

hw_fourier

February 26, 2019

todo

Find the characteristic function of W_t by deriving

$$\phi_t(u) = \mathbb{E}[e^{iuW_t}].$$

todo

Use the explicit formula to find BSM call price with the following paras.

```
In [1]: '''=====
        paras
        ====='''
        s0 = 100
        r = .0475
        sigma = .2
        otype = 1
        K = 110.
        T = 1.
```

todo

Use the fourier transform method to find out the same BSM call price.