

alpaka Parallel Programming – Online Tutorial

Lecture 00 – Getting Started with alpaka

Lesson 06: alpaka Workflow



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Lesson 06: alpaka Workflow

Based on CMake

- Starting tomorrow, the lectures will become more detailed
- We will start to do actual work with alpaka
- alpaka is usually used with an up-to-date CMake (≥ 3.15)
- All examples in the upcoming lectures will require CMake ≥ 3.15

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No CMake available?

- Special stand-alone headers available. Example for CUDA GPUs:
`#include <alpaka/standalone/GpuCudaRt.hpp>`
- Beware: **You** will have to guarantee for all dependencies, compatibilities and compiler-specific flags!

Lesson 06: alpaka Workflow

alpaka and cupla

- alpaka: *Abstraction Library for Parallel Kernel Acceleration*
 - <https://github.com/alpaka-group/alpaka>
 - Focus of the lectures
- cupla: *C++ User Interface for the Platform Independent Library Alpaka*
 - <https://github.com/alpaka-group/cupla>
 - Thin layer over alpaka
 - CUDA-style API, intended for porting existing CUDA codes
 - Not covered here



alpaka

The logo for alpaka features the word "alpaka" in a blue, sans-serif font. The letter "p" is replaced by a stylized orange alpaca head profile.

cupla

The logo for cupla features the word "cupla" in a blue, serif font. The letter "c" is replaced by a stylized orange and blue shape that resembles a cup or a stylized letter.

Lesson 06: Lecture Workflow

Slides and examples

- All slides will be uploaded after the corresponding lecture took place
- We will upload the slides to here: <https://github.com/alpaka-group/alpaka-workshop-slides>
- The lecture sessions are recorded. We will send around the links to the videos once we obtained them from the video conference system.
- Examples can be found here: <https://github.com/alpaka-group/alpaka-workshop-examples>

Lesson 06: Lecture Workflow

Cheat sheet

- A cheat sheet / FAQ is available here:
<https://github.com/alpaka-group/alpaka-workshop-slides/tree/master/cheatsheet>



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