

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](mailto:margherita.boselli@cern.ch)

Kind regards,

Margherita Boselli

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## WHAT'S UP IN SWITZERLAND?

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### SPS Communications May 2022

The May issue of the journal of our Society, the [SPS Communications](#), has been distributed to our members. The editorial article of this edition, written by Prof. Hans-Peter Beck, Vice-President of the SPS, expresses the point of view of the Swiss Physical Society on the war in Ukraine.

The Swiss Physical Society condemns the military attack by the Russian government on Ukraine, and hopes for the immediate ceasefire. Our Society supports students and researchers from Ukraine and remains inclusive toward the Russian scientists who do not support the war.

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### Honorary Doctorate of UZH to Prof. Ruth Durrer

On the [2022 Dies Academicus](#), April 30, the Faculty of Science of the University of Zurich honored Honorary Doctor Prof. Dr. Ruth Durrer, [professor of theoretical physics at the University of Geneva](#), in recognition of her outstanding accomplishments in theoretical cosmology.



*Image: 2022 Honory doctors at UZH Prof. Dr. Dorothea Sattler, Dr. Hanna Machińska, Prof. Dr. Eric Bettinger, Prof. Dr. Vera Regitz-Zagrosek (first row from left to right); Prof. Dr. Debbie Jaarsma, Prof. Dr. Peter French, Prof. Dr. Ruth Durrer (second row from left to right). Source UZH.*

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### Natasha Tomm wins the 2022 Prix Schläfli in Physics

The [Prix Schläfli](#) is awarded by the Swiss Academy of Sciences (SCNAT) to the most important insights of young researchers at Swiss universities. This prize was first awarded as early as 1866. Among the winners of the 2022 edition of the prize is [Natasha Tomm](#), who defended her thesis at the University of Basel. Her work could help give



data transfers more protection against being hacked: during her dissertation, Natasha Tomm (co-)developed a super-efficient source of individual photons.

*Image: portait of Natasha Tomm, credits Clemmens Spinnler.*

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## 2020 Albert Einstein Medal

The Albert Einstein Medal is awarded by the [Bern Einstein Society](#) to deserving individuals for outstanding scientific findings, works, or publications related to Albert Einstein.

In 2020 this prize was awarded to the [Event Horizon Telescope \(EHT\) Scientific Collaboration](#), represented by its spokespersons: Prof. Sheperd Doeleman, MIT, USA and Prof. Heino Falcke, Radboud Universit t, Nijmegen, Holland. The award ceremony has been postponed for two years due to the Covid-19 pandemic, and it will finally take place on June 16 2022 in one of the Aditorium of the University of Bern. Detailed information on the event will be published soon.



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## Physics Night at ETH of Zurich

The Physics Department of ETH Zurich and the NCCR "QSIT - Quantum Science and Technology" organizes the [2022 Edition of "Night of Physics"](#). The event will take place in the afternoon and evening of Friday June 17 2022 at the H nggerberg campus of ETH Zurich, and the public will have the opportunity to discover the exciting world of physics through hands-on experiments, lectures, laboratory visits and much more. Many scientists will be available for guiding the visitors and answering their questions.



The participation is free and no registration is needed except for the lab tours. The program and all the details are available [here](#).

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## 50 years at the University of Geneva for Prof. Eckmann

A conference taking place on June 7-10 2022 at the University of Geneva will honor the 50 years of activity of Jean-Pierre Eckmann at the UNIGE.

This event will bring together students and close collaborators of Jean-Pierre Eckmann, and the participants will share some of the most recent and exciting developments in the domain of mathematical physics, more specifically nonequilibrium statistical mechanics, dynamical systems, mathematical biology and related fields. All the details are available [here](#).

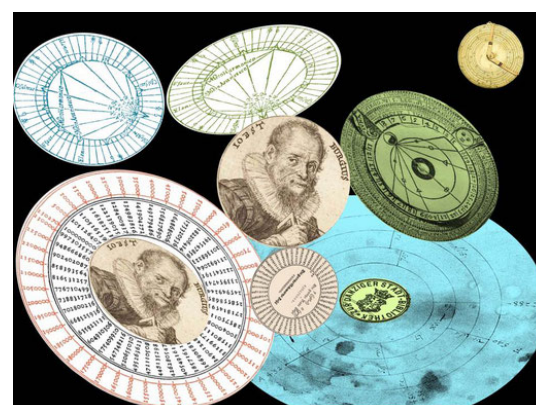


*Image: A portrait of Jean-Pierre Eckmann, source [SwissMap](#).*

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## Lecture of Daniel Muzzolini on Volvelles, mathematical turntables of the Renaissance

The Jost B rgi Activities 2022, co-organised by the SPS, also dealt with the topic of logarithmic circle diagrams, which appeared as volvelles (rotating number disks of angle-coded exponential functions) in the Renaissance. They could be used not only to perform mathematical operations such as the multiplication, but also to visualise questions of music theory, in the past as well as nowadays.



[The lecture](#) of the mathematician Daniel Muzzolini from the Zurich University of the Arts will be repeated virtually on Monday June 13 2022 at 16h30, and the author will supplement his talk, now given in English, with musical examples. You will find more details and also the zoom link to his presentation [here](#).

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## Young faculty meeting 2022

The Young Faculty Meeting of the [Platform MAP](#) offers young researchers with a leading position at Swiss universities the opportunity to network with each other. In addition, they receive information and tools to enable them to better master challenges in the academic professional environment.



The [Young Faculty Meeting 2022](#) will take place on September 6 2022 at the [Berner Generationenhaus](#). Perspective participants can register via [map@scnat.ch](mailto:map@scnat.ch), indicating their first and last name and the institution where they work. The prerequisite for participation is a leading position at a Swiss university and that the PhD degree was completed no more than ten years ago.

*Image: Jason Goodman, Unsplash.*

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## Physics "New" faculty workshop

Modelled after the American Association of Physics Teachers' "Physics and Astronomy 'New' Faculty Workshop", the conference invites doctoral students, postdocs, and recently appointed physics faculty members to explore research-based teaching methods for STEM disciplines, as well as early-career challenges and opportunities. Workshop sessions will be informed by results and current frontiers of discipline-based physics education research.

The workshop will take place at [Monte Verità](#), Ascona, Switzerland, from Sunday July 23 2023 to Thursday July 27 2023. It is sponsored by the [Department of Educational Development and Technology](#) at ETH Zurich and by [Congressi Stefano Franscini](#). All the information are available [here](#).

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## Swiss contribution to the International Day of Light

[The International Day of Light](#), a worldwide event promoted by Unesco, took place on May 16 and Switzerland contributed to the organization of many interesting events around this topic. For example, there was a symposium in honour of Albert Einstein on April 9 organized by our Society (more information on our [website](#)). Indeed, for Einsteins' work on the theory of relativity it was crucial that the speed of light is a natural constant. Light cannot travel at any speed.



International  
Day of Light

16 May

While many events took place between April and May, some of them are still running, for example the [photo contest](#) promoted by the International Society for Optics and Photonics that will continue until September 16. The list of events planned for the coming months in Switzerland is available [here](#).

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## WHAT'S UP IN THE WORLD?

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### First Image of the black hole at the center of our galaxy

On May 12 2022 the researchers of the [Event Horizon Telescope \(EHT\) collaboration](#) unveiled the first image of the supermassive black hole at the centre of our Milky Way galaxy. This image is the result of the observations done using a worldwide network of radio telescopes.



Scientists had previously seen stars orbiting around something invisible, compact, and very massive at the centre of the Milky Way. This strongly suggested that this object — known as Sagittarius A\* (Sgr A\*) — is a black hole, and this image provides the first direct visual



evidence of it. Sgr A\* is about 27'000 light years away from the Earth and its mass is four million times that of our Sun. To image it, the team created the powerful EHT, which linked together eight existing radio observatories across the planet to form a single “Earth-sized” virtual telescope.

This image follows the EHT collaboration’s 2019 release of the first image of a black hole, called M87\*, at the centre of the more distant Messier 87 galaxy. The two black holes look remarkably similar, even though our galaxy’s black hole is more than a thousand times smaller and less massive than M87\*. For this reason, creating an image of Sgr A\* was much more complex. The gas in the vicinity of the black hole, i.e. the visible part of the object, moves almost at the speed of light, while it takes days to weeks to orbit the large M87\*, it takes only a few minutes to turn around the smaller Sgr A\*, inducing rapidly changing brightness patterns in the images. Therefore, the image of Sgr A\* is an average of the different images the team extracted using sophisticated new tools.

Progress on the EHT continues: a major observation campaign in March 2022 included more telescopes than ever before.

More information are available in the [EHT press release](#).

*Image: Sgr A\* source EHT.*

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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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