

Dear Reader,

This Newsletter is intended for all SPS members, researchers, industries, students, interested specialists and physics friends. Feel free to share this Newsletter within your community, and follow this [link](#) if you want to add a person to our mailing list.

If you wish to give your contribution with news or suggestions, please do not hesitate to contact me at: margherita.boselli@cern.ch

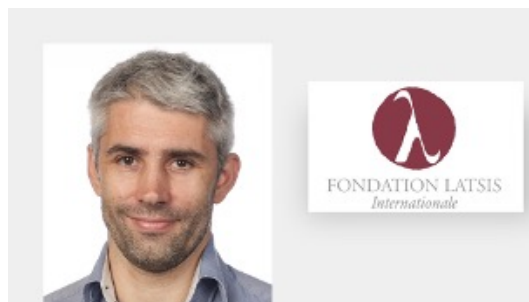
Kind regards,

Margherita Boselli

WHAT'S UP IN SWITZERLAND?

2023 Prix Latsis Universitaires for EPFL awarded to Jean-Philippe Brantut

The "Prix Latsis Universitaires 2023" were awarded on **November 13 during a ceremony that took place at the University of Geneva**. These prestigious prizes, sponsored by the [Latsis Foundation](#), are awarded to scholars from the Ecole Polytechnique de Lausanne (EPFL), the Ecole Polytechnique de Zurich (ETH), the University of Geneva and the University of Saint-Gall, who have shown exceptional promise in their respective fields.



[The 2023 EPFL Latsis Prize](#) has been awarded to **Jean-Philippe Brantut**, Professor at EPFL's School of Basic Sciences, and member of the SPS executive board, in charge of atomic and quantum Physics. The Prize recognizes Brantut's groundbreaking research in quantum gases and quantum optics. His work delves into the complex interactions of Fermi gases within optical cavities, exploring the intricate dance between light and matter.

The recording of the ceremony is available [here](#), and it includes the seminar given by Jean Marc Jancovici, President of the [Shift Project](#), who gave a very rich talk entitled "Quelle Suisse dans un monde neutre un carbon?". Don't miss it!

Image: portrait of Jean-Philippe Brantut, from EPFL.

Physics in Advent is about to start!

Physics in Advent <https://www.physics-in-advent.org/> is a special and unique Advent calendar, where **young researchers, school classes** and **anyone interested** can try out a do-it-yourself physics experiment at home or at school every day from the 1st to the 24th of December 2023.

Participation is particularly rewarding for Swiss students and school classes, who can



win special prizes offered by the Swiss Physical Society. [Registration](#) is open, don't miss this opportunity!

New portraits of women in science

In 2021 the MAP platform (Mathematics, Astronomy and Physics) launched a series of video portraits of female scientists working in Switzerland. A second series has been published in 2023, focusing on scientists who have left academia to apply their expertise in different professions. One of the main aims of this interesting initiative is to inspire young girls and early-career women.



Two **new portraits** were published in October and November. [The one released in October](#) is about **Stephanie Landini-Lang**, a medical physicist specialized in radiotherapy, who leads a group of 17 people at the University Hospital of Zurich. Her group provides high-quality support to radiotherapy treatments to around 1700 patients a year. The video is available [here](#).

[The November portrait](#) features **Shiva Farghar**, a data science consultant at the consulting firm D ONE. Shiva Farghar moved into data science after completing a bachelor's and master's degree in physics, specializing in theoretical astrophysics and cosmology. During her master's degree, she worked on applying artificial intelligence tools to the study of black holes. The critical and analytical approach she developed during her studies has been crucial to her success as a data scientist. The video is available [here](#).

A [third portrait](#) published at the very end of this month features **Valerie Koller**, trained as mathematician and currently working for the Swiss federation in charge of space research. Click [here](#) to watch her video interview.



Image: on the top picture Stephanie Landini-Lang (from Benedikt Vogel), and Shiva Farghar (from D ONE). At the bottom, Valerie Koller.

Public consultation of the project Matura 2023

A long-term and far-reaching [reform of the Swiss Matura](#) is currently underway. The aim is to reform the Matura curriculum to take account of major changes and challenges at several levels: the education system, the societal and cultural context, and major trends such as globalisation and digitalisation.

[The Swiss Physical Society has published a position paper](#) on the legal and educational framework of the reform.

A public consultation on the framework curriculum is currently underway, covering both disciplinary and interdisciplinary/cross-curricular aspects.

Key information, including the full texts of the consultation and the procedure for participation, is available [here](#) in French and German (use the button at the top right to switch from one language to the other).

Applications for CERN's International Teacher Programmes 2024 are now open!

In the summer of 2024, CERN will offer two 2-week residential programmes for high-school science teachers. Both programmes will be delivered entirely in English and are open to in-service teachers from all around the world. The **International High School Teacher Programme (HST) 2024** will take place from 30 June – 13 July 2024 and the **International Teacher Weeks Programme (ITW) 2024** will take place from 4-17 August 2024.

Teachers can find out more about these fully-funded programmes and apply via the [CERN Teacher Programmes website](#) until 14 January 2024.

CERN Beamline for Schools 2024

Beamline for Schools 2024 is about to start! [Beamline](#)

for Schools is a physics competition for high school students from all around the world inviting them to propose an experiment that they want to perform at a particle accelerator. The popular competition celebrates its 10th anniversary in 2024. Three winning teams will be selected, two of which will perform their experiments at CERN and one at DESY. There will be additional prizes for up to 40 selected teams. All prospective participants who [preregister](#) to the competition will have the possibility to follow online Q&A sessions about the preparation of their experiment proposals and to participate in virtual visits to CERN. The deadline to submit a proposal is **10 April 2024 at 23:59 CEST**. Further information can be found in the [official invitation](#). The Beamline for Schools competition is fully funded via the [CERN & Society Foundation](#).



Teaching the basics of climate without equations

Scientists from the [Nonlinearity and Climate group](#) at the University of Geneva have developed and published a **mobile app** that provides a simplified climate model that can be very useful for teaching the basics of climate physics to non-experts. The main authors are Stéphane Goyette, a former member of the SPS executive board in charge of Earth and environmental physics, and his colleague Jérôme Kasparian.



This application offers several ways of learning about the climate convergence of a long-term solution, but also about the non-linearities and alternative stable states. Although highly simplified, the models used in this application capture the essence of the Earth's energy balance, with formulations based on sound physical principles. Default parameter values are set to represent today's Earth, but can be adjusted by the user using sliders to explore model sensitivities and compare model results for different inputs. The app also provides didactic support, with parameter definitions, explanations of physical processes and suggestions for numerical experiments, as well as data export for further offline processing.

The app is already available and can be downloaded [here](#) for Apple devices.

WHAT'S UP IN EUROPE

President Macron concluded at CERN his visit to Switzerland

On Thursday 16 November, **the President of the French Republic, Emmanuel Macron**, [visited CERN](#) together with the **President of the Swiss Confederation, Alain Berset**, and the **Director General of CERN, Fabiola Gianotti**. This visit marked the end of the French President's visit to Switzerland and was an important opportunity to discuss the excellent collaboration in research also very relevant for CERN of which they are the host countries. During their visit, the delegation had the opportunity to visit the LHC tunnel, the ATLAS experiment and the new Science Gateway, inaugurated on 7 October in the presence of the President of the Swiss Confederation, Alain Berset.



The Swiss Physical Society (SPS) unites persons interested in physics from university, schools, research, development and industry. The SPS promotes the scientific exchange of ideas in Switzerland and with its international environment.

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