

CERN openlab is a unique public-private partnership.

We work to drive innovation in computing technologies.

We collaborate with leading technology companies (including Intel, Oracle, Siemens, Micron, Google).

We also work with other research laboratories (including Fermilab and INFN).

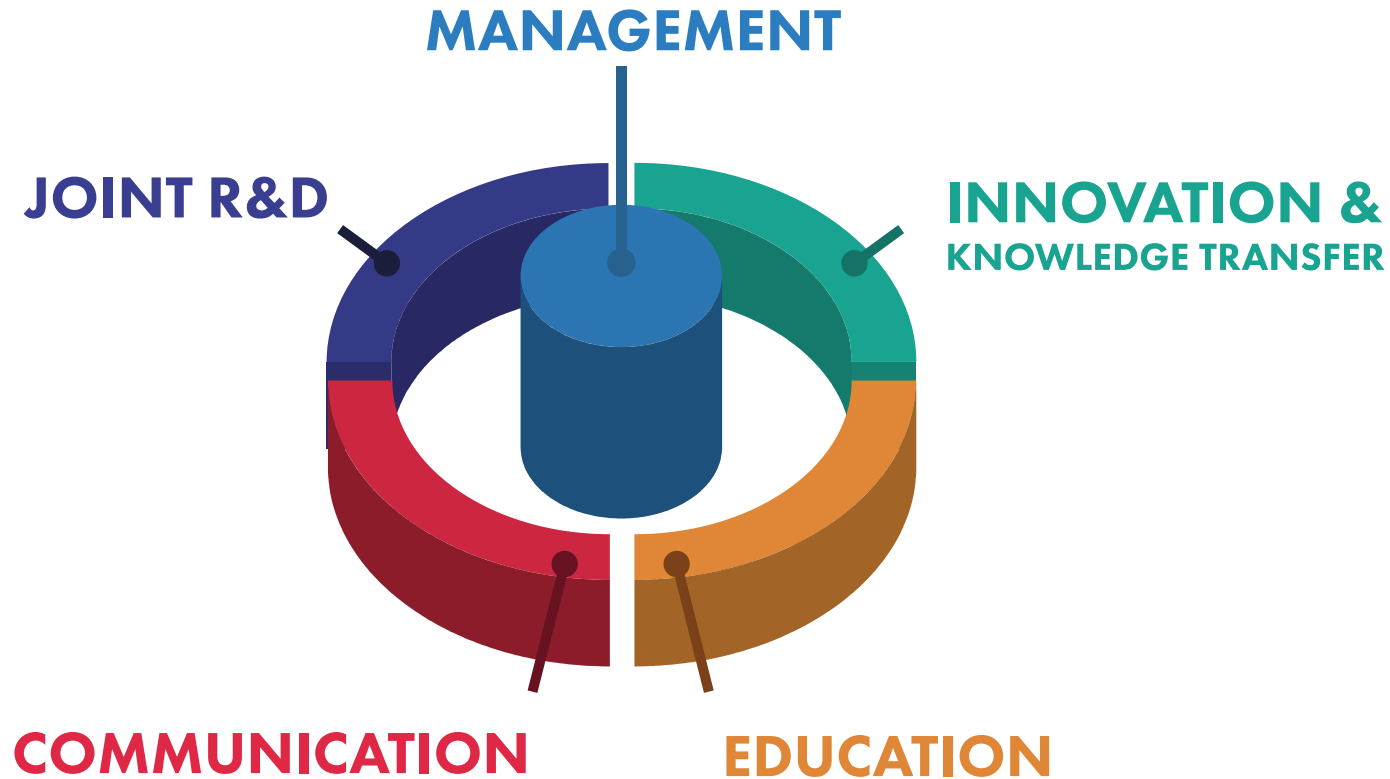
Education and training are important aspects of our work.

Over 1700 applicants for this year's CERN openlab summer-student programme.

32 students selected from 18 different countries.

More info on our website: [openlab.cern](https://openlab.cern).

Follow us on Twitter/Facebook: [@CERNopenlab](https://twitter.com/CERNopenlab).



# The lecture programme

All lectures webcast, except the two marked with red bullet points.



## Welcome to CERN openlab

*Alberto Di Meglio*

IT Amphitheatre (31-3-004)

14:00-14:30, 5 July



## Tackling computer challenges at CERN in 2022

*Maria Girone*

IT Amphitheatre (31-3-004)

14:30-15:30, 5 July



## DAQ-filtering data (50TB/s to 1GB/s)

*Flavio Pisani*

IT Amphitheatre (31-3-004)

13:30-15:30, 7 July



## Computer security in 2022

*Stefan Lueders*

IT Amphitheatre (31-3-004)

13:30-15:00, 12 July



## Introduction to Machine Learning

*Jean-Roch Vlimant*

IT Amphitheatre (31-3-004)

13:30-15:30, 14 July



## Writing code that's less bad

*Axel Naumann*

IT Amphitheatre (31-3-004)

13:30-15:30, 20 July

# The lecture programme

*All students from all programmes are welcome to attend!*



## **FPGA programming**

*Marco Barbone*

IT Amphitheatre (31-3-004)

13:30-15:30, 22 July



## **GPU programming**

*Stephan Hageboeck*

IT Amphitheatre (31-3-004)

13:30-15:30, 26 July



## **CERN Science for open data**

*Anna Ferrari*

IT Amphitheatre (31-3-004)

13:30-15:30, 28 July



## **Quantum Computing for HEP applications**

*Sofia Vallecorsa*

IT Amphitheatre (31-3-004)

13:30-15:30, 4 August

<https://indico.cern.ch/category/15588>

## Lightning talks

- Students work on projects over nine weeks, gaining hands-on experience with latest computing technologies.
- 5-minute presentations by each student, with prizes for best talks.
- Split into two sessions (dates TBC in September).
- Events will be online and open to all.

## Webfest

- Celebrating 10 years!
- Open to all – held online.
- A two-month hackathon challenge: 8 July to 31 August.
- Sign up by Tuesday 5 July. Kick-off event on Friday 8 July.
- Collaborate on environment-related computing projects using open-web technologies.
- Full details on the event website: [webfest.cern](https://webfest.cern).



The poster for the Webfest Challenge 2022 is set against a green background. At the top, it states the dates: 'JULY 8 – AUGUST 31' and '8, 25 JULY & 16, 30, 31 AUGUST'. The main title 'WEB FEST CHALLENGE 2022' is prominently displayed in large, colorful letters. Below the title, the hashtag '#CERNWEBFEST' is visible. The poster lists the themes: 'SCIENCE + TECH', 'DATA + CREATIVITY', '+ CLIMATE ACTION +', and 'COMMUNITY + YOU'. It also includes the website 'https://webfest.cern' and the tagline 'Innovate with creative minds from across the globe to help make our world a better, more sustainable place.' The bottom of the poster features logos for various partners: CERN openlab, CERN, Pori, gluonNet, REMOTELY GREEN, citizen cyberlab, and alviri.