



HETEROGENEOUS COMPUTING

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TUTORIAL GOALS

- Discuss the state of the art and the future of mainstream heterogeneous systems
- Discuss current and future programming models for heterogeneous systems
- Note that the content is biased towards our experience and vision



TUTORIAL STRUCTURE

- Heterogeneous computing in the modern age
 - The current state of heterogeneous computing from our point of view
 - The already-known progress we're making as an example of how heterogeneous processing is concentrating in mainstream devices
- Programming models
 - Some of the current ways such devices are programmed and how this may change
- C++ and tasking runtimes
 - A summary of some of the modern C++ features and how these are used in



TUTORIAL STRUCTURE

- OpenCL C++
 - Integrating some of the C++ features into OpenCL in both the API and kernel language
- MPI and PGAS models with an example of an OpenCL/MPI layered application
- Crystal ball
 - Thinking about the future of programming model development and how we can improve the experience



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