

Homework Assignment No.12, Due Tuesday, Dec 17 at 5 pm

1. Modify the Matlab code `mc_option.m` to perform a comparison study for an European put, a digital call, and a digital put (all with $K = 100$). You can assume all the other parameters in the code. Observe the convergence behavior for all three choices of simulation methods provided.
2. Use the code `mc_exotics.m` to perform a series of simulations with the number of steps $N = 100$, and number of paths $M = 10^k, k = 3, 4, 5, 6$. Plot the simulated prices for all three options (up and out call, Asian call, and floating call). Discuss briefly what these options are and how should they be used in practice.
3. Implement the trinomial tree model using the formulas introduced in the previous assignment. Repeat the experiments in Problem 2 of the midterm project. If you are using Excel, you could just use $N = 5$ and 10. Compare with the previous results from the binomial tree model and make some comments.