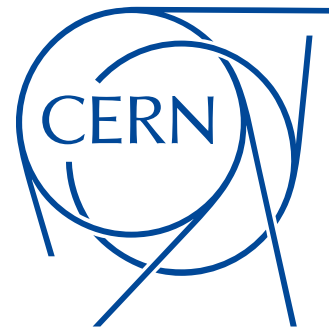
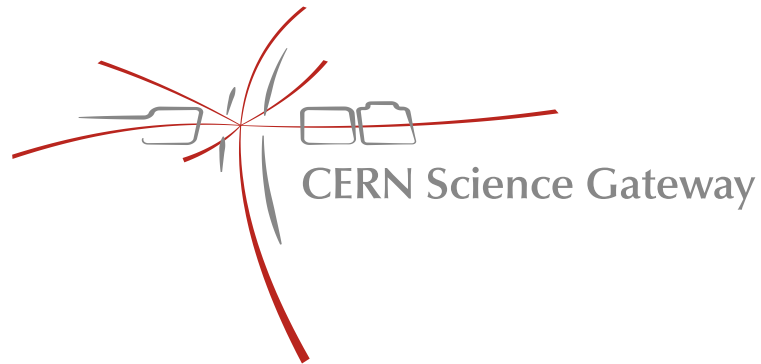


# Welcome!

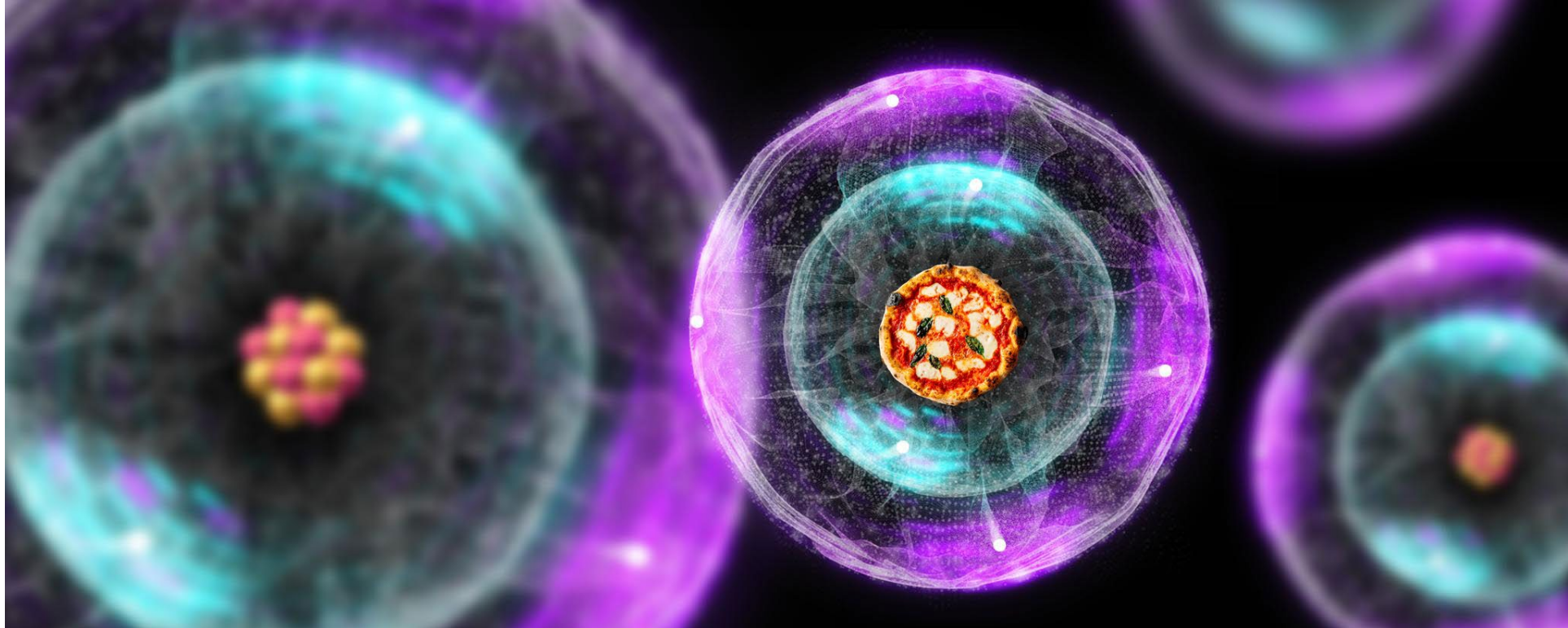
## CERN-Solvay student camp



Progress beyond

# Welcome to...

# Welcome to...



## The particular pizzicists



- 1. General information**
- 2. Project day selection**
- 3. Questionnaire**



- 1. General information**
- 2. Project day selection**
- 3. Questionnaire**

# Important Numbers

**EMERGENCY:** Fire brigade

+41 22 76 74444 (internal: 74444)

**NON-EMERGENCY:** CERN medical service

+41 22 76 73802

**FIRST POINT OF CONTACT:** Accompanying teachers

+381 60 6619668 Marina Dorocki

+41 75411 2048 Cédric Vanhoolandt

**CAMP MANAGERS:**

+41 75411 0675 Guillaume Durey

+41 75411 6539 Julia Woithe



# Wi-Fi

Register your device



1

Connect to the «CERN» network  
(not «CERN Visitors»)



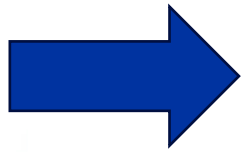
2

Agree to the terms of use  
(type [cern.ch](http://cern.ch) in any browser  
if nothing happens)



3

# Access card & registration



8:00 tomorrow  
Building 55  
→

**Bring your passport**

**Ground floor:  
get your access card**

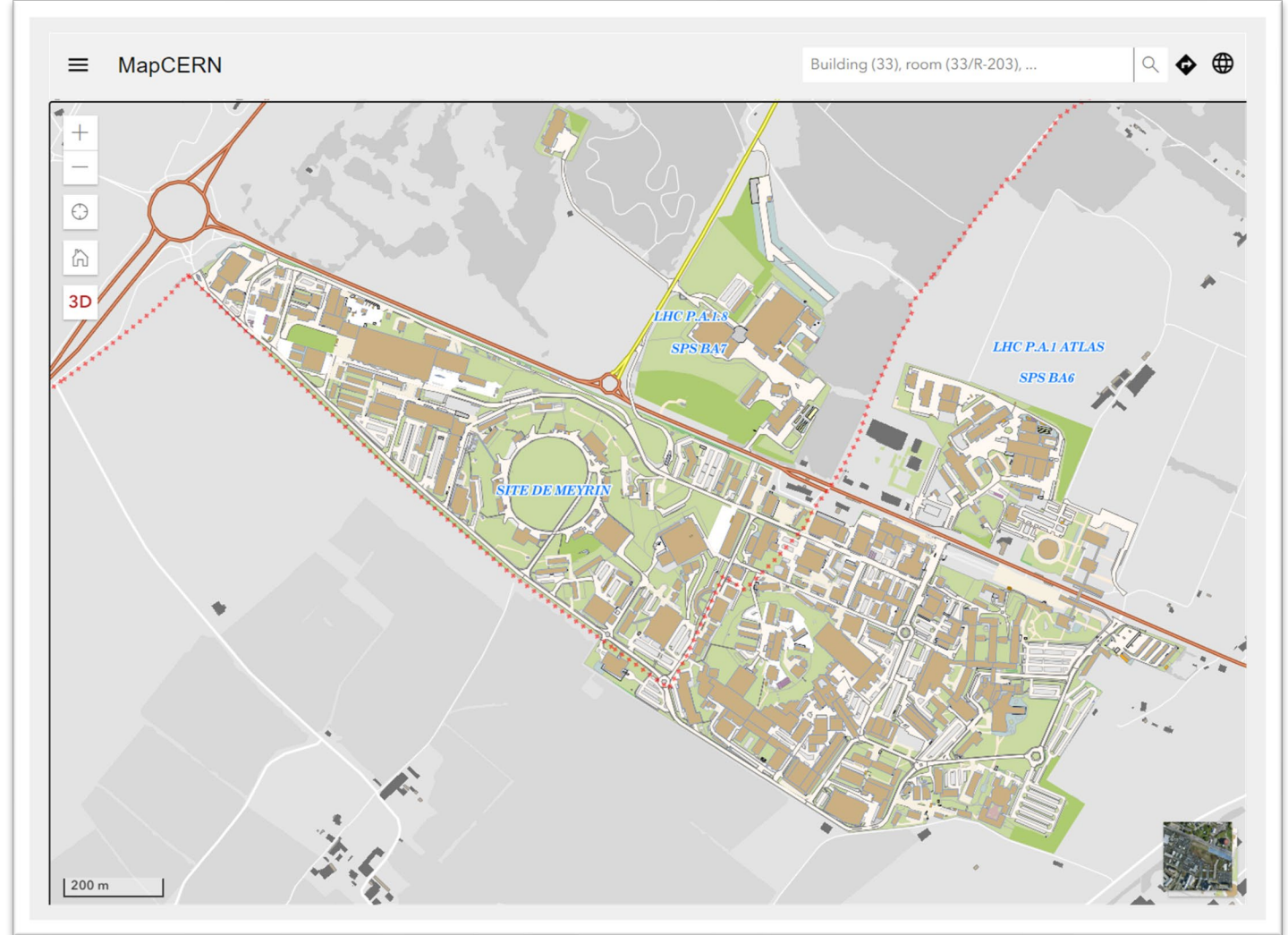
**Second floor:  
get your computing account**





# Getting around

MapCERN



# Restaurants

Restaurant 1, bldg 501, open 6-22

Breakfast	Lunch	Dinner
6:30-10:30	11:30-14:15	18:00-20:30



Restaurant 2, building 504, open 7-17

[mylunchcheck.ch](http://mylunchcheck.ch)



**With great powers...**



**... comes great responsibility**

# Timetable



SUNDAY, OCTOBER 1

**2:00 PM** → 7:00 PM **Welcome to CERN!**

**2:00 PM** **Arrive at CERN & check-in at CERN hotel** ⌚ 3h 📍 39  
Check-in is possible as of 14:00. If you arrive earlier, you can leave your luggage at the hotel reception.

**5:00 PM** **Welcome reception** ⌚ 45m 📍 500/1-201 - Mezzanine  
**Speakers:** Guillaume Durey (CERN), Julia Woithe (CERN)

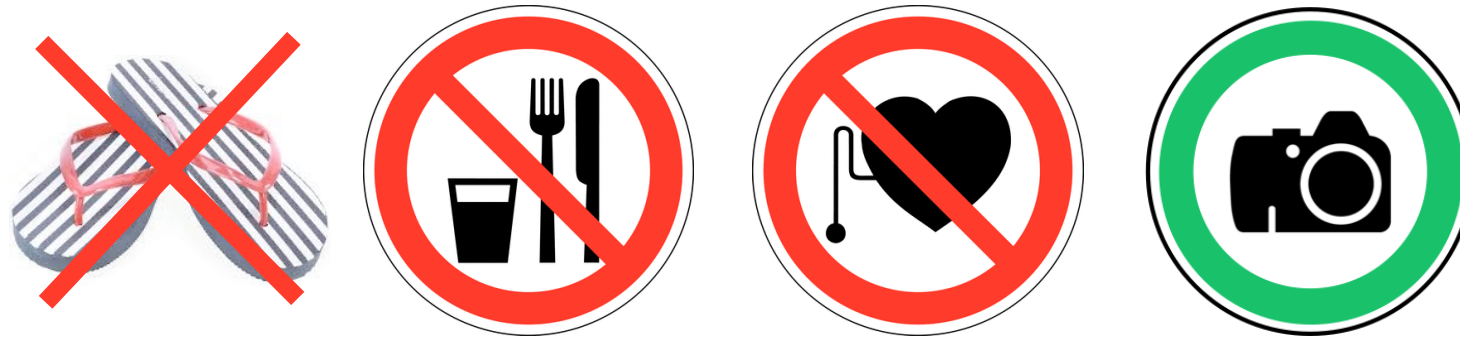
**5:45 PM** **Discover CERN Treasure Hunt** ⌚ 1h 15m

**7:00 PM** → 8:15 PM **Dinner** ⌚ 1h 15m

**8:15 PM** → 9:00 PM **Introductory Remarks** 📍 500/1-001 - Main Auditorium  
**Convener:** Guillaume Durey (CERN)

[cern.ch/solvay-camp-timetable](https://cern.ch/solvay-camp-timetable)

# CERN Visits

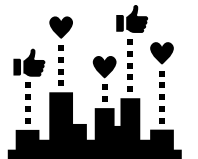
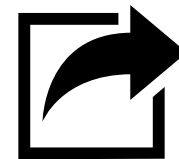


# Photos, videos & social media

- You can **take** photos and videos almost everywhere.
- If you want to **share** some of your photo to be **archived** and **used by CERN and Solvay**, please upload them in this folder →
- If you want to **share** your adventures on **your own social media** accounts, please tag **@CERN** and **@SolvayGroup** and use **#CERNSolvayEducation**
- We will have a **group photo** tomorrow afternoon by an official CERN photographer
- I will be your personal paparazzo during the week ;)



[cern.ch/solvay-camp-photos](https://cern.ch/solvay-camp-photos)  
pwd: Strange\_Quark



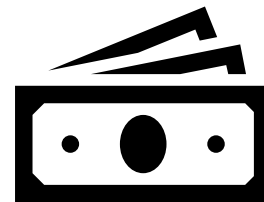
[#CERNSolvayEducation](https://twitter.com/CERNSolvayEducation)

# Travel grants

For students who received a travel grant:

Send your bank information details (**IBAN** and **BIC/SWIFT** codes)  
**as soon as possible** to [solvay.education.programme@cern.ch](mailto:solvay.education.programme@cern.ch)

**Triple-check** codes are correct before sending





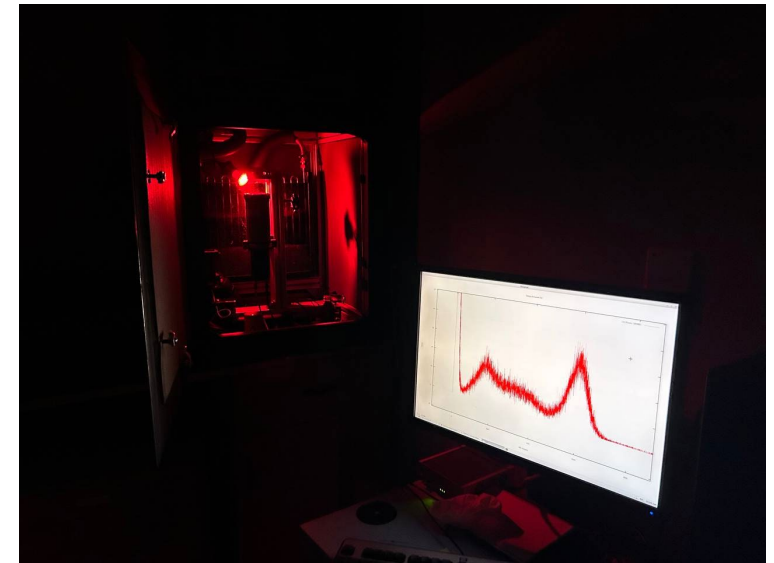
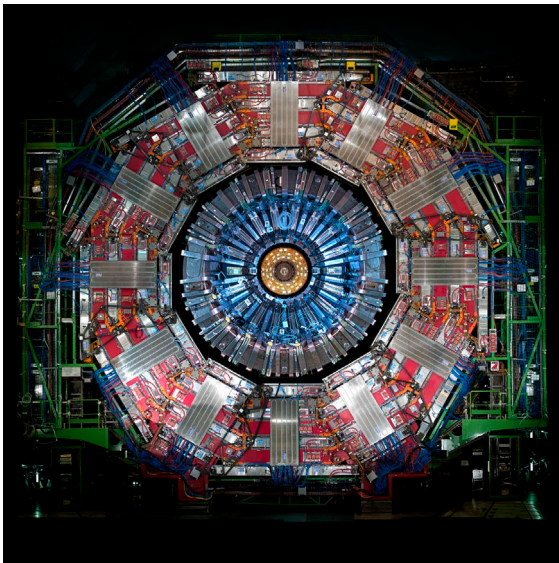
1. General information
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# Crystal lab

Supervisor: Giulia Terragni

The Crystal lab is where the crystals employed in the CMS electromagnetic calorimeter were first investigated and characterized. Nowadays, the lab studies the properties of numerous materials and crystals aimed at the application to future detectors in high-energy physics and medical imaging. During your project, you will be able to perform characterization measurements of leading materials the group is working with.



# Data workshop

Supervisor: Giuseppe Lo Presti

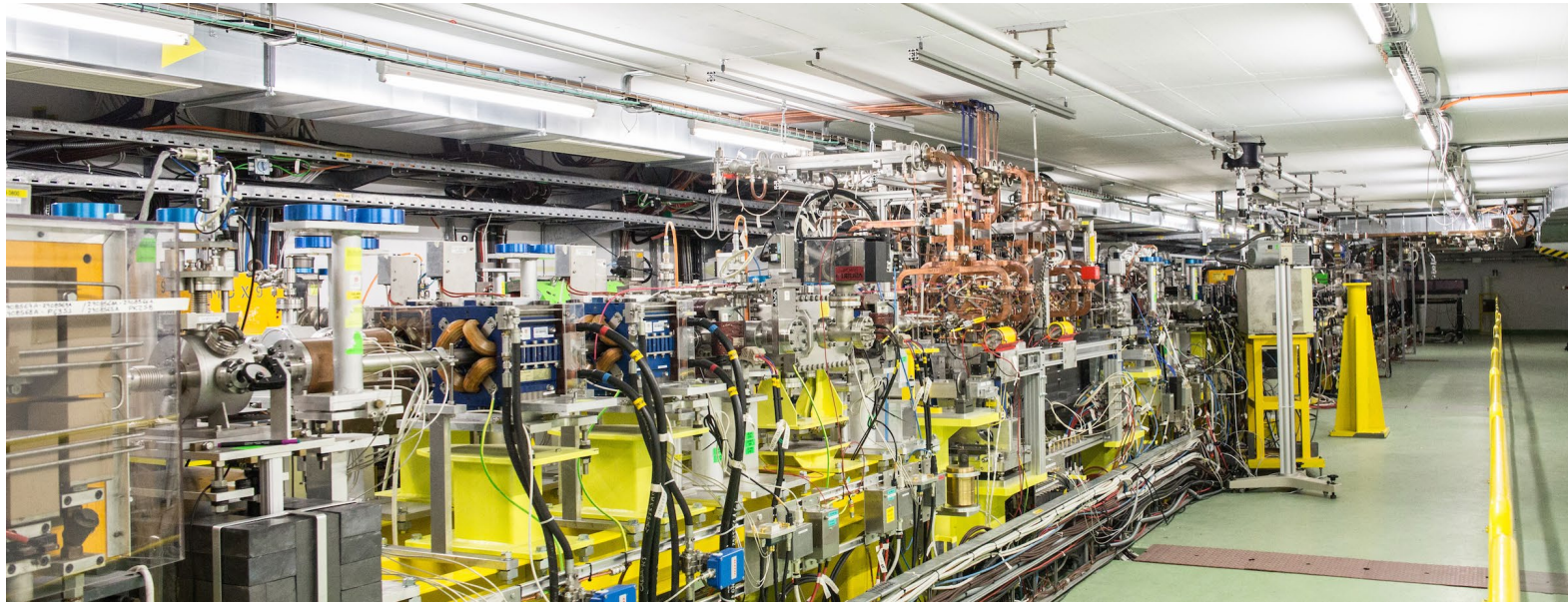
In this project, you will learn about data at CERN, specifically in terms of computing, storage and security. In the morning, you will start with an introductory lecture followed by a bit of job shadowing. You will experience how a team of engineers responsible for CERNBox and EOS, the platforms developed for storing and sharing the 100s of PB of CERN data, operate on a daily basis. You will then be introduced to SWAN, the platform for performing interactive data analysis in the CERN cloud. In the afternoon, you will take part in a mini-hackaton, solving problems on SWAN. You will learn about the challenges of running computations at scale on GPUs on tens of billions of collision events.



# CLEAR

Supervisor: Pierre Korysko

CLEAR is an electron LINAC and an experimental beamline, operated at CERN as a multi-purpose test facility for users. It is for instance used to perform R&D on accelerator components or novel accelerating techniques, or to study the effects of electron irradiation on electronic components in space or medical contexts. This week, scientists are using CLEAR to investigate a novel method to measure beam parameters using electromagnetic radiation emitted as the electrons pass through a boundary between two different media. You will operate the accelerator from start to end: align the beam, measure its energy, charge, position and size, and perform scans to measure its emittance.



# Cryo lab

Supervisor: Torsten Koettig

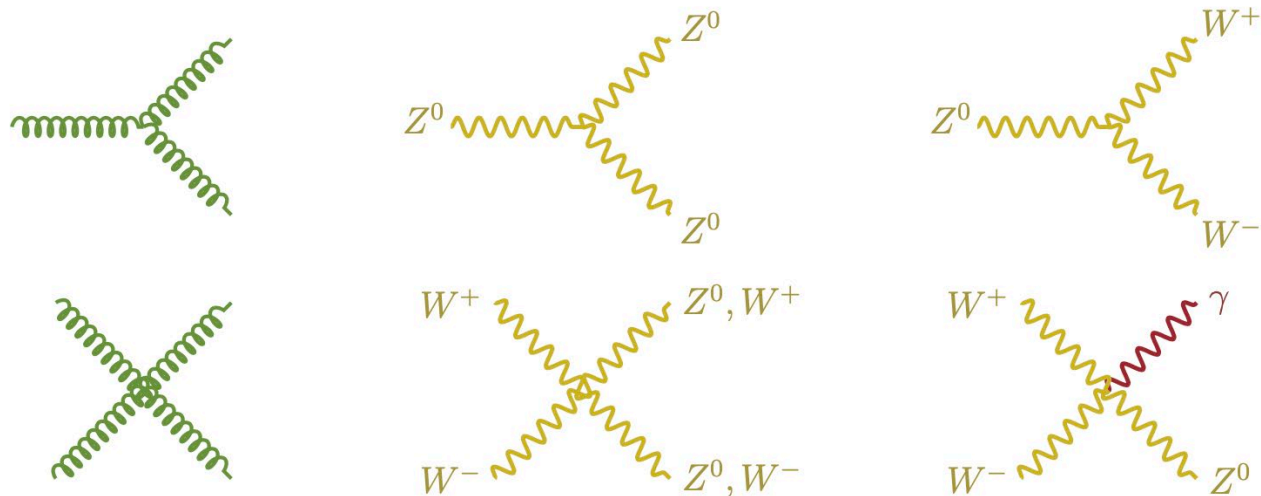
The Cryolab is CERN's R&D lab dealing with cryogenics, essential for operating all the superconducting magnets in the LHC. In this project, you will first get a liquid nitrogen safety course, with an extended presentation of cryogenic effects ranging from gas behaviour to materials at low temperatures and basic superconducting parameters. You will then study the boiling heat transfer regimes at a metal / liquid nitrogen interface. You will setup an experiment to cooldown an aluminium cylinder in liquid nitrogen, measure the temperature over time, calculate the heat transfer rate at the surface, and produce final graphs of heat transfer rate vs. interface temperature difference.



# Theory workshop

Supervisor: Frederik van der Veken

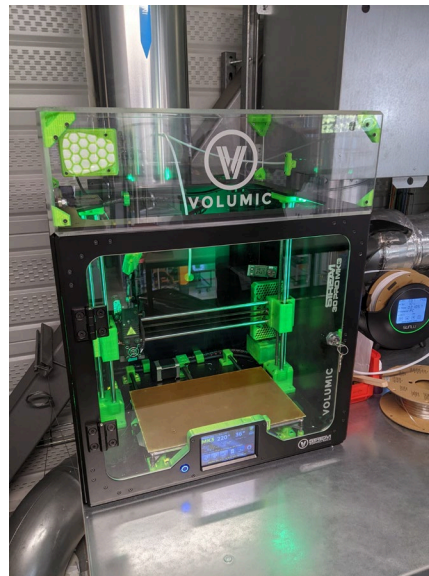
You might have heard of Feynman diagrams before: it's those funny drawings of straight and wavy or curly lines, that are used as a representation of elementary particle interactions (such as those that are created at the LHC at CERN). In this project, we will look at the theory behind them, unravel their mysteries, and learn how to read these types of diagrams. This will help us to better understand what might be happening during particle collisions, which types of interactions can occur, and which are unlikely, and how new particles are found.



# Polymer lab

Supervisor: Christian Scheuerlein

The Polymer lab at CERN works closely with the Magnet Design and Technology section responsible for manufacturing our giant superconducting electromagnets. They design polymer resins responsible for the mechanical stability and electrical insulation of the superconducting coils, which must withstand extreme cold, extreme heat and radiations. In this project, you will experience the entire life of a polymer at CERN: you'll start by designing polymer samples, then 3D print them, then conduct mechanical resistance tests as well as electrical spectroscopy characterisation.



# Project day review

8:00 pm on Friday

- PowerPoint presentations are boring  
Instagram / Tiktok / Snapchat is cool

→ We want a project day review  
as a social media «story».

That's one video per group,  
a minute or two in length,  
shot and edited on your phone,  
vertical video orientation,  
everyone gives updates about the day.

You do not need to post it online,  
but you can if you want 😊



# Time to choose!



[cern.ch/solvay-camp-project](https://cern.ch/solvay-camp-project)





1. General information
2. Project day selection
- 3. Questionnaire**

# And now... questionnaire time!



[cern.ch/solvay-camp-q1](https://cern.ch/solvay-camp-q1)

