CS 5740 **Parallel and Distributed Computing**
Assignment # 5 Due Date: December 08, 2011

CUDA

1. In-place swapping can be performed by using the following function:

```
void swap ( int * a, int * b )
{
    *a ^= *b ^= *a ^= *b;
}
```

   Modify the code to reverse array on the device by limiting the index to up to half the array size and swap the appropriate numbers in-place. You will have to compute the two indices to be swapped and then, substitute the above code. Do not call the function.

2. Write a program to find the largest number in an array using a kernel. Test it using the following process: Create a file with random numbers in the range $[0, 2^{32} - 1]$. Make sure that the numbers in the file are unique. Also make sure that you have at least 100,000 integers in the file. Read this file into memory and find the largest number.

What to handin

Create your programs in a directory called *username*.5 where *username* is your user name on admiral. Once you are done with everything, *remove the executables and object files*, copy the directory to admiral, and issue the following commands:

```
% cd
% ~bhatis/bin/handin cs5740 5
```