

Tutorial: HPC - Algorithms and Applications

WS 16/17

Complete the following assignment (alone or in a group); the solution will be discussed in the tutorial.

Worksheet 6: Shallow Water Equations in CUDA (2)

T6.1: Optimization of the SWE-CUDA kernels

Think of possible optimizations for the CUDA kernels of SWE:

- Can we use shared memory to improve memory access in the kernels?
- Is there a way to improve the computation of the maximum wave speed?
- Would it be feasible to fuse the kernels `computeNetUpdatesKernel` and `updateUnknownsKernel`?