

Dear Reader,

You scientists shape this newsletter.

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. If you would like to share some news with us, please contact Celine.Lichtensteiger@UniGe.ch.

WHAT'S UP IN SWITZERLAND?

"Physik am Freitag" at University of Bern

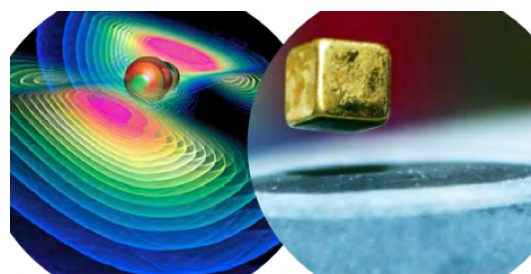
With every new year, the physics institute of University of Bern is offering a series of five open and public lectures explaining current research and results in physics on five Fridays starting at 16:30. The lectures are usually given in German and last about one hour and after every lecture, the speakers will be happy to answer questions, followed with small refreshment.



The 2019 series started on Friday, **18 January 2019**. On Friday, **25 January 2019**, [Thomas Frölicher](#) will detail in his lecture "*Warm, sour, little oxygen - the ocean under stress*" how increased CO₂ abundances in the atmosphere affect the oceans world wide. [\[more\]](#)

"Saturday Morning Physics" at the University of Basel

Exciting topics of physics research are presented in an understandable way in the public lecture series "Saturday Morning Physics" at the University of Basel. The lectures are open for everyone interested in physics, in particular also for teenagers.



On Saturday, **26 January 2019**, [Prof. Dirk Trautmann](#) will talk about the "*Mysteries of Gravity*", and on Saturday, **2 February 2019**, [Prof. Christoph Bruder](#) will discuss the intriguing phenomenon of "*Superconductivity*". The program starts at 10:00 on each day with a lecture at the Physics Department of the University of Basel. From 11:00 on a number of exciting demonstration experiments can be explored. The lectures are usually in German. [\[more\]](#)

Women scientists visit local schools! 11-15 February 2019

International Day of Women and Girls in Science, 11 February 2019

11 February 2019 is the International Day of Women and Girls in Science. On this occasion, CERN, EPFL and UNIGE ScienScope offer local schools the possibility to welcome a female scientist/engineer to present her work to (mixed) classes. [\[more\]](#)



International Masterclass in Particle Physics for Swiss high-school students

"Discover the world of quarks and leptons with data from the Large Hadron Collider"

In **March 2019**, the International Particle Physics Outreach Group ([IPPOG](#)) will hold its fifteenth international Masterclass in Particle Physics. Every year, some 14,000 students from over 50 countries come to one of 200

universities and research centres to explore the world of elementary particles. In Switzerland, under the patronage of the Swiss Institute of Particle Physics ([CHIPP](#)), the Universities of Bern, Geneva and Zurich (together with ETHZ) and EPFL are offering interested students the opportunity to participate. Interested high-school students and their physics teachers in Switzerland can participate on **7 March 2019** in Geneva or on a yet to be specified date in **March or April 2019** in Lausanne in French; and on **26 March 2019** in Berne or on **22 March** in Zürich in German. [\[more\]](#)



Physics Courses for School Classes at the Science Lab of the University of Zurich

The Physics Institute of the University of Zurich, in cooperation with the [Science Lab UZH](#), offers various courses for school classes on current research topics: [Quarks, electrons, gluons & co](#) - an introduction to the theory of particle physics and detectors at the

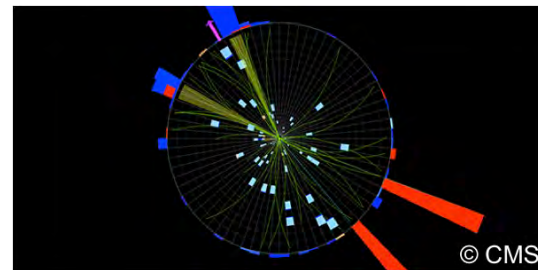
LHC accelerator at CERN; [Cosmic radiation](#) - an introduction to experiments; [Neutrinos](#) - how to measure the invisible; [Magnetism workshop](#) - so commonplace and yet exciting - from the discovery of magnetism to modern applications and superconductivity. [\[more\]](#)



Decay of Higgs boson into bottom quarks observed with ATLAS and CMS

Since the discovery of the Higgs boson in **2012**, various properties of the new particle have been measured. However, the Higgs boson decay into a pair of bottom quarks ($H \rightarrow b\bar{b}$) has so far escaped observations, despite its largest branching ratio. Now, by

combining different analyses channels, most prominently the associated production of H with a vector boson, for the first time this decay was unambiguously observed at a significance level above 5-sigma by the ATLAS and CMS experiments at CERN. Swiss physicists had leading roles in obtaining that landmark result. [\[more: Phys. Lett. B, Phys. Rev. Lett.; viewpoint\]](#)



2019 Watt d'Or Energy Prize for former SPS president

The railway company BLS and the University of Basel are among the winners of this year's Watt d'Or energy prize, which is awarded by the Swiss Federal Office of Energy. They received the award for a modernisation programme for rail vehicles that can save a considerable amount of electricity. The efficiency initiative was launched by [Peter Oelhafen](#), physics professor emeritus from Basel and SPS-president (from 1997-1999). [\[more\]](#)



WHAT'S UP IN EUROPE?

ESERA Conference, 26-30 August 2019, Bologna

The beauty and pleasure of understanding: engaging with contemporary challenges through science education



The ESERA (European Science Education Research Association) bi-annual conference is the largest European conference for science education research, with many innovative and stimulating contributions in particular for physics education research.



Submission of abstracts for peer review is now open [[here](#)], deadline: **31 January 2019**.
[\[more\]](#)

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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