CERN Bulletin

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More articles at *http://home.cern/cern-people*

CERN AND IUPAP: A LONG-STANDING PARTNERSHIP

The International Union of Pure and Applied Physics (IUPAP) gets ready to mark its centenary year in 2022 and, as a long-standing partner, CERN will be part of the celebrations

John Adams (former CERN Director-General) describing the 300 GeV project with Willi Jentschke, incumbent CERN Director-General at the time and session chairman at the eighth International Conference on High Energy Accelerators, sponsored by IUPAP and held at CERN in 1971 (Image: CERN)

IUPAP is the only global international scientific union dedicated to physics, connecting physicists from all fields and all continents. Founded in Brussels in 1922 with 13 member countries, its membership has grown today to 60 countries. Its centenary will be marked by a series of activities celebrating physics and marking the Union's achievements. These include a Centennial Symposium to be held at the International Centre for Theoretical Physics (ICTP) in Trieste in July as a hybrid event. Events will also be organised in 2023, including the 100th anniversary of the first IUPAP General Assembly, which will be held at the newly inaugurated CERN Science Gateway, if the situation allows.

IUPAP and CERN have a long history of collaboration. As early as 1958, CERN hosted the IUPAP-sponsored meeting " The 8th Annual International Conference on High-Energy Physics ". Since then, CERN scientists have played active roles in many IUPAP commissions and working groups, in particular Commission 11: "Particles and Fields" and Working Group 1: "International Committee for Future Accelerators (ICFA)".

IUPAP continues to develop and to expand its global reach.

(Continued on page 2)

A WORD FROM CHARLOTTE LINDBERG WARAKAULLE

CELEBRATING THE ROLE OF BASIC SCIENCE IN SUSTAINABLE DEVELOPMENT

Last week, the United Nations General Assembly proclaimed 2022 the International Year of Basic Sciences for Sustainable Development (IYBSSD) . An initiative championed by the International Union of Pure and Applied Physics (IUPAP), which celebrates its 100th anniversary next year, the international year will be organised under the auspices of UNESCO.

(Continued on page 2)

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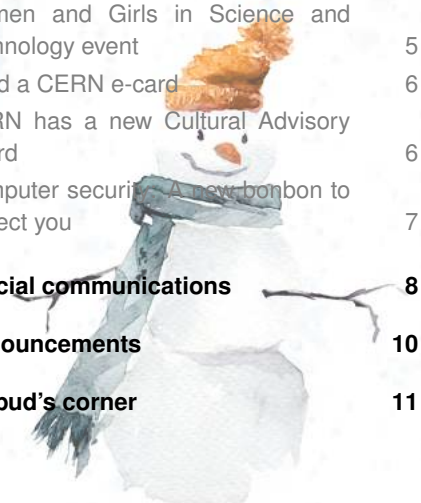

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A WORD FROM CHARLOTTE LINDBERG WARAKAULLE

CELEBRATING THE ROLE OF BASIC SCIENCE IN SUSTAINABLE DEVELOPMENT

If COVID-19 has taught us anything, it is the importance and impact of fundamental research. It is therefore timely that 2022 should highlight the role of basic science in support of sustainable development. Promoted by IUPAP, under the energetic leadership of former CERN Council President Michel Spiro, IYBSSD is an opportunity for us to raise awareness of the practical benefits that our research brings.

It is expected that IYBSSD will be kicked off with an opening conference at UNESCO in Paris in July 2022, and conclude with a closing ceremony at CERN one year later. Its focus will be the 2030 Agenda for Sustainable Development, and how understanding nature at a fundamental level not only helps to make the Agenda's goals achievable, but also promotes sustainable policy making for the common good and technology development that can advance the implementation of the agenda.

CERN, along with 26 other scientific organisations, supported IUPAP's initiative, and we are looking forward to being part of a rich year of activities showcasing the value of basic science for society. CERN has a strong story to tell. Since the adoption of the Sustainable Development Goals by the full membership of the United Nations in 2015, we have been working actively, often in partnership with other organisations, to find ways to enable expertise and know-how from particle physics to support the Agenda. Among the most recent examples: this year's Webfest brought together young talent from across the world to promote the Goals; the new Technology Impact Fund provides a platform for bridging the gap between the technology developed for research at CERN and its potential applications to address societal challenges; and CERN's COVID Airborne Risk Assessment (CARA) tool has led to the Organization working with the WHO to develop a standardised algorithm to quantify airborne COVID-19 transmission risk in indoor settings.

CERN's engagement with sustainable development, however, is not new. The Organization has always striven to make its technologies and expertise available to society as a whole. Our work on medical imaging, dating back to the 1970s, is a good example, while CERN's collaboration with the United Nations satellite centre, UNOSAT, celebrated its 20th anniversary this year. Ongoing activities for medical applications, educational programmes and capacity-building initiatives for countries with developing particle physics communities all contribute to advancing sustainable development through the channel of basic research. Many are the subject of active Knowledge Transfer initiatives, while CERN's Environment Reports, the second of which was published this year, also highlight CERN technologies with the potential to promote environmental sustainability.

We look forward to an exciting year celebrating the value of basic sciences for the global common good and the future of our world, and hope that many of you will join the celebrations.

Charlotte Lindberg Warakaulle
Director for International Relations

CERN AND IUPAP: A LONG-STANDING PARTNERSHIP

To ensure stability and continuity in its operations, IUPAP has taken the decision to register itself in Geneva as an association under Swiss law. It has also introduced corporate associate membership, which will enable new actors to get involved, including industry with a focus on physics. A new configuration for a new century.

IUPAP was the driving force behind last week's UN General Assembly proclamation of 2022 as the International Year of Basic Science for Sustainable Development, giving CERN another good reason to pursue the partnership as the Union enters its second century.

Jens Vigen, Monica Pepe-Altarelli

INNOVATION IN MANAGING EXCAVATED MATERIALS: AN FCC CONTRIBUTION TO THE CIRCULAR ECONOMY

First phase of CERN's "Mining the Future" competition successfully completed

(Image: CERN)

A key recommendation of last year's update to the European Strategy for Particle Physics is that Europe, in collaboration with the worldwide community, should undertake a feasibility study for a next-generation hadron collider. As a result, the Future Circular Collider (FCC) Feasibility Study is committed to investigating the technical and financial viability of such a facility at CERN.

The feasibility study for the FCC provides a unique space to explore ideas that could tackle the colossal challenge of achieving a more sustainable future and to test technologies with applications beyond particle physics.

To that end, CERN and the *Montanuniversität Leoben* in Austria launched the international competition Mining the Future with the support of the EU-funded Horizon 2020 FCC Innovation Study project. In line with circular economy principles, the challenge set for the participants was to identify credible solutions for the innovative reuse and sustainable management of the large quantities of molasse material that would be excavated during the construction phase of the future FCC tunnel. Such rock deposits are abundant in the Geneva region and all over the Alps.

"The solutions put forward for the construction of new underground tunnels to host future colliders could also apply to other future tunnel and underground civil engineering projects. CERN has a long-standing record of pioneering technical solutions that are put to good use in areas lying beyond its core scientific mission," said CERN's Johannes Gutleber.

Phase 1 of Mining the Future ran from 1 May to 31 October. Applicants from all over Europe stepped up to tackle this challenge, submitting high-quality proposals with huge innovation potential. Young researchers, fresh start-ups, universities and traditional players from the construction industry formed consortia to develop their strategies. Each of the proposals addresses both the technical feasibility – with participants presenting evidence from a controlled laboratory environment – and the socio-economic impact.

Some of the solutions focus on developing fast and efficient sorting processes enabling the reuse of the excavated material for the creation of marketable products. These products can then cover regional needs or feed the European marketplace – participants went as far as providing the tools for connecting supply with demand. Other innovative proposals are dedicated to the elaboration of methods for transforming the excavated molasse into construction materials or alternatively, proposing smart construction techniques based on the immediate reuse of molasse.

By keeping excavated materials in play, circular economy models offer a clear pathway towards achieving our collective climate goals and reducing greenhouse gas emissions linked to the extraction, processing, manufacturing and landfilling of natural resources. "Tunnel excavation material is, too often, still treated as waste. Change needs to come in the form of both new technical solutions and an updated legal framework. Everyone can benefit from a green underground infrastructure," said Professor Robert Galler, co-organiser of the competition and chair of the jury committee.

Over the coming months, the jury committee will carefully evaluate the applications. This second stage of this contest will offer participants the opportunity to refine their proposals. The final winner will be announced in August 2022, with an award ceremony to take place next October at *ZaB-Zentrum am Berg*, Austria.

On the long path towards the FCC, the Mining the Future competition is a resolute first step towards the development of new construction models that create economic value, build local resilience and spur innovation across sectors.

Panagiotis Charitos

ENVIRONMENTAL AWARENESS: MANAGING CHEMICAL PRODUCTS

(Image: CERN)

Chemical safety at CERN begins with avoiding chemical products whenever possible. If that is not an option, the least hazardous chemical product should be selected. Wherever chemical products are used, appropriate prevention measures should be observed. In addition to these measures, CERN provides training courses and has put in place procedures regarding chemical safety.

CERN experts are available to support you in identifying and evaluating chemical products and to provide advice on

their appropriate usage (e.g. handling and storage) and alternative products. For further questions, please contact Environment-Prevention@cern.ch.

This infographic is part of the "CERN's Year of Environmental Awareness" series.

CERN RECEIVES A LOCAL "SOFT MOBILITY" PRIZE

The Auvergne-Rhône-Alpes region, through the Ain Energy and Climate Agency, has awarded its ecomobility prize to CERN as a "soft-mobility accelerator".

Bike2Work 2019 (Image: CERN)

The French local authorities have recognised CERN's ecomobility actions by awarding it the "establishments committed to soft mobility" prize, following the regional "Mobility Challenge" that was taken up by the CERN community in September 2021. The Ain Energy and Climate Agency (*Agence de l'énergie et du climat de l'Ain* – ALEC 01) singled out CERN as one of the department's employers that are successfully investing in alternatives to the private car.

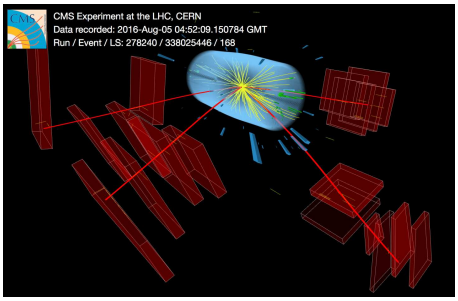
Gilles Bollinger (SCE-SCC-CS), a member of CERN's Soft Mobility Working Group, accepted the prize on the Organization's behalf at a ceremony held in Miribel near Lyon on 30 November. During the ceremony, Gilles had the opportunity to present CERN's "soft mobility" strategy, which is geared towards increasing the facilities available to cyclists (cycle paths, bicycle stands, bicycle maintenance equipment) and renting out bicycles and electric bicycles through the Mobility Service. He also underlined CERN's commitment to initiatives like the annual "Bike2Work" campaign and the Mobility Challenge.

The strategy is bearing fruit. In 2018, 32% of the CERN community commuted to work by bicycle, on foot or using public transport. This figure, which is above the average for conurbations, earned CERN the title of "soft-mobility accelerator" from the organisers of the prize.

Thomas Hortala

CMS HOMES IN ON HIGGS BOSON'S LIFETIME

The collaboration reports a value for the Higgs boson's lifetime that has a small enough uncertainty to confirm that the particle has a tiny lifetime



A Higgs boson candidate transforming into four muons (red lines). (Image: CERN)

The Higgs boson doesn't stick around for long. Once it is created in particle collisions, the famed particle lives for a mere less than a trillionth of a billionth of a second or, more precisely, 1.6×10^{-22} seconds. According to theory, that is, for so far experiments have only been able to set bounds on the value of the particle's lifetime or to determine this property with a large uncertainty. Until now. In a new study, the CMS collaboration reports a value for the particle's lifetime that has a small enough uncertainty to confirm that the Higgs boson does have such a short lifetime.

Measuring the Higgs boson's lifetime is high on the wish list of particle physicists, because an experimental value of the lifetime would allow them not only to better understand the nature of the particle but also to find out whether or not the value matches the value predicted by the Standard Model of particle physics. A deviation from the prediction could point to new particles or forces not predicted by the Model, including new particles into which the Higgs boson would decay.

But it isn't easy to measure the Higgs boson's lifetime. For one, the predicted lifetime is too short to be measured directly. A possible solution entails measuring a related property called the mass width, which is inversely proportional to the lifetime and represents the small range of pos-

sible masses around the particle's nominal mass of 125 GeV. But this isn't easy either, as the predicted mass width of the Higgs boson is too small to be easily measured by experiments.

Quantum physics to the rescue. In addition to being produced with a mass equal or close to its nominal value, a short-lived particle such as the Higgs boson can also be produced with a much larger mass than the nominal value, although the odds of this happening are lower. This effect – and in fact the mass width of the particle as well – is a manifestation of a quantum quirk known as Heisenberg's uncertainty principle, and a comparison between the production rate of these large-mass, or "off-shell", Higgs bosons with that of the nominal or close to nominal, or "on-shell", Higgs bosons can be used to extract the Higgs boson's mass width and therefore its lifetime.

This is the method employed by the CMS team in their new study. By analysing data collected by the CMS experiment during the second run of the Large Hadron Collider (LHC), specifically data on Higgs bosons transforming into two Z bosons, which themselves transform into four charged leptons or two charged leptons plus two neutrinos, the CMS researchers have obtained the first-ever evidence for the production of off-shell Higgs bosons. From this result, which has only a 1 in 1000 chance of being a statistical fluke, the CMS team obtained a Higgs boson's lifetime of 2.1 x 10^{-22}seconds, with an upper/lower uncertainty of (+2.3/-0.9) x 10^{-22}seconds. This value, the most precise yet, aligns well with the Standard Model prediction and confirms that the particle does indeed have a tiny lifespan.

"Our result demonstrates that off-shell Higgs-boson production offers an excellent way to measure the Higgs boson's lifetime," says CMS physicist Pascal Vanlaer. "And it sets a milestone in the study of the properties of this unique particle. The precision of the measurement is expected to improve in the coming years with data from the next LHC runs and new analysis ideas."

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Read more on the CMS website.

Ana Lopes

BECOME AN AMBASSADOR FOR THE WOMEN AND GIRLS IN SCIENCE AND TECHNOLOGY EVENT

For the week of 7 to 11 February 2022, female scientists and engineers are invited to speak at local schools to get young people excited about science. You can volunteer to take part!

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

CERN, the University of Geneva's Scienscope and EPFL will be joining forces in 2022, for the sixth year running, to celebrate the International Day of Women and Girls in Science. This year they will be joined for the first time by the Annecy Particle Physics Laboratory (LAPP). From 7 to 11 February 2022, female scientists and engineers will visit local schools to talk to the students about their professions.

These science ambassadors will talk about their career history, offer an insight into the projects and experiments in which they are involved, and maybe even give a short demonstration. The aim is to change how young people view scientific, technical and technological professions and to show that they are just as accessible to girls as to boys. And, who knows, the presentations might even help some to discover their vocation!

The Women and Girls in Science and Technology week is a huge success every year. Even in 2021, the hybrid set-up did not deter the schools or the presenters, with more than 20 presentations given in the classroom and another fifty or so via videoconference! **This is why we are always looking for more volunteer female scientists willing to give up a bit of their time to visit schools.** So come and join the adventure by **signing up** (*https://indico.cern.ch/event/1092237/registrations/77066/*) **: the deadline is 5 January 2022 (11.59 p.m.)**.

Conditions of participation:

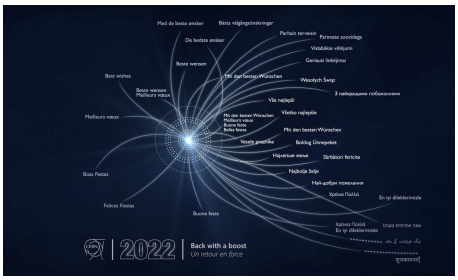
- Registration is open to all women working in a profession connected with science, technology, engineering or maths (STEM), as well as computer science, communication or education.
- Priority will be given to presenters from CERN, the University of Geneva, EPFL and LAPP. If you are not from one of these institutions but would like to take part, contact us (*http://education.locale@cern.ch*).
- Deliver one-hour presentations for a maximum of 30 pupils aged 7 to 15.
- The majority of presentations will be given in French (95%), but English speakers can also sign up.
- You will be required to attend a briefing session.
- People classified as vulnerable and subject to COVID-19 protection measures may not sign up.

COVID-19 measures: We are closely monitoring the evolving health situation and the related measures in place at CERN, in Switzerland and in France. Please note that this event will take place via videoconference only if the situation in February rules out in-person events.

Sign up and find out more: https://cern.ch/wis-internal

Thank you for volunteering!

SEND A CERN E-CARD



(Image: CERN)

Send colleagues, family and friends holiday greetings using the CERN e-card service.

The video (*https://www.youtube.com/watch?v=r55KLQmPqfo*) is available on YouTube.

You can create your own personalised electronic cards by signing in with your CERN account on this site (*https://ecard.web.cern.ch/*). Please note that this year's cards will only be available virtually and that no physical copies will be distributed.

CERN HAS A NEW CULTURAL ADVISORY BOARD

CERN's newly appointed Cultural Advisory Board will hold its first meeting

The CERN Cultural Advisory Board. From left to right, top to bottom: Helga Timko, accelerator physicist; Frédérick Bordry, Chair of the Board (CERN), Patrick Gyger (Plateforme10); Elvira Dyangani Ose (MACBA); Ulrike Erbslöh (Fondation Beyeler) and Vicente Todolí (Pirelli HangarBicocca). (Image: CERN)

On Thursday, 25 November CERN will convene the first meeting of its newly appointed Cultural Advisory Board. Comprising experts and leaders from the arts and science sectors, the Board will provide advice to shape the Laboratory's arts programme and promote CERN's engagement with art in collaboration with leading cultural organisations.

The CERN Cultural Advisory Board brings together world-leading cultural experts from the CERN Member States: Elvira Dyangani Ose, Director of MACBA, Barcelona; Ulrike Erbslöh, Managing Director of Fondation Beyeler, Riehen/Basel; Patrick Gyger, Director-General of Plateforme10, Lausanne; and Vicente Todolí, Artistic Director of Pirelli HangarBicocca, Milan. CERN is represented by Frédérick Bordry, former Director for Accelerators and Technology and Chair of the Board, and Helga Timko, an accelerator physicist. Fabiola Gianotti, CERN's Director-General, appointed the Advisory Board members for their world-renowned expertise and distinctive leadership in the arts and science sectors. The newly appointed members, who will meet for the coming four years, form the third committee since the institution's inception ten years ago.

In 2011, CERN launched its first ever Cultural Policy for engaging with the arts. The initiative provided the essential framework and foundations for establishing the arts programme at CERN. For the last ten years, Arts at CERN has fostered creative dialogues between art and physics. Artists across all creative disciplines have been able to experience how fundamental physics pursues the big questions about our universe through research-led residencies and art commissions. To date, the programme has supported 186 artists to expand their artistic practices at the Laboratory alongside physicists, engineers and CERN staff.

Since 2017, eighteen art commissions have been developed following the artists' time at the Laboratory, with the support of extraordinary partnerships and the involvement of the artists' scientific partners. Under the creative direction of Mónica Bello, curator and head of Arts at CERN, these artworks have been produced and have later found a place in museums and art centres worldwide. Altogether, they have enhanced Arts at CERN's scope and reach with audiences and the international community eager to connect with CERN. The programme has commissioned artworks by artists working with a broad range of subjects, among them Semiconductor, Mariele Neudecker, James Bridle, Suzanne Treister, Yunchul Kim, Richard Mosse, Chloé Delarue and Rosa Barba.

The Cultural Advisory Board will meet annually and will play an advisory role concerning CERN's cultural strategies and the Arts at CERN programmes, expanding the opportunities and the creative exchanges between art and science.

COMPUTER SECURITY: A NEW BONBON TO PROTECT YOU

(Image: CERN)

With the new firewall in place (“ Block the bad, grant the good access (*https://home.cern/news/news/computing/computer-security-block-bad-grant-good-access*) ”) in addition to our dedicated malware-quarantining appliance (*https://home.cern/news/news/computing/computer-security-stop-spam*) that has been running smoothly for some years, it's time for strike number three: the deployment of new anti-virus, anti-malware and endpoint detection and response software running on Windows and Mac computers. Our bonbon for Christmas.

Multi-featured anti-malware software (AM) and sophisticated endpoint detection and response software (EDR) are the last line of defence for your computer before everything goes down the drain (“ What have accelerators and pipelines in common? ”). By monitoring local activities on your computer – by the operating system, on the local file system and network communications – the AM and EDR are jointly able to detect and report abnormal or malicious activity. The AM is a security suite constituting the first line of defence. It looks for malware signatures identified by a global threat intelligence network as well as improves system security generally by, for example, detecting behaviour associated with ransomware, blocking access to malicious websites and monitoring that system updates have been applied.

The EDR is a specialised threat hunting and response software using CERN-internal and external threat intelligence feeds to detect more sophisticated attacks. Whole system state behaviour is analysed by the central dashboard, allowing CERN's Security Operations Centre to analyse threats in real time in order to better understand the origin, damage, extent and consequences of the successful attack, as well as run remote queries intended for threat hunting.

CERN is about to purchase this new AM and EDR solution and is in the process of rolling it out. Based on different use cases, device ownerships, responsibilities and privacy aspects, there are two distinct deployment methods for CERN-owned devices and for personal devices (“bring your own device” or, for short, BYOD):

- All centrally managed devices, i.e. centrally managed Windows servers and centrally managed Windows PCs/laptops, will have AM, EDR solutions deployed via the standard means (i.e. CMF) and remotely managed, monitored and maintained by CERN Desktop Support. Similarly, the installation of AM and EDR solutions are envisaged and supposed to be deployed and enforced for all Windows laptops and Macbooks bought with a CERN budget code. In all cases, the CERN Computer Security team will intervene and conduct remote incident response in case the AM/EDR triggers an alert;
- When it comes to BYOD, your personal Windows laptops, Macbooks and the PCs you use at home for teleworking also benefit! You can download and install the AM free of charge from the CERN app store for Windows (*https://appstore.web.cern.ch/*) or Mac-Self Service (*https://devices.docs.cern.ch/devices/mac/MacSelfService/*). The licence must be renewed every 12 months by reconnecting to that app store or it will become invalid. However, since the installation concerns your personal device, your privacy is paramount to us. All alerts will be displayed only to the local user. Neither the CERN Service Desk nor the Windows Support Team nor the CERN Computer Security Team will be able to remotely connect to your device. You would need to contact us at Computer.Security@cern.ch in case of problems or issues.

Thus, with this new AM and EDR offer by CERN, you can protect your work horse, your teleworking posts, your personal data and CERN, all in one go. Right in time for Christmas. C'est bon-bon, non?

Do you want to learn more about computer security incidents and issues at CERN? Follow our Monthly Report (*https://cern.ch/security/reports/en/monthly_reports.shtml*). For further information, questions or help, check our website (*https://cern.ch/Computer.Security*) or contact us at Computer.Security@cern.ch.

Computer Security team

Official communications

NEW CERN SAFETY RULE FOR CABLES

The CERN Safety Rules listed below have been published on the CERN website dedicated to the Safety Rules : specific Safety Instruction SSI-FS-2-1 (*https://edms.cern.ch/ui/file/2669584/LAST_RELEASED/SSI-FS-2-1_EN.pdf*) “Fire Safety and Radiation Resistance requirements for Cables”.

This Specific Safety Instructions cancels and replaces Safety Instruction IS 23.

The SSI-FS-2-1 defines the minimum Safety requirements with respect to fire performance and resistance to ionising radiation of insulation and sheathing materials of cables used in CERN installations. It applies to cables purchased by or on behalf of CERN or otherwise brought onto the CERN site as from the date of its entry into force. Cables that are part of CE marked equipment are not subject to this Specific Safety Instruction.

The SSI-FS-2-1 is complemented by Safety Guideline SG-FS-2-1-1 (*https://edms.cern.ch/ui/file/2669629/LAST_RELEASED/SG-FS-2-1-1_EN.pdf*) which provides guidance as to the implementation of SSI-FS-2-1 in particular with regard to the certification and selection of Cable materials.

The fire performance requirements set out in the SSI-FS-2-1 refer to the European Construction Products Regulation (CPR) and are thus aligned with common industrial standards and certification processes. This will facilitate the procurement of cables. The new rule allows for flexibility with regards to specific types of cables and in-kind contributions. Tailored procedures based on risk assessments strike a balance between CERNs functional needs and the level of Safety required.

The CERN Safety Rules apply to all persons under the Director-General's authority. They are available under the following link: https://www.cern.ch/safety-rules

SERVICE AVAILABILITY DURING CERN'S ANNUAL CLOSURE 2021/2022

General site services

As always, in addition to the Fire and Rescue service (+41 22 76) 74444, the Security service remains operational every day (24/7) and can be reached at (+41 22 76) 78878.

SCE department services that do not depend on continuous human presence will remain available, although at a reduced support level. In general, the response time for common issues will be half a day (but this is not guaranteed). To report urgent infrastructure issues during the annual closure, call the CCC TI operator at (+41 22 76) 72201.

Other services requiring human presence (such as Service Desk, CERN hostels, car sharing, shuttles, cleaning services, etc.) will not operate during the end-of-year closure

For more information, please consult the CERN Service Portal (*https://cern.service-now.com/service-portal*).

In addition, please note that the heating on the Meyrin and Prévessin sites will be switched to low-heat mode to maximise energy savings during this period of low occupancy. This will lead to a slight drop in temperature.

Computing services

Essential services provided by the IT department – including WLCG production services – will remain available.

Most problems will be dealt with on a **best-effort basis only** and the availability of specific services might be limited by the availability of other services. No interventions are scheduled – in case of a failure, there is no guarantee that services will be restored, and changes requiring on-site human intervention will not be possible.

Incidents will be listed on the CERN Service Status Board for Computing.

The Computer Centre Operator service will be available and can be reached at (+41 22 76) 75011 or by email to computer.operations@cern.ch, where urgent problems can be reported.

Suspected computer-security incidents must be reported to Computer.Security@cern.ch or (+41 22 76) 70500 as usual.

Please remember to shut down and power off any equipment in your office whose operation is not required during the annual closure.

ACCESS TO THE ORGANIZATION'S SITE DURING THE 2021 END-OF-YEAR CLOSURE

This year, CERN will be closed from Wednesday, 22 December 2021 to Tuesday, 4 January 2022 inclusive. The first working day of the new year will be Wednesday, 5 January 2022.

As is the case every year, the only persons who will be entitled to enter the CERN site during the end-of-year closure are those who have been authorised to do so for strictly professional reasons (stand-by service or indispensable maintenance work). The **COVID-19-related restrictions** remain applicable.

A specific e-group records all such authorised personnel. Managers (department heads, group leaders, contract supervisors, etc.) and experiments' technical coordinators are responsible for submitting the names of the persons concerned to their department's designated person for updating the e-group by Tuesday, 21 December 2021. The procedure is documented on the service portal (*https://cern.service-now.com/service-portal?id=kb_article&n=KB0007612*).

Unlike in previous years, it is no longer necessary to include members of the personnel of outside companies in these departmental/experiment lists. Any members of the personnel of outside companies who are required to work on the CERN site during the closure must have a valid notice of work to be done outside normal working hours (AET). Please note that AETs must be limited to the time needed to perform the work in question or, in the case of annual AETs, must not extend beyond 21/12/2022. As a reminder, all 2021 AETs will end on 17/12/2021 at the latest.

During the period when the Laboratory is closed, from 22 December onwards, any members of the CERN personnel who need to enter the CERN site for an urgent reason and without prior authorisation from their department or their experiment's technical coordinator will be obliged to submit an access request ("CERNXMAS" permission request), which may be signed by the Security service or the CCC (TI) after its legitimacy has been assessed. The "CERNXMAS" permission option will not be available in the ADAMS system until 22 December. This provision does not apply to members of the personnel of outside companies, since they must have a valid AET.

We would also like to remind you that all CERN services, including the restaurants and the library, will be closed during the end-of-year closure.

We thank you for your cooperation and wish you all a very happy holiday.

SCE department

PENSIONS PAYMENT DATES IN 2022

Friday 7 January

Monday 7 February

Monday 7 March

Thursday 7 April

Friday 6 May

Tuesday 7 June

Thursday 7 July

Monday 8 August

Wednesday 7 September

Friday 7 October

Monday 7 November

Wednesday 7 December

CERN HEALTH INSURANCE SCHEME (CHIS) - OPENING HOURS OF UNIQA OFFICES DURING END-OF-YEAR CLOSURE

Please note that the UNIQA office **at CERN** (Main Building) will be closed during the two-week end-of-year closure.

During that period, **UNIQA's offices in Geneva will remain open** daily from 8 a.m. to 5 p.m. (4 p.m. on 23 and 30 December 2021) and will be closed on 24 and 31 December 2021. During open periods you can also reach UNIQA by telephone on 022 718 63 00.

For **urgent medical assistance**, you may call UNIQA Assistance **+41 22 819 44 77**, **24h/day throughout this period**. Please note that this service only provides medical advice and urgent assistance services and is not in a position to inform you on the coverage by CHIS of medical expenses.

HR department

LAUNCH OF A NEW MANDATORY DATA PRIVACY BASICS E-LEARNING COURSE

The Data Privacy Coordination Committee (DPCC), in collaboration with the Learning and Development group of the Human Resources department, is delighted to announce the launch of the new Data Privacy Basics e-learning course. This is an important milestone in raising awareness about data privacy at CERN.

The new course is available on the CERN Learning Hub (*https://lms.cern.ch/ekp/servlet/ekp?TX=STRUCTUREDCATALOG&CAT=EKP023979451*).

Successful completion of the exam linked to the course will be mandatory for:

- All new members of personnel from 6 December 2021
- All members of personnel from 15 February 2022
- Contractors, including temporary workers, from 1 April 2022

Thank you in advance for your collaboration with respect to this important initiative, which is a key part of the CERN-wide endeavour to protect the privacy of personal data.

Further information on data privacy at CERN can be found here (*https://privacy.web.cern.ch/*) or obtained from your Departmental Data Privacy Coordinator (*https://privacy.web.cern.ch/contacts*).

(Image: CERN)

NEW OPENING HOURS FOR THE REGISTRATION SERVICE (BUILDING 55)

As of 5 January 2022, the Registration service and the Locks and Keys service will extend their opening hours to ease pressure at peak periods.

The new opening hours will be the following:

- Registration of people and vehicles, biometry, proximeter delivery: open from 7.00 a.m. to 5.00 p.m.
- Access cards: open from 7.00 a.m. to 6.30 p.m.
- Locks and Keys service: open from 7.30 a.m. to 5.30 p.m., with flexitime until 6.30 p.m. on certain days.

This is also an opportunity to remind you that access to the site during the annual closure period is subject to specific rules, and only duly authorised people are allowed to come on site from Wednesday, 22 December 2021 to Tuesday, 4 January 2022 inclusive.

SCE department

Announcements

BURGLARY SEASON BEGINS – STAY ALERT

Although break-ins are on the decline in the canton of Geneva, the winter season brings with it an increased risk of burglary. When the days get shorter, burglars are more likely to notice if houses or flats are unoccupied. Consequently, so-called “twilight burglaries” soar.

To assist the population in the fight against this type of crime, the Swiss police have launched a nationwide campaign to raise awareness of the risks of burglary and of appropriate preventive measures.

The risk of burglary can be considerably reduced by taking some simple preventive steps:

- Simulate someone being at home by putting lights on a timer or programming your TV/radio.
- Call 117 immediately if you notice any suspicious behaviour, including at your neighbours'.
- Lock your doors, even if you are away for a short time.

- Inform your neighbours if you are away for an extended period. Their watchful eyes can help.
- Ask for advice. Many police forces and private companies have specialised security advisers.

Further information on burglary prevention can be found (in German, French and Italian) on the following websites: www.unis-contre-le-cambriolage.ch and https://www.skppsc.ch/fr/sujets/cambriolage/ (Swiss Crime Prevention website).

THEMATIC CERN SCHOOL OF COMPUTING 2022: “SCIENTIFIC SOFTWARE FOR HETEROGENEOUS ARCHITECTURES”

(Image: CERN)

The **10th Thematic CERN School of Computing (tCSC 2022)** will take place on 1-7 May 2022. The programme will focus on **Scientific Software for Heterogeneous Architectures**, covering areas ranging from computer architectures to parallel and optimised software, and heterogeneous programming (CPU, GPU, HPC etc.).

Provided the health situation allows it, the school will be hosted at the Institut d'Études Scientifiques de Cargèse (IESC). The Institute is located on the west coast of the French island of Corsica, 50 km north of Ajaccio and its international airport. (However, if the pandemic situation doesn't allow traveling or physical presence, the school will be moved to online format.)

The School is aimed at postgraduate students, engineers and scientists with a few years' experience in particle physics, computing or related fields. We welcome applications from all nationalities and encourage everyone who is qualified to apply. Limited financial support may be available.

Applications are open until Sunday 23 January.

For more information, and to apply, please visit https://indico.cern.ch/e/tCSC-2022

(NB: We are also planning a new Thematic CSC with a focus on security of computing research infrastructures. This school will be announced via the usual channels and on the CSC website in January 2022 and will take place in late June 2022.)

Sebastian Lopienski, CERN School of Computing director

Ombud’s corner

EACH AND EVERY ONE OF US MATTERS

Some visitors to the Ombud's office tell me that they are “too insignificant” or “too low” in the chain of command for their opinion to really matter.

Or they tell me they feel that, because they are an assistant or a technician, there's a difference in attitude towards them. They're sometimes given instructions without the usual courtesies, while their superiors or colleagues who are engineers receive the “pleases” and “thank yous” that so ease interaction and grease the wheels of the Organization and of society at large.

Something else that I hear people say in the Ombud's office is that, because they are “only” in charge of a small area of operations or are not involved in high-profile projects, they feel that they're not listened to or even respected.

Perhaps these are isolated cases, and we'd all like to believe that they are few and far between, because it's painful to hear.

No one is insignificant – everyone matters!

Everyone working at CERN, whatever their activity and their position in the hierarchy of the Organization and its projects, should be treated with respect and consideration and should be listened to.

Let's not forget that it's our colleagues in the thick of the action who are in a position to come up with the best ideas for improving tools and processes or to raise the alarm about any risks they might spot.

CERN's successes rely on the activities of everyone – from the sub-contractor's technician to the Director-General or a collaboration spokesperson – and on the combination of all our interactions. We all play our part in furthering CERN's mission when

we perform our duties with integrity, professionalism and commitment.

In the lead-up to the end-of-year celebrations and the holidays that will give us a chance to take a breather and recharge our batteries, it's important to remember that we all have an important contribution to make and that it's only the sum of all our contributions, in all their diversity, that makes our wonderful Laboratory function. We're all entitled to the same respect, to true equality of treatment and to pride in our work!

That, in any case, is how things work in the Ombud's office, where every visitor is treated equally and with equal regard. We all matter!

I hope you enjoy your end-of-year celebrations and look forward to seeing you next year here in the Ombud's corner or – if you wish – in my office,. whether virtual or in 500-1-004! If you need to contact me during the Laboratory's end-of-year closure, I remain at your disposal (ombud@cern.ch).

Laure Esteveny

I want to hear from you – feel free to send an e-mail to ombud@cern.ch with any feedback or suggestions for topics you'd like me to address.

NB: If you would like to be notified about posts, news and other communications from the CERN Ombud, please register at: CERN Ombud news.