



Local educational offers 2022-2023

IR-SG-VI - Mélissa Samson, Loraine Massarotti

04 May 2023

Partage ta science

14 October 2022



PARTAGE 11^{ème} ÉDITION

TA SCIENCE

TON GO/TM/TPA/TPI/TIP EN QUELQUES MINUTES

Vendredi 14 octobre 2022
18h00 – 20h00
CERN – Globe de la science et de l'innovation

Entrée libre – Réservation obligatoire
Renseignements et inscriptions : voisins.cern

GLOBE
CERN, MEYRIN

Projet réalisé en collaboration avec

CERN & Science Foundation
ACADEMIE DE LYON
ACADEMIE DE LYON

Overview

- **When:** two-hour annual event (a Friday evening in October before holidays)
- **Where:** CERN, Globe of Science and Innovation
- **What:** a French-Swiss cross-border colloquium where students from Geneva and Pays de Gex present their graduation works covering scientific fields (modelled on the style of a scientific symposium)
 - FR (5'): Grand Oraux
 - CH (15'): Travaux de Maturité, Travaux Personnels d'Approfondissement, Travaux Pratiques Individuels, Travaux Interdisciplinaires centrés sur un Projet
 - A cartoonist reacts live on the various subjects discussed
- **Who:** for young people aged 15 y/o and over
- **Language(s):** French
- **Partners:** Lycée international de F-V, Collège Voltaire, Centre de Formation Professionnel Technique

2012

1st edition
« La science en
partage »

2016

« Mon TPE / TM en 15
minutes »

2020

« Mon TM en 15
minutes »

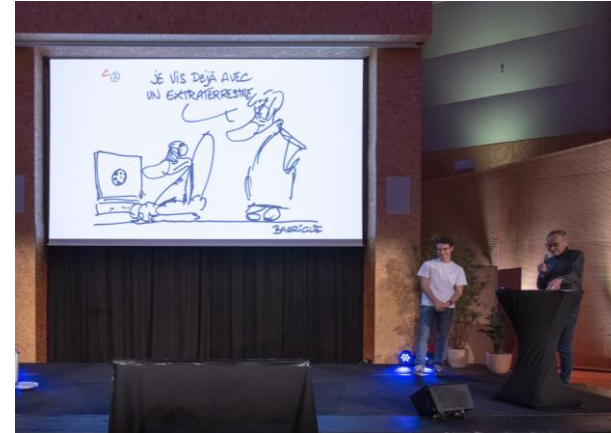
2021

New name and new
visual identity +
Partnership with the
CFPT

2022

11th edition

Last edition | 14 October 2022 (11th edition)



Results:

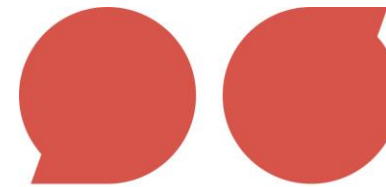
- 6 students
 - 3 FR (CSI Ferney, Cessy)
 - 3 CH (Claparède, Voltaire, CFPT)
- Variety of topics
- Cartoonist: Barrigue

Achievements:

- Fully booked (~ 160 pax)
- Good format (2h + no breaks)

Future editions / Challenges:

- Hold the event at the SG
- Reach more students and increase comms efforts



**FUTUR EN
TOUS GENRES**

Nouvelles perspectives pour filles et garçons

Futur en tous genres

10 November 2022

Overview

- **When:** a Thursday (all-day) in November
- **Where:** Swiss organisations and firms
- **What:**
 - Futur en tous genres is an annual event organised by the DIP. Young people are invited to spend a day discovering the wide range of jobs and fields in which their gender is underrepresented. The goal is to help them to break free of prejudices and to open their eyes to futures they may not have considered, encouraging them to pursue their own ambitions with confidence.
 - 2 ways to take part: 1/ organise a workshop for all children ; 2/ organise the basic programme (only for employees' children)
- **Who:** for children from Swiss schools aged 12 and 13
- **Language(s):** French
- **Partners:** Swiss Department of Public Education, Training and Youth (DIP)

2019

1st edition at CERN
(workshop)

2021

2nd edition at CERN
(workshop)

2022

3rd edition at CERN
(basic programme)

Last edition | 10 November 2022 (3rd edition)



Results:

- 24 children of CERN employees
- Introduction to CERN careers
- 2 workshops per group (cryogenics laboratory, radiation protection, civil engineering, superconductivity)
- CERN guided tour (SC + AVC)
- Science show “Fun with physics”

Achievements:

- Internal communication worked well (Bulletin, secretariats of CERN departments)
- Fully booked
- Good format

Future editions / Challenges:

- If the position of DIP does not change = keep the basic programme for future editions at CERN

Women and Girls in Science and Technology

30 January – 3 February 2023



Overview

- **When:** a week around the 11 February (International Day of Women and Girls in Science)
- **Where:** local schools from Geneva Canton, Nyon district, Ain, Haute-Savoie within a 30-km radius of Geneva or the Annecy conurbation
- **What:**
 - Female science “ambassadors” visit classrooms in the local region to promote the sciences to schoolchildren. They talk about their profession and conduct some small demonstrations.
 - The aim is to address sexist stereotypes and to demonstrate that careers in science are just as accessible for girls as they are for boys. By meeting female role models it’s much easier for girls to picture themselves as scientists, explorers, inventors or engineers later in life.
- **Who:** pupils from 7-15 y/o (maximum 30 pupils per classroom)
- **Language(s):** French ; English (other languages on a case-by-case basis)
- **Partners:** Scienscope, École Polytechnique Fédérale de Lausanne, Laboratoire d’Annecy de Physique des Particules

2017

Initiative from the Diversity task force of CERN ECO group

2019

Partnership with EPFL and Scienscope to address the many requests from schools

2021

New name and new visual identity

2022

Partnership with the LAPP

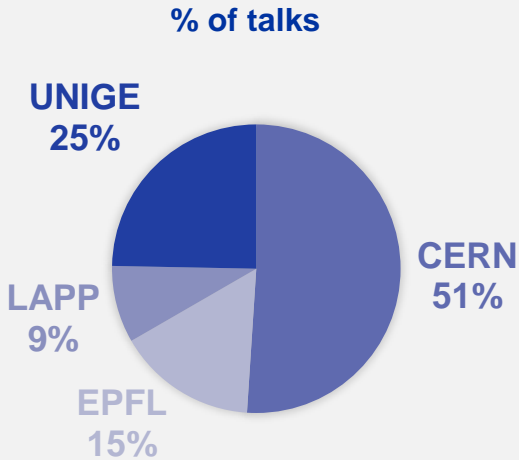
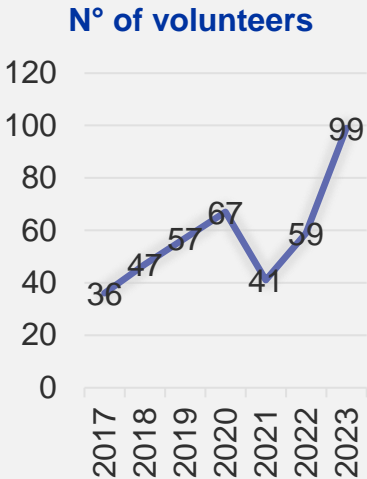
2023

7th edition

Last edition | 30.01-03.02 (7th edition) - Results

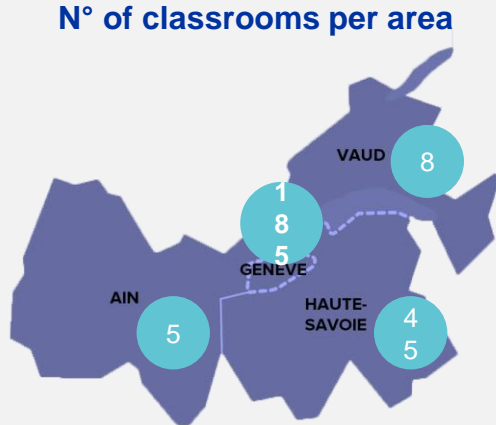
Volunteers

- 99 volunteers (60% from CERN)
 - CERN: 62
 - EPFL: 6
 - UNIGE: 22
 - LAPP: 9



Schools

- 243 classrooms
 - FR: 50
 - CH: 193
- 5221 pupils (average age: 10-11 y/o)



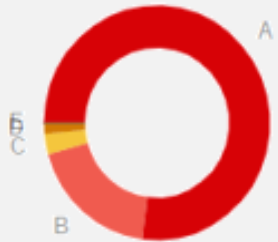
Last edition - Achievements

General

- All requests from schools answered positively
- Relying on a huge community of volunteers (especially at CERN)

Volunteers' satisfaction rate (70 replies out of 99 volunteers)

How satisfied were you with the project organisation ?



A/ Very satisfied – 54 (77%)
 B/ Satisfied – 13 (18%)
 C/ Neither satisfied or dissatisfied – 2 (3%)
 D/ Dissatisfied – 1 (1%)

How satisfied are you with your participation in this outreach project?



A/ Very satisfied – 57 (81%)
 B/ Satisfied – 12 (17%)
 C/ Neither satisfied or dissatisfied – 1 (1%)

Teachers' satisfaction rate (150 replies out of 243 classrooms)

Was the content of the presentation appropriate for the age and level of the pupils?



A/ Too simple – 2 (1%)
 B/ Adequate – 143 (95%)
 D/ Too complicated – 5 (3%)

⚠ In 2019 and 2020, 25% of the teachers thought that the presentation was too complicated for their pupils.

How satisfied are you with your participation in this outreach project?



A/ Very satisfied – 129 (86%)
 B/ Satisfied – 19 (13%)
 C/ Neither satisfied or dissatisfied – 1 (0.5%)
 D/ Dissatisfied – 1 (0.5%)

Last edition - Challenges



For future editions

- Continue to deal with the many requests by keeping the current format (1 presentation for 1 classroom with ~30 pupils maximum)
 - Proposal to gather some classrooms from a same school in an auditorium rejected by our partners (less interactive)
- Involve more and more volunteers (mainly French-speaking)
 - Share our communications (Bulletin, mailing, etc.) in the CERN experiments network

Devoxx4Kids

11 March 2023



DEVOXX™ 4KIDS CERN



Devoxx4Kids, c'est LA conférence réservée aux geeks en herbe : l'occasion pour les enfants de 4 à 15 ans de découvrir de manière ludique la programmation, la robotique ou encore l'électronique avec des outils adaptés à leur âge.

SAMEDI 11 MARS 2023

CERN – Globe de la science et de l'innovation

A chaque âge son programme :

- **Minis (4-6 ans)** : 10h00-12h00, ateliers Cubetto et Robot turtles
- **Kids (7-10 ans)** : 14h00-17h30, ateliers Kids-lab.io et CodeCombat
- **Teens (11-15 ans)** : 10h00-17h30, ateliers Robotique, IOT et Web

Événement gratuit
Inscription obligatoire sur voisins.cern
Ateliers en français

GLOBE
CERN, MEYRIN



La Fondation CERN & Society est fière de soutenir le programme des événements publics au Globe de la science et de l'innovation



Overview

- **When:** a Saturday all day (in March)
- **Where:** CERN, Globe of Science and Innovation & IdeaSquare
- **What:**
 - DevoXX4Kids is an initiative with the aim of providing, developing and bringing together tools and running workshops to familiarise children and teenagers with programming and IT systems in a fun way. Some 450 events have been held so far worldwide.
 - CERN hosts a day of workshops dedicated to programming, robotics and electronics, with three age groups:
 - Minis (aged 4–6) | Globe | Morning
 - Kids (aged 7-10) | Globe | Afternoon
 - Teens (aged 11-15) | IdeaSquare | All day
- **Who:** pupils from 4-15 y/o
- **Language(s):** French
- **Partners:** Swiss DevoXX4Kids non-profit organization (volunteers)

2012

The Swiss
DevoXX4Kids initiative
was launched in 2012

2017

1st edition at CERN

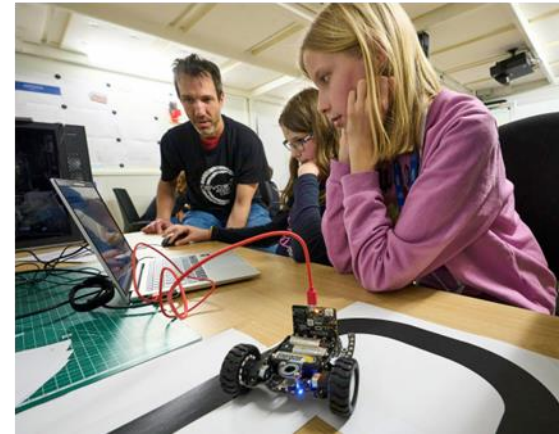
2020

2nd edition at CERN

2023

3rd edition at CERN

Last edition | 11 March 2023 (3rd edition)



Results:

- ~ 100 children
- Registration open in 3 steps
 - Volunteers
 - CERN people
 - General public

Achievements:

- Fully booked within a few minutes
- A new workshop for teens developed by the WIT Community (Bitbot)

Future editions / Challenges:

- Run robotics workshops for kids more often (at the SG?)
- Involve CERN volunteers

International physics Masterclasses

28 - 31 March 2023



Overview

- **When:** 4 dates usually gathered over one week in February or March (one per experiment)
- **Where:** CERN, Globe of Science and Innovation (used to be in S'Cool LAB)
- **What:**
 - International Physics Masterclasses are organised by IPPOG. Each year, some 13 000 secondary school pupils from 60 countries attend particle physics masterclasses held at around 225 universities and research centres. CERN traditionally hosts 4 Masterclasses, one per experiment
 - Local school classes apply to attend a full day at CERN: introduction to particle physics, guided tour, Masterclass exercise, final videoconference with other institutes around the Globe
- **Who:** Pupils studying science in the last two years of secondary school in France and Switzerland (i.e. 1^{ère} or terminale with option scientifique in France or third and fourth years of the option scientifique in Geneva)
- **Language(s):** French or English
- **Partners:** IPPOG, ALICE, ATLAS, CMS, LHCb

2004

Initiative launched by
IPPOG

2013

1st participation of local
school classes

2023

3 Masterclasses held
at CERN

Last edition | 28 - 31 March 2023



Achievements:

- Participation of 2 colleagues from IR-ECO-TSP
- Introduction of a meeting with TSP + tutors to share good practices and general information on the day

Results:

- 3 Masterclasses (~ 80 participants)
- Held over one week for logistics synergies

Future editions / Challenges:

- Improve tutors' recruitment among the 4 experiments
- Try to prevent loss of experience from one year to the next
- Provide communication course to tutors
- Improve communication to recruit more school classes (no takers for LHCb this year)
- Revise format ?
 - A full-day onsite is difficult to arrange for one subject only
 - Suggest shortenig the videoconference

Django Girls

21 & 22 April 2023

django girls GENEVA

ATELIER DE PROGRAMMATION POUR LES FEMMES
PROGRAMMING WORKSHOP FOR WOMEN

Vendredi 21 avril 2023

18H00 – 19H45 : FÊTE D'INSTALLATION

Friday 21 April 2023

6.00 P.M.–7.45 P.M.: LAUNCH PARTY

Samedi 22 avril 2023

9H00 – 17H00 : ATELIER

Saturday 22 April 2023

9.00 A.M.– 5.00 P.M.: WORKSHOP

Événement gratuit en français et en anglais – Nombre de participants limité
Inscription obligatoire sur voisins.cern
Free event in French and English – Limited number of participants
Mandatory registration on voisins.cern

IDEASQUARE
CERN, MEYRIN



Overview

- **When:** an evening installation party and a full day workshop in April (International Girls in ICT Day)
- **Where:** CERN, IdeaSquare
- **What:**
 - Django Girls is a non-profit organization that helps to organise programming workshops by providing, tools, resources and support. Their goal is to inspire and encourage women and girls into programming. Participants create a blog and deploy it on the internet.
 - CERN hosts the Django Girls Geneva workshop. Participants are coached by the CERN tutors.
- **Who:** 15 y/o+
- **Language(s):** French ; English
- **Partners:** MicroClub, WIT Community



The Django Girls initiative was launched in 2014



1st edition at CERN



Online editions at CERN



6th edition at CERN

Last edition | 21 & 22 April 2023 (6th edition)



Results:

- +50 applicants (from all over the world)
- 34 participants (local, 12-60 y/o)
- 17 CERN coaches
- Maria Girone (Head of CERN Openlab)

Achievements:

- Very few no shows (only 2 / several reminders)
- Participants and coaches are satisfied with logistics and their participation

Future editions / Challenges:

- Need to recruit more French-speaking CERN Volunteers (coaches) when the event is organised in-person

Be a scientist

January – May 2023

Dans la peau
de scientifiques

Overview

- **When:** every year from January to May
- **Where:** in classrooms + 2 trainings for teachers at CERN (January & March)
- **What:**
 - Pupils are introduced to the scientific research process in order to identify, as precisely as possible, the content of boxes that they were not allowed to open or damage – just like CERN scientists are looking for particles they can't see.
 - The project includes a visit to CERN or to the Physiscopes.
 - The edition ends with a conference at the Globe of Science and Innovation at CERN. Pupils are invited to present their results, discuss their research and, above all, to finally discover the content of the boxes!
- **Who:** for pupils aged 7 to 12 from Geneva, Ain and Haute-Savoie
- **Language(s):** French
- **Partners:** University of Geneva, Physiscopes, Department of Public Education, Ministry of Education



Project launched in 2011 "Dans la peau d'un chercheur"



10th edition (online due to Covid) + Défi des écoles



Cancelled due to Covid



11th edition

Last edition | January – May 2023 (11th edition)



Results:

- 30 schools
- 684 pupils
- 230 boxes

Achievements:

- Ongoing
- Satisfaction survey will be sent to the teachers

Future editions / Challenges:

- 11 May (10:00-12:00): conference at the Globe of Science and Innovation at CERN with three schools

Science shows

All year



Overview

- **When:** mostly during local school holidays or on-demand when a school group is guaranteed
- **Where:** CERN, Globe of Science and Innovation
- **What:**
 - 3 shows available, delivered in French or English
 - Fun with Physics
 - Seeing the invisible
 - Seize the data
- **Who:** 6 y/o+ or 12 y/o+ depending on the show
- **Language(s):** French ; English
- **Partners:** IR-ECO-TSP

Summer
2021

Introduction of first
34 shows over
summer

Fall
2021

Decision to maintain
the shows as a
recurrent public offer

2022

55 shows
3472 attendees

2023

So far: 29 shows
1617 attendees

Feedback



Results

- 124 shows since summer 2021
- 6669 attendees since summer 2021

Achievements:

- Registration no longer needed: first-come-first served activity complementing the Globe exhibition

Future editions / Challenges:

- Need to recruit more CERN guides (tutors) able to deliver the 3 shows
- Particularly missing French-speaking tutors
- Develop a daily program at the SG

Other events dedicated to school kids

All year



Held at the Globe

- **February 2022 – Moteur à salades**
 - Theater play for kids aged 6-8 y/o
- **March 2022 – FILMARcito**
 - Short latin-american films on sensitive and funny stories on the awareness of an infinite beyond
- **March 2023 – Mad Maths**
 - A zany, poetic show about mathematics



Held outside CERN

- **November 2022 – Expanding Your Horizons**
 - Organised by the Expanding Your Horizons – Geneva (EYH) association at Uni Mail for girls aged 11-14
24 CERN ambassadors ran four activities (three workshops and a stand)
- **March 2022 – TecDays**
 - Initiated by the Swiss Academy of Technical Sciences (SATW) ; 70 professionals ; 900 students from Sismondi College





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