Accelerating and Parallelizing MATLAB Code on HPC infrastructure

Workshop
30/05/2018 – CINECA – Casalecchio di Reno (Bo)

This workshop covers a variety of techniques for making your MATLAB® code run faster. By using MATLAB big data technologies and more hardware, you can reduce the cycle time for your workflow and solve computationally- and data-intensive problems faster.

You will learn available techniques on importing and preparing huge data set for data analytics applications. On top of that, you will take advantage of multiple cores on your computer and scale up across multiple computers. Interplay between those concepts will be explored throughout the workshop.

We will discuss a range of workflows available to scale MATLAB applications with minimal changes to your MATLAB code and without needing to learn any shell or scheduler programming syntax.

8:30	Enrollment	
9:00	HPC infrastructure and services at CINECA	C. Padrin (CINECA)
9:30	Configuration, settings and usage of MATLAB at CINECA	I. Spisso (CINECA)
10:00	Strategies for handling large amounts of data in MATLAB Improve and optimize serial MATLAB code to boost execution speed	F. Perino (MathWorks)
11:15	Coffe Break	
11:30	Offloading existing applications to clusters and clouds to free-up desktop resources MATLAB Parallel Computing basics: worker processes, parallel-enabled toolboxes, implicit and explicit multi-threading Parallelizing computations Scaling desktop workflows to clusters for additional throughput	F. Perino (MathWorks)
13:15	Question Time	
13:30	End of Workshop	