

HPC methods for Computational Fluid Dynamics and Astrophysics - CINECA Bologna			
Wednesday, 2 Nov.			
8:30	9:00	Registration	
9:00	9:15	Welcome Giovanni Erbacchi/Carlo Cavazzoni CINECA	
9:15	10:15	Introduction to solvers and algorithms for CFD and Astrophysics Massimiliano Guarrasi, Ivan Spisso CINECA	HPC01
10:15	10:45	HPC Numerical libraries for CFD and Astrophysics Nicola Spallanzani CINECA	HPC02
10:45		Coffe break	
11:00	12:30	SPH methods (TBC) Giuseppe Lodato Università degli Studi di Milano	APH01
12:30	13:00	HPC CINECA Infrastructure - The new Marconi System G. Amati CINECA	HPC03
13:00	14:30	Lunch	
14:30	15:30	Pseudo-spectral approach to high performance computing of MHD Luca Biferale Università degli Studi di Roma "Tor Vergata"	CFD01
15:30	15:40	Coffe break	
15:40	17:00	Using the 3D MHD code FLASH to describe systems that span different scales in space and time. Salvatore Orlando INAF - OAPA	APH02
17:00	18:00	The Einstein Toolkit: an open framework for Numerical General Relativistic Astrophysics. Roberto De Pietri Università degli Studi di Parma	APH03
Thursday, 3 Nov.			
9:00	10:45	Turbulence in wall-bounded flows Sergio Pirozzoli Università degli Studi di Roma "La Sapienza", Dipartimento di Ingegneria Meccanica ed Aeronautica	CFD02
10:45	11:00	Coffe break	
11:00	12:00	Numerical Approaches to Computational Fluid- and Magnetohydro-dynamics in Astrophysics Andrea Mignone Università degli Studi di Torino	APH04
12:00	13:00	Facing HPC Challenges with the PLUTO code Andrea Mignone Università degli Studi di Torino	APH05
13:00	14:30	Lunch	
14:30	15:30	Complex solutions of the 3D Navier-Stokes Equations in the Fourier Space: Numerical Evidence of Blow-Up Sandro Frigio Università degli Studi di Camerino	CFD03
15:30	15:40	Coffe break	
15:40		A minimal Flow unit for turbulence, combustion and astrophysics Paolo Orlandi Università degli Studi di Roma "La Sapienza", Dipartimento di Ingegneria Meccanica ed Aeronautica	CFD04
17:00	18:00	ENZO and RAMSES codes for computational astrophysics Claudio Gheller CSCS	APH06

Thursday, 4 Nov.			
9:00	9:40	Numerical methods for standard and non-standard cosmological simulations - Part 1 Marco Baldi Università degli Studi di Bologna	APH07
9:40	10:45	Numerical methods for standard and non-standard cosmological simulations - Part 2 Marco Baldi Università degli Studi di Bologna	APH08
10:45	11:00	Coffe break	
11:00	12:00	Physics and high performance computation of turbulent flows with interfaces Francesco Zonta T.U. Wien	CFD05
12:00	13:00	HPC visualization of particle based CFD simulations in astrophysics Claudio Gheller CSCS	HPC04
13:00	14:30	Lunch	
14:30	15:15	In situ Visualization with Paraview Catalyst: a case study Luigi Calori CINECA	HPC05
15:15	15:30	Coffe break	
15:30	17:00	Discontinuous Galerkin Methods (TBC) Alessandro Colombo Università degli Studi di Bergamo	CFD06
17:00	18:00	Porting on Manycore architectures: A case study Vittorio Ruggiero CINECA	CFD07
Astrophysics			
CFD			
HPC tools & techniques			