
Welcome to the

Fifth INFN International School on

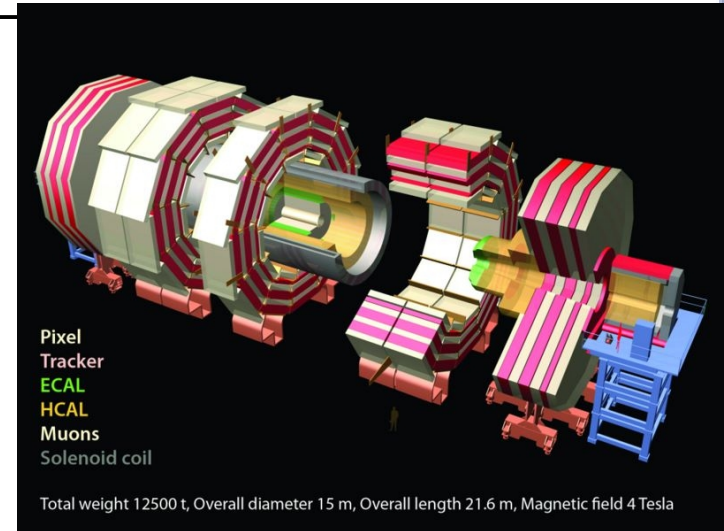
**“Architectures, tools and methodologies
for developing efficient large scale
scientific computing applications”**

Oct. 21-26 2013

On behalf of:

- ◆ **The Italian Institute for Nuclear Physics (INFN)**
 - × Bologna, CNAF, Padova sites
- ◆ **The University of Bologna, Department of Physics**
- ◆ **The lecturers, the International Scientific Committee, the Local Organizing Committee**
 - × and the Institutions that support them

INFN activities

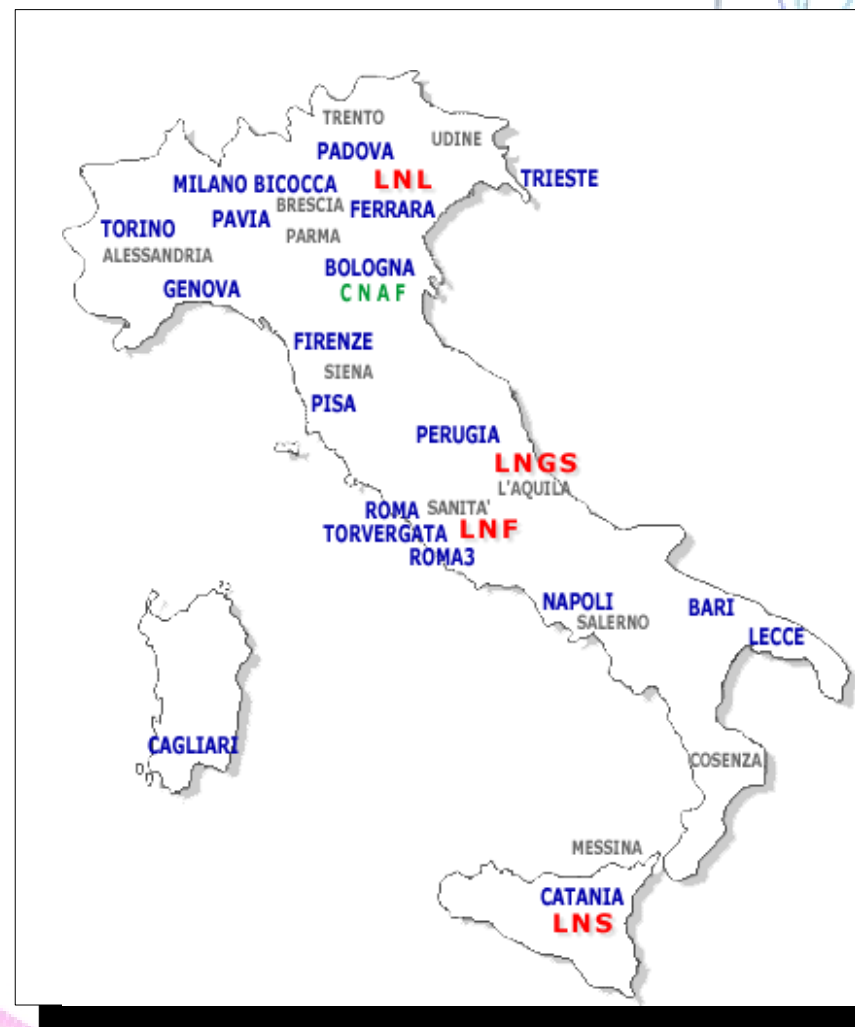


- × study of the **fundamental constituents of matter and their interactions**
- × **theoretical and experimental** research, in the fields of **subnuclear, nuclear e astroparticle** physics
- × development of cutting-edge research **technologies and tools**



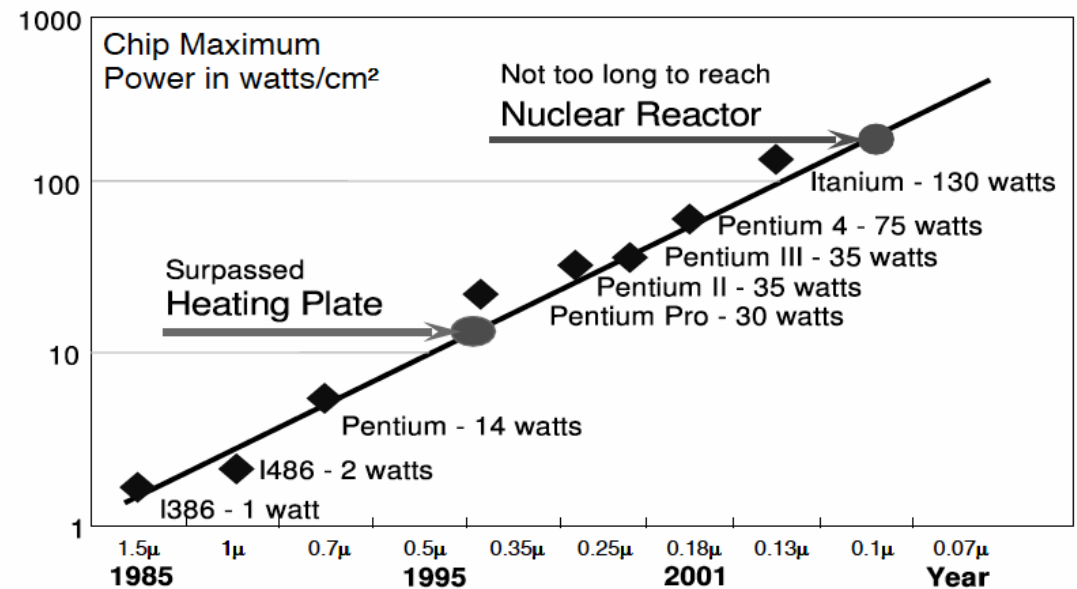
INFN today

- x founded in **1951**
- x it is articulated in
 - ◆ 4 **national laboratories**
 - ◆ 20 **sites** located in Universities
 - ◆ 3 national **centers, one dedicated to computing research and services (CNAF)**
- x it supports the activities of:
 - ◆ ~ **2000 employees**
 - ◆ ~ **2000 associated** Univ. staff
 - ◆ ~ **1300 associated students**



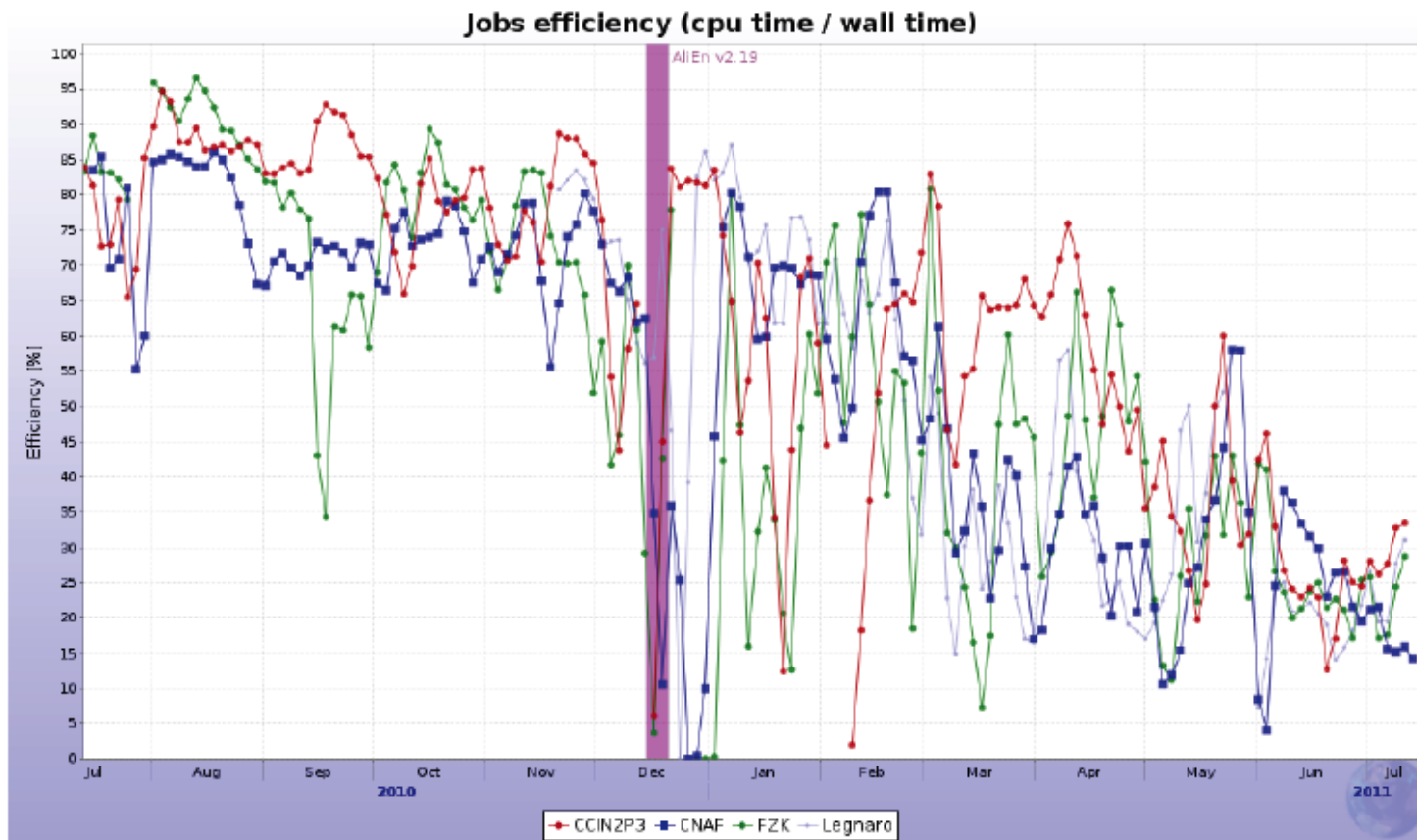
Why this School

- ◆ The conception of this school was motivated by the awareness that **efficient usage of computing resources** in our field was becoming:
 - ✗ **more and more challenging**, due in particular to the latest technology limits and related developments (esp.: the end of CPU performance “free ride” era)
 - ✗ and not always well **understood** and taken into proper **consideration**



Why this School (II)

- × **more and more important** due to the size of the current and future scientific computing projects, both in terms of amount of software involved and hardware required
 - ◆ LHC being one of the most prominent example so far



Goals of the School

- ◆ We wanted therefore to give the possibility to young scientists to:
 - ◆ grow the **general awareness** about key aspects of **efficient usage** of computing resources
 - ◆ provide **competences** to master the **latest technology developments** and exploit at best their potential strengths
 - × this year with special emphasis on **GPUs programming**
 - ◆ complement the **lectures** with **hands-on exercises**
 - ◆ develop a school format that facilitates the **interactions** among the students and the lecturers

- ◆ School is hosted in the University Residential Center of Bertinoro (Ce.U.B)



Bertinoro: the past

- ◆ Bertinoro is a nice medieval village, famous for its **hospitality**
 - ✗ the name most likely comes from **“Castrum Brittinori”** (XIth century) and it is probably due to the frequent stops pilgrims coming from Britain, in their way to Rome, used to take in the quiet surroundings of Bertinoro.
 - ✗ one of the monument in Bertinoro known as **Colonna delle Anelle** ("Column of the Rings" or "Column of hospitality") is a column in white stone with 12 rings erected in 1300 by the noble families to express **their sense of hospitality**.
 - ◆ Each one of the rings corresponded to one family;
foreigners arriving in town, could select the family by using **tying** the horse bridles to a specific ring



... and the present

- ✕ Bertinoro still hosts a "**Hospitality Festival**". Held in the first weekend of September, it foresees an entire night of music, dances and events (between Friday and Saturday), some historic commemorations and the final Hospitality Rite (Sunday late morning).
- ✕ In this ceremony **anyone can be hosted** for lunch by a family in the town simply **taking one of the envelopes** tied to the rings of the Hospitality column (which inside has the name of the hosting family).
- ✕ you will not get this opportunity this week, but I'm sure you will enjoy the **good food and wine** that Bertinoro will offer to you

Announcements

◆ Student lightning presentations

- ◆ As anticipated we would like to offer you the possibility to briefly present yourself during a dedicated session on Monday and Tuesday evening
- ◆ We have received slides from nearly half of the participants

◆ Meal vouchers

- ◆ Lunches are served at the canteen (where we had dinner last night)
- ◆ For the dinners you will be given today a list of local restaurants and meal vouchers
 - x please ask Rossana during the coffee break

**We wish you a very pleasant and
“efficient” week in Bertinoro**