

Debugging and Optimization of Scientific Applications

11th-14th March 2025

Lingua: Inglese

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Agenda

11 March – Tuesday		
9.00 - 9.15	Presentations	
9.15 - 10.45	HPC hardware	Emerson
11.15 - 12.30	Compilers and optimizations	Emerson
LUNCH		
14.00 - 15.00	CINECA HPC environment	Molinari
15.30 - 17.30	Fundamentals of profiling	Bellentani

12 March – Wednesday		
9.00 - 9.45	Debugging techniques	Latini
10.00 - 11.30	Hands on	Latini
11.45-12.30	Debugging with Totalview	Latini
LUNCH		
14.00 - 15.30	Hands-on	Latini
16.00 - 18.00	Profiling MPI codes with Score-P (lab)	Bellentani

13 March – Thursday		
9.00 - 11.30	Optimizing heterogeneous codes with nsys (lab)	Bellentani
12.00 - 12.30	Introduction to GPU hardware	Orlandini
LUNCH		
14.00 - 15.30	Debugging GPU codes	Orlandini
16.00 - 17.30	GPU kernel profiling with ncu	Orlandini

14 March – Friday		
9.00 - 10.30	Async and multi-GPU optimizations with nsys (lab)	Bellentani
11.00 - 12.30	Profiling python	Gorni
LUNCH		
14.00 - 14.40	Energy monitoring	Turisini
15.10 – 16.00	Nvidia-smi for GPU monitoring (lab)	Turisini