

High Performance Bioinformatics

9-11 december 2019
CINECA - Roma
Sala Corsi, Via dei Tizii 6B, Roma

Docenti

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Silvia Gioiosa
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AGENDA

9 december

09:15	Registration		
09:30 - 10:00	Student kick-off		10 minuti
10:00 - 11:00	Bioinformatics: Big data challenges through HPC (Castrignanò)	[big_data]	1h
11:00 - 12:15	Introduction to Cineca Supercomputing Hardware Architectures and Software Environment (Castrignanò)	[hardware_file_system]	1:15h
12:15 - 13:00	Introduction to Cineca Supercomputing and bioinformatics module environment (Software) (Gioiosa)	[bioinformatics_module_environment]	45m + 30 for ssh
13:00 - 14:00	Lunch		
14:00 - 17:00	Hands-on session on bioinformatics data analysis through Linux and scripting	[bash]	2.5h

	commands (Castrignanò - Gioiosa)		
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10 december

09:45 - 11:15	Introduction to Next Generation Sequencing (Gioiosa)	[introduction_NGS]	
11:15 - 11:30	Coffee break		
11:30 - 13:00	SLURM and workflow implementation (Gioiosa)	[bioinformatics_workflow]	
13:00 - 14:00	Lunch		
14:00 - 17:00	Hands-on session on automation of bioinformatic pipelines (Castrignanò - Gioiosa)	[bioinformatics_workflow]	

11 december

09:30 - 11:00	Introduction to parallel computing through MPI (Grottesi)	[introduction_MPI]	
11:00 - 11:30	Coffee break		
11:30 - 13:00	Introduction to structural bioinformatics: molecular dynamics of biomolecules (Grottesi)		
13:00 - 14:00	Lunch		

14:00 - 17:00	Hands-on Parallel Computing: Molecular Dynamics (Grottesi)	[MPI_handsons ession]	
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