pen up your mind!

CERN openlab Student Programme

CERN is where the World Wide Web was born over 20 years ago...
... And where dizzying challenges in networking, data processing and storage abound!

Located just outside Geneva, straddling the border between Switzerland and France, CERN is the world's leading particle physics research institute. CERN explores what matter is made of and what holds it together by accelerating protons to a fraction under the speed of light and then smashing them together. The Large Hadron Collider (LHC) has just started and is expected to generate some 15 million gigabytes of data per year. More than ever, CERN will be a particularly thrilling place this summer!

Through close collaboration with leading industrial partners, CERN acquires early access to technology well before it reaches the general computing market. CERN openlab is the framework for evaluating and integrating cutting-edge IT technologies and services. Together with our partners, HP, Intel, Oracle and Siemens, we are working on:

- Computer Server Platforms and Related Software
- Relational Databases
- Network Monitoring Software
- Automation and Controls Software
- Grid Middleware
- Wireless Networks

By joining the CERN openlab Student Programme, you will work with some of the latest hardware and software technologies and see how advanced IT solutions are used in High energy physics.

You will also become acquainted with other key technologies for industrial and commercial purposes, through external visits and special invited talks.
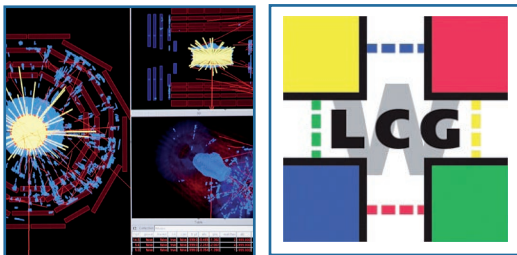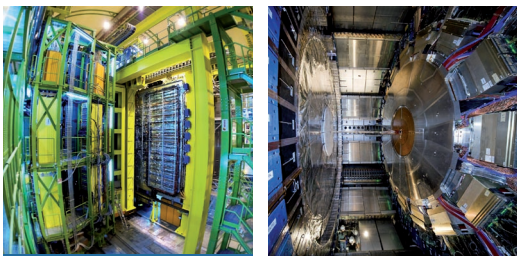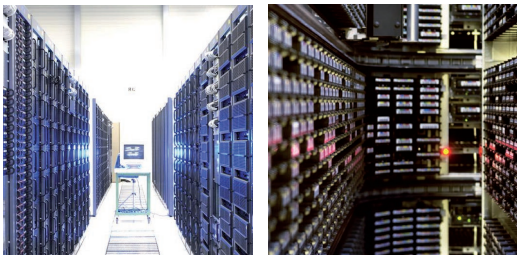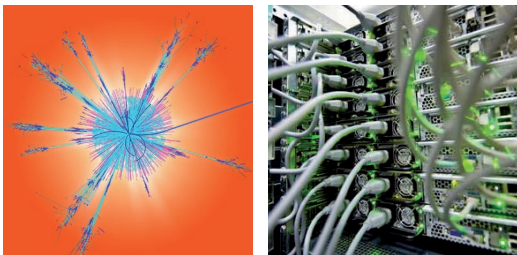
The CERN openlab Summer Student Programme is much more than just a summer at CERN. It can lead to follow-on projects in your home institute at bachelor's, master's or Ph.D level. It may even inspire you to become an entrepreneur in cutting-edge computing technologies.

Contact

openlab.students@cern.ch - Tel. +41 22 767 4944

Open up your mind... And apply!

www.cern.ch/openlab

CERN openlab Student Programme 2010

Who should apply?

B.Sc., M.Sc., or Ph.D. students in Computer Science or Physics, interested in working on cutting edge technology projects for two months during the period June-September 2010, with the possibility of follow-on projects in their home institutes.

How to apply?

Candidates for the CERN openlab Student Programme are normally proposed by University supervisors. The student's CV, a recommendation by the supervisor, and an indication of the preferred area of work should be sent to openlab.students@cern.ch by 31st March 2010. Confirmation of student placement will be made to supervisors shortly thereafter.

Stipend

The stipend for a two-month study is CHF5000 for travel, accommodation and per diem, normally sponsored 50% by the student's home institute or university and 50% by CERN and the CERN openlab industrial partners of CERN. Students must have their own health insurance.

Students projects

Several projects and groups at CERN will participate in the openlab student programme, including the WLCG (Worldwide LHC Computing Grid). Examples of projects that students undertook in 2009 include:

- Studies of software performance using multithreading
- Autovectorisation by compilers
- Integration of database virtualisation solutions
- Grid job monitoring
- Development of a security monitoring tool
- Visualisation of network monitoring data

Other activities

A series of lectures by experts in various domains of CERN-related High Throughput Computing, and study tours to universities and CERN facilities are part of the programme. The openlab students may also participate in a wide range of physics and technology lectures that are part of the general CERN summer student programme.