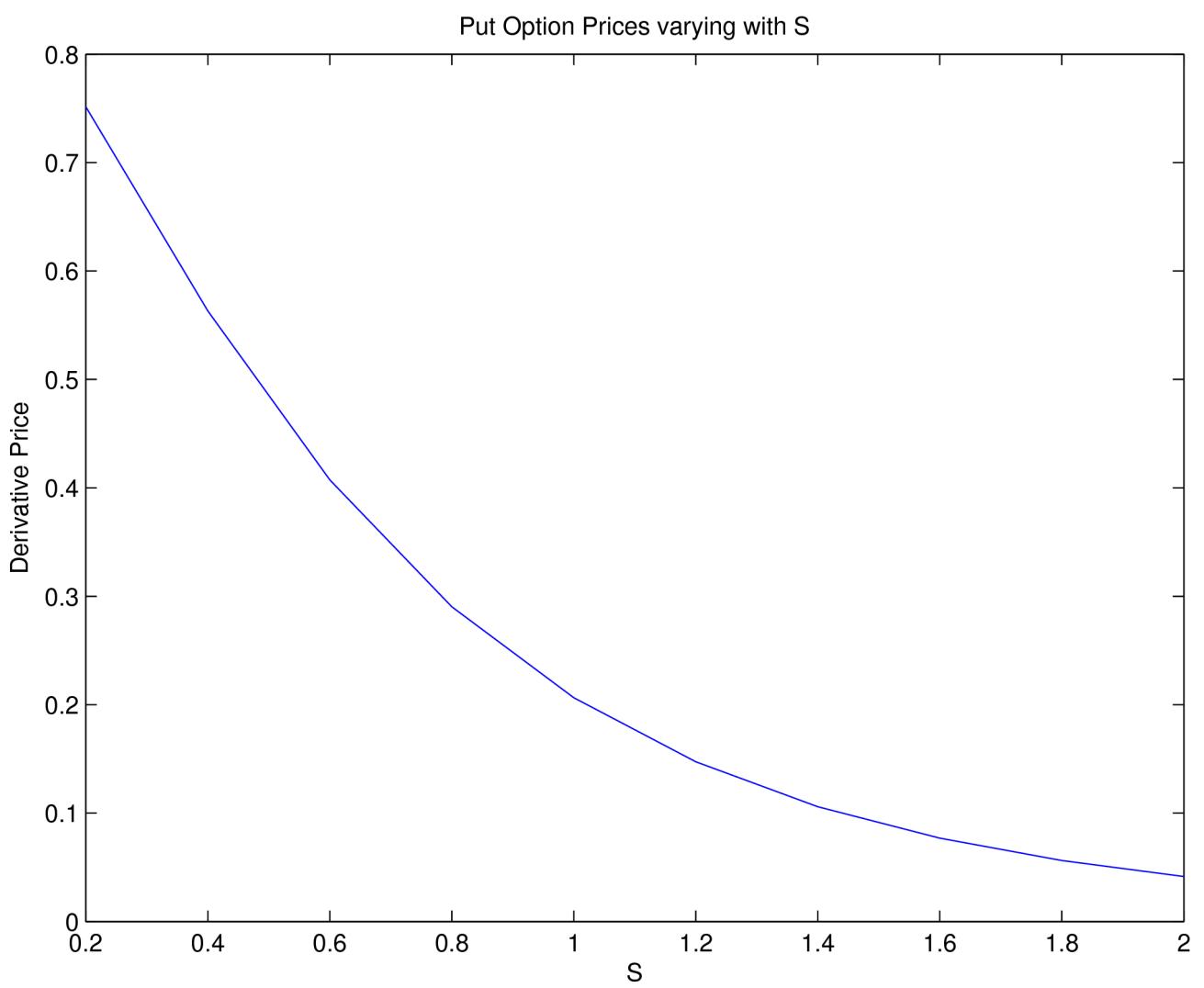


Put Option Prices varying with K

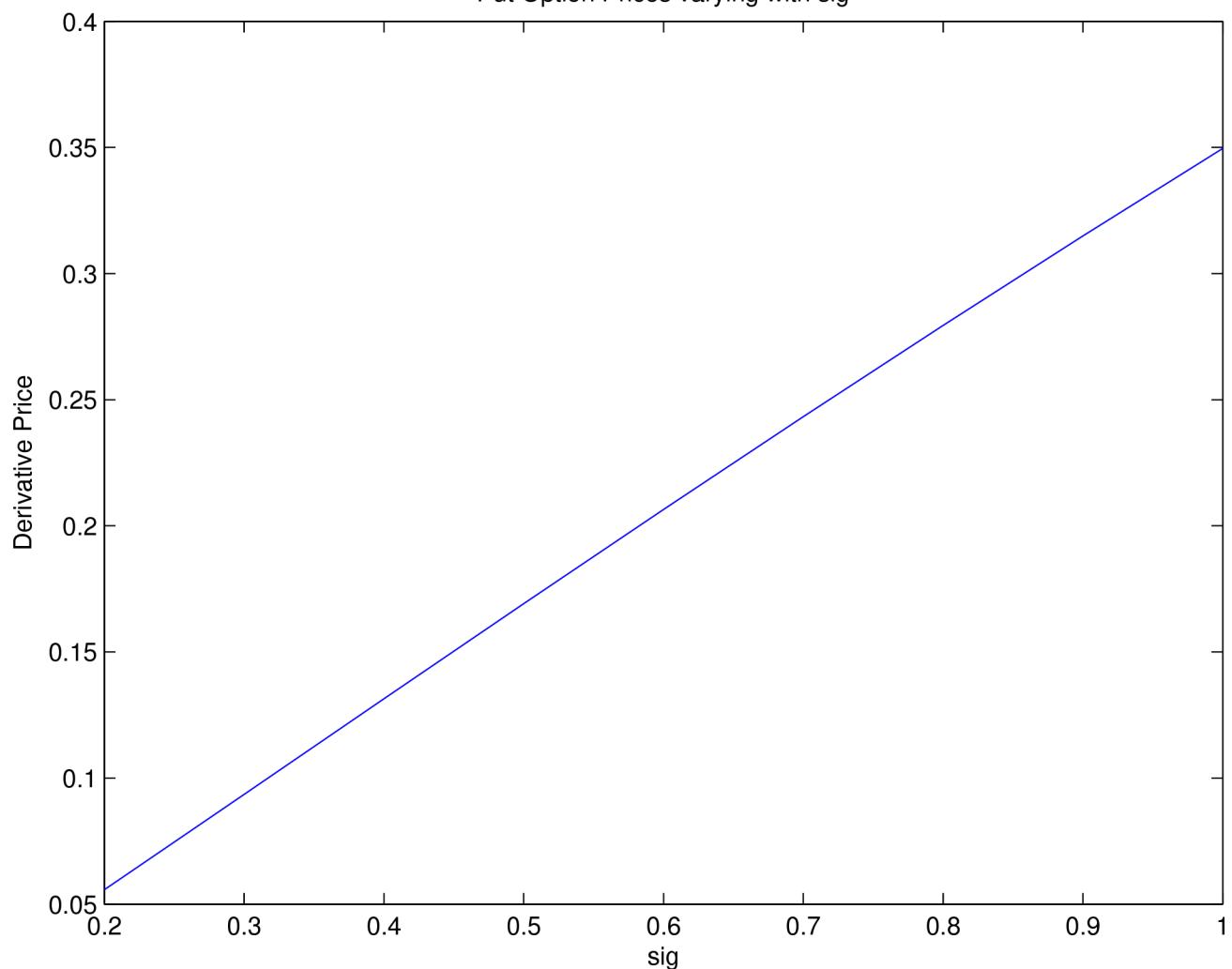


Put Option Prices varying with r

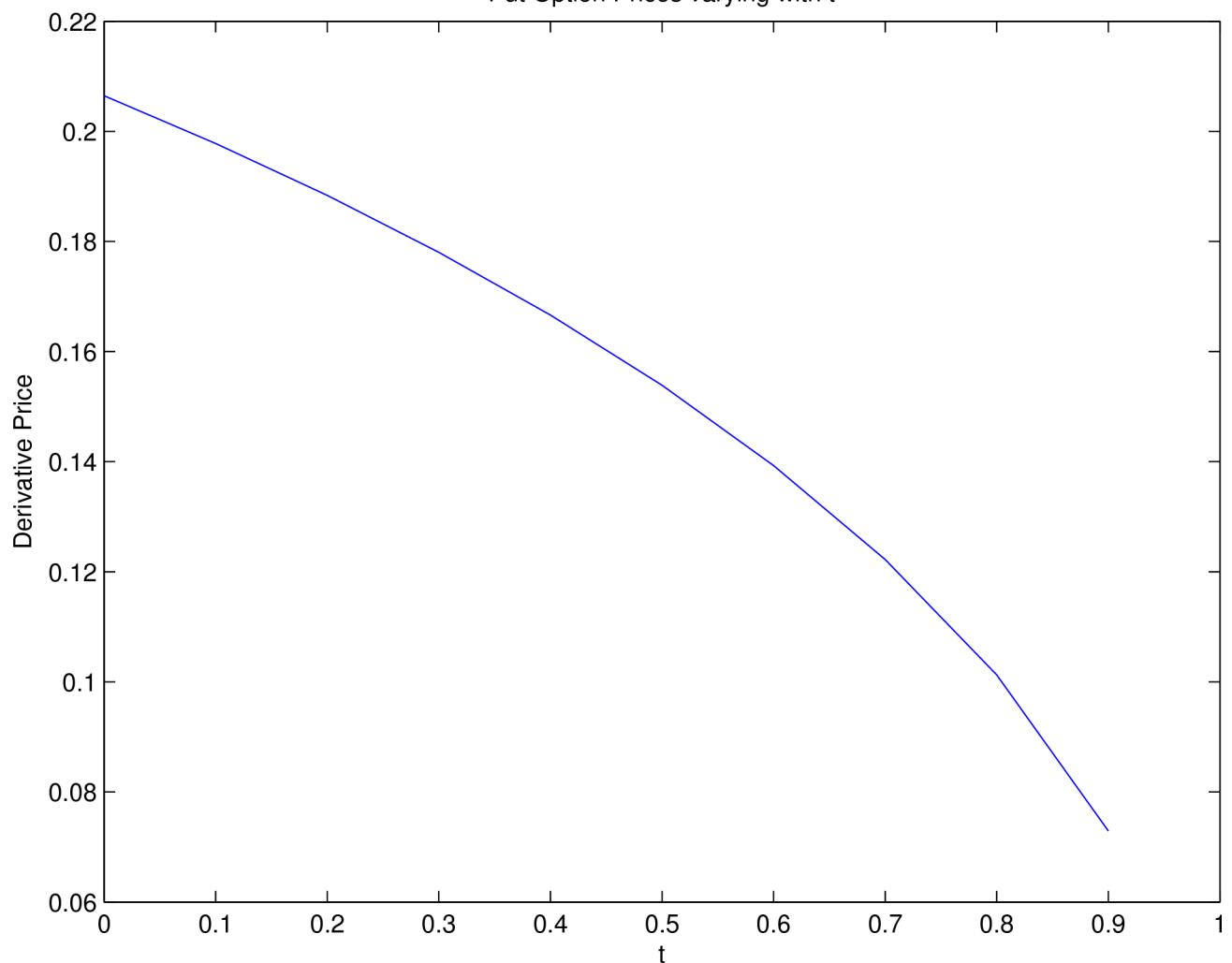




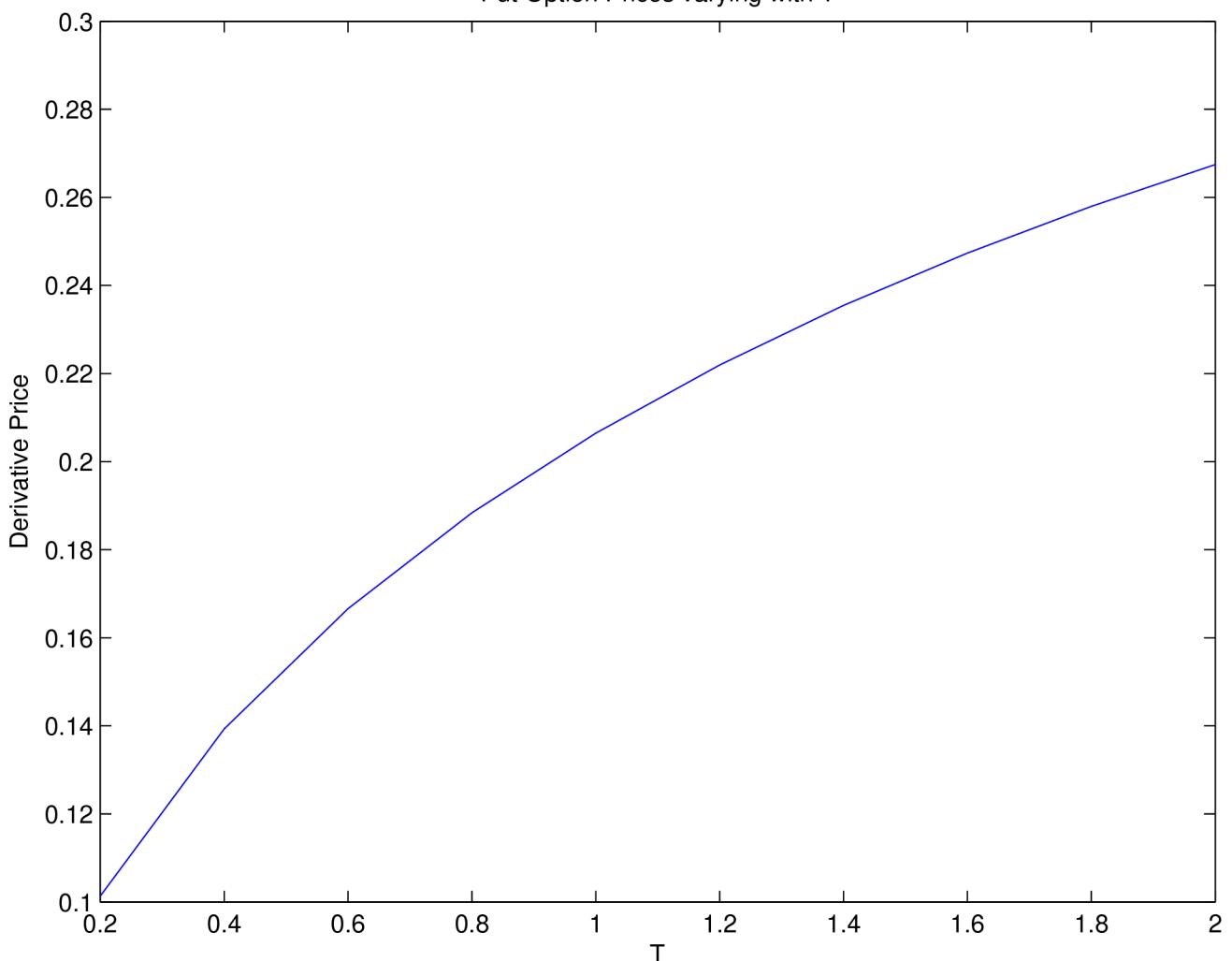
Put Option Prices varying with sig



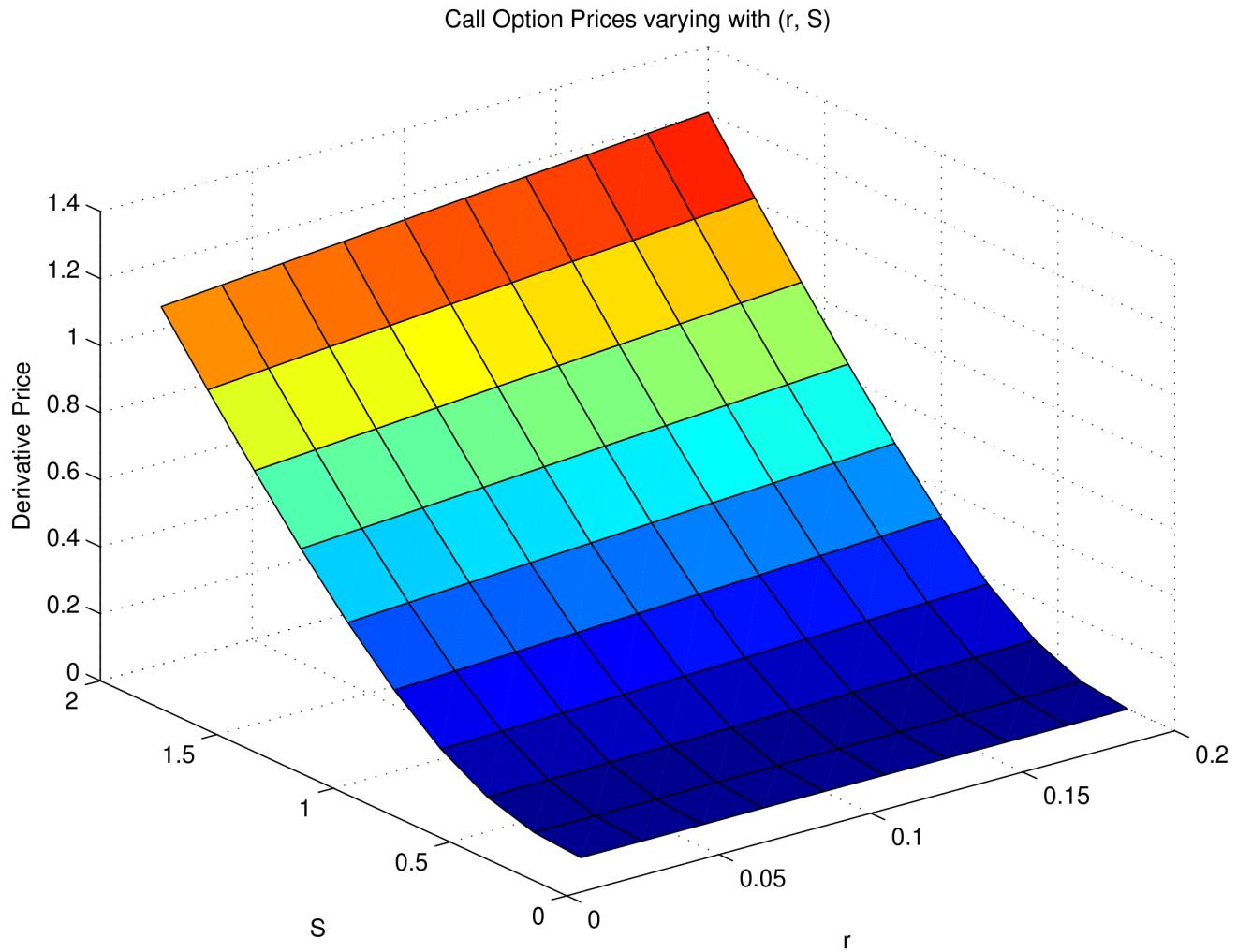
Put Option Prices varying with t



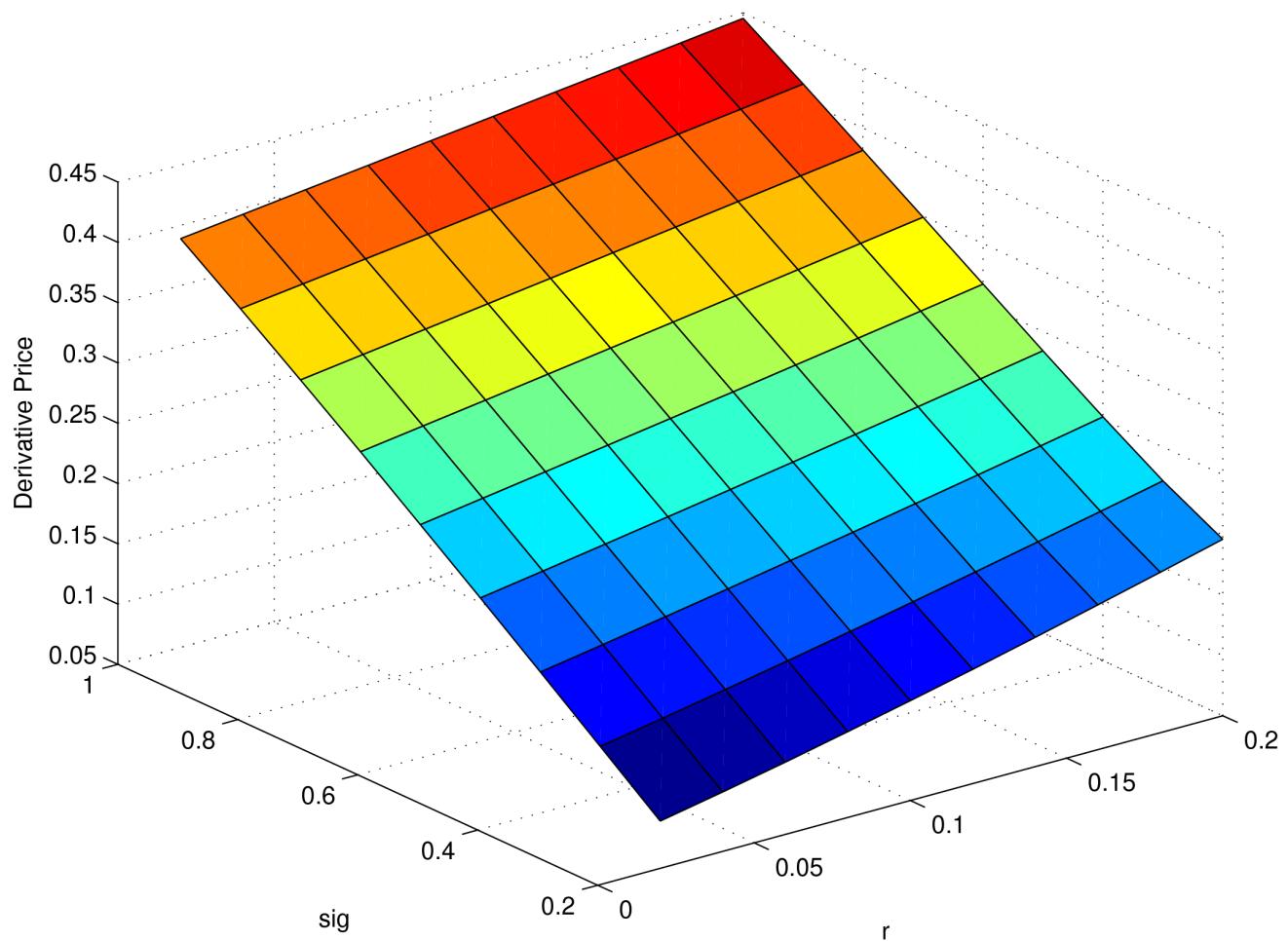
Put Option Prices varying with T



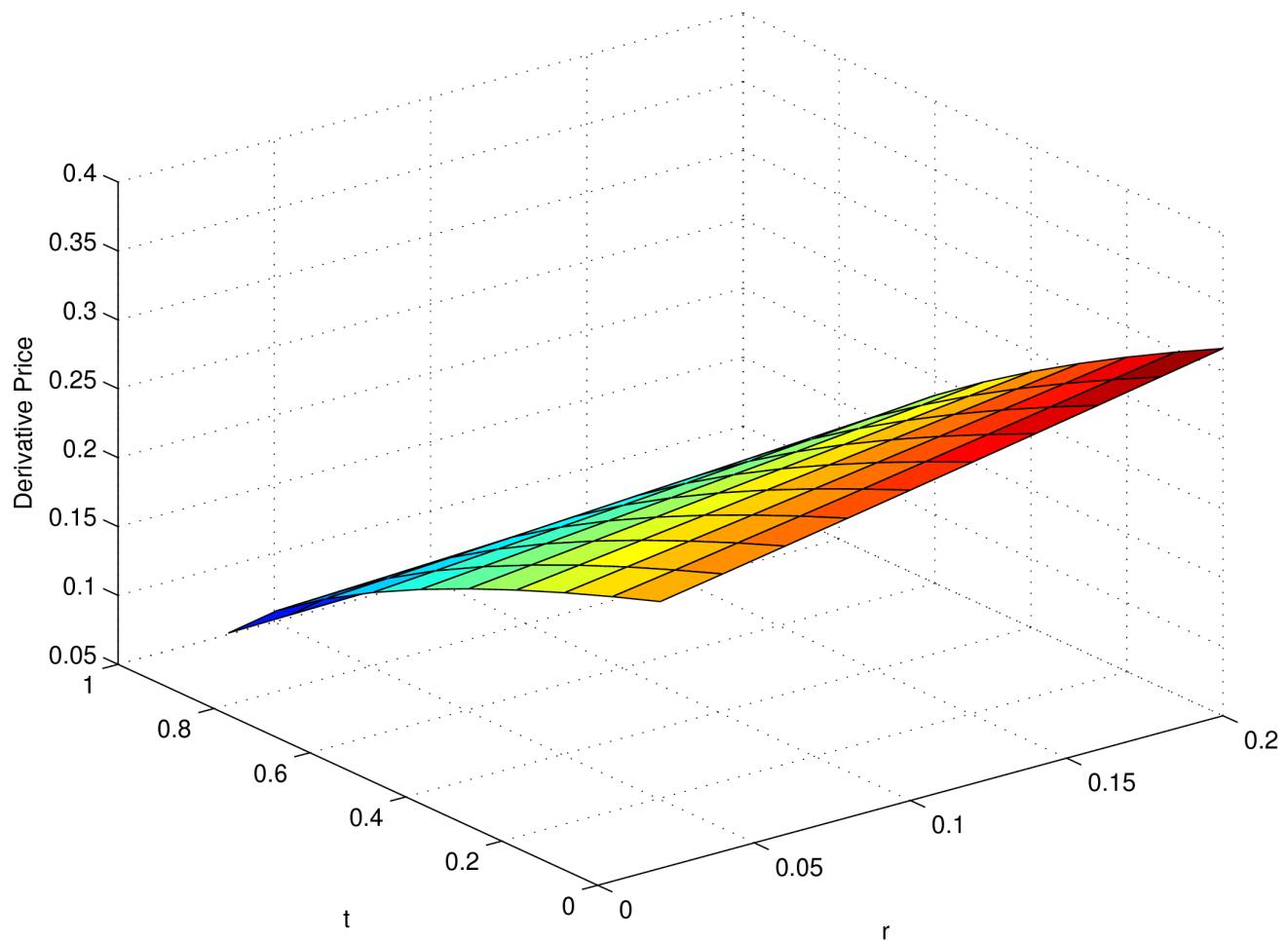
Three dimentional Plots



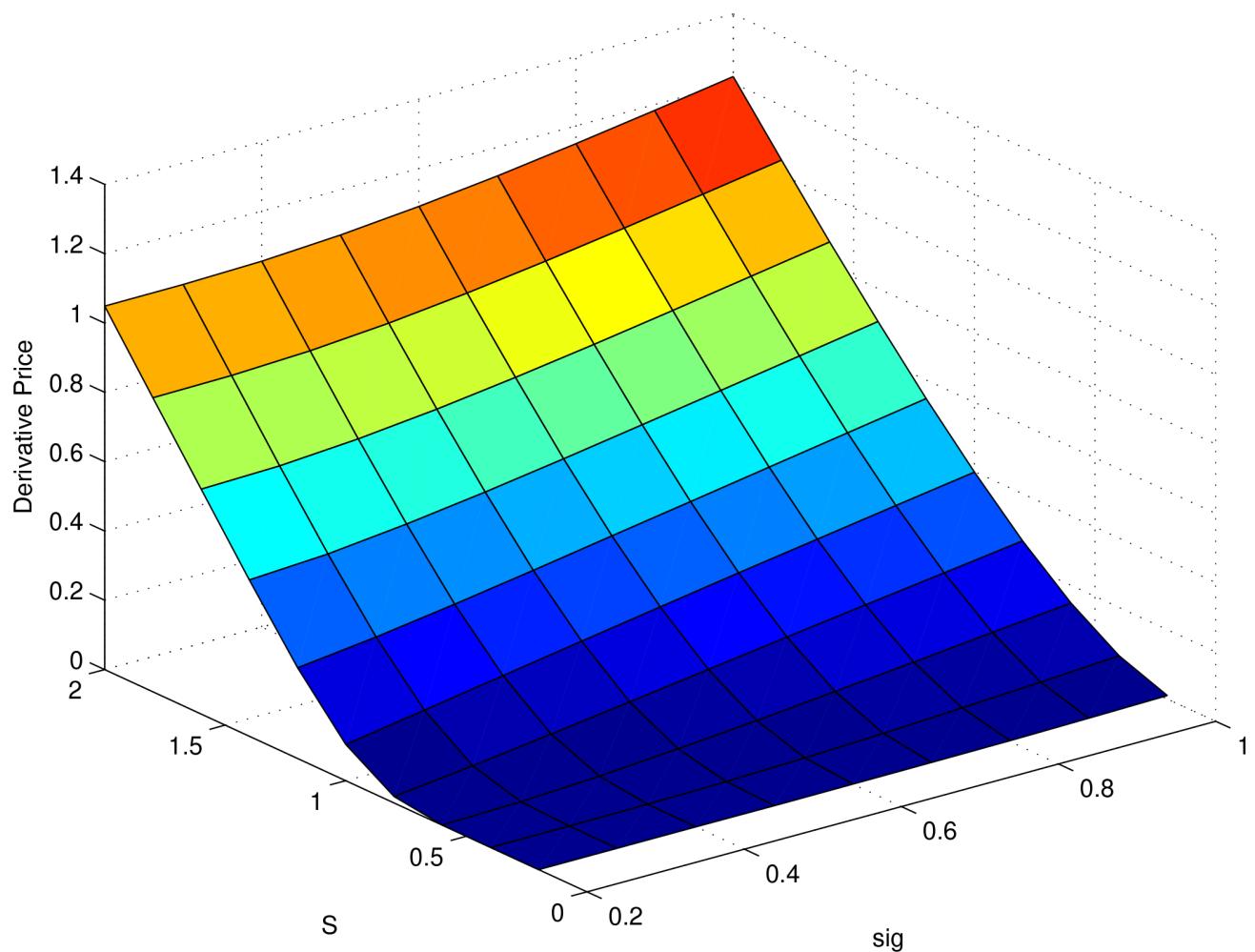
Call Option Prices varying with (r, sig)



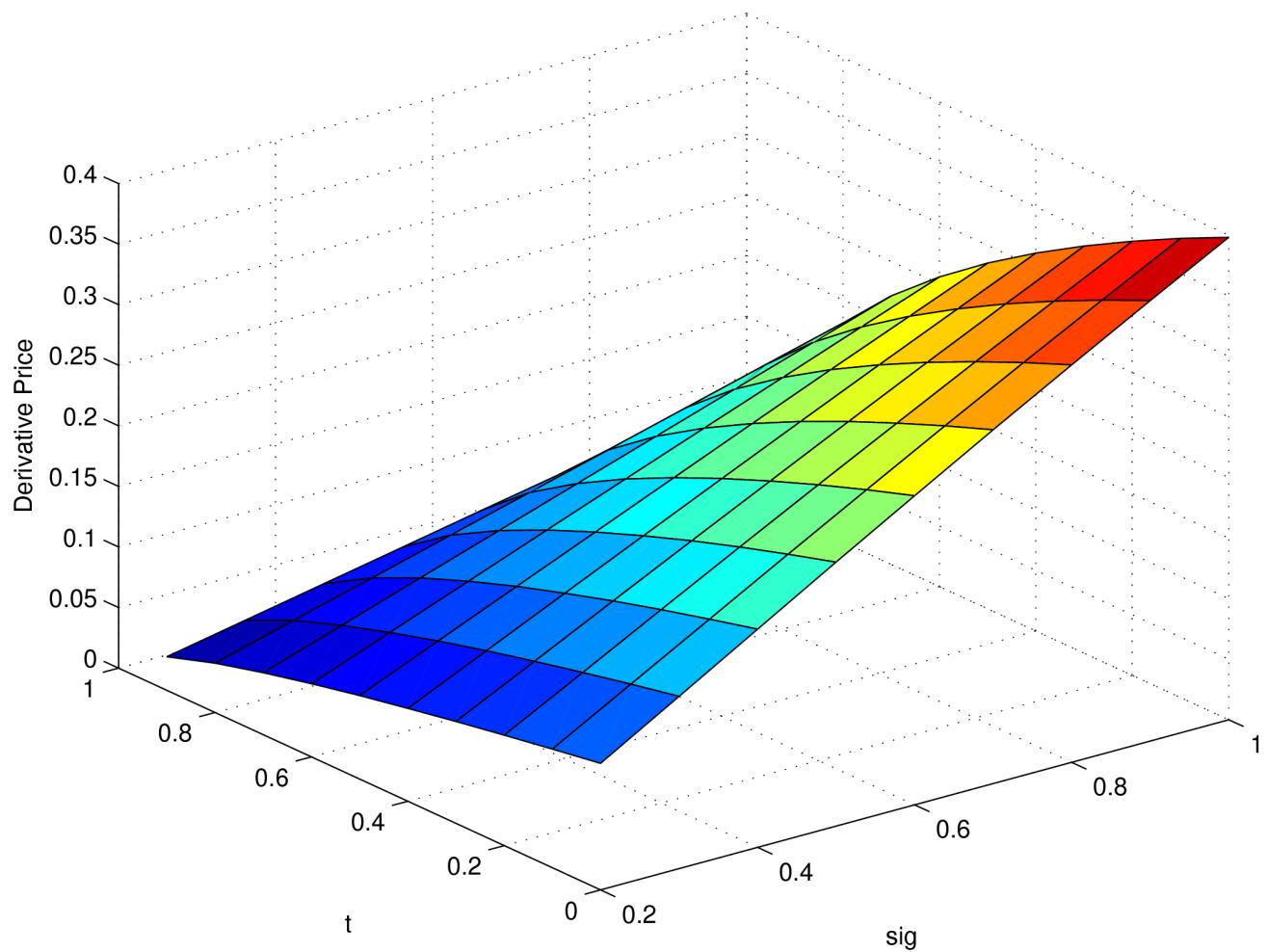
Call Option Prices varying with (r, t)



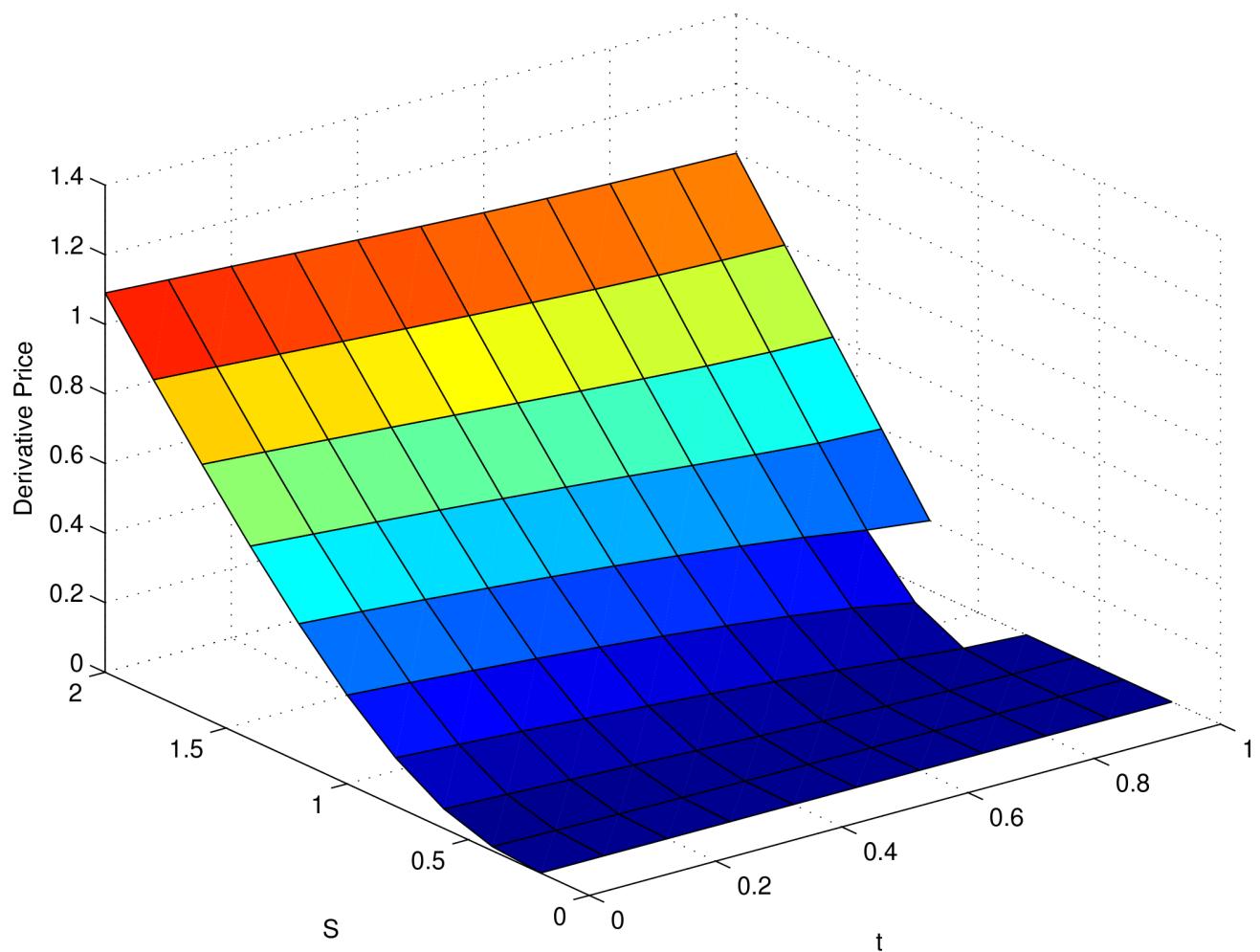
Call Option Prices varying with (sig, S)



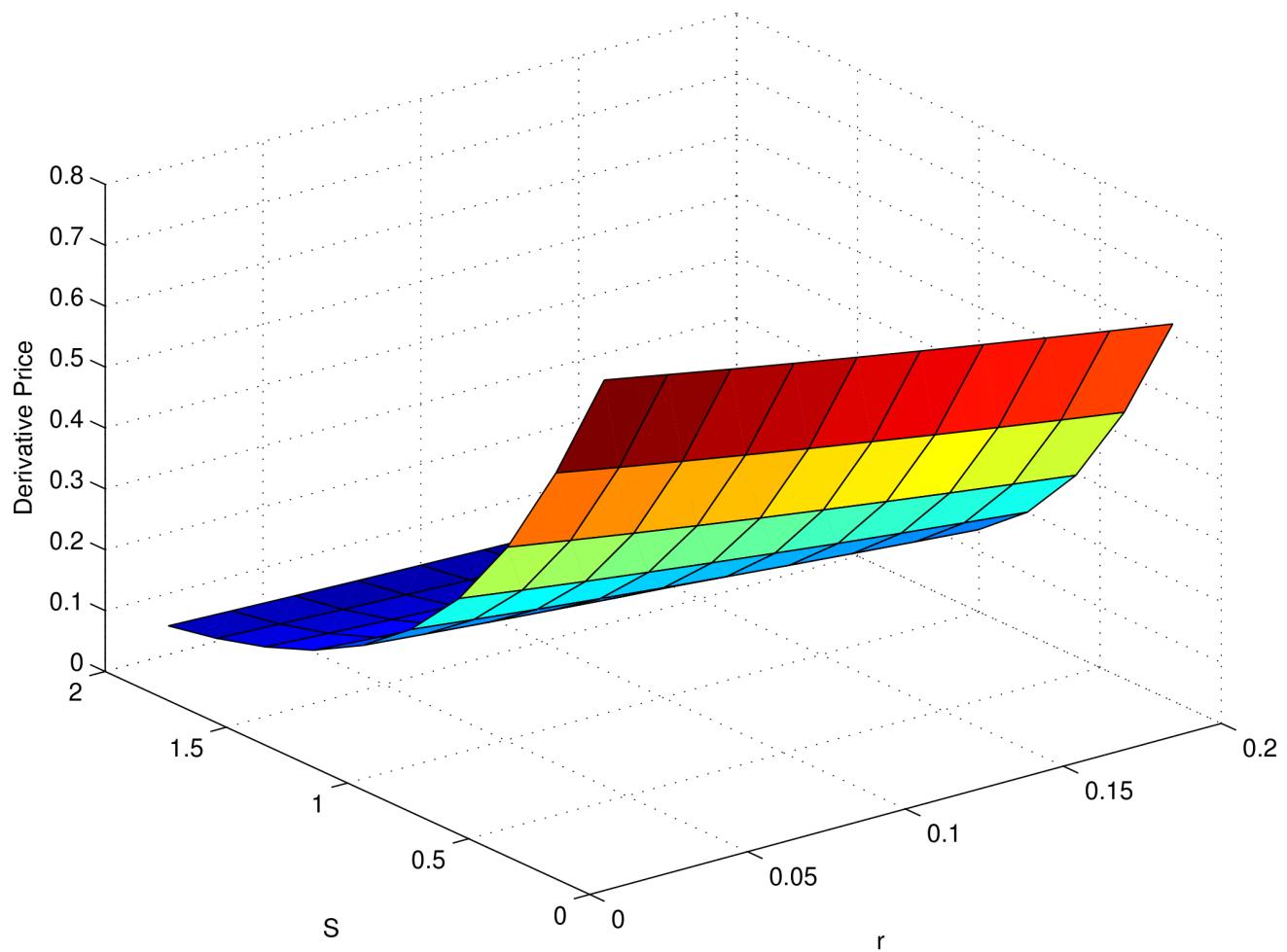
Call Option Prices varying with (sig, t)



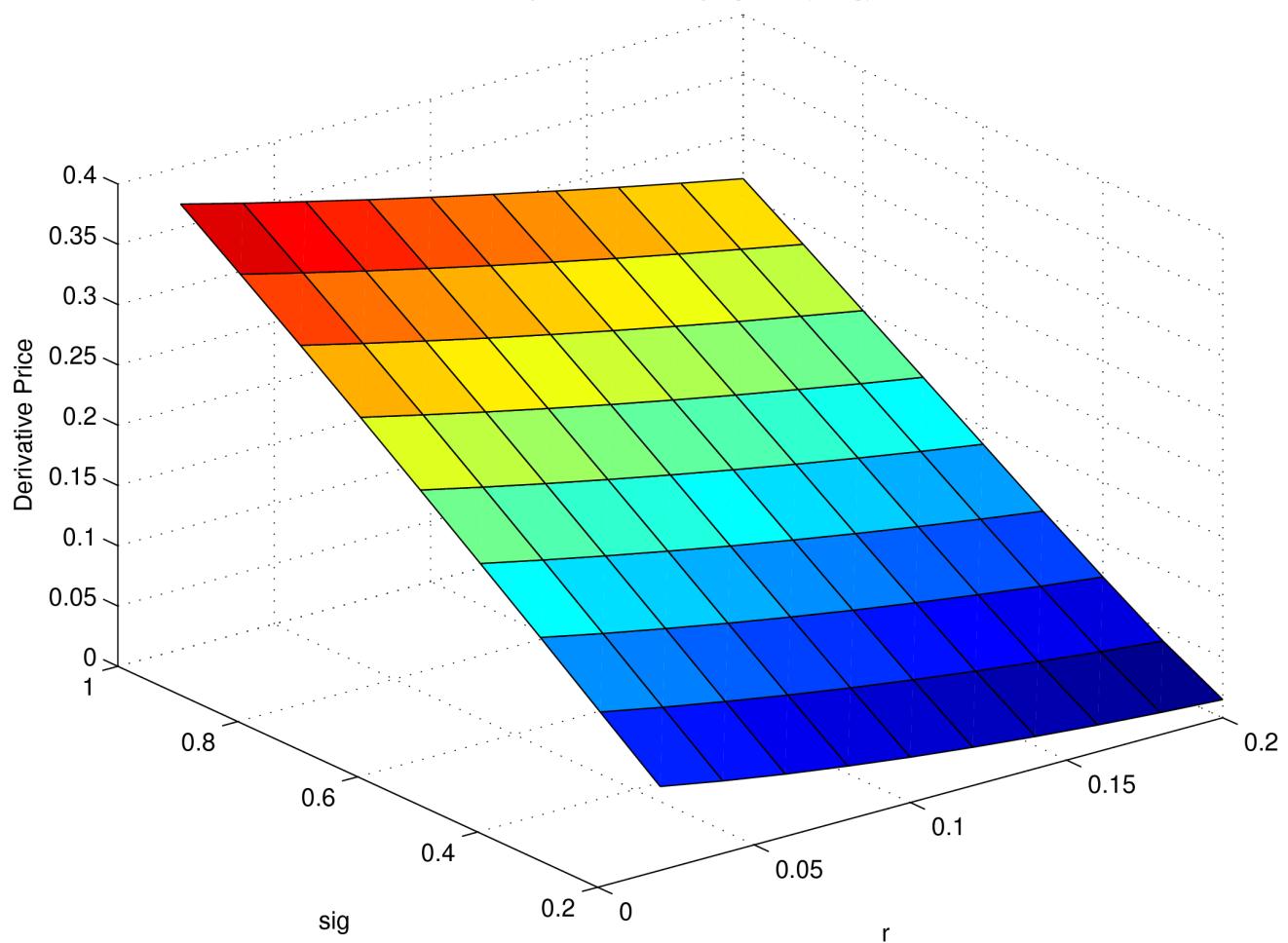
Call Option Prices varying with (t, S)



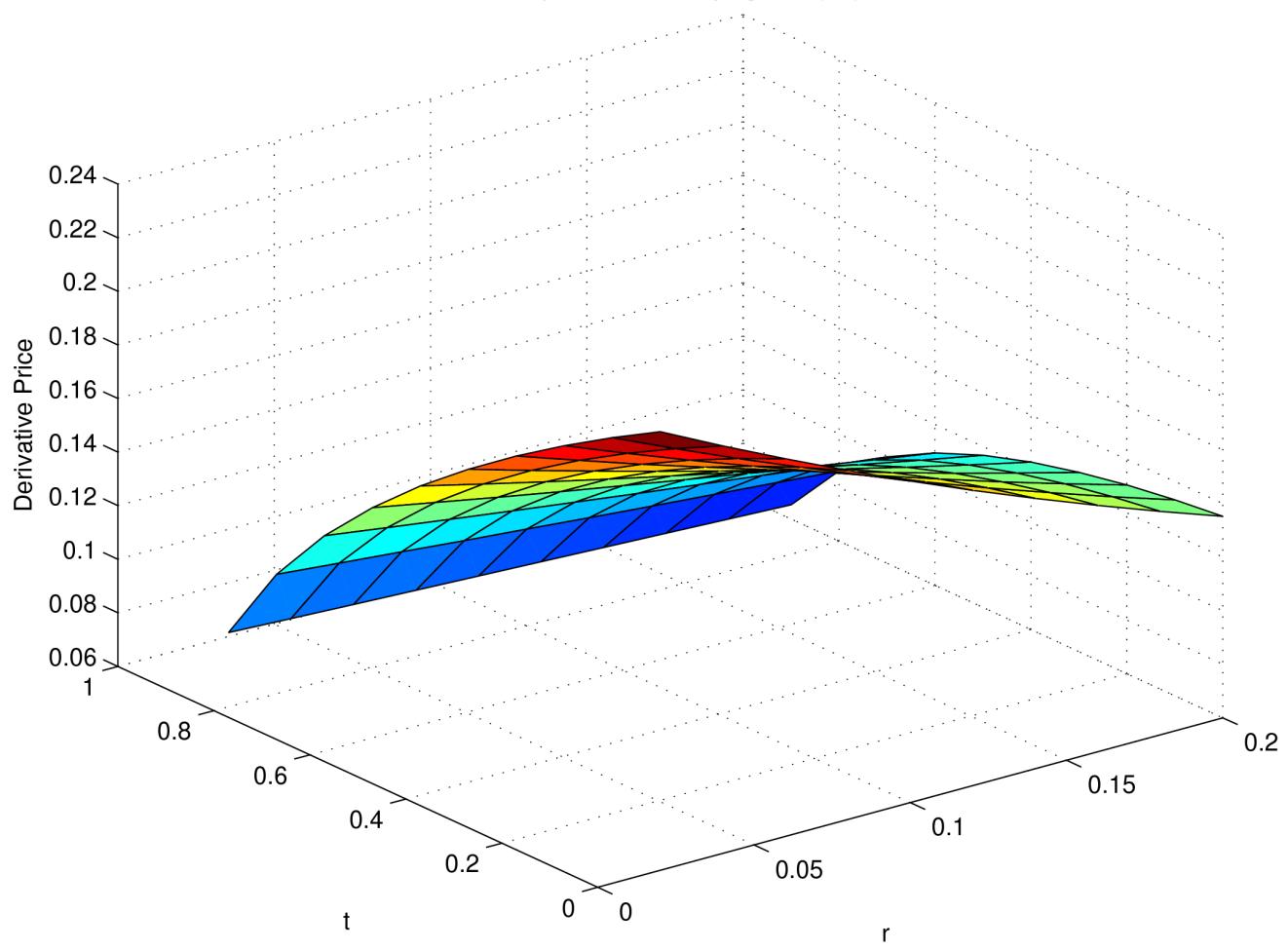
Put Option Prices varying with (r , S)



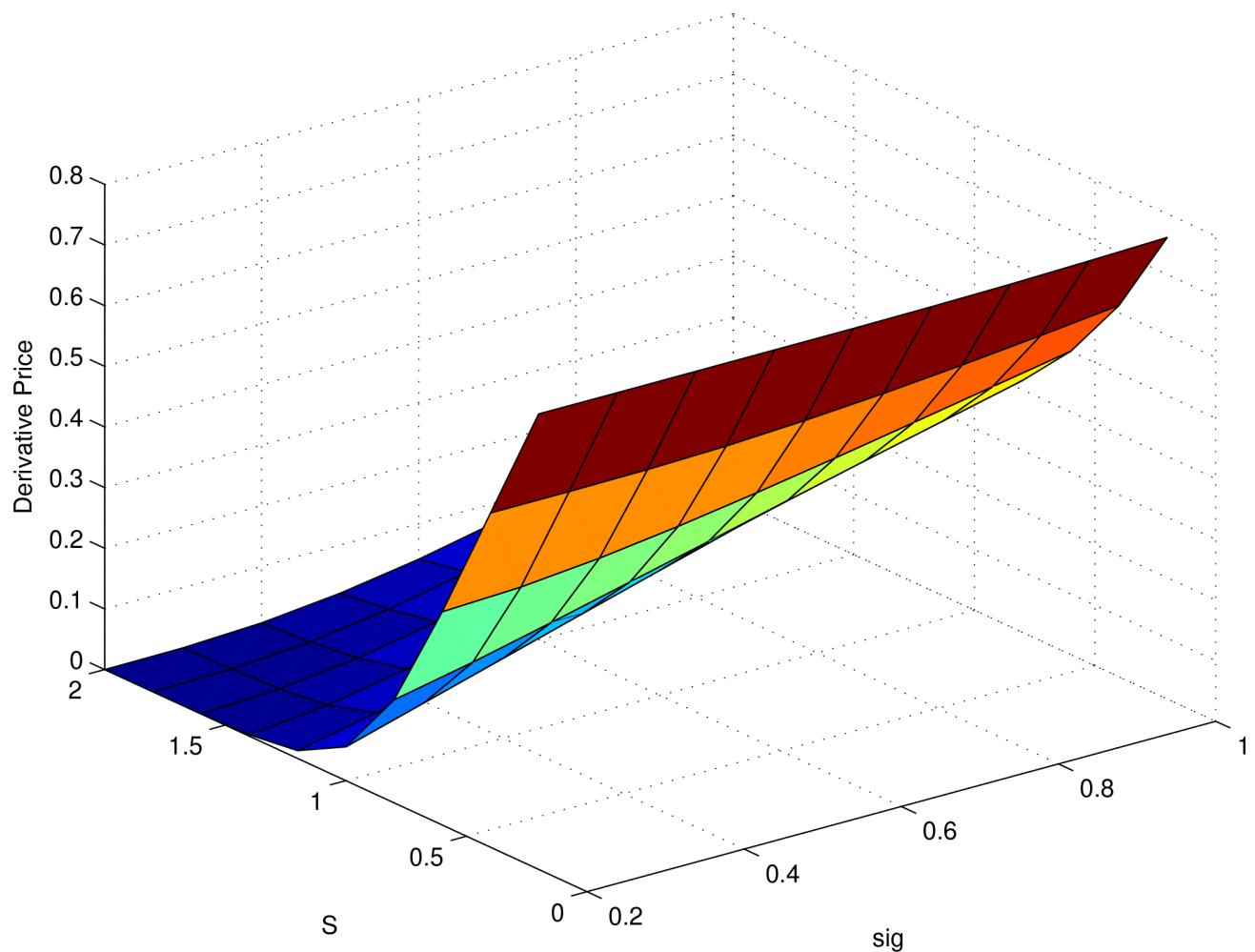
Put Option Prices varying with (r, sig)



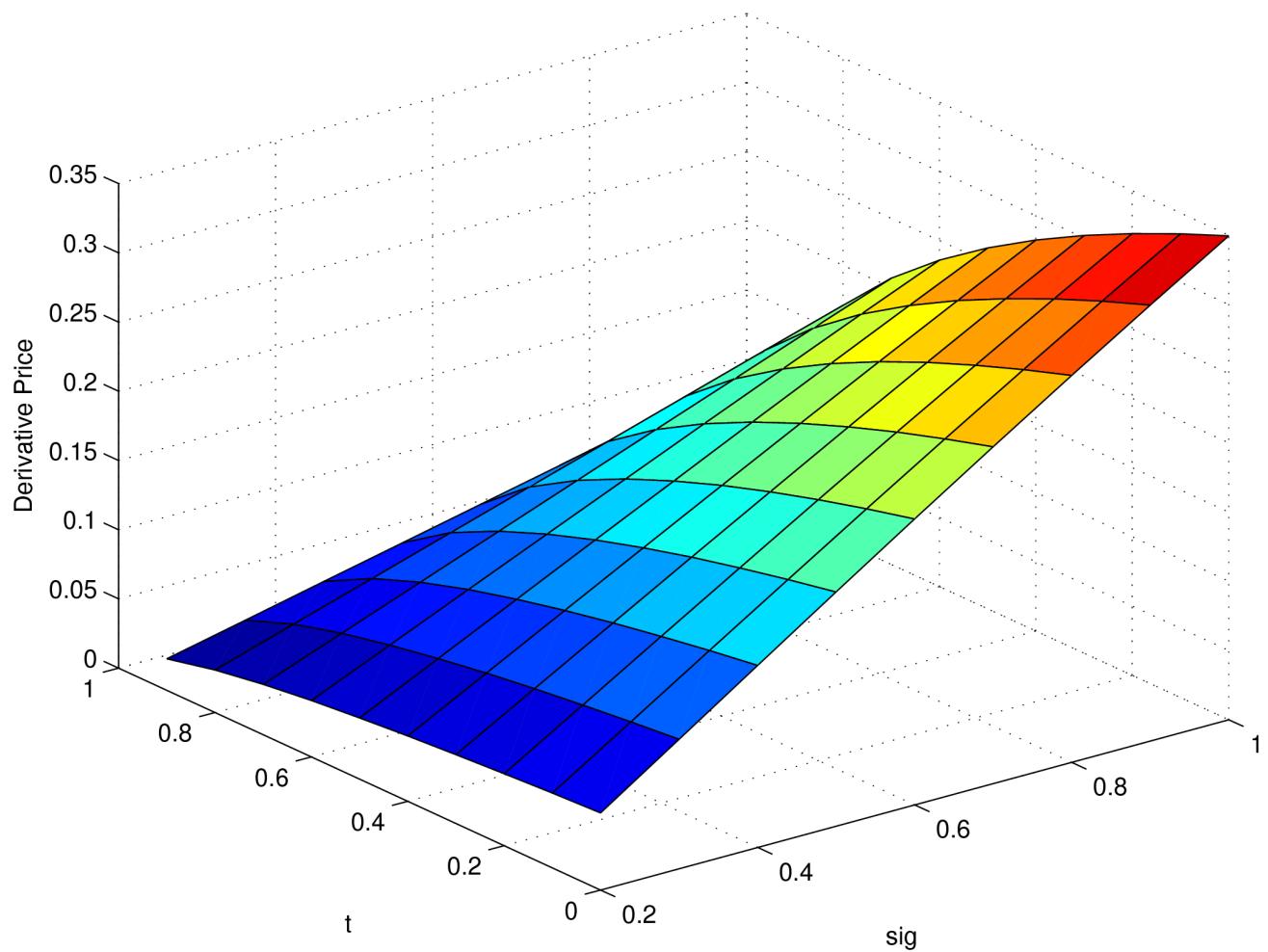
Put Option Prices varying with (r , t)



Put Option Prices varying with (sig, S)



Put Option Prices varying with (sig, t)



Put Option Prices varying with (t, S)

