FRE 6951

Problem Set 1

Due: April 12, 2019, before class

If you plan to use Visual Studio and Nvidia Cuda C on your own PC, do exercise #3 below first.

1) Find the Black-Scholes example in the CUDA Toolkit (C:\ProgramData\NVIDIA Corporation\CUDA Samples\vxx.x\4_Finance.) and open in Visual Studio. Build the model and run.

2) In Windows Visual Studio, write a program to multiply the elements of one vector by the elements of another vector on the CPU and on the GPU. The vectors need to be of length at least 2048. Print a few of the elements of the results to verify that the calculations on the GPU match those on the CPU.

Provide screen shots of your work for 1 and 2. For 2, provide a copy of the source code and a screen shot of the execution.

3) If you plan to use Visual Studio and Nvidia Cuda C on your own PC, download Visual Studio Community Edition (https://visualstudio.microsoft.com/vs/community/) and the CUDA Toolkit from Nvidia (https://developer.nvidia.com/cuda-toolkit). Download Visual Studio first. Both downloads are free.