FINAL BULLETIN
"GPU in High Energy Physics"
Pisa, Italy
September 10-12, 2014

This Conference focuses on the application of GPUs in High Energy Physics (HEP), expanding on the trend of previous workshops on the topic and pointing to establishing a recurrent series. All different applications of massively parallel computing in HEP will be addressed, from computational speed-ups in online and offline data selection and analysis to hard real-time applications in low-level triggering, to Monte Carlo simulations for lattice QCD. Both current activities and plans on foreseen experiments and projects will be discussed, together with perspectives on the evolution of the hardware and software.

The Conference is sponsored by the Istituto Nazionale di Fisica Nucleare (INFN), the University of Pisa, DESY and the Helmholtz Alliance "Physics at the Terascale", and will be followed by a twin conference "Perspectives of GPU Computing in Physics and Astrophisics", to be held in Rome in September 15-17, 2014.

Topics

The program will cover:

- GPUs in triggering applications
- Low-level trigger systems based on GPUs
- Use of GPUs in high-level trigger systems
- GPUs in tracking and vertexing
- Challenges for triggers in future HEP experiments
- Reconstruction and Monte Carlo software on GPUs
- Software frameworks and tools for GPU code integration
- Hard real-time use of GPUs
- Lattice QCD simulation
- GPUs in phenomenology
- GPUs for medical imaging purposes
- GPUs in neutron and photon science
- Massively parallel computations in HEP
- Code parallelization

The Conference is organized as a series of 11 oral sessions and 1 poster session, each addressing one or more specific topics of interest

An exhibition of products by companies active in the field of GPU and scientific computing will take place during the meeting.
For more details on the program, see the complete schedule at

https://agenda.infn.it/conferenceTimeTable.py?confId=7534#20140910

Venue

The conference will be held in Aula Gerace, in the Computer Science department. This is located in building C of Polo Fibonacci (which includes also the Physics and Mathematics departments), largo Bruno Pontecorvo 3.

Please find attached a map of the Pisa center in which the location of the conference is indicated by the black spot "GPU in HEP". Once in Polo Fibonacci you will find detailed indications on how to reach the conference room.

The Pisa airport is connected to the train station by the bus service "LAM rossa" (every 15 min.) and from the train station the conference location can be reached by using the bus service "LAM verde", whose route is shown in the attached map.

Registration

Registration will open Wednesday 10 September at 8:30. The conference fee is € 170,00, it includes the cost of proceedings, coffee breaks, lunches and social dinner and can be paid by cash (not by credit card) at registration or by bank transfer (see instructions in the Registration section of the Indico web page). People who have already paid the conference fee by bank transfer are kindly requested to bring a copy of the transfer with them.

Instructions for speakers

All speakers are kindly requested to upload their presentations (pdf or ppt format are the ones accepted) via the Indico web page. For technical reasons, the upload has to be performed at least two hours before the beginning of the relative session.

Social activities

Coffee breaks and lunches will be served in the nearby Physics department.

The social dinner will be held on the evening of Thursday 11 September and will take place in the "Cinema teatro LUX", in Piazza Santa Caterina, which is at a walking distance (5 min.) from the conference location (it is indicated by the green spot in the attached Pisa map).

In the late afternoon of Wednesday 10 September we have organized a guided tour of the most famous historical sites of the Pisa center, in particular Piazza dei Miracoli. The tour is free for registered participants and companions. However, in order to properly organize this event, we kindly ask you to explicitly express your intention to participate by sending an email to **GPU2014@pi.infn.it**
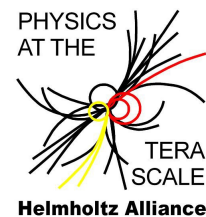
Weather conditions

In mid september the weather in Pisa is usually mild and confortable. However, since we are at the beginning of the Autumn season, abrupt weather changes and fluctuations may occur. Please check your favorite weather website a couple of days before the conference for the latest forecast.

Proceedings

The Conference Proceedings will be published by DESY. More information will be given during the conferences.

Conference WWW site
Conference e-mail

http://www.pi.infn.it/gpu2014
GPU2014@pi.infn.it

PISA CENTER

"LAM verde" ROUTE