

Tutorial

Introduction to Programming with Intel Xeon Phi

Organizers and presenters:

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Schedule (11 00 – 16 00)

- Intel MIC architecture
- Introduction to Intel Xeon Phi programming
- Hands-on Session 1 – Hello world!
- Utilization of many cores Intel MIC architecture
- Hands-on Session 2 – OpenMP, thread affinity
- Programming optimization techniques
 - Compiler friendly practices
 - Scalar optimization
 - Scaling above 100 threads
 - Arithmetically intensive or bandwidth-limited algorithms
 - Reducing the amount of synchronization
 - Elimination of false sharing
 - Improving load balance of cores
 - Communication optimization
- Hands-on Session 3 – Programming optimization techniques

Requirements:

Computer with: Linux, Windows or Mac OS and installed SSH client. Participants are encouraged to use their own laptop computers.