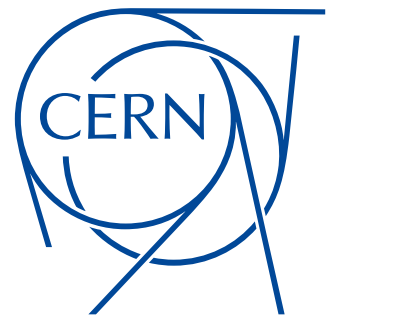
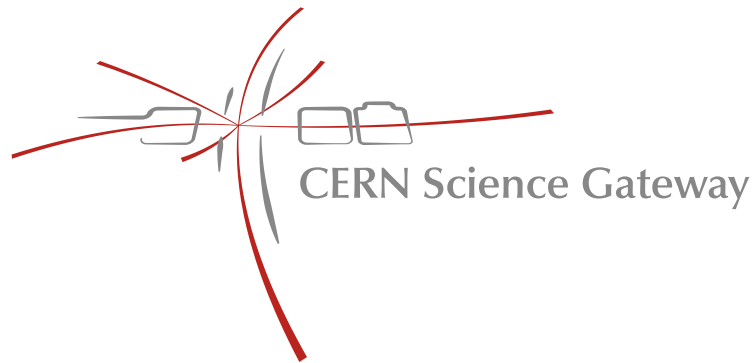


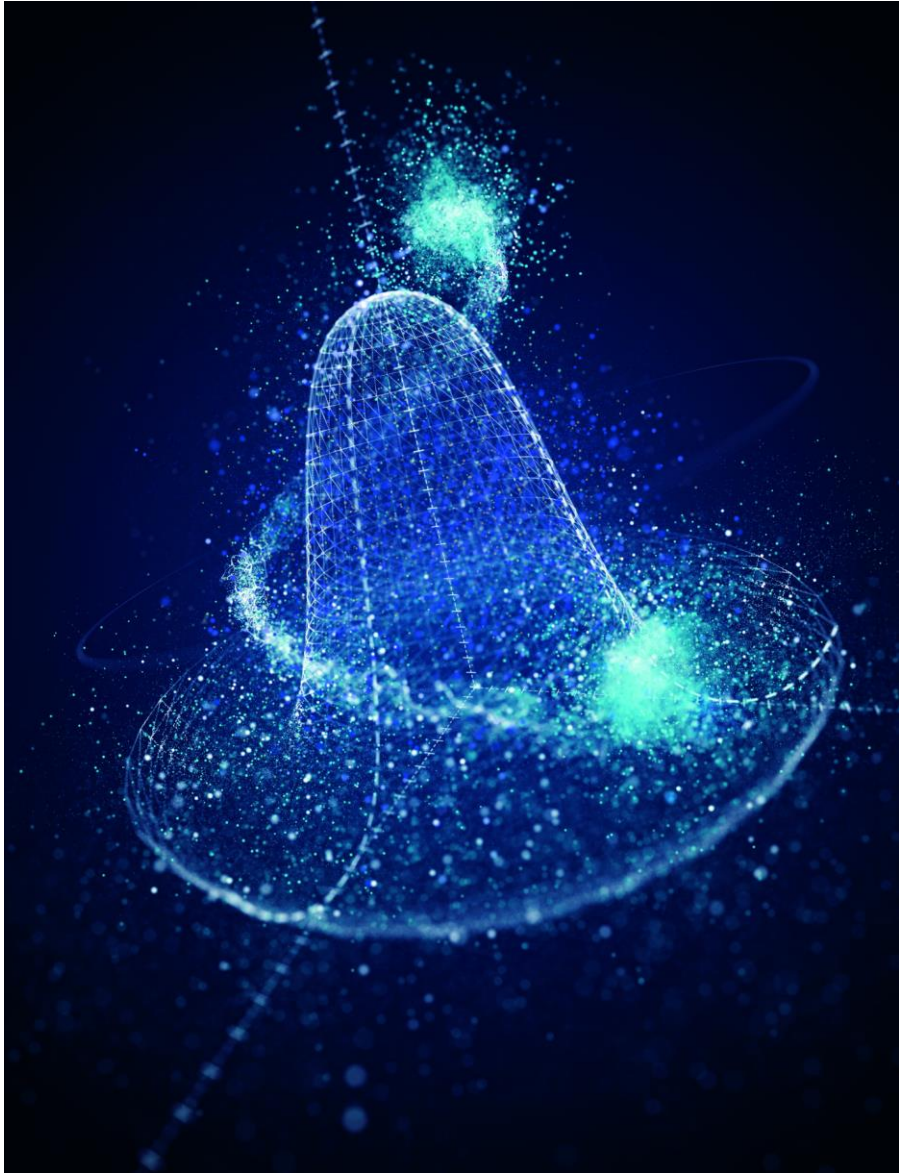
Welcome!

CERN-Solvay student camp



SOLVAY

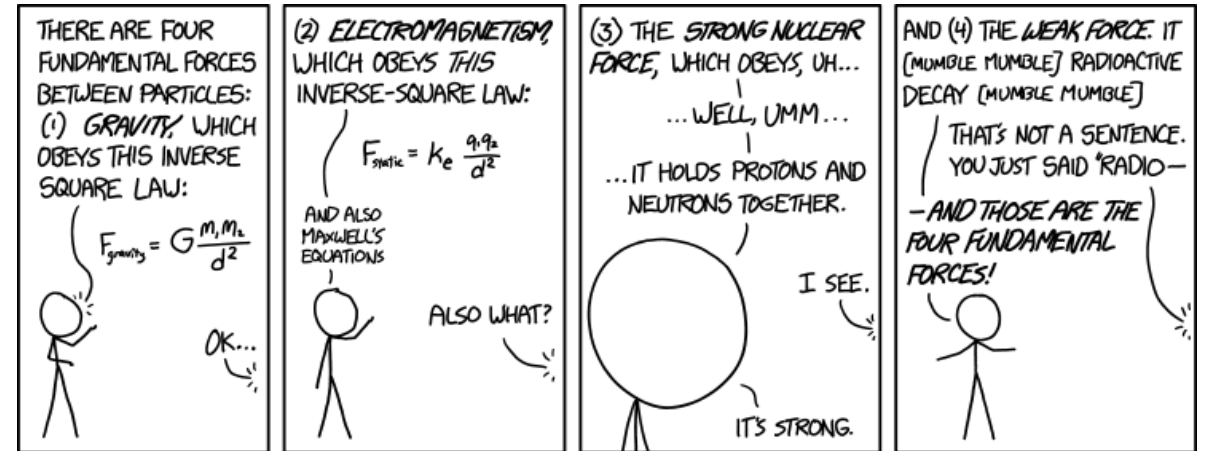
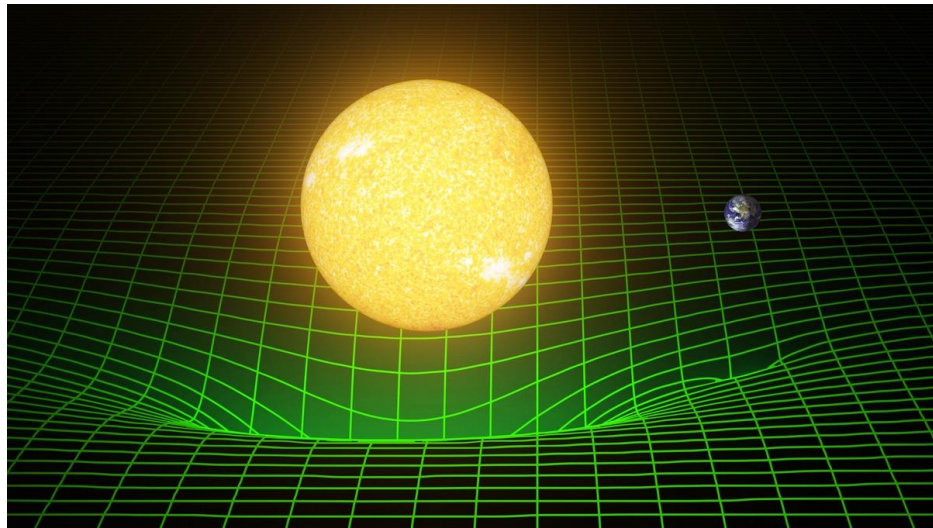
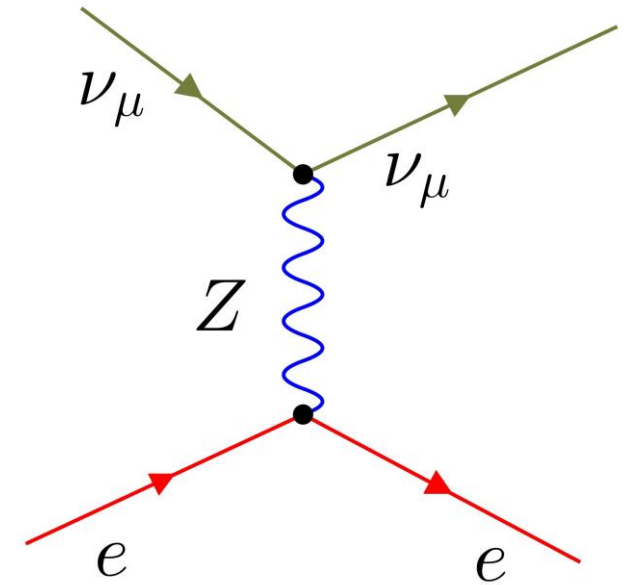
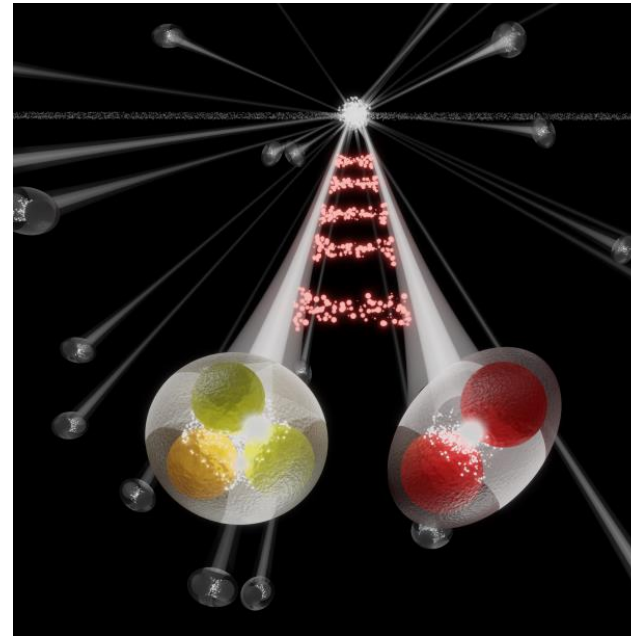
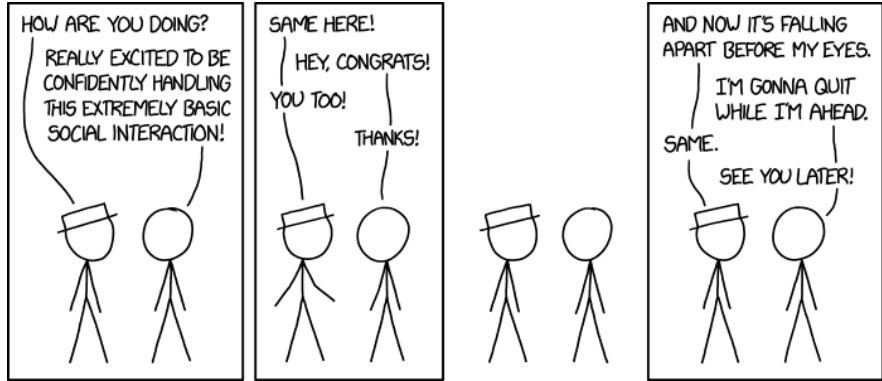
Welcome to...



Welcome to... The boson believers



Interactions!





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



1. General information

2. Project day selection

3. Questionnaire

Important numbers

EMERGENCY: Fire brigade
+41 22 767 44 44 (internal: 74444)

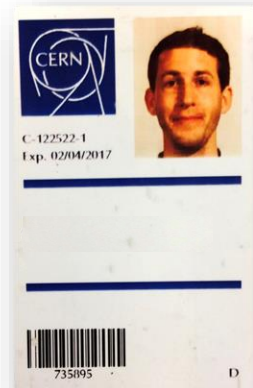
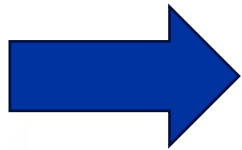
NON-EMERGENCY: CERN medical service
+41 22 767 38 02

FIRST POINT OF CONTACT: Accompanying teachers
+30 694 772 2204 Eirini Siotou
+32 486 94 87 07 Jean-Pierre Grootaerd

CAMP MANAGER:
+41 75 411 06 75 Guillaume Durey



Access card & registration



**Group 1
8:00 tomorrow**

**Group 2
8:30 tomorrow**

**Bring your passport
Building 33**



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



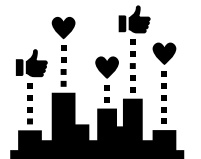
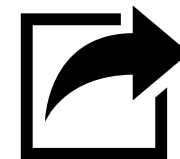
- Ask for allergens
- Stay away from tomatoes
- Return the salad bowl
- You have 40 CHF per day
- Scan your QR code

Photos, videos & social media

- To **share** your photos to be **archived** and **used by CERN and Solvay**, upload them here →
- To **share** your adventures on **your own social media** accounts, please tag **@CERN** and **@SolvayGroup** and use **#CERNSolvayEducation**
- Official **group photo** Wednesday afternoon
- We will be your paparazzi during the week ;-)



cern.ch/solvay-camp-photos
pwd: Beauty_Quark



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

CERN Visits



Travel grants



- We have all the documents we need from everyone
- The travel claims will be processed once your travels are over (during the week after the camp)
- It can take a few weeks for the payments to arrive
- Reach out to me if nothing arrived into your bank account a month after the camp... but not before

Travel grants

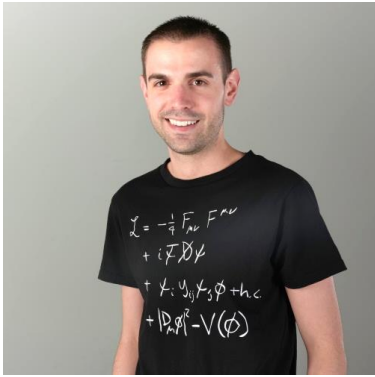
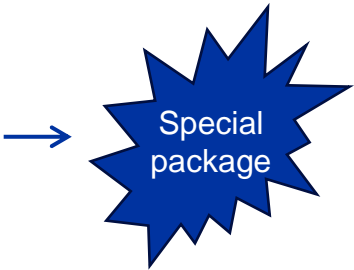


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Shops!

<u>SG Gift Shop</u>	SG Reception	Tue-Sun 8:00-18:00
<u>CERN Kiosk</u>	Main Building	M-F 7:30-11:00 11:30-16:00
<u>ATLAS Shop</u>	40/5-B01	M-F 8:30-12:30 13:30-17:30
<u>CMS Shop</u>	40/4-D01	M-F 9:00-12:00 14:00-17:00
<u>LHCb Shop</u>	2/1-024	M-F 8:30-12:30 13:30-17:30
<u>ALICE Shop</u>	301/R-029	M-F 8:30-12:30 13:30-17:30
<u>CERN Library</u>	52/1-054	M-F 9:00-18:00



With great powers...



... comes great responsibility

Timetable



SUNDAY, OCTOBER 6

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

2:00 PM **Arrive at CERN & check-in at CERN hotel** ⌚ 3h 📍 39 (CERN)

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 📍 R1 in front of the dipole (CERN)

Speaker: Guillaume Durey (CERN)

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

7:00 PM → 8:00 PM **Dinner** ⌚ 1h

8:00 PM → 9:30 PM **Introductory remarks** 📍 500/1-001 - Main Auditorium (...)

8:00 PM **Walk** ⌚ 15m

8:15 PM **Introductory remarks** ⌚ 1h 15m

Speaker: Guillaume Durey (CERN)

cern.ch/solvay-camp-timetable

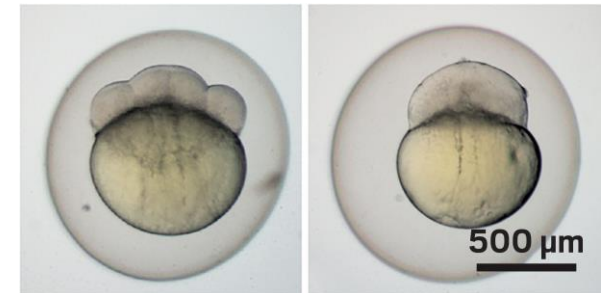
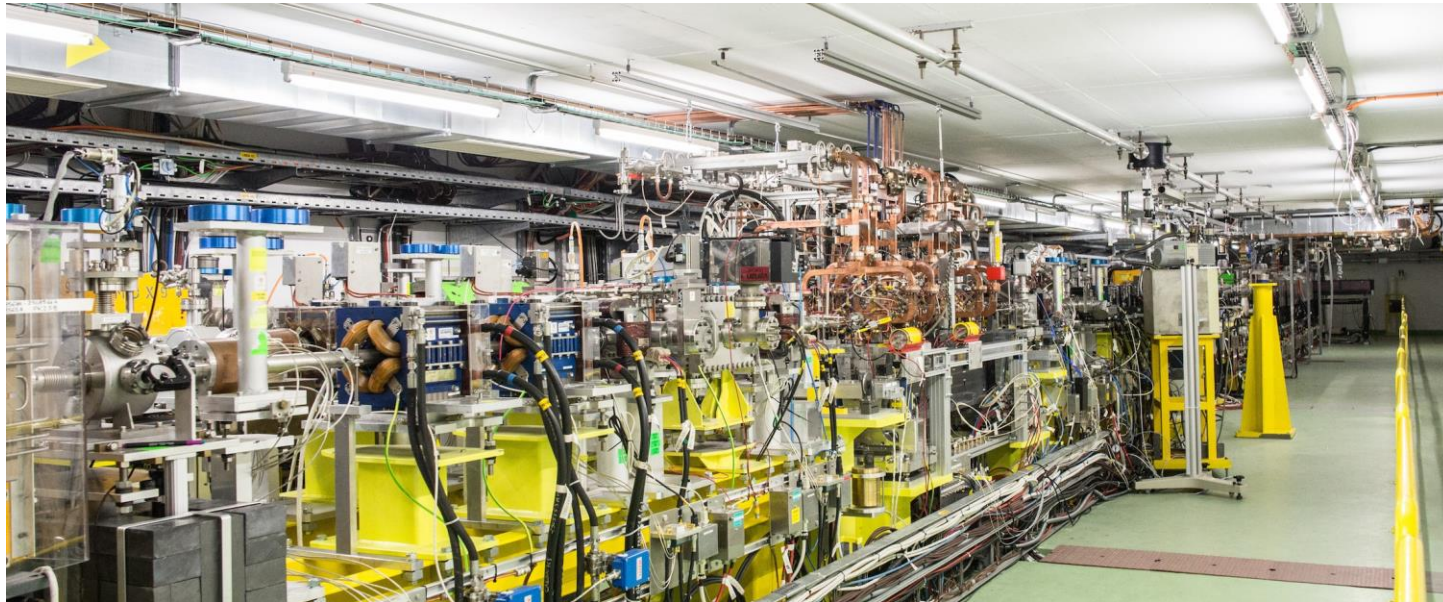


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CLEAR – CERN Linear Electron Accelerator for Research

Supervisor: Pierre Korysko

CLEAR is an electron LINAC and an experimental beamline, operated at CERN as a multi-purpose test facility. Scientists book time with CLEAR 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 e-beam cancer treatment techniques, in particular to study the FLASH effect on zebrafish eggs. You will watch sample preparation, help with sample installation, follow the startup of the beam from the control room, and learn how to irradiate the samples.



Cryo lab

Supervisor: Torsten Koettig

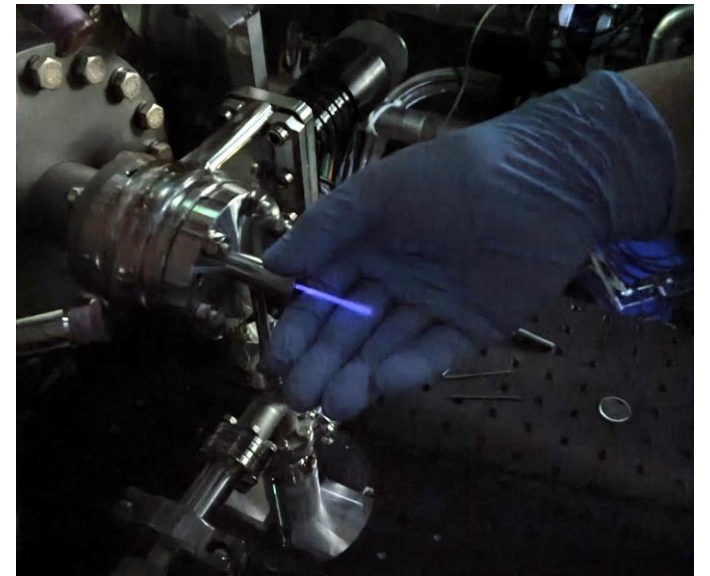
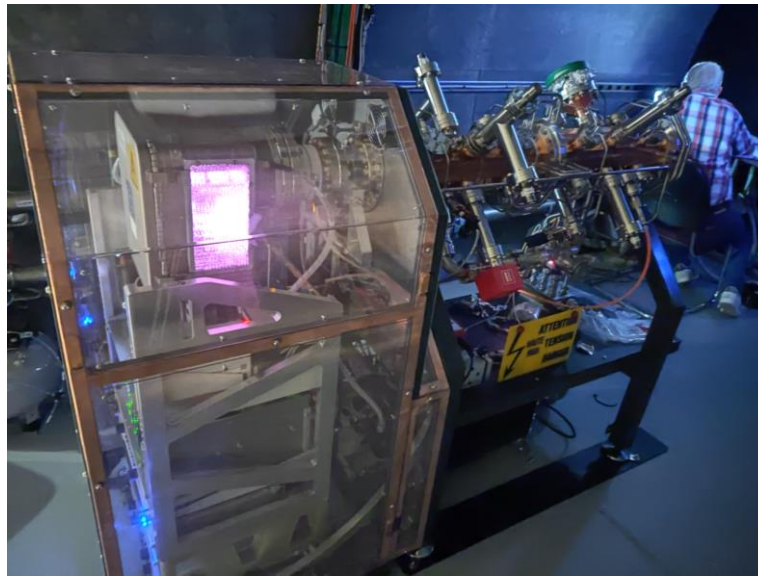
The Cryolab is CERN's R&D lab dealing with cryogenics, essential for operating all the superconducting magnets in the LHC. In this project, you will first get a liquid nitrogen safety course, with an extended presentation of cryogenic effects, or the surprising way gases and materials behave at low temperatures. You will then study the boiling heat transfer regimes at a metal / liquid nitrogen interface. You will setup an experiment to cool down 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.



ELISA – Experimental Linac for Surface Analysis

Supervisor: Serge Mathot

ELISA is a proton LINAC located in the Science Gateway exhibitions – the first proton accelerator to be installed in a science centre! Visitors will be able to attend physics demonstrations with the proton beam – seeing how it can be bent or attenuated, how its color or range can be changed, etc. Scientists will be able to book time with ELISA to perform PIXE (Particle-Induced X-ray Emission) measurements, which reveal the elemental composition of a sample. These non-destructive techniques are very useful in the field of art preservation and art authentication. You will be the first students to perform a workshop with ELISA.



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.



Robotics lab

Supervisors: Hannes Gamper, Eloise Matheson

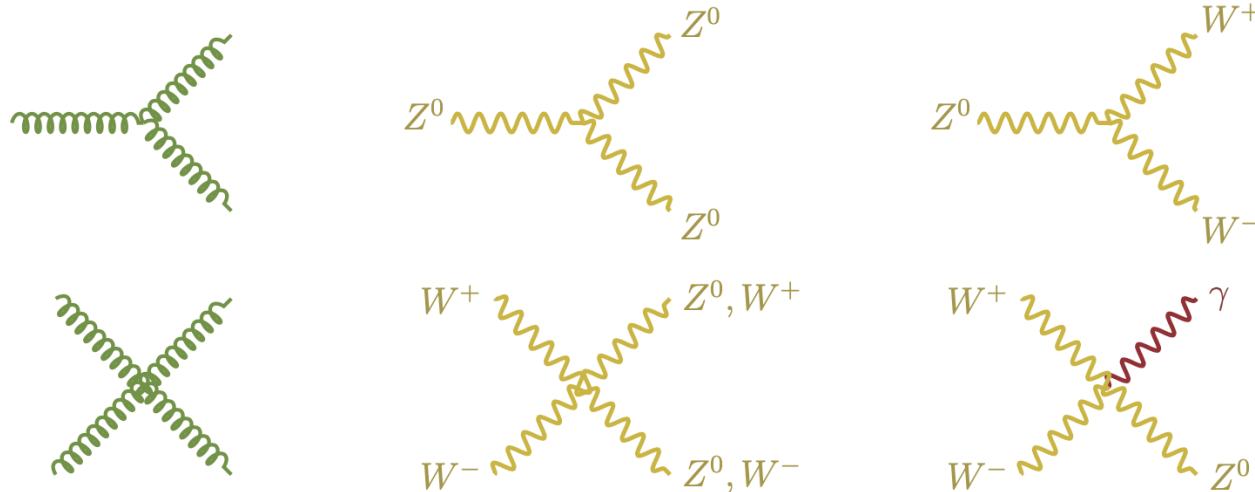
Did you know there is a train in the LHC? The Train Inspection Monorail performs measurements in the LHC tunnel. It is one of the many robots which replace human workers at CERN – either because they wouldn't be able to access the environment they work in due to confined spaces or hazardous conditions, or because it speeds up maintenance operations or repetitive tasks, freeing up more time for physics. You will assemble a miniature rover from scratch, starting from 3D-printed parts, solder the electrical connections, programme the robot's behaviour in Python so it can follow mathematically-defined trajectories, and eventually control it through a virtual reality interface.



Theory workshop

Supervisor: Silke van der Schueren

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.



Project day review

5:00 pm on Friday

→ We want a project day review in the form of a social media story.

That's one video per group, max 90 seconds 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



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

And now... questionnaire time!



cern.ch/solvay-camp-q1

