

# CUDA Training Agenda

University of Sheffield 19-20 May 2015

The aim of the course is to provide a basic understanding of principles of CUDA GPU programming. It is not required a prior knowledge of CUDA or Parallel programming.

## Required knowledge

Previous knowledge of C/C++ is required in order to get the most out of the course. Familiarity with concepts such as pointers, arrays and functions is essential.

## Contents

The course consists of approximately 3 hours of lectures and 4 hours of practical training each day, according to the following structure:

### Day 1

NVIDIA GPU Architectures  
The CUDA Programming Model and runtime API  
The CUDA Memory Model  
Shared memory vs global memory access

### Day 2

CUDA Streams, concurrency and asynchronous execution  
Optimisation techniques  
Alternative programming models  
cuBLAS, Thrust, OpenACC

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**Director:** Dr Davide Marocco – [davide.marocco@gmail.com](mailto:davide.marocco@gmail.com)

## Schedule of the course

### Tuesday 19<sup>th</sup> May

9.30	Introduction by NVIDIA representative
10.30	Lecture
11.15	Break
11.30	Practical
13.00	Lunch
14.00	Lecture
15.00	Break
15.15	Practical
17.30	

### Wednesday 20<sup>th</sup> May

9.30	Lecture
10.40	Break
11.00	Practical
13.00	Lunch
14.00	Lecture
15.00	Break
15.15	Practical
17.15	