

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?

SPS Annual Meeting - Deadline for Abstract Submission

The [Annual Meeting of the Swiss Physical Society](#) will take place in Fribourg from **June 27 to June 30 2022**. The current evolution of the COVID 19 pandemic seems to allow for an in-person event.



This year the program will benefit from the direct contributions of the [Swiss Institute for Particle Physics](#) (CHIPP), the [NCCR Bio-Inspired Materials](#), and the [Swiss Neutron Science Society](#) (SGN).

In addition, on **July 1** the satellite event "[Women in Physics Career Symposium](#)" will take place. The goal of this symposium is to boost women in the early career stage starting from undergraduate up to postdoctoral studies in building a professional and mentoring network in physics.

The deadline for the [abstract submission](#) is **March 15 2022**, and the registrations will be open until **June 1 2022**.

International Day of Women and Girls in Science 2022

The United Nations General Assembly adopted February 11 as the [International Day of Women and Girls in Science](#). The goal of this initiative is promoting the role of women and girls in science as agents of change.



Among many other initiatives promoted in Switzerland, the main scientific institutions of the Suisse Romande partnered up to celebrate this event and organized a series of activities for all ages.

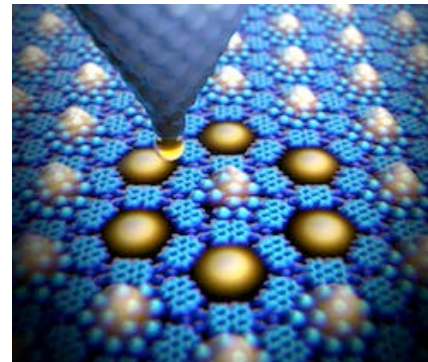
From February 7 to 11 2022, almost sixty volunteers, all female scientists and engineers from [CERN](#), [Sciencescope \(UNIGE\)](#), the [École Polytechnique Fédérale de Lausanne \(EPFL\)](#) and the [Annecy Particle Physics Laboratory \(LAPP\)](#) visited local schools, either in person or virtually, to talk to the pupils about their professions. They met more than 110

classes in the local area (canton of Geneva, Pays de Gex and Greater Annecy).

Presentation at the École des Boudines in Meyrin during the 2019 Women and Girls in Science and Technology event (Image: CERN)

MolQueST Conference 2022

The [2022 MolQueST \(Molecule Based Quantum Science and Technology\) Conference](#) will take place at the congress center "Stefano Fascini", in Ascona, Switzerland, from August 21 and August 25 2022.

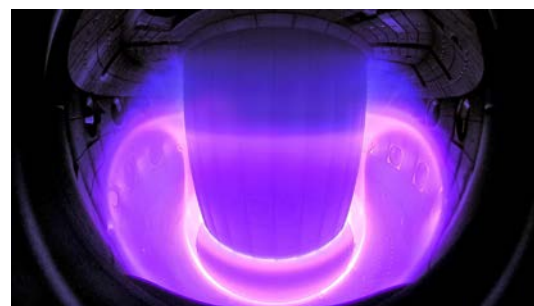


The topic of this conference, « Quantum Science Emerging from Atoms and Molecules at Surfaces », builds upon breakthroughs in the art of making atomic and molecular architectures. Electronic and nuclear quantum states can now be manipulated at the single atomic level in a controlled surface environment by using either local probes or global electric and magnetic fields. This conference, as a continuation of the ones of 2014 and 2017, will address the use of quantum and spin states in atoms and molecules at surfaces for sensing, information storage, and information processing (logic) devices.

All the information about the abstract submission and the registration are available [here](#).

EPFL and DeepMind use AI to control plasmas for nuclear fusion

[EPFL's Swiss Plasma Center \(SPC\)](#) has decades of experience in plasma physics and plasma control methods. [DeepMind](#) is a scientific discovery company acquired by Google in 2014 that is committed to 'solving intelligence to advance science and humanity.' Together, they have developed a new magnetic control method for plasmas based on deep reinforcement learning, and applied it to a real-world plasma for the first time in the [SPC's tokamak research facility, TCV](#). Their study has just been [published in Nature](#).



More information are available here: [EPFL news](#), and [DeepMind blog](#).

Image: EPFL.

WHAT'S UP IN EUROPE

International Day of Light 2022: Call for Events

UNESCO celebrates every year on May 16 the [International Day of Light \(IDL\)](#) commemorating the date of the first laser operated by Theodore Maiman at Bell Labs in 1960. IDL is a global initiative that provides an annual focal point for the continued appreciation of light and the role it plays in science, culture and art, education, and sustainable development, as well as in fields as diverse as medicine, communications, and energy.



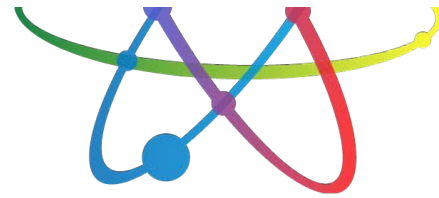
This event is the perfect occasion to organize an event on this topic. You can register your activities (also colloquia, seminars,...) to the IDL calendar using the IDL's [online form](#).

Stick to Science

[Stick to Science](#) is an online signature campaign for an open and inclusive European Research Area. This initiative has been set up by the European research community calling for open and barrier-free collaboration among Europe's research and



innovation (R&I) actors, who all share the same values. The initiative is an active response to the delayed progression of association agreements with Switzerland and the United Kingdom (UK), which are being held up by political barriers that have nothing to do with science.



The signatories urge the EU, the UK and Switzerland to rapidly reach association agreements so that the two countries can contribute scientifically and financially to the strength of Horizon Europe and to a truly open, inclusive and excellence-driven European Research Area.

IUPAP 100 Photo Contest

IUPAP, the International Union of Pure and Applied Physics, launched the [IUPAP100 Photo Contest](#) to celebrate physics and its practice on the occasion of the IUPAP's centenary. The contest is now open for submissions, and the deadline for sending a contribution is April 14 2022 at 23:59 EST.

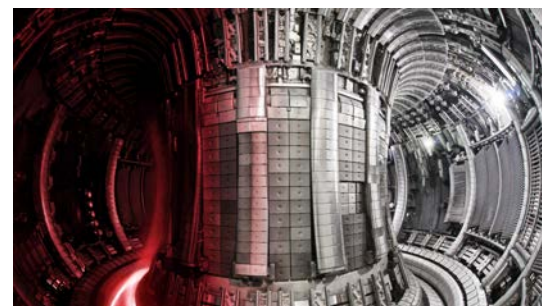


The contest is aimed at professional and amateur photographers and at science students and researchers. The images must be related to physics research and/or education, the impact of physics on everyday lives or an event or process in which physics plays a role. Images that have been obtained through special scientific equipment, that have been made via computer simulations of physical processes or have been taken with any type of camera are accepted.

More details on the contest, its rules, and the way to register and submit entries are available on the [contest's webpage](#). By submitting an entry, each participant agrees to the official rules and confirms that his/her entry complies with all requirements noted in the rules.

European researchers achieve fusion energy record

On February 9, [EUROFusion](#) announced a record-breaking 59 megajoules of sustained nuclear fusion energy. This achievement demonstrates potential of fusion at the world-leading [Joint European Torus \(JET\)](#) facility in Oxford, UK. More details can be found on the [EUROFusion press-release](#) and on the [EPFL](#) news.



These record results are the clearest demonstration in a quarter of a century of the potential for fusion energy to deliver safe and sustainable low-carbon energy. Researchers from EUROfusion consortium used the Joint European Torus (JET) device to release a record 59 megajoules of sustained fusion energy, and confirmed that sustained high-level fusion energy production is feasible. This achievement on JET, the largest and most powerful operational tokamak in the world at the UK [Atomic Energy Authority \(UKAEA\)](#) site in Oxford, more than doubles the previous fusion energy record of 21.7 megajoules set there in 1997. Look and listen at the [video](#) of the record discharge. This result comes as part of a dedicated experimental campaign designed by EUROfusion to test over two decades' worth of advances in fusion and optimally prepare for the start of the international [ITER project](#), located south of France and now at 85% of its construction.

Image: UKAEA.

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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