



Intel Parallelism Faculty Training 2.1

Date & Location: 24th - 26th March 2009

Cardiff University

Duration: 3 days – 9:00am to 5:30pm

Operating System: Microsoft Windows

Audience: University professors, PhD students and researchers seeking to optimise performance and utilise parallelism concepts on Multi-Core and multi-processor systems.

Course Description: This courseware provides an introduction to Intel® Multi-Core Architecture and a complete survey of the importance of parallelism, threading concepts, multi-threading methodology and programming with threads (Windows*, OpenMP*, and Pthreads*). It does so by means of exciting lectures combined with important walk-through examples and topical hands-on lab exercises. Visual computing “game” workloads have been adopted in two brand new sections which demonstrate how to tackle threading in a DirectX game environment. The course now also offers a two-hour introduction to parallel programming. This new module will cover topics such as data dependencies, data races, synchronisation or locking concepts, deadlocks and also provides a manual technique for mapping out data dependencies in an algorithm using a dependency graphs. The course also includes an overview of performance analysis for Multi-Core platforms using the latest Intel® threading tools.

Course Agenda:

- Open MP3.0
- Integrated Architecture & Tools
- Introduction to Parallel Programming
- Intel® Thread Checker
- Intel® Thread Profiler
- Parallel Design Patterns
- Parallel Architecture for Games
- Threading Methodology
- Threading Building Blocks
- Game Threading Methodology

Recommended Experience:

The preferred enrollee will have a good understanding of C/C++ programming language in order to make best use of the lab materials. Typically this means 1-3 years programming experience with C/C++.

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