

## ICOM 6025/CIIC 4019 – High Performance Computing Programming Assignment #4: CUDA

In this assignment you will use CUDA to implement a data parallel sorting code using Bitonic Sort.

The vector of numbers to be sorted will be of length  $2^k$

1. Measure the execution time using different values of  $K$
2. For  $K=25$ , evaluate the performance of the GPU computations varying the numbers of blocks and the number of threads per block
3. Write a short report discussing the performance results. Is your implementation scalable on the GPU?

Deliverables (parallel code & report)

Reference

<http://www.iti.fhflensburg.de/lang/algorithmen/sortieren/bitonic/bitonicen.htm>