



# CERN openlab Student Programme 2011



## *Open 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) is now operational and generates 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 have R&D activities on:

- Computer Server Platforms and Related Software
- Large Scale Databases
- Automation and Controls Software
- Cloud Computing
- Wireless Networks Research

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 have the opportunity to attend a special series of lectures given by CERN IT experts on advanced CERN-related topics and to visit the laboratory facilities and experiments.

The CERN openlab 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.

### Who should apply?

B.Sc., M.Sc., or Ph.D. students in Computer Science or Physics, interested in working on advanced IT projects for two months during the period June-September 2011, with the possibility of follow-on projects in their home institutes.

### How to apply?

The application must be submitted to [www.cern.ch/jobs](http://www.cern.ch/jobs) by 31st March 2011 and the following documents should be attached to it: student's CV, recommendation letter(s) by university supervisor(s) and a motivation letter with an indication of the preferred area of work. Incomplete applications will not be considered. Confirmation of student placement will be made to the students and their supervisors by early May.

### Stipend

The stipend for a two-month internship is CHF 5000 for travel, accommodation and per diem, sponsored by CERN and the CERN openlab industrial partners. Students must have their own health and accident 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 2010 include:

- Automation for WebLogic servers management
  - Monitoring tools for the Grid
  - New template engine for Indico
  - Virtual machine technology for distributed computing
  - Graphics processing units to accelerate data analysis
- A report on the work project carried out is to be handed in at the end of the student stay.

### 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.

### Contact

[openlab.students@cern.ch](mailto:openlab.students@cern.ch) - Tel. +41 22 767 4168



Open up your mind and apply!  
[www.cern.ch/openlab](http://www.cern.ch/openlab)