

# HPC Numerical and domain specific Libraries

Cineca (Casalecchio di Reno, BO)

March 11<sup>th</sup> -13<sup>th</sup> 2015

## AGENDA

### 11 March:

09:30-10:00 Welcome!

10:00-11:15 Introduction to HPC Numerical libraries on CINECA  
(Spallanzani)

11:15-11:30 Coffee Break

11:30-13:00 Introduction to Fast Fourier Transform libraries (FFTW +  
2Decomp&FFT) (Guarrasi)

13:00-14:30 Lunch

14:30-17:30 Exercises on FFT libraries (Guarrasi)

### 12 March:

10:00-11:30 Introduction to Linear Algebra libraries (Spallanzani)

11:30-11:45 Coffee Break

11:45-13:00 Exercises on Linear Algebra libraries (Spallanzani)

13:00-14:30 Lunch

14:30-15:30 Introduction to Scalable Linear Algebra libraries  
(Spallanzani)

15:30-17:30 Exercises on Scalable Linear Algebra libraries (Spallanzani)

### 13 March:

10:00-11:00 Introduction to PETSc (Spallanzani)

11:00-11:15 Coffee Break

11:15-13:00 Introduction to Adaptive Mesh Refinement: Numerical  
Methods and Tools (Guarrasi)

13:00-14:30 Lunch

14:30-17:30 Extra time for practice