Data Parallel School

M. Hodgkinson (on behalf of all those involved in organisation)

15 January 2021

Introduction

- Organised by Vassil and Evguenia Alexandrova
  - Myself and Ben Morgan advised from the HEP side
  - Antonio Rago (Plymouth) and Andreas Juttner (Southampton) advised from the theory side.
- Suitable for people with knowledge/experience of using C++, who have little/no experience with GPU programming.
- You can register here
  - Includes detailed content of course

Course Content

- Covers topics including:
  - parallel algorithms
  - GPU programming with CUDA and profiling your code
  - communication avoiding algorithms
  - Optional module on OpenMP, MPI, hybrid algorithms
- Combination of lectures and hands on work
  - Hands on work will be done in groups (mixture of HEP and theory people).
- Will check if the material already exists - if not we can ask if it will be possible to use the format suggested by Eduardo and to make the material available via the HSF training areas for reuse.

Registration

- From the link on slide 2 you can register.
    - Parts of the form will ask you about your research interests and experience level.
    - The precise content of the course will take these into account, so those details are important!
    - Number of people on the course is capped at 30 - but the funding will allow to run the course more than once (most of the work is in the preparation)
- Runs on all of the following dates:
    - 09:00-17:30 March 15-17
    - 13:00-15:00 March 19
    - 09:00-12:30 March 22
    - 09:00->15:30 March 23
    - 09:30-12:30 March 26
- Optional module runs on the following dates:
    - 09:30-17:30 March 29
    - 09;00->17:30 Marc 30
    - 13:00->15:00 March 31

Summary

- School will run during March on a number of (non-consecutive) days.
  - Register here.
  - So far 14 have registered (10 HEP and 4 Lattice) - 30 spaces available, but Vassil/Evgenia have already stated they can run the school a second time, within current funding envelope, if demand is there.
  - We will investigate further the possibilities for integration with the HSF training materials.