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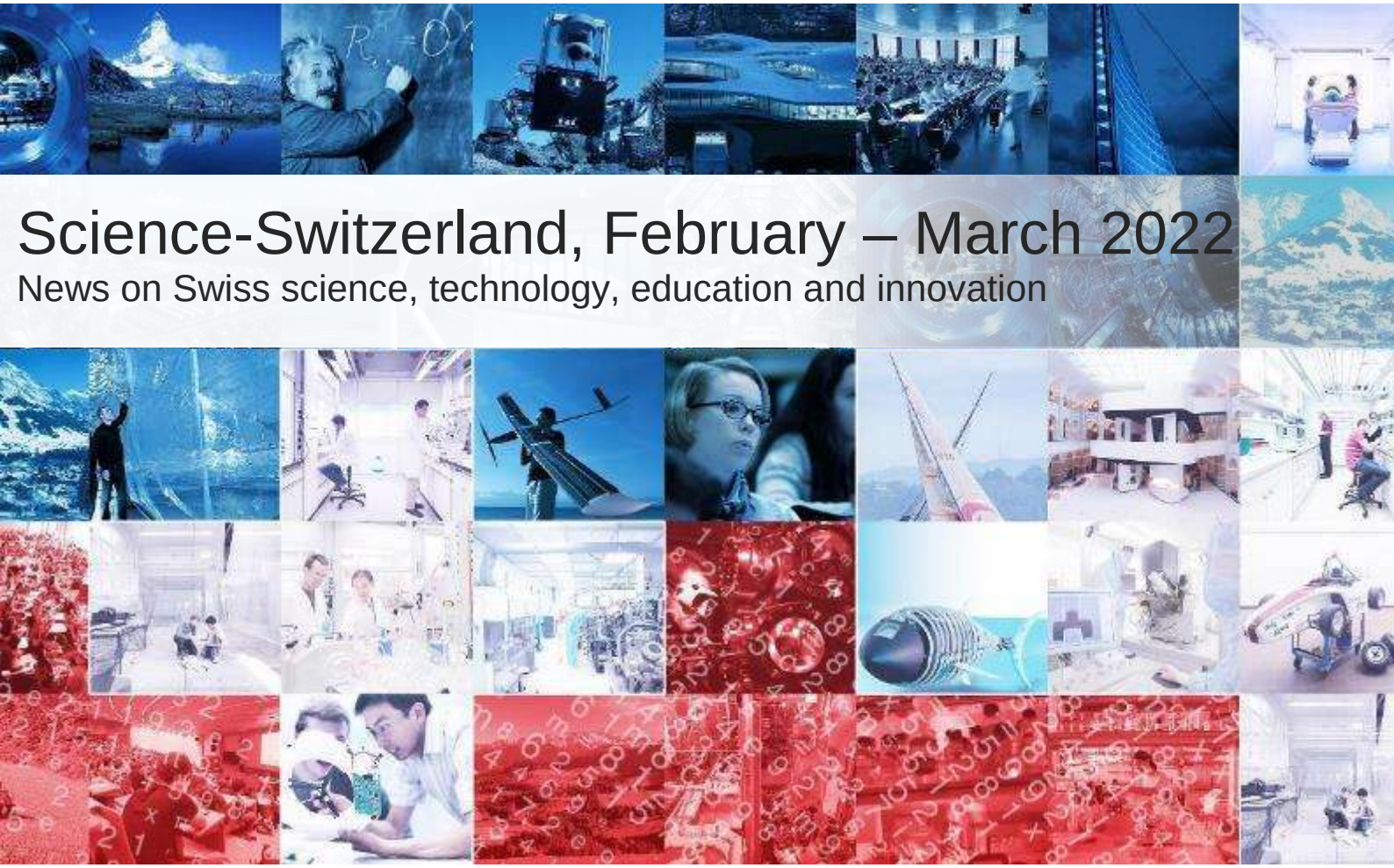

Science-Switzerland, February – March 2022

News on Swiss science, technology, education and innovation

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FEMSPIN: Promoting Spin-Off Activities of Female Academics

(University of Applied Sciences and Arts Northwestern Switzerland, March 07, 2022)

A group of eight Swiss Universities recently launched a new, two-year collaborative project, called "FEMSPIN", which aims to foster equal opportunities in the field of spin-off activities by setting a specific focus on women. To achieve this, the new project will combine gender equality policy objectives with the promotion of innovation and spin-off creation by women to not only foster spin-off intentions and activities of female academics and students in the field of STEM, as well as social sciences and humanities, but also to enhance and develop measures for spin-off promotion at Swiss universities, based on a gender perspective. The project will moreover involve knowledge and technology transfer offices, startup and innovation centers, as well as industry and investors in order to support universities in their role with respect to entrepreneurial skills training, innovation, and the exploitation of knowledge from R&D.
/web/2022/00-220307-bf

New World Record for Qubit Storage

(University of Geneva, March 22, 2022)

A team of researchers led by University of Geneva senior lecturer Afzelius Mikael recently succeeded in storing a quantum bit (qubit) for 20 milliseconds, thereby setting a new world record for a quantum memory based on a solid-state system – in this case a crystal. This is a significant achievement, because it not only constitutes a major advance for the development of long-distance quantum telecommunications networks, but it could also bring the storage of a quantum state carried by a photon to a time scale that can be estimated by humans. To achieve this, the team first applied a small magnetic field of one thousandth of a Tesla to a europium-doped crystal kept at -273.15°C, before subsequently using dynamic decoupling methods to decouple the rare-earth ions from perturbations of the environment and thus increase the storage performance by almost a factor of 40.
/web/2022/00-220322-ce

Practical Guide for Deep Learning in Life Science

(EPFL, March 11, 2022)

A team of researchers composed of Laurène Donati, Virginie Uhlmann and Daniel Sage from EPFL and the European Bioinformatics Institute recently published a new paper, in which they outlined good practices for employing deep learning technologies in life sciences, as well as advocated for closer interdisciplinary collaboration between bioscience researchers and program developers. This is significant, because despite the fact that deep learning models are growing in popularity among life sciences researchers on account of their speed and precision, the team contends that using them without fully understanding their architecture, as well as their limitations, introduces the risk of bias and error, with potentially major consequences.
/web/2022/00-220311-4b

1. Policy

Strategies to Counter High-Emission Electricity Imports

(University of Geneva, February 11, 2022)

A team of researchers led by University of Geneva senior scientist Elliot Romano and Empa researcher Martin Rüdisüli recently carried out a comprehensive analysis of the life cycle of electricity production, and found that a mix of photovoltaic and wind generation not only constitutes the most efficient way to reduce the country's footprint, but it also appears to be the best alternative to nuclear power. This is an important development, because contrary to previous studies, which generally calculated the footprint of electricity production based on average consumption values – particularly annual values – this new study used hourly values, and thus provided policymakers with unprecedentedly precise data to develop concrete guidelines for Switzerland's 2050 energy strategy.
/web/2022/01-220211-f8

Horizon Europe: Transitional Measures for SMEs and Startups

(Federal Department of Economic Affairs, Education and Research, March 04, 2022)

The Federal Council recently announced that a new legislative provision will come into force on 15 April 2022 to support SMEs and startups that currently do not have access to the Accelerator funding instrument of the European Innovation Council (EIC), as well as approved the related amendment to the Innosuisse Funding Ordinance. The Federal Council moreover approved and submitted the financial resources for Innosuisse's transitional measures for the 2022 EIC Accelerator calls for proposals to Parliament. This is an important development, because Switzerland is currently a non-associated third country in Horizon Europe, which means that the Alpine country is excluded from participating in the Accelerator funding instrument of the EIC, which supports innovative small and medium-sized enterprises.
/web/2022/01-220304-e5

2. Education

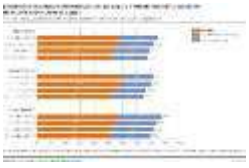
New HSG Building to Explore Future of Learning and Teaching

(University of St. Gallen, February 13, 2022)

Following the largest fundraising campaign in the history of the University of St. Gallen, its President, Professor Bernhard Ehrenzeller, recently unveiled the university's new, privately financed building: "SQUARE". Designed by Japanese architect Sou Fujimoto, the imposing glass structure constitutes a prototype for the university of the future, which not only aims to promote the development of new forms of learning and teaching, as well as to enable students, alumni and alumnae to collaborate with researchers and interested parties in an inspiring environment, but also to offer a stimulating public place for encounters, as well as a forum for dialogue between science, society, business, politics, and culture.
/web/2022/02-220213-b2

Statistics on Upper Secondary Level Certification

(Federal Statistical Office, February 28, 2022)



The Swiss Federal Statistical Office recently published a new study on the upper secondary level certification of young people who turned 15 in 2010, which demonstrated that social background, length of stay in Switzerland and the educational pathway in compulsory education have a particularly strong influence on whether an individual ultimately obtained such a qualification. Specifically, the study

not only found clear differences in the likelihood of certain population groups to be certified, but also that the educational level of the parents had a strong influence. In addition, the study also illustrated that recently immigrated youth, as well as individuals with delayed educational progress, were less likely to obtain an upper secondary level qualification.
/web/2022/02-220228-8a

Gender Equality in Swiss Research

(ETH Zurich, March 08, 2022)

On the occasion of this year's International Women's Day, Julia Dannath-Schuh, Vice President for Personnel Development and Leadership at ETH Zurich, recently sat down to talk about some of the forms of bias that women in academia are still facing today, as well as to highlight a few of the measures that have been put in place to support young female scientists and professors. In this context, Dannath in particular contends that it is not only important to tackle the issues that often prevent female doctoral students and postdocs from pursuing an academic career at the university level – these for example include the perceived incompatibility of an academic career and family life, the mobility required, the insecurity that comes with a career in academia, as well as the intense competition surrounding professorships – but also at the societal level.
/web/2022/02-220308-13

EPFL Launches Three New Master's Programs

(EPFL, March 17, 2022)

EPFL recently announced the introduction of the following three new Master's programs, which aim to widen the school's offer of cross-disciplinary study programs in basic sciences and engineering. First, the Master's in Neuro-X aims to provide students with a broad and universal training in the foundations of neuroscience, computational neuroscience, and neuroengineering. Next, the Master's in Quantum Science and Engineering aims to provide students with the opportunity to acquire a comprehensive set of skills to become the main actors of the next "quantum revolution". Finally, the Master's in Statistics aims to provide a combination of a theoretical background, experience with cutting-edge computational techniques, as well as practical team-working and communication skills that will make graduates valued collaborators in any data-rich environment.
/web/2022/02-220317-21

3. Life Science

European Reference Genome Atlas

(Swiss Federal Institute of Aquatic Science and Technology, February 01, 2022)

A team of approximately 600 scientists from 48 countries, including Eawag Group Leader Philine Feulner, University of Geneva Professor Nadir Alvarez, and University of Bern Professor Ole Seehausen, recently launched a new initiative, called the "European Reference Genome Atlas" (ERGA), in order to sequence and catalogue the genome of all currently described eukaryotic species in Europe. This is important, because although the researchers contend that the primary pathway to maintaining biological diversity remains in protecting populations in their habitats, as well as in maintaining and restoring habitats and ecosystems, studying the genetic repertoire nevertheless offers a rapidly growing palette of novel instruments for characterizing biological diversity and to support conservation efforts.
/web/2022/03-220201-03

New Tool to Study Electrophile Signaling

(EPFL, February 01, 2022)

A team of researchers led by EPFL Professor Yimon Aye recently developed a new tool, called "Localis-rex", which enables them to delve deeper into an important biological process known as "electrophile signaling." Specifically, by releasing a transient burst of an electrophilic compound in a specific subcellular compartment, the new method enables researchers to identify potential reactive metabolites that sense and regulate a signaling protein. This is significant, because as explained by Aye, their work not only has important ramifications for covalent drug design, but also for profiling drug-sensitive cells with high spatiotemporal resolution, as well as for establishing interesting and relevant means through which endogenous signaling electrophiles and reactive metabolites can impact biological signaling processes.
/web/2022/03-220201-33

Non-Heritable Immune Perturbations in Multiple Sclerosis

(University of Zurich, February 16, 2022)

An international team of researchers led by University of Zurich Professor Burkhard Becher and Florian Ingelfinger, together with the groups of Lisa-Ann Gerdes and Eduardo Beltrán from the LMU Klinikum München, recently conducted a unique study to compare the immune profiles of 61 pairs of monozygotic twins where one twin is affected by multiple sclerosis (MS) and the co-twin is healthy, thereby enabling them to identify which part of the immune dysfunction in MS is influenced by genetic components, and which by environmental factors. This is significant, because previous studies of MS generally did not control for genetic predisposition, thereby making it impossible to determine how the immune system of two genetically identical individuals could lead to significant inflammation and massive nerve damage in one case, and no damage at all in the other.
/web/2022/03-220216-a2

Impact of Genomic Deletions and Duplications on Health

(University of Lausanne, March 02, 2022)

A team of researchers led by University of Lausanne Professors Alexandre Reymond and Zoltán Kutalik recently investigated the broad consequences of genomic mutations known as "copy-number variations" (CNVs) in a healthy population, which in particular revealed that such variations are much more common than previously thought. The team moreover explored their influence on our physical traits and predisposition to diseases, and found that people with a large number of CNVs in their genome had a lower birth weight and increased adiposity, were more likely to have damage to the liver and kidneys, as well as reduced physical and intellectual capacity and decreased life expectancy. It is important to note however, that the same CNVs do not always have the same impact on everyone.
/web/2022/03-220302-f1

Nanoparticle-Based Radio-Enhancers for Cancer Treatment

(Swiss Federal Laboratories for Materials Science and Technology, March 10, 2022)

A team of researchers led by Lukas Gerken and Inge K Herrmann from Empa and ETH Zurich, in collaboration with oncologists from the Cantonal Hospital in St. Gallen, recently developed a new method to produce sterile, high-quality metal oxide radiosensitizers in large quantities, thereby offering a potential route to overcoming key roadblocks in the translation of nanoparticle-based radio-enhancers. This is a significant development, because by using these substances to enhance the sensitivity of cancer cells to radiation, radiotherapy could be carried out more effectively and gently. In other words: a desired treatment outcome could be achieved with a lower dose of radiation than is currently the case, or particularly radiation-resistant tumors could finally become sensitive to radiation.
/web/2022/03-220310-aa

SARS-CoV-2 Vaccination by Nasal Spray

(University of Bern, March 16, 2022)

An international team of researchers led by Professor Volker Thiel from the University of Bern and the Institute of Virology and Immunology (IVI) recently developed two new second-generation vaccine candidates against SARS-CoV-2, which, thanks to a just-signed collaboration agreement with RocketVax AG, can now be prepped for phase I of the clinical trials required for regulatory approval. Specifically, the team developed two new "live-attenuated vaccines", which have already proven successful in other vaccination drives, such as against measles, and offer a distinct advantage over first-generation vaccines: they also become active in new viral variants, because they contain all viral proteins and not just the spike protein. As such, they provide a broader immune response resulting from the activation of T cells against all viral proteins.
/web/2022/03-220316-a7

Link Between Long COVID, Stress and Depressive Symptoms

(University of Basel, March 23, 2022)

A team of researchers led by University of Basel Professor Dominique de Quervain recently published the results of the fourth Swiss Corona Stress Study survey, which assessed stress levels and depressive symptoms, as well as physical and neurological symptoms, of more than 11,000 people from all over Switzerland. In this context, the team found that although SARS-CoV-2 positivity appeared to be associated with a higher prevalence of physical and neurological symptoms, they did not observe any difference in the stress levels or depressive symptoms between the group with a positive SARS-CoV-2 test and the SARS-CoV-2-negative control group. These findings are significant, because they suggest that long COVID symptoms do not appear to originate from prolonged mental stress following a coronavirus infection.
/web/2022/03-220323-eb

Mitochondria Transplantation Between Living Cells

(ETH Zurich, March 25, 2022)

A team of researchers led by ETH Zurich Professor Julia Vorholt and lead author Christoph Gäbelein recently developed a new technique, which enables them to transplant mitochondria – the tiny powerhouses of cells, where the processes of cellular respiration take place – from one living cell to another with unparalleled efficiency. To achieve this, the team used a specially-developed nanosyringe to first pierce the cell membrane and suck up the spherical mitochondria, before subsequently piercing the membrane of a different cell and pumping the mitochondria back out of the nanosyringe into the recipient cell. This is an exciting development, because the novel technique could, for example, help researchers to rejuvenate stem cells, or to obtain a better understanding of the processes that control how different cell compartments cooperate.
/web/2022/03-220325-76

4. Nano / Micro Technology / Material Science

Coherent Feedback Mechanism to Cool Quantum Systems

(University of Basel, February 03, 2022)

A team of researchers led by University of Basel Professor Philipp Treutlein, together with doctoral students Gian-Luca Schmid and Chun Tat Ngai, recently developed a new method to remotely cool a quantum system via a coherent quantum mechanical interaction, thereby eliminating the need to take a

measurement. This is significant, because the very act of taking a measurement in the world of quanta causes a change in the system and therefore leads to uncontrolled backaction. To address this issue, the researchers used atoms as a quantum mechanical control system to control the temperature of a macroscopic, but very thin, vibrating membrane. This was achieved by performing spin-membrane state swaps, combined with stroboscopic spin pumping, to cool the membrane, or by using laser light to quickly return the atoms to their initial state.
/web/2022/04-220203-97

Engineering Multi-State Transparency on Demand

(EPFL, February 03, 2022)

A team of researchers led by EPFL Professor Olivier Martin and PhD student Sebastian Mader recently developed a new method to alter the transparency of an initially black surface, thereby enabling them to realize a wide variety of optical states, ranging from absorbing black to highly reflective, fully transparent, or even combinations thereof. This is an exciting development, because it opens the door to a myriad of applications, including printing, photovoltaics, sensing, reconfigurable surfaces, customizable security solutions, diffractive optical elements, and data storage, to name a few. To achieve this, the team first created a highly absorbing three-layer system, before subsequently using a laser to precisely thin the layers out as much or as little as they wanted, thereby enabling them to reproduce the full spectrum of shades between black and transparent.
/web/2022/04-220203-b6

Bioinspired Bigrating Color Filters

(ETH Zurich, February 09, 2022)

Drawing inspiration from the unique surface structures of the wings of the tropical butterfly species "Cynandra opis", a team of researchers led by ETH Zurich Professor Andrew deMello, lead author Cao Xiaobao and co-author Stavros Stavrakis, recently succeeded in fabricating bioinspired bigrating nanostructures, whose optical properties can be controlled by varying the height and period of their grating features. This is an exciting development, because it enabled the team to subsequently produce all the colors of the visible spectrum as structural colors in a translucent material for the first time, thereby opening the door to numerous potential applications, including being used as a security feature on banknotes and other documents, manufacturing color filters for optical technologies, or replacing the pigments used today in printing and painting.
/web/2022/04-220209-a4

New System to Monitor Aircraft Components During Flight

(Swiss Federal Laboratories for Materials Science and Technology, February 15, 2022)

As part of an EU-funded project called “DIMES” (Development of Integrated Measurement Systems), an international research consortium composed of researchers from Empa and the University of Liverpool, as well as experts from Airbus, Strain Solutions Ltd. and Dantec Dynamics GmbH recently developed an innovative new monitoring system for aircraft components, which could make it possible to detect and monitor minor damage during flight, and thus not only help to reduce operating costs, but also to increase safety at the same time. This is an exciting development, because in addition to routine inspections for cracks and damages, jets are currently required to undergo a so-called a "D-check" every six to ten years where they are largely dissembled in a hangar, and which not only results in significant lost operating time, but can also easily cost several million U.S. dollars.
/web/2022/04-220215-1c

Groundbreaking X-Ray Lens Facilitates Glimpse Into Nanoworld

(Paul Scherrer Institute, March 14, 2022)

A team of Paul Scherrer Institute researchers led by Adam Kubec, Christian David and Marie-Christine Zdora, in collaboration with the PSI spin-of XRnanotech, recently developed a ground-breaking achromatic lens, which makes it possible to accurately focus X-ray beams on a single point, even when they consist of a bandwidth of wavelengths. To achieve this, the team in particular benefited from a revolutionary new method that only recently become available – 3D printing on the micrometer scale – as this made it possible to produce the refractive structure of the lens. This is a significant development, because thanks to this new lens, it will now be much easier to study nanostructures using X-rays, which will benefit R&D work in sectors, such as microchips, batteries and materials science, among others.
/web/2022/04-220314-b6

5. Information & Communications Technology

Innovative Glass Technology to Improve Wireless Connectivity Indoors

(EPFL, February 07, 2022)

EPFL spin-off nu glass recently concluded a successful pilot test of their innovative new system in an SBB railcar, which can improve wireless connectivity in closed spaces by making glass pervious to certain wavelengths. Specifically, nu glass developed a laser housed within a portable casing, which can engrave a microscopic grid pattern into the insulating metal coating of train windows, so that mobile-phone frequencies can pass through. Excitingly, this process only takes approximately 15 minutes per window, and does not affect the coating's thermal insulation properties. As a result, the new system could bring significant environmental and cost benefits to railway companies and mobile-phone operators, since they would no longer have to install signal boosters to provide wireless connectivity for passengers.
/web/2022/05-220207-7d

AR User Manuals for Industrial Companies

(ETH Zurich, February 18, 2022)

Founded in August 2020 by ETH Zurich graduates David Shapira and Kordian Caplazi, Rimon Technologies develops virtual user manuals for industrial companies to support technicians and frontline workers when commissioning new equipment or repairing it. This is an exciting development, because instead of working their way through a tedious paper-based handbook, users can now simply wear augmented reality (AR) glasses that guide them step by step through complex instructions, thereby providing them with the information they need exactly when and where they need it. In this context, AR instructions bring particular added value to contracts from abroad and training, which have both been made more difficult by the COVID-19 pandemic, as well as can help companies keep pace with technological change.
/web/2022/05-220218-50

AI Method to Monitor Industrial Assets Based on Sound

(ETH Zurich, February 25, 2022)

A team of researchers led by ETH Zurich postdocs Gabriel Michau and Gaëtan Frusque, as well as Professor Olga Fink, recently developed a new, fully unsupervised deep-learning framework for high-frequency time series, which can not only extract meaningful and sparse representation of raw signals, but is also able to handle different lengths of time series flexibly, thereby overcoming thereby several of the limitations of existing deep-learning approaches. This is an exciting development, because it for

example makes it possible for intelligent algorithms to automatically perform acoustic monitoring and sound analysis on a variety of industrial machines, thereby providing professionals with useful clues as to whether a machine is in a good – or "healthy" – condition, or whether it will soon require maintenance or urgent repair.
/web/2022/05-220225-25

AI-Augmented Cooling System for Data Centers

(Swiss Federal Laboratories for Materials Science and Technology, March 01, 2022)

As part of the Horizon 2020-supported "ECO-Qube" project, an international team of researchers and industry partners from Switzerland (Empa), Turkey, Spain, Germany, Netherlands and Sweden are developing a new, holistic management system, which aims to enhance energy efficiency and cooling performance by orchestrating both hardware and software components in edge computing applications. To achieve this, the team will not only develop an AI-based, smart cooling system, which will combine smart monitoring capabilities with advanced modelling and simulations techniques, but they will also directly integrate three test data centers in Switzerland, Turkey and the Netherlands into the energy systems of their surrounding neighborhoods and supply them with renewable energy whenever possible.
/web/2022/05-220301-24

6. Energy / Environment

Vital Insights From Largest Polar Expedition in History: MOSAiC

(Federal Institute for Forest, Snow and Landscape Research, February 07, 2022)

An international team of researchers, which also includes scientists from the WSL and SLF, recently published three overview articles on the atmosphere, snow and sea ice, as well as ocean programs of the historic, one-year "MOSAiC" expedition, during which hundreds of environmental parameters were recorded with unprecedented accuracy and frequency over a full annual cycle in the Central Arctic Ocean. This is an important development, because as explained by Alfred Wegener Institute Professor and MOSAiC head Markus Rex, these results present the first complete observation-based picture of climate processes in the Arctic, and thus serve as the basis for interpreting biogeochemical cycles and ecosystem processes, as well as for supporting coupled models that are used to learn even more about climate feedbacks and the global repercussions of Arctic change.
/web/2022/06-220207-9f

Cost and Feasibility of CO2-Netural Energy Supply

(Swiss Federal Laboratories for Materials Science and Technology, February 17, 2022)

A team of researchers led by EPFL Professor Andreas Züttel and former Empa director Louis Schlapbach recently conducted a detailed analysis of the energy demand, technical challenges, as well as the economic feasibility of a transition to an energy economy based entirely on renewable energy, using Switzerland as an example. To achieve this, the researchers analyzed three approaches to completely replace fossil and nuclear fuels – namely, a purely electric system with battery storage (ELC), hydrogen (HYS), or synthetic hydrocarbons (HCR) – and compared them with today's energy costs of around CHF 3,000 per capita and year. Crucially, the team contend that it is highly unlikely that Switzerland will be able to meet all its energy needs with domestically produced, renewable energy, and thus underlined the importance of global energy logistics.
/web/2022/06-220217-80

Strategic Collaboration to Bring Solar Aviation Fuel to Market

(Synhelion, March 01, 2022)

Swiss International Air Lines and the Lufthansa Group recently concluded a strategic collaboration with ETH Zurich spin-off Synhelion to promote the development, market introduction and scaling-up of a new, highly promising technology for producing sustainable, carbon-neutral solar kerosene. Specifically, Synhelion's unique technology uses concentrated solar heat to manufacture syngas, which can then be synthesized into kerosene using standard industrial processes. This sun-to-liquid fuel in turn also closes the fuel carbon cycle, as it will only produce as much CO2 as went into its manufacture when combusted. In this context, Synhelion will build the world's first-ever facility for the industrial production of solar fuel, and SWISS is set to become the first customer for the solar kerosene in 2023.
/web/2022/06-220301-5e

Switzerland's First CO2-Neutral Concrete

(Eastern Switzerland University of Applied Sciences, March 08, 2022)

An interdisciplinary team composed of researchers from the Eastern Switzerland University of Applied Sciences (OST), as well as experts from the construction company Zindel United and the building materials manufacturer Logbau AG, recently developed Switzerland's first CO2-neutral concrete, called "Klark". To achieve this, the team mixed cement with a type of charcoal known as "INKoh", which can be produced from untreated residual wood from regional forestry and contains carbon that was absorbed from the air during the growth of the trees. As such, the carbon remains bound in the concrete – i.e. it is permanently removed from the atmosphere – and thus compensates the indirect greenhouse gas emissions that resulted from the cement production.
/web/2022/06-220308-75

Greenlandic Fjord Ecosystems in a Changing Climate

(EPFL, March 09, 2022)

An interdisciplinary team of researchers led by EPFL tenure-track assistant professor Julia Schmale recently launched a new, four-year field research program called "GreenFjord," which aims to provide a better understanding of the ecosystem of Greenlandic fjords in the context of a changing climate and thus help improve the computer models scientists can use to predict future shifts in the region's ecosystem and climate. To achieve this, the team will not only investigate how accelerated glacier discharge and soil erosion impact the fjords' nutrient cycle, marine resources and cloud formation, but also how local livelihoods are affected. This is significant, because as highlighted by Schmale, this "will be the first time that the region's entire ecosystem will be studied taking into account the human aspect."
/web/2022/06-220309-68

Double Challenge of Climate Change and Aging

(University of Bern, March 10, 2022)

A team of researchers led by University of Bern doctoral student Evan de Schrijver and Dr. Ana M. Vicedo Cabrera recently demonstrated that climate change and aging present a double challenge for future generations. In doing so, they highlighted the importance of developing more ambitious adaptation strategies, as well as promoting sustainable public health measures, at the national and local level to mitigate the health impacts of a warming climate and strengthen the resilience of the population. Specifically, the team not only estimate that over the past 50 years, more than 9% of deaths in Switzerland were caused by very hot or cold temperatures, but also that the heat- and cold-related burden on health is expected to continue, and, in the case of the former, increase, due to climate change in the coming decades, as well as the progressively aging population.
/web/2022/06-220310-73

Using AI to Improve Biodiversity Protection

(University of Fribourg, March 16, 2022)

An international team of researchers led by Professor Daniele Silvestro from the Universities of Fribourg and Gothenburg recently developed a new, AI-based open-source software package, called "CAPTAIN", to efficiently quantify the trade-off between the costs and benefits of area and biodiversity protection. This is an exciting development, because for a given budget, CAPTAIN not only offers solutions that protect more species than more simplistic approaches, but it also achieves substantially better solutions with empirical data than alternative software, meeting conservation targets more reliably and generating more interpretable prioritization maps. As such, the team contend that AI can constitue a game-changing tool to help policymakers make the best use of available data and halt the irreversible loss of biodiversity.
/web/2022/06-220316-b3

First Step Towards Genuine Plastic Recycling

(ETH Zurich, March 24, 2022)

A team of researchers led by ETH Zurich Professor Athina Anastasaki recently developed a new, catalyst-free, depolymerization approach, which enables them to break down RAFT polymers into their basic building blocks – monomers – and subsequently recover over 90% of them. This is an exciting development, because as explained by Anastasaki, the monomers can subsequently be used to either reconstruct the same polymer, or to create an entirely new insoluble gel, which can also be subjected to depolymerization. Moreover, both of these newly-created products are of similar quality to the original products, which represents a significant advancement compared to previous products made from recycled polymers. As such, this constitutes an important first step towards genuine plastic recycling.
/web/2022/06-220324-7a

CircuBAT: Reducing Ecological Footprint of Li-Ion Batteries

(Bern University of Applied Sciences, March 31, 2022)

Seven Swiss research institutions and 24 companies recently joined forces to launch a new research project, called CircuBAT, which, over the next four years, will strive to create a sustainable circular business model for lithium-ion batteries used in mobility. To achieve this, the new project will in particular focus on finding solutions that boost sustainability in all phases of a lithium-ion battery's life cycle, including: extending the lifespan of batteries during their first application; putting batteries to use as stationary energy storage systems after they are retired from their first mobility-related application; looking for solutions for demanufacturing batteries and recovering materials that enable large quantities of high-quality secondary raw materials to be used to produce new batteries; and examining socio-economic aspects and holistic business models.
/web/2022/06-220331-a6

7. Engineering / Robotics / Space

Ultralight Exoplanet Orbiting our Closest Neighboring Star

(University of Geneva, February 10, 2022)

An international team of researchers, which also included scientists from the University of Geneva, recently detected a third candidate planet around our closest neighbor, the star Proxima Centauri, which is located just 4.2 light-years from the Sun. Named "Proxima d," this planet possesses a mass that is approximately a quarter of that of the Earth, thereby making it the lightest ever detected with the radial velocity technique, and orbits its star in just 5.12 days, at a distance of about four million kilometers. This is an exciting

discovery, because it not only demonstrates that our closest stellar neighbor appears to be full of interesting new worlds, within reach for future study and exploration, but also underlined the unprecedented precision of ESPRESSO – a state-of-the-art spectrograph developed by the University of Geneva, which was crucial to the success of this study.
/web/2022/07-220210-04

Robotic Exoskeletons for Payload Transportation in Lunar Caves

(EPFL, March 15, 2022)

As part of his Master's program, recent EPFL engineering graduate Lucas Froissart, under the supervision of Professor Auke J. Ijspeert and his colleagues at JAXA, recently designed an innovative new exoskeleton capable of propelling robot explorers into subsurface tunnels on the moon. This is an exciting development, because approximately 10 years ago, scientists discovered a series of untouched caves located a hundred meters below the surface of the moon, which appear to possess a constant and tolerable climate for human beings, and can be can be reached through natural, vertical pits. As such, they could conceivably serve as base camps in the future, which in turn prompted space agencies to start developing robots that could explore these subterranean caves prior to sending astronauts in.
/web/2022/07-220315-eb

Collaborative Robot to Amplify and Extend Human Capabilities

(University of Applied Sciences and Arts of Southern Switzerland, March 24, 2022)

In an effort to help harmonize the capabilities of collaborative robots with those of human operators, team of SUPSI researchers recently developed a new system as part of the "COMPLEMANT" project, which aims to support the finishing process of plastic components to which a human operator is assigned to. In this context, the team used a cobot to support the operator in the different tasks of the process, and, by employing different production system configurations, were able to make real-time interventions whenever the operator and/or system's behavior deviated from the optimal and safe performance. As such, the cobot's capabilities not only become an extension of those held by the worker, but could also be modulated to cope with the worker's specific characteristics, as well as the prevailing system conditions.
/web/2022/07-220324-e3

New Tool to Model Escaping Atmosphere on Exoplanets

(Swiss National Science Foundation, March 29, 2022)

With the support of the Swiss National Science Foundation, a team of researchers led by University of Geneva Professor David Ehrenreich recently developed an open-source computer tool, called "p-winds", which makes it possible to model exoplanetary atmospheric escapes based on the detection and interpretation of helium leaks in the infrared spectrum. This is an exciting development, because the new tool provides a viable alternative to studying exoplanetary atmospheric escape – one of the main channels for evolution in sub-Jovian planets, particularly in their early lives – instead of having to solely rely on overbooked space telescopes. In this context, the team moreover presented case studies of the warm Neptunes HAT-P-11 b and GJ 436 b, which could help the team to one day predict the long-term future of Earth-like exoplanets.
/web/2022/07-220329-dc

Crowd-Friendly Robotic Wheelchair

(EPFL, March 29, 2022)

As part of the EU-funded project "CrowdBot", a team of EPFL researchers led by Professor Aude G. Billard and post-doctoral researcher Diego Paez have been exploring the technical, ethical and safety issues related to having robots move through crowded areas, with the aim of gathering vital data to help the disabled get around more easily in the future. To achieve this, the team not only ran crash tests of a robotic standing wheelchair called "Qolo" in Bern to analyze what kind of injuries a collision could cause, but also

modified Qolo so that it can analyze and react to its surroundings, before subsequently testing it in real-world conditions in Lausanne's open market. Encouragingly, the initial results are promising, as pedestrians seem to behave normally around the machine, and the semi-autonomous dimension of the robot also appears to work well.
/web/2022/07-220329-e1

8. Physics / Chemistry / Math

New Method to Simulate Foamy Flows Across Scales

(Swiss National Supercomputing Center, February 02, 2022)

A team of researchers led by ETH Zurich and Harvard University Professor Petros Koumoutsakos, together with his PhD student Petr Karnakov and postdoctoral researcher Sergey Litvinov, recently developed a new method, called "Multi-VOF", to conduct large-scale predictive simulations of foamy flows that involve thousands of interacting and noncoalescing bubbles. This is significant, because despite the crucial importance of foamy flows in numerous natural, industrial, and medical processes, they have, until now, been virtually impossible difficult to compute, due to the fact that they involve coupled, multiscale physical processes. Thanks to this new method however, the team was able to realistically simulate an unprecedented 20,000 interacting bubbles in a variety of arrangements on the CSCS's flagship supercomputer "Piz Daint."
/web/2022/08-220202-23

Light-Powered Chloride Ion Pump

(Paul Scherrer Institute, February 03, 2022)

A team of researchers led by Przemyslaw Nogly, Jörg Standfuss and Sandra Mous recently leveraged the unique capabilities of two state-of-the-art facilities at the Paul Scherrer Institute – namely, the Swiss Light Source and the X-ray free-electron laser SwissFEL – to gain a detailed understanding of how chloride anions are transported into the cell membrane of the Nonlabens marinus bacteria via a light-driven protein pump. These insights are significant, because genetically engineered into mammalian neurons, the proteins that make up this, and other, light-driven bacterial pumps could make it possible to control the activities of neurons by light and thus research their function.
/web/2022/08-220203-22

Data-Driven Modelling and Prediction of Non-Linearizable Dynamics

(ETH Zurich, February 15, 2022)

A team of researchers led by ETH Zurich Professor George Haller and postdoc Mattia Cenedese, together with colleagues from the University of Bremen, recently developed a new approach, which enables computers to extract highly-accurate nonlinear dynamic models directly from experimental data. This is significant, because it could enable researchers to solve dynamical problems in the future that involve so-called tipping points, which cause a dynamical system to suddenly and drastically change its behavior, such as the onset of turbulence, or points of no return in the Earth's climate. To achieve this, the team's new approach is based on the idea that one does not need to reproduce all the details of a particular dynamic, but only its key structures.
/web/2022/08-220215-4b

AI-Based Control System for Tokomak Plasmas

(EPFL, February 16, 2022)

A team of researchers led by Professor Ambrogio Fasoli and Federico Felici from EPFL, as well as Martin Riedmiller and Brendan Tracey from DeepMind, recently developed a new magnetic control method for plasmas based on deep reinforcement learning, which enabled them to subsequently produce and control a diverse set of plasma configurations on the Swiss Plasma Center's TCV Tokamak, including elongated, conventional shapes, as well as advanced configurations, such as negative triangularity and "snowflake" configurations. This is a significant achievement, because it not only illustrates the promising potential of reinforcement learning to accelerate research in the fusion domain, but also constitutes one of the most challenging real-world systems to which reinforcement learning has been applied.
/web/2022/08-220216-2d

Cheap and Robust Unified Model Learning Strategy

(Università della Svizzera italiana, February 25, 2022)

A team of researchers led by Università della Svizzera italiana Professor Illia Horenko recently developed a cheap and robust computational strategy, called "Entropic Outlier Sparsification" (EOS), to not only improve learning from data, but also the accuracy of predictions when in presence of data anomalies and outliers. This is a significant development, because as explained by Professor Horenko, EOS can, for example, help to achieve a statistically-significant accuracy improvement when predicting patient's mortality from heart failure, compared to the common learning methods currently adopted for this purpose. This in turn can potentially mean more timely and correct diagnostics and more adequate clinical treatment for a significant number of individuals worldwide.
/web/2022/08-220225-9d

"Hot" Spin Qubits in Silicon Transistors

(University of Basel, March 25, 2022)

A team of researchers led by Dr. Andreas Kuhlmann and Professor Dominik Zumbühl from the University of Basel, in collaboration with the IBM Research Laboratory Zurich, recently developed silicon-based quantum bits (qubits), which are very similar in design to classic silicon transistors, and could potentially help solve one of the greatest challenges in developing quantum computers: scalability. Specifically, the newly developed qubits are based on "fin field-effect transistors" (FinFETs), which are small enough for quantum applications, and use a hole trapped under the gate to serve as a spin qubit at low temperatures. However, in order to achieve this, the team required qubit operation at temperatures above 1 K, which is why the work of Dr. Leon Camenzind and Simon Geyer, who overcame the 4K-mark with their qubits, was also of crucial importance.
/web/2022/08-220325-74

9. Architecture / Design

AI-Image-Based System to Inspect Infrastructure

(EPFL, February 10, 2022)

EPFL spin-off SwissInspect recently developed an innovative new system, which combines structural engineering, computer vision, drone technology, and artificial intelligence to make infrastructure inspections safer, more objective, and efficient. To achieve this, the novel system uses images as input to detect various types of structural defects, such as cracking, spalling, efflorescence, and rust, to name a few,

as well as to create numerical physics-based models, which provide crucial information to evaluate the structural health of infrastructure, and thus enable engineers and infrastructure owners to more efficiently plan maintenance and repair work. Given the promising potential of this new system, SwissInspect recently won a CHF 300k Innosuisse grant to inspect around 50 bridges across Switzerland, as well as a 10k Venture Kick grant to help develop its business.
/web/2022/09-220210-c2

Constructive Alps International Architecture Competition

(Federal Office for Spatial Development, February 15, 2022)

Following the reception of 237 entries, an eight-member jury led by Köbi Gantenbein recently shortlisted 31 projects, including seven from Switzerland, for the second round of this year's Constructive Alps international architecture competition, which is organized by Switzerland and the Principality of Liechtenstein, and aims to recognize outstanding examples of climate-conscious renovation and construction in the Alps. The jury now will visit the nominated buildings and hold discussions with building contractors, architectural firms and users in order to not only determine their climate compatibility, but also the contribution that they can make to future-oriented living and working in the Alpine region, before subsequently awarding the prizes to the winning projects in September.
/web/2022/09-220215-99

10. Economy, Social Sciences & Humanities

Factors That Contribute to “Phubbing”

(University of Basel, February 15, 2022)

Using the frameworks of the theory of planned behavior and an interaction value approach, a team of researchers led by University of Basel social psychologist Christiane Büttner recently examined the driving factors of phubbing – ignoring another person in order to use a smartphone – frequency, and found that a person’s attitude appeared to be particularly decisive in this context. Specifically, the results suggested that people who are not bothered by others looking at their phones, as well as who have a positive attitude toward phubbing, are more inclined to use their phones in an exclusionary manner while spending time with others. On the other hand, the team was surprised to find that while a lower evaluation of the social interaction did appear to lead to an increase in overall phone use, it did not necessarily lead to exclusionary phubbing.
/web/2022/10-220215-56

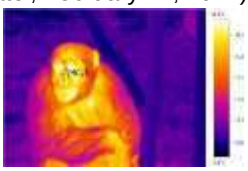
European Inflation Tracker

(University of St. Gallen, February 16, 2022)

University of St. Gallen lecturer Stefan Legge recently launched a new website, called the "European Inflation Tracker," which aims to provide academics, policymakers, and the public-at-large with up-to-date insights into the topic of inflation, particularly within the Euro area and Switzerland. This is an important development, because although most people understand the basic concept of inflation – if the price of something goes up, the value of each Euro or Swiss Franc is reduced because it can buy less – Legge contends that it is not only often hard to find key figures, but that there are also many misunderstandings about the causes and ramifications of inflation. As such, the new website is not only home to data sources and graphs, but it also presents the history of inflation, as well as the factors that play a role in it.
/web/2022/10-220216-e1

Thermal Imaging Reveals Emotional States of Chimpanzees

(University of Neuchâtel, February 24, 2022)



A team of researchers led by University of Neuchâtel primatologist Marion de Vevey recently collected infrared thermal data from wild chimpanzees engaged in daily social activities and found that their nose skin temperature varied in systematic ways, depending both on the type of social event, as well as on the audience composition. Specifically, the team not only found that chimpanzees involved in competitive events had lower nose skin temperatures than those involved in cooperative events, but also that these perceptions are moderated by specific audiences. This is a significant development, because it not only provides researchers with a better understanding of the highly-adapted physiology of chimpanzees, but also reaffirms the utility of using infrared thermal imaging to study the evolution of cognitive capacities in primates.
/web/2022/10-220224-35

Effects of Acute Stress on Older Adult's Cognition

(Swiss National Science Foundation, February 28, 2022)

A team of researchers led by University of Geneva doctoral student Greta Mikneviciute, under the supervision of Professor Matthias Kliegel, and in collaboration with Professor Ulrike Rimmele, recently conducted a systematic review of acute stress effects on cognition in older adults for the first time, which not only demonstrated that stressful situations had little or no impact on their cognitive abilities, but also illustrated several differences between young and older adults. Specifically, the meta-analysis only indicated one area where stress had a significantly negative effect on the over-60s' cognitive abilities – namely, verbal fluency – while also demonstrating that it had virtually no impact on episodic memory or on the executive functions that manage tasks such as systematic problem-solving, as well as that it even appeared to significantly improve working memory.
/web/2022/10-220228-07

New Platform for Cultural Heritage Diplomacy

(University of Geneva, March 09, 2022)

A team of researchers led by University of Geneva Professor Marc-Andre Renold, together with Alessandro Chechi and Morgane Desboeufs, recently launched a new platform to support the restitution of cultural heritage items. To achieve this, the new platform offers States, communities, institutions and individuals a physical and virtual place to declare the possession of an object of delicate provenance in complete confidentiality, provides support throughout the restitution process, as well as enables those wishing to recover objects of which they have been dispossessed to call on the expertise of the team. This is an important development, because as explained by Marc-André Renold, returning these types of objects or works of art can be very useful in improving relations between certain countries and communities by promoting so-called "transitional justice."
/web/2022/10-220309-95

FinTech in Switzerland: Fewer Companies, More Volume

(Lucerne University of Applied Sciences and Arts, March 09, 2022)

The Lucerne University of Applied Sciences and Arts recently published the 2022 edition of the annual IFZ FinTech Study, which provides a comprehensive overview of the Swiss FinTech sector for a broad spectrum of stakeholders. In this context, the study in particular found that although the number of Swiss FinTech companies shrank in 2021 for the first time, venture capital activity in the Swiss FinTech sector reached a record level in 2021 – both in terms of the number of financing rounds and volume. In addition, there were also several positive trends regarding the companies' business models, as, for example,

illustrated by the fact that the median number of employees and the median total funding of Swiss FinTech companies increased in 2021, after having stagnated or even declined in 2020.
/web/2022/10-220309-09

Effect of External Childcare on Socio-Behavioral Development

(University of Zurich, March 10, 2022)

A team of researchers led by Margit Averdijk, Denis Ribeaud and Manuel Eisner from the University of Zurich recently conducted a study to examine how external childcare influences the development of children into young adulthood. In this context, the team in particular found that although primary school pupils were more likely to show aggression, display symptoms of ADHD, and experience anxiety and depression the more time they had spent in a daycare center before entering school, this problematic behavior appeared to decrease as the children got older and mostly disappeared from the age of 13. The only exception was symptoms of ADHD, which were found to persist into adolescence. The researchers moreover found no evidence that generally links external childcare settings to delinquency and substance use in adolescents.
/web/2022/10-220310-d7

11. Start-ups / Technology Transfer / IPR / Patents

New "Wyss Zurich Foundation" for Translational Research and Tech Transfer

(University of Zurich, February 10, 2022)

The University of Zurich and ETH Zurich recently established a new, non-profit foundation, called the "Wyss Zurich Foundation", to put the Wyss Zurich Translational Center – a joint UZH-ETH accelerator for translational research, which specializes in regenerative medicine and robotics – on a stable long-term footing, as well as to draw a clear line between the foundation, which decides on donations, and the center, which receives the funds. This is an important development, because over the past six years, the Wyss Zurich Translational Center has not only successfully helped bridge the gap between basic research and application, but also launched several projects and startups, which have benefited society and improved treatments for patients.
/web/2022/11-220210-5c

Switzerland Continues to be Innovative During Pandemic

(Federal Institute of Intellectual Property, March 02, 2022)

With more trade mark applications having been filed in 2021 than in the previous year, as well as around 1,000 innovators having carried out a search with the Swiss Federal Institute of Intellectual Property (IPI) to examine their inventions in detail, Swiss companies yet again demonstrated their innovative spirit during the second year of the pandemic. Specifically, in 2021, 17,250 new trademarks were registered with the IPI, compared to 16,322 in 2020, with over 60% of applicants benefitting from early trademark examination, and thus bringing the total number of trademarks in force in Switzerland to 534,960, as of the end of 2021. Switzerland's innovative spirit was also reflected in the figures for the Assisted Patent Search service, which was used 996 times in 2021, as well as by the fact that patent applications were filed for 1,555 inventions in Switzerland in 2021.
/web/2022/11-220302-74

Swiss Female Investors in Decision-Making Roles

(Venturelab, March 08, 2022)

On the occasion of the International Women's Day, Venturelab compiled a list of the following 15 exceptional Swiss female investors, who occupy decision-making roles and help female founders obtain access to the world of venture capital, as well as to break down barriers: Carole Ackermann (Diamond

Scull), Marie-Line Bachmann (Zürcher Kantonalbank), Brigitte Baumann Gervais (GoBeyond Investing), Nathalie Chemtob (Alpana Ventures), Kiran Dallenbach (BioMedPartners), Gina Domanig (Emerald Technology Ventures), Bettina Ernst (Bernina BioInvest), Caroline Gueissaz (Business Angels Switzerland), Jasmin Heimann (Lightbird Ventures), Aleksandra Laska (Redalpine), Kathrin Sahner (Post Finance), Susanne K. Schorsch (Verve Ventures), Carina Them (SwissHealth Ventures), Karen Wagner (ysioscapital), and Klea Wenger (Swisscom Ventures).
/web/2022/11-220308-4d

University of Bern Venture Fellowships

(University of Bern, March 11, 2022)

The University of Bern recently awarded four "UniBE Venture Fellowships" for the first time, which will support the following young researchers to validate the technical feasibility, as well as prepare the commercialization, of their promising innovation projects: Dr. Olivier Schären is developing a genetically modified life vaccine to fight avian pathogenic Escherichia coli (APEC); PhD student Matheus Notter and his team developed a novel treatment against the bacteria Helicobacter pylori, which leads to chronic gastritis, peptic ulcers, and gastric cancer; psychologist Florence Olivia von Gunten and her team are developing an internet-based application for psychotherapists called ILAH, which allows for a continued therapy of patients on daily basis; and postdoc Dr. Felix Alexander Baier is conducting research on new treatment methods for cholestatic liver diseases.
/web/2022/11-220311-cd

SuisseFund: Matchmaking Platform for Investors and Startups

(startupticker.ch, March 16, 2022)

A team of entrepreneurs composed of Thierry Kneissler, Pawel Kowalski and Benjamin Berger recently launched a new matchmaking platform for startups and investors, called "SuisseFund", which aims to complement existing business angel networks and venture capital platforms. To achieve this, interested startups from all sectors first provide a description of their solution, financial needs, valuation, and pitch deck. This is subsequently verified by SuisseFund, before being published on the platform, where it can be accessed by registered investors. Once an investor indicates their desire to initiate a dialogue to kick off negations, the platform informs the corresponding startup, thereby enabling the two parties to proceed on their own initiative.
/web/2022/11-220316-57

12. General Interest

New Innovation and Research Center for Sensory Sciences: "The Sense"

(University of Applied Sciences and Arts of Western Switzerland, February 02, 2022)

HES-SO Valais-Wallis, the University of Lausanne and the Lausanne University Hospital recently launched a new innovation and research center called "The Sense," which will bring together nineteen leading neuroscience researchers and their teams to help provide new solutions at the national and international levels. Specifically, the researchers will draw from their considerable applied, basic, and clinical research activities to create and diffuse knowledge regarding the senses, cognition, and human behavior for the benefit of the society, while adopting a particular emphasis on the following three main axes: Perception & Cognition, Action & Repair, and Devices & Data.
/web/2022/12-220202-84

March Edition of "Horizons" Research Magazine

(Swiss National Science Foundation, March 03, 2022)

The SNSF Swiss National Science Foundation and the Swiss Academies of Arts and Sciences recently published a new edition of the quarterly Swiss research magazine "Horizons," which reports on the latest developments in science and discusses research policy issues of global importance. For this issue, Horizons in particular casts a lens on urban reality, while also comparing international sources of research funding. Other highlights include an encounter with Loretta Seglias, who has been exposing the deficits of past welfare policies for decades, a detailed view of the inside and outside of the sun, as well as the experiences of sleuths who uncover fraud in science.
/web/2022/12-220303-de

Federal Council Extends Mandate of GESDA Foundation

(Federal Council, March 04, 2022)

After a successful three-year pilot phase, the Federal Council recently decided to extend the mandate of the Geneva Science and Diplomacy Anticipator (GESDA) Foundation until 2032, as well as to provide it with an annual funding of CHF 3 million for ten years, starting in 2023. Founded in 2019, the Foundation has not only been boosting the visibility of International Geneva beyond the traditional spheres of international governance such as NGOs and the UN – and specifically in the scientific community – through its “Scientific Breakthrough Radar” report and annual summit, but it is also breathing new life into the way multilateralism works by involving stakeholders working in science, diplomacy, the private sector, philanthropy and civil society.
/web/2022/12-220304-aa

Swiss Mobility Monitor 2022

(University of St. Gallen, March 17, 2022)

A team of researchers led by University of Lucerne Professor Reto Hofstetter and University of St. Gallen Professor Andreas Herrmann recently released this year’s edition of the "Swiss Mobility Monitor," which highlights the status of new forms of mobility in Switzerland, as well as the extent to which motives and needs influence acceptance and use. This is an important development, because the findings not only provide researchers with a valuable basis for further projects, but also provide marketing and sales experts with specific starting points to develop strategies for future marketing of mobility innovations, such as electric vehicles, car-sharing or multi-modal mobility options. In this context, the study in particular highlighted that the population living in Switzerland mainly uses classic forms of transport, as well as that mobility often appears to be a very emotional topic.
/web/2022/12-220317-33

New Makerspace for Project-Based Learning

(EPFL, March 25, 2022)

EPFL recently opened a new Makerspace, called the "Student Prototyping and Outreach Tank" (SPOT), in order to provide students with a dedicated space, as well as tailored support and resources, to meet, collaborate, get creative, and do hands-on prototyping work. To achieve this, the 1,500 square meter building is split into the following three spaces, which are each intended for projects at different stages of maturity: the communal areas, which are open 24/7; the mechanical and electronic prototyping workshops, which are supervised and open to students who have completed some basic training; and the professional workshops, which can be commissioned to design more complex components. In addition, the SPOT is also open to students taking classes with a project-based component, thereby opening up a wealth of unique teaching opportunities.
/web/2022/12-220325-6a

13. Calls for Grants/Awards

Call: "R'Equip" Grants for Large-Scale Research Equipment

(Swiss National Science Foundation, February 10, 2022)

As part of the "R'Equip" funding scheme, the Swiss National Science Foundation (SNSF) is awarding grants for the acquisition and development of large-scale apparatuses in all areas of science with a view to facilitating research projects at the high end of international research. Specifically, a grant pays for the acquisition of equipment worth at least CHF 100,000, and generally covers up to 50% of the acquisition costs. The maximum amount of a grant is CHF 1 million, and although the research supported by the research equipment must be of high scientific quality, it does not necessarily have to be funded by the SNSF. Researchers who work at the envisaged location of the research equipment and who are willing to assume part of the responsibility for its use and maintenance are eligible to submit an application until 2 May 2022 via the mySNF platform.
/web/2022/13-220210-af

Call: Science Journalism Awards

(Swiss Academies of Arts and Sciences, March 08, 2022)

The Swiss Academies of Arts and Sciences recently opened applications for its "Prix Média", "Prix Média Newcomer", and "Research sponsorship 31+" programs, which aim to support media professionals with research contributions and prize money for exciting stories and innovative formats. In this context, the Prix Média is endowed with CHF 10,000 and stands for excellence in science journalism, while the Prix Média Newcomer aims to support media professionals or students under 31 years of age who wish to implement projects in the field of science journalism. Finally, as part of the Research sponsorship 31+, the Swiss Academies of Arts and Sciences generally sponsor three excellent projects per year by journalists who are over 31 years old with a maximum of CHF 3,000. Application deadline: 16 May 2022.
/web/2022/13-220308-e4

Call: Swiss Energy Research for the Energy Transition (SWEET)

(Swiss Federal Office of Energy, March 31, 2022)

The Swiss Federal Office of Energy recently launched the fourth call for proposals in the "SWEET" funding program on the following topic: co-evolution of the Swiss energy system and Swiss society and its representation in coordinated simulations. In this context, the aim is to increase the informative value of simulations, as well as to promote transdisciplinary cooperation on energy and climate-related issues. Therefore, funding will only be awarded to a consortium in which the natural sciences and engineering, as well as economics, social sciences and humanities are equally represented. To apply, interested research consortia from universities, non-profit research institutions, the private- and public sectors must submit a pre-proposal by 16 June 2022. The call budget of CHF 10 million will be awarded for a term of 10 years.
/web/2022/13-220331-72

Call: “Swiss Accelerator” for Startups and SMEs

(Innosuisse, March 31, 2022)

Innosuisse recently launched a new competitive funding offer, called the "Swiss Accelerator", as a transitional measure for Horizon Europe, which enables Swiss startups and SMEs with no more than 250 full-time employees to apply for direct financial support for innovation projects with significant innovation potential. This is an important development, because Switzerland is currently considered a non-associated third country in terms of the EU’s Horizon Europe framework program, which has in turn also excludes Swiss startups and SMEs from being able to participate in the European Innovation Council’s

(EIC) "Accelerator" funding program. In this context, the funding from Innosuisse will amount to a maximum of 70% of the project costs, as well as a maximum of CHF 2.5 million per application – typically spread over two years. Application deadline: 10 May 2022.
/web/2022/13-220331-b6

Upcoming Science and Technology Related Events

Swiss Biotech Day 2022
May 2-3, 2022
https://is.gd/iYU8Ju
Innovation, Research, Networking
Basel

FEMSPIN Kick-off Event
May 9, 2022
https://is.gd/PayXsc
Innovation, Knowledge Transfer, Gender
Olten

Energy Startup Day 2022
May 17, 2022
https://is.gd/AcCzI7
Energy, Cleantech, Mobility
Zurich

startup days 22
May 19, 2022
https://is.gd/BV8vDo
Startups, Technology, Investors
Bern

Swiss Economic Forum
June 2-3, 2022
https://is.gd/1Uyk47
Cooperation, Business, Science
Interlaken

Horizon Europe Info Day
June 14, 2022
https://is.gd/HCIzL2
Funding, Research, Innovation
Bern

Swiss Fintech Investor Day 2022
June 14, 2022
https://is.gd/9KT0UI
Fintech, VC, Startups
Zurich

Swiss NanoConvention 2022
July 5-6, 2022
https://is.gd/L5F8db
Nanotech, Imaging, Materials Science
Fribourg

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