



 **pen up your mind!**  
*CERN openlab student programme*

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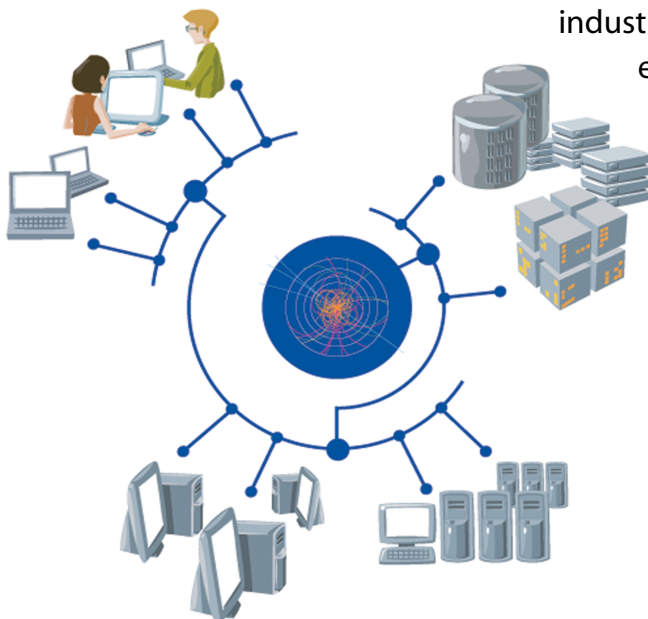
CERN is where the World Wide Web was born...  
...and where you can be part of the next IT revolution: the Grid!

The Web provides seamless access to information around the world. The Grid will provide seamless access to globally distributed processing power and data storage capacity.

CERN needs the Grid to solve the huge data challenge of the Large Hadron Collider, which will produce millions of gigabytes of data each year. Just like the Web, the Grid is bound to have practical applications well beyond the realms of high energy physics - in medicine, commerce, finance and much more.

By joining the CERN openlab student programme, you will work with some of the latest hardware and software technologies for the Grid at CERN, and see how advanced IT solutions are used in high energy physics.

You will also hear about how CERN's industrial partners are developing Grid technology for industrial and commercial purposes, through external lab visits and special invited talks.



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 the bachelors, masters or Ph.D. level. It may even inspire you to become an entrepreneur in the emerging Grid business.

Open up your mind...and apply.

# The CERN openlab

## student programme 2006



### WHO SHOULD APPLY?

B.Sc. , M.Sc., or Ph.D. students in Computer Science or Physics, interested in working on cutting-edge Grid technology projects for two months during the period June-September 2005, with the possibility of follow-on projects in their home institutes.

### HOW TO JOIN

Candidates for the CERN openlab student programme are normally proposed by University supervisors. A CV of the student, recommendation of the supervisor, and indication of preferred area of work should be sent to [Francois.Grey@cern.ch](mailto:Francois.Grey@cern.ch) by March 31st 2006. Confirmation of student placement will be made to supervisors shortly thereafter.

### STIPEND

The stipend for a two-month study is 5000CHF for travel, accommodation and per diem, sponsored 50% by student home institute and 50% by CERN and the industrial partners of the CERN openlab DataGrid applications. Students must have insurance coverage from their home institute.

### STUDENT PROJECTS

CERN has several Grid-related projects which participate in the openlab student programme. As well as the CERN openlab industrial collaboration, there is LCG (LHC Computing Grid), EGEE (Enabling Grids for E-Science) and several other EU-funded projects. Examples of projects that students undertook as part of the 2005 programme include:

- Porting physics application software to the 64-bit-based CERN opencluster.
- Optimising 64-bit compiler technology for high energy physics.
- Developing a monitoring system for service challenges run by LCG.
- Porting EGEE's gLite middleware to a 64-bit computing environment.
- Adapting LCG technology for satellite image storage and processing.
- Developing a humanitarian distributed computing project called Africa@home.

### OTHER ACTIVITIES

A Grid tutorial, a series of lectures by experts in various domains of Grid computing, and study tours to industrial labs are part of the programme. The openlab students may participate in a wide range of physics and technology lectures that are part of the general CERN summer student programme.

