

Introduction to CUDA Parallel Programming Homework Assignment 1
Due 2021/03/16

1. To write your own CPU+GPU code for the matrix addition with 2D grid and 2D blocks. Setting the input $N \times N$ matrices (where $N=6400$) with entries of random numbers between 0 and 1, determine the optimal block size by running your code for the following block sizes: (4,4); (8,8); (10,10); (16,16); (20,20); (32,32). You can use the sample code in `twqcd80:/home/cuda_lecture_2021/vecAdd_1GPU/vecAdd.cu` as a template to develop your own code.

Your homework report should include your source codes, results, and discussions. The discussion file should be prepared with a typesetting system, e.g., LaTeX, Word, etc., and it is converted to a PDF file. All files should be zipped into one gzipped tar file, with a file name containing your student number and the problem set number (e.g., `r05202043_ps1.tar.gz`).

Please send your homework from your NTU/NTNU email account to twchiu@phys.ntu.edu.tw before 24:00 of the due date.