

Accelerated computing with HIP

Making GPU computing accessible

Syllabus

The Heterogeneous Interface for Portability (HIP) provides a programming framework for harnessing the compute capabilities of multicore processors such as the AMD Instinct MI250 and MI300, in addition to NVIDIA GPU's. In this course we focus on the essentials of developing HIP applications with a focus on supercomputing. The workshop entails 4.5 days of training and includes everything you need to be effective with HIP.

1. Days 1-4 (6 hours per day)
    - Introduction to HIP and high level features
    - How to build and run applications with HIP and MPI
    - A complete line-by-line walkthrough of a HIP-enabled application
    - Tools and techniques for debugging and measuring the performance of HIP applications
    - How to access different memory spaces from the host and the kernel.
    - Strategies for building performant HIP kernels
    - Optimise application performance with asynchronous IO
    - Tips and techniques for porting applications from CUDA to HIP
9. Day 5 (3 hours)
    - Programming challenge - choose your own adventure in working with HIP

      - or -
    - Bring your own code and receive feedback and assistance

Experience level

Advanced, a working knowledge of C++ is helpful

Course delivery and logistics

All of our workshops are taught by example from instructors that really care about you and your staff, with close attention paid to maximising educational value. Each day of training is approximately 6 hours of engagement plus breaks, and some workshops may span over multiple days. With regard to logistics we have a number of options available including:

- On premises, where we come and teach the course using your facilities (additional cost).
- Online via video conferencing (available worldwide).

In order to keep the educational quality high we keep class sizes in the range of 1-16 participants. A workshop can be repeated for as many times as necessary to cover your training needs. This workshop may be combined with our other course offerings to create a tailored "boot camp" experience spanning several days.

Ready to commit?

So great to go on this journey with you! Click on the links below to enrol in a course or send us an email. We will be in touch soon to discuss logistics!

Enrol in Course | Email Pelagos