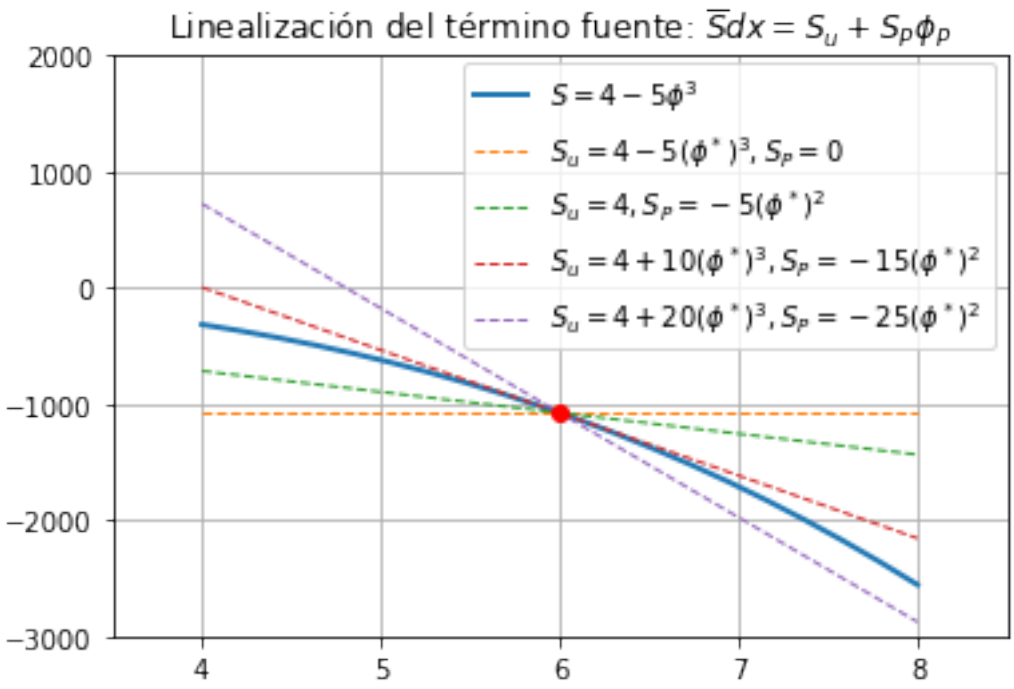
TerminoFuenteFVM

February 14, 2018

In [1]:
```
%matplotlib inline
```

In [85]:
```
import numpy as np
import matplotlib.pyplot as plt

x = np.linspace(4,8,20)

phi = 6
yv = 4 - 5 * phi ** 3

ym = map(lambda x: 4 - 5 * x ** 3, x)
y1 = np.array(list(ym))

ym = map(lambda x: 4 - 5 * phi ** 3, x)
y2 = np.array(list(ym))

ym = map(lambda x: 4 - 5 * phi ** 2 * x , x)
y3 = np.array(list(ym))

ym = map(lambda x: 4 + 10 * phi ** 3 - 15 * phi ** 2 * x, x)
y4 = np.array(list(ym))

ym = map(lambda x: 4 + 20 * phi ** 3 - 25 * phi ** 2 * x, x)
y5 = np.array(list(ym))

plt.plot(x, y1, '-', linewidth=2, label='$S = 4 - 5\phi^3$')
plt.plot(x, y2, '--', linewidth=1, label='$S_u = 4 - 5(\phi^*)^3, S_P = 0$')
plt.plot(x, y3, '--', linewidth=1, label='$S_u = 4, S_P = -5(\phi^*)^2$')
plt.plot(x, y4, '--', linewidth=1, label='$S_u = 4+10(\phi^*)^3, S_P = -15(\phi^*)^2$')
plt.plot(x, y5, '--', linewidth=1, label='$S_u = 4+20(\phi^*)^3, S_P = -25(\phi^*)^2$')

plt.plot(xv,yv,'ro')
plt.title('Linealización del término fuente: $\overline{S} dx = S_u + S_P \phi_P$')
plt.axis([3.5, 8.5, -3000, 2000])
plt.grid()
plt.legend(bbox_to_anchor=(1.0, 1.01))
plt.savefig('linealizacion.pdf')
```


Linealización del término fuente: $\overline{S}dx = S_u + S_p\phi_p$
$S = 4 - 5\phi^3$
$S_u = 4 - 5(\phi^*)^3, S_p = 0$
$S_u = 4, S_p = -5(\phi^*)^2$
$S_u = 4 + 10(\phi^*)^3, S_p = -15(\phi^*)^2$
$S_u = 4 + 20(\phi^*)^3, S_p = -25(\phi^*)^2$
2000
1000
0
−1000
−2000
−3000
4
5
6
7
8