CERN Bulletin

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TWO ARTWORKS AND A SCHOOL EVENT INSPIRED BY CERN AT THE VICTORIA & ALBERT MUSEUM IN LONDON

Two artists are presenting their work inspired by their research at CERN at the V&A exhibition "Alice: Curiouser and Curiouser"

(Image: Alice Curiouser and Curiouser, May 2021, Installation Image ©Victoria and Albert Museum, London)

The exhibition *Alice: Curiouser and Curiouser* at the Victoria and Albert Museum in London draws inspiration from the work of mathematician Charles Lutwidge Dodgson – better known as Lewis Carroll – and the adventures of *Alice in Wonderland*. Exploring the work's origins, adaptations and reinventions over the space of 157 years, this immersive and theatrical show charts the evolution of Alice's adventures, from manuscript to a global phenomenon beloved by all ages. Concepts of space, time and scale run throughout Carroll's books, evoking alternative realities through Alice's tumble down into the rabbit hole. The exhibition will run until 31 December 2021.

The final part of the exhibition, *Quantumland*, presents the work of artist Mariele Neudecker and designer Iris van Herpen, guest artists of *Arts at CERN*.

The Eye: A.L.I.C.E, created by Mariele Neudecker, invites the viewer to travel to the underground world of the ALICE experiment at CERN's Large Hadron Collider (LHC). It consists of a film which focuses on the scientific endeavour of the last century for the study of the fundamental structure of matter.

(Continued on page 2)

A WORD FROM MANFRED KRAMMER

GETTING BACK TO A DIVERSE PHYSICS PROGRAMME AFTER LS2

The Super Proton Synchrotron (SPS) is back in operation after close to three years of intense maintenance and upgrades. With this milestone behind us, and with only the Large Hadron Collider (LHC) left to restart, it is hard not to be excited about getting back to physics after LS2. The SPS is the last link in the chain supplying the LHC with beams but, like the Booster and the PS, it is host to a vibrant and diverse research programme in its own right. The Booster feeds ISOLDE, the PS, the East Area, n-ToF and the AD, while the SPS's 450 GeV protons fill the beamlines of the North Area, HiRadMat and AWAKE. The restart of the injection chain is bringing the diversity of physics at CERN back to life, and this is what I wish to celebrate here.

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In this issue

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A WORD FROM MANFRED KRAMMER

GETTING BACK TO A DIVERSE PHYSICS PROGRAMME AFTER LS2

It is a widely acknowledged truth at CERN that colliders cannot bring all the answers to the intricate and wide-ranging questions of physics, from the internal dynamics of protons to matter-antimatter asymmetry. That is why the Organization has made a point of developing and fostering experiments that rely on different methods, grouped within the "Physics Beyond Colliders" (PBC) programme, of which the North Area is the centrepiece. North Area beamlines supply a range of particles to a range of fixed-target experiments, which share the Prévessin site with the CERN Neutrino Platform and the control centre of the AMS experiment on the International Space Station.

From the pioneering NA1 spectrometer, which initially studied hadron fragmentation, all the way – 63 experiments later – to NA64, which studies the dark sector, the North Area's rich physics programme has given CERN and the world an abundance of results. Over the years, the NA experiments have brought us the first attempts to study quark-gluon plasma, the first evidence of direct charge-parity (CP) violation and a strong understanding of the internal dynamics of protons and neutrons. Most recently, the NA64 experiment has set firm limits on the interaction between photons and their hypothetical dark counterparts.

Visiting the North Area can feel like entering a maze of concrete blocks, magnets and cranes. But this seemingly chaotic arrangement is only the reflection of the multiplicity and diversity of the experiments, which use different methods to observe numerous rare phenomena. There lies the strength of the North Area. This tradition of multiplying strategies to solve the riddles of physics is being perpetuated through the upgrade of long-standing experiments and the setting-up of new ones, opening horizons for various fields of research. The kaon-focused NA62 experiment will benefit from the optimisation of the SPS beamline, which was conducted in 2020, while new experiments, such as AMBER (the successor to COMPASS) and NA64++, which will study dark-sector physics, are being geared towards installation.

Moving towards this new generation of experiments and ensuring that the existing ones operate under optimal conditions offers mouth-watering perspectives for dark matter hunters, quantum chromodynamic specialists and so many other CERN users. None of those future achievements would have been possible without the hard work and dedication of those who contributed one way or another to the works carried out during LS2, whom I wish to warmly thank. Here's to many more years of physics beyond colliders at CERN!

Manfred Krammer
Head of the Experimental Physics department

TWO ARTWORKS AND A SCHOOL EVENT INSPIRED BY CERN AT THE VICTORIA & ALBERT MUSEUM IN LONDON

Neudecker is the recipient of the first of a series of three art commissions, made possible thanks to the support of the Didier and Martine Primat Foundation and its special fund Odonata.

In Neudecker's words, "With my work, I am exploring interphases and overlaps of two and three-dimensional realities as well as analogue and digital worlds. The collisions in the LHC are invisible and imperceptible to us in real time and always happened in the past – yet they are made tangible, visible and experiential. With *Alice in Wonderland* and *Quantumland*, one enters a similarly impenetrable layering of reality and fiction, which allows encounters of these two entities to become both physical and abstracted, enmeshed and enchanting."

Fashion designer Iris van Herpen focuses on exploring matter, which she describes as: "Creation, evolution, nature, us. It's the source of all energy and all our questions." Displayed together with Antony Howe's voluminous *Omniverse* sculpture, her piece *Infinity dress* was inspired by her several visits to CERN. The sculptural dress and kinetic halo create a moving visual illusion, reflecting ideas of transformation, gravity and materiality.

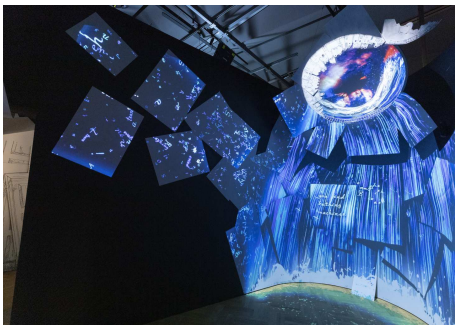
On 29 June, the Victoria and Albert Museum and CERN joined forces to invite teachers and students to join the CERN Classroom Live. This online event offered schools around the globe the possibility to go behind the scenes of the Laboratory and hear about the work of physicists, artists and curators at CERN, and how creativity works across cultures. Speakers included Dr Despina Hatzifotiadou, physicist and researcher in the ALICE experiment, Mónica Bello, curator and head of *Arts at CERN*, and Kate Bailey, senior curator at the Victoria and Albert museum.

The virtual event included introductions to the Victoria and Albert's *Alice: Curiouser and Curiouser* exhibition and to Arts at CERN, as well as a virtual tour of the ALICE experiment, where students and teachers could see the experimental cav-

ern, the control room and learn about physics at the LHC.

271 primary and secondary schools in the UK took part, as well as schools in Taipei, Los Angeles, Warsaw, Komorow, and Haaksbergen. Some 5000 students aged 11-18 joined the event!

(Image: Alice Curiouser and Curiouser, May 2021, Installation Image ©Victoria and Albert Museum, London)



(Image: Alice Curiouser and Curiouser, May 2021, Installation Image ©Victoria and Albert Museum, London)

PHASE 2 OF ATTRACT LAUNCHES NEW CALL FOR PROPOSALS

ATTRACT phase 2 has launched three calls for proposals that include a thematically defined R&D&I track, student programmes for social innovation, and socio-economic studies linked to the ATTRACT initiative

Together with computing, detection and imaging technologies will enable future paradigms like smart cities, autonomous transport and personalised healthcare to become a reality. However, promising deep-tech ventures often struggle to reach commercialisation; the process of turning scientific breakthroughs into viable products and services is bumpy and serendipitous.

ATTRACT aims to flatten the bumps by creating an innovation ecosystem that will absorb and minimise risk, through funding and expertise. In doing so, ATTRACT is helping to ensure that breakthrough ideas in imaging, detection and computational technologies derived from scientific research are not overlooked or lost along the way; instead, they have a chance of becoming products and services that benefit society.

ATTRACT phase 1 awarded € 100K to each of 170 promising projects to develop a proof-of-concept in 12 months. Now, ATTRACT phase 2 will take forward the most promising opportunities generated in phase 1, with total funding of € 25M. In this phase, the emphasis will be on turning the proofs-of-concept from phase 1 into applications in science and industry, while encouraging demonstration of how the technologies can be used to address societal challenges.

“Phase 1 of ATTRACT has proven to be a powerful framework to build bridges and accelerate innovation in detection and imaging technologies and will continue to do so during phase 2”, says Sergio Bertolucci, Chair of the R&D&I Committee (IC) of ATTRACT, Professor at the University of Bologna and former CERN Scientific Director.

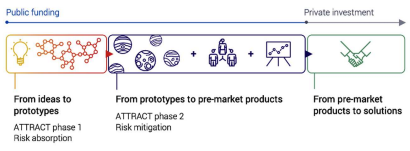
In addition to the R&D&I call, ATTRACT phase 2 will also upscale the “Young Innovator and Entrepreneurs” pilot from phase 1 through the Academy Call for Student Programmes. Applicants with proven experience in design thinking methodologies in the context of big research infrastructures are encouraged to form teams of MSc-level students to generate ideas for social innovation inspired by the technologies developed in the R&D&I ATTRACT projects. The interaction between researchers and students during phase 1 has already integrated students' ideas in projects such as a wearable PET-scanning vest, a drone with olfactory capabilities for agriculture efficiency, and a gamified weather intelligence system.

“The ATTRACT adventure continues with the start of phase 2, and it is not finished. Synergy and solidarity are ever so important; ‘value for me’ is no longer an option for a world facing societal challenges at a planetary scale”, says Michael Krisch, Chair of the Project Consortium Board and scientist at the European Synchrotron Radiation Facility (ESRF).

ATTRACT phase 2 also includes a call for researchers with proven experience in conducting socio-economic studies on the impact of big research infrastructures on innovation ecosystems. These studies will provide quantitative and qualitative data and insights on the ATTRACT model, helping to forecast the potential benefits of scaling it up for European science, industry, business and, ultimately, the social and economic well-being of European citizens.

The deadline for applications is 20 September 2021. More information is available on the ATTRACT EU site.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 101004462.



(Image: CERN)

SUSTAINABLE HIGH-ENERGY PHYSICS

Before the pandemic, a typical high-energy physics (HEP) researcher was expected to cross the world several times a year for conferences, collaboration meetings and detector shifts (Image: SustHEP 2021)

COVID-19 put the community on a steep learning curve regarding new forms of online communication and collaboration. Before the pandemic, a typical high-energy physics (HEP) researcher was expected to cross the world several times a year for conferences, collaboration meetings and detector shifts, at the cost of thousands of dollars and a sizable carbon footprint. The online workshop Sustainable HEP – a new initiative this year – attracted more than 300 participants from 45 countries from 28 to 30 June to discuss how the lessons learned in the past two years might help HEP transition to a more sustainable future.

The first day of the workshop focused on how new forms of online interaction could change our professional travel culture. Shaun Hotchkiss (Auckland University) stressed in a session dedicated to best-practice examples that the purpose of online meetings should not simply be to emulate traditional 20th-century in-person conferences and collaboration meetings. Instead, the community needs to rethink how virtual scientific exchange could look like in the 21st century. This might, for instance, include replacing traditional live presentations by pre-recorded talks that are pre-watched by the audience at their own convenience, leaving more precious conference time for in-depth discussions and meaningful interactions among the participants.

Social justice

The second day highlighted social-justice issues, and the potential for greater inclusivity using online formats. Alice Gathoni (British Institute in Eastern Africa) powerfully described the true meaning of online meetings to her: everyone wants to belong. It was only during the first online meetings during the pandemic that she truly felt a real sense of belonging to the global scientific community.

The third day was dedicated to existing sustainability initiatives and new technologies. Mike Seidel (PSI) presented studies on energy-recovery linacs and discussed energy-management concepts for future colliders, including daily "standby modes". Other options include beam dynamics explicitly designed to maximise the ratio of luminosity to power, more efficient radio-frequency cavities, the use of permanent magnets, and high-temperature-superconductor cables and cavities. He concluded his talk by asking thought-provoking questions such as whether the HEP community should engage with its international networks to help establish sustainable energy-supply solutions.

The workshop ended by drafting a closing statement that calls upon the HEP community to align its activities with the Paris Climate Agreement and the goal of limiting global warming to 1.5 degrees. The organisers invited members of the HEP community to add their names to the statement, which is open for signature until 20 August.

by Kai Schmitz

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This article was originally published in the CERN Courier .

BIKE2WORK 2021 CONCLUDES WITH CERN ON THE PODIUM

CERN cyclists pedalled the equivalent of almost five times round the equator during the 2021 Bike2Work campaign, with 173 teams participating

Due to the pandemic, the traditional 'critical mass' gathering was not possible this year. Instead, participants were invited to submit photos illustrating their Bike2Work 2021 experience (Image: CERN)

The 2021 edition of Bike2Work has come to a successful conclusion for CERN. Despite the fact that COVID-19 kept many of us working from home, CERN fielded 648 cyclists in 173 teams. Only four institutions in Switzerland had more teams than CERN, and the high level of participation, 18% of the estimated population, placed CERN first in the category for companies with 1000–4999 employees.

Measured in kilometres, CERN cyclists pedalled the equivalent of almost five times around the equator. If they had been driving instead their cars would have emitted 27657 kg of CO_2into the atmosphere. The main focus of Bike2Work is not the number of kilometres cycled, but the number of days cycled, and in this respect, CERN also performed well. Registered participants logged 77% of their working days in May and June as cycling days—well beyond the required 50% threshold set by the organisers.

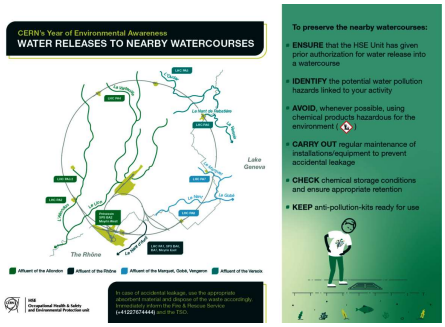
Improving the conditions for soft mobility is part of CERN's effort to reduce its environmental impact. Over recent years, CERN has demonstrated its commitment to soft mobility through the construction of a cycle path between the Meyrin and Prévessin sites, the creation of cycle lanes within the

sites, and the opening of more showers. A campaign is also under way to build more bike shelters. Further suggestions can be made to the Mattermost Channel to share ideas related to environmental topics at CERN.

Keep on cycling!

Jens Vigen

WATER RELEASES TO NEARBY WATERCOURSES



(Image: CERN)

CERN's sewage water is treated in public wastewater treatment plants. Water from various sources is released through the site drainage into nearby watercourses: cooling water, infiltration water pumped from tunnels and precipitation runoff. The HSE Unit operates water monitoring stations at 13 water release points on the sites' drainage system.

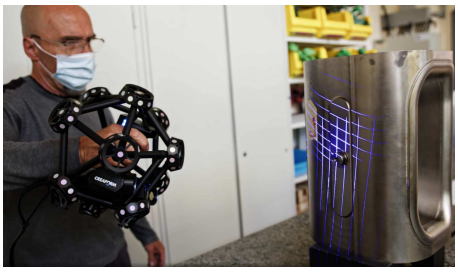
Prior to release, ensure that the HSE Unit has granted the permission to release a definite volume of water. Please fill in a request prior to discharge at the following address: SNOW (*https://cern.service-now.com/service-portal?id=sc_cat_item&name=water-release&se=water-release*).

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

HSE unit

A 3D LASER SCANNER IS SHAKING UP COMPONENT INSPECTION AT CERN

A laser scanner acquired in 2020 by the EN department's metrology laboratory produces high-resolution 3D modelling of a wide variety of components



A piece being inspected with the new laser scanner in the metrology laboratory (Image: CERN)

Several months ago, a new recruit joined the ranks of the metrology laboratory's measuring devices, housed in Buildings 72 and 100. It may be less imposing in scale than the many other pieces of kit for which the laboratory is well known, such as the tomograph, but this new scanner can inspect components quickly and precisely, thanks to the 3D laser technology it uses.

The scanner is spherical in shape, easy to manoeuvre thanks to its internal handle, and covered in targets that are captured by a pair of standing cameras located at least 1.5 metres from the component that is being inspected. First, the cameras record the measurement volume defined by the reflective targets, as well as the position of the scanner in 3D space and its orientation, before the latter sweeps the component with blue lasers forming a grid pattern that gradually moves across the entire surface as the operator turns and moves the scanner around the object (see video). The positions of the lasers on the surface of the component are detected and the resulting multitude of points is then used to produce a digital reconstruction of the component with a volumetric precision of between 64 and 78 microns, depending on the component's volume.

A specialised software program is then used to meticulously compare the digital reconstruction with a perfect theoretical model of the component in order to identify any material deviation from the latter. The comparison produces a colour-coded image that highlights areas where the component has too much or too little material. It is then possible to obtain, point by point, a value for the deviation that has been measured. Armed with this information, CERN clients can, if necessary, modify the component in a workshop to align it as closely as possible with the theoretical model.

"This type of scanner is widely used in the automotive, aviation and aeronautics industries. Since the laboratory acquired one in January 2020, the demand for component inspection has exploded, with a wide variety of clients approaching us with all kinds of components," explains Ahmed Cherif, who is in charge of the metrology laboratory. Crab cavities, magnet yokes, beam screens and even the ALICE inner tracker have already been exposed to the scanner, which can model all kinds of material and even the most convoluted shapes (a small additional sensor can be inserted into the narrowest holes to scan their interior). The only real limitation is the size of the components to be inspected: their dimensions may not exceed 16 m^3, which is the maximum volume detected by the cameras from a given position. The measurement volume can be increased by adding more stations, but the accuracy of the measurement will be somewhat affected.

If you think that this device may meet your component inspection needs, or if you have any other questions on metrology, please contact ahmed.cherif@cern.ch.

Thomas Hortala

CERN SPARKS PODCASTS EXPLORE ARTIFICIAL INTELLIGENCE

The series collides pairs of leading experts on AI to preview the Sparks! Serendipity Forum in September

(Image: CERN)

CERN is launching a new podcast series on artificial intelligence. The series looks forward to the first edition of the Sparks! Serendipity Forum in September, when over 30 leading thinkers will converge on the laboratory for high-level multidisciplinary discussions designed to spark ethical innovation.

To whet your appetite for the forum, the podcasts bring a selection of the *Sparks* delegates together in pairs. Think of these conversations like collisions in the LHC. Rather than protons, however, we're colliding a diverse cast of thought leaders featuring computer scientists, neuroscientists, philosophers, physicists and psychologists. And rather than energy being transformed into new particles, the weight of scholarship is transformed into new seams of creative energy — a foretaste of the intellectual dust-up planned for September.

The first episode, *Brainy AI*, wastes no time in colliding two giants of the field: renowned machine-learning expert Stuart Russell, and Tomaso Poggio, one of the founders of computational neuroscience. Our guests contrast the human brain with deep learning, and pull no punches in their evaluation of the direction of AI research. “What if we succeed?” asks Russell. “AI has been so difficult for so long, that we kind of forget to ask that question.”

AI for science

Quantum AI keeps up the momentum by colliding neuroscientist and AI entrepreneur Vivienne Ming with quantum-computing expert Maria Spiropulu. The pair connect the two ongoing revolutions in computing, and explore links between neuroscience and quantum physics. “To see that our brains and the universe are solving the same problems mathematically in the same ways, I think is really exciting,” says Ming, “ — particularly if you're a little demented like me, and want to build cyborgs and give vision back to the blind.”

The two central pillars of our series of six half-hour podcasts relate directly to the fundamental research we do here at CERN. First up, world-renowned theoretical physicist John Ellis talks to leading AI researcher Anima Anandkuma about how to design and deploy *Creative AI*. Then, in *Experimental AI*, we invite you to listen in on a conflab between two of CERN's finest: Michael Doser, of the antimatter factory, and Maurizio Pierini, of the CMS experiment. Whether in the exquisitely creative process of theory formation, or the nuts-and-bolts work of making reliable experimental measurements, our guests agree that artificial intelligence is an irresistibly powerful tool for particle physics, both now and in the future.

We arrive at the crux of the issue for many in Episode 5: how can we design *Ethical AI* ? Philosopher S. Matthew Liao and computer scientist Nyalleng Moorosi bring a laser focus to their analysis of ethical challenges posed by real-world AI, from autonomous weapons to everyday algorithms used by mid-sized companies. Whatever the subject, the decisions made by deep learning are only as good as the data they work with, and risk being deficient in fairness and accountability. “When we had these decisions being made by humans, who we could embed a whole history book inside, perhaps there would be areas of more flexibility,” says Moorosi. “But the moment we start to encode these things, we are starting to encode some of these misfortunes, and we're going to start to perpetuate them.”

Last but not least, we collide AAAI President Elect Francesca Rossi with Nobel laureate Daniel Kahneman — one of the greatest living cognitive psychologists. In *Fast and slow AI*, our guests take Kahneman's revolutionary systems of thought as inspiration for rewriting AI, and debate the nature of thought itself. “I really find it difficult to imagine why there should be anything at which humans are essential in the domain of intelligence,” says Kahneman. “Is there anything that humans can do that AI cannot in principle do?”

Artificial intelligence is transforming our world, and nobody knows for sure what the future will hold. Hosts Abha Eli Phoboo and I invite you to join us on a journey of discovery as we invite the great and the good of this fast-evolving field to share their wisdom in a spirit of open collaboration, ethically minded innovation and indefatigable curiosity — the finest traditions of CERN.

Sparks is a CERN outreach event and part of the CERN & Society programme. CERN & Society activities are only possible thanks to voluntary support received from partners, in particular Rolex and its long-standing association with the Organisation. The 2020-2021 Sparks is also supported by Edmond de Rothschild and by the Didier et Martine Primat Foundation.

Mark Rayner

COMPUTER SECURITY: REFLECTIONS ON PAYING RANSOM

Paying is the easiest way to eventually recover the data and re-establish compromised computing services, but hold on...

Previous *Bulletin* articles have discussed the risk of an organisation, university, institute, company or enterprise falling victim to a so-called ransomware attack, whereby the successful attackers infiltrate into (many) computers, laptops and computing services and encrypt valuable files, documents and data. That data is only released after a certain amount of money (the ransom) has been paid to the attackers. The central question is, however, whether a compromised entity should or should not pay.

Of course, paying is the easiest way to eventually recover the data and re-establish compromised computing services – in particular if the damage done vastly exceeds the ransom demand. But hold on, there could be collateral costs, so let's think about what other risks an entity might consider:

- **Attackers' ethics** : Are the attackers serious, reasonable and trustworthy? Will they not be tempted to ask for even more money? Will they really hand out decryption keys? Will and can they ensure that all malicious activity is stopped and that any stolen data is purged and not further distributed?
- **General ethics** : Ransom payments usually support and subsidise criminal activities and provide funding for more/other criminal activities. Hence, paying the attackers encourages them to either ask for more money and/or continue such a "lucrative" business against the same or another entity.
- **Legal risks** : Is paying a ransom illegal in the country where the entity under attack is based? And what about the liabilities for damages a bank suffers as a result of unknowingly carrying out a ransom payment instruction (e.g. if it causes them to breach – US – sanctions regulations)?
- **Insurance coverage** : Is there a cyberinsurance policy in place that might cover ransom expenses? What are the conditions and are there any exclusion clauses that might invalidate coverage? Fun fact: attackers have already compromised some such insurance companies and, subsequently, attacked their clients, reasoning that " They're covered by insurance, so they're more likely to pay ".
- **Reputational risks** : The media will cover the fact that an entity has paid a ransom. How might this be perceived by the general public? By similar entities? By its peers and the wider community? Could there be negative consequences that would be detrimental or destructive to the entity?
- **Risk of "replay" attacks** : Given that the attack (and a possible payment!) will become public, other attackers might see this as an incentive to also have a go, launch a similar attack and try to press for their money: "They paid once, why wouldn't they pay twice?"

It's not an easy call to make. While some entities paid, others did not. In the end, it largely depends on what incident recovery and business continuity capabilities are in place. Recovery is incredibly complex, time-consuming and expensive, regardless of whether or not the ransom is paid. Do unaltered / untampered back-ups exist? Is all the information (documentation, configuration files, procedures, including all dependencies) available to rebuild systems and services from scratch? Has this restore and rebuild been regularly and successfully exercised? In case you manage or administer a computing service or control system, have you ever tried? If your palms are getting sweaty now, it's time to talk: Computer.Security@cern.ch.

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Do you want to learn more about computer security incidents and issues at CERN? Follow our Monthly Report. For further information, questions or help, check our website or contact us at Computer.Security@cern.ch.

Computer Security team

Announcements

CINEGLOBE AT CERN: BECOME A VOLUNTEER

(Image: CERN)

From 25 to 29 August 2021, CineGlobe – the International Film Festival inspired by science – returns to CERN for its 10th edition, on the theme *(Dis)Orders of Magnitude*.

Programme

The programme includes screenings of short and feature films at the Globe of Science and Innovation, workshops at the S'Cool LAB, virtual reality stands (to be confirmed) – the programme is as vast as the health situation allows.

•Wednesday, 25 August: 12.00 p.m. – 10.30 p.m.

•Thursday, 26 August: 12.00 p.m. – 10.30 p.m.

•Friday, 27 August: 12.00 p.m. – 10.30 p.m.

•Saturday, August 28: 10.00 a.m. – 10.30 p.m.

•Sunday, 29 August: 10.00 a.m. – 8.30 p.m.

The full programme will be available at cineglobe.ch at the beginning of August.

We are looking for volunteers

To run the festival, we need help with logistics, visitor welcome and information and hosting the TetraPak and Moviola workshops, as well as the VR stand (to be confirmed).

Each day will be split into several shifts; the schedule will be defined according to your availability. **Become a volunteer (*https://indico.cern.ch/e/cineglobe-volontaires*)!**

To sign up, you must:

•have a CERN contract (MPEs, MPAs, Official CERN guides, ENTC, TEMC);
•be over 18 years of age;

•have completed the COVID-19 course – Health and Safety Measures at CERN;

•have a good command of oral French (minimum B2) to communicate with the expected local community;

•attend one of the briefing sessions;

•for hosts of the workshops at the S'Cool LAB: attend one of the briefing sessions specific to S'Cool LAB

T-shirt and meal

- You will receive one or two Cineglobe t-shirts, depending on the number of shifts you do.
- A meal voucher (value to be confirmed) to be used at the event's food truck (presence of the food truck to be confirmed)

Sanitary measures

A dedicated health and safety concept is currently being drafted; the conditions will be detailed during the briefing sessions. Wearing a mask is mandatory during screenings and workshops.

Registration and additional information are available at https://indico.cern.ch/e/cineglobe-volontaires

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BLOOD DONATION: URGENT APPEAL TO BLOOD DONORS

In June, the numbers of blood donations was lower than expected. Therefore, The HUG Blood Transfusion Centre (CTS) initiated an urgent appeal to blood donors

The summer has arrived, and the blood donation campaign in France and Switzerland has started. Until the context allows us again to organise a campaign here at CERN, we would like to inform you of the different places where you can donate blood alternatively.

In June, the numbers of blood donations was lower than expected. Therefore, The HUG Blood Transfusion Centre (CTS) initiated an urgent appeal to blood donors. Dr Sophie Waldvagol, the doctor in charge of CTS, warned that “during the first six months of the year we narrowly obtained the number of donations necessary to treat HUG patients. The situation is very tense at the beginning of summer. The vast majority of collections within companies have been cancelled and, after a year of pandemic, fewer donors are in number.”

Blood donation is an act of solidarity to save lives. We encourage you, if possible, to do it.

Who can donate blood?

- Be between 18 and 60 years old for the new donors. Up to 75 years old for regulars donors in Switzerland and up to 70 years old for regular donors in France
- Weigh at least 50 kg
- Be in good health and feeling well

Donate blood in Switzerland

If you have been vaccinated in Switzerland with the Pfizer/Moderna or BioNTech vaccine, you have to wait 48 hours before donating blood. If you have been vaccinated with any other vaccine, please show on your donation day your vaccine attestation with the name of the vaccine. If you had any symptoms after your vaccine, please wait 7 days after the symptoms have gone away to donate blood.

You can answer an online questionnaire (*https://www.blutspende.ch/fr/informations-pour-les-donneurs/liste-de-controle-pour-le-don-de-sang*) to see if you can donate blood, and the available places to do so.

Here are the next available collection spots in Switzerland:

- HUG Centre of Blood Transfusion, Monday, Tuesday, Wednesday and Friday from 7h30 until 15h / Thursday from 11h until 19h / 1st and 3rd Saturday of the month from 8h30 until 12h00.
  Make here your appointment online to donate blood (*https://www.hug.ch/en/don-du-sang/prenez-rendez-vous-ligne-pour-donner-votre-sang*)
  Rue Gabrielle-Perret-Gentil 6, 1205 Genève

- Salle des fêtes de Vernier, the 25/08 from 15h00 until 19h00
  Route de Vernier 200, 1214 Vernier

Donate blood in France

In France, you do not need to wait after your vaccination. But here are some restrictions: you cannot donate blood if you do not feel well or not in good health, if you have any symptoms of flu or loss of smell and taste in the last 2 weeks, if you had any close contact with someone infected with the coronavirus in the last 2 weeks, or if you were tested positive for the coronavirus in the last 4 weeks.

In France there is also an online questionnaire (*https://dondesang.efs.sante.fr/puis-je-donner?quiz=0&etape=0*) that you can answer and see where and if you are eligible to donate.

Here are the next available collection spots in France:

- Salle du Levant, the 03/08 from 14h30 until 19h00
  Chemin de Collex, 01210 Ferney Voltaire

- Espace Perdtemps, the 09/08 from 15h00 until 19h00
  Avenue Perdtemps, 01170 Gex

- Salle des fêtes de Thoiry, the 16/08 from 16h00 until 19h00
  Rue des Cypres, 01710 Thoiry

- Le Nautique, the 24/08 from 15h00 until 19h30
  282 Avenue des Alpes, 01220 Divonne les Bains

- Maison des Associations, the 25/08 from 15h30 until 19h30
  219 Route de Peron, 01630 Peron

- L'arande, the 26/08 from 16h00 until 19h30
  24 Grande Rue, 74160 Saint Julien en Genevois

- Établissement Français du Sang
  Every Monday from 8h30 until 13h30 and between Tuesday until Thursday from 12h30 until 18h00
  1 Route de Taninges, 74100 Annemasse

Please note that if you have coronavirus symptoms 14 days after your blood donation, inform immediately the blood transfusion service that you went to. If you have any questions, CERN's Medical Service is at your disposal: Medical.Service@cern.ch.

Medical Service

CHANGE OF DATES AND VENUES OF THE CERN ACCELERATOR SCHOOL

Please note that the CERN Accelerator School has adapted to the ongoing evolution of the COVID-19 pandemic by relocating to Chavannes de Bogis, in Switzerland. The school will take place from 25 September to 8 October 2021. It was originally scheduled to take place from 5 to 18 September in Kaunas, in Lithuania.

EXCEPTIONAL CLOSURE OF THE O'DÉLICES CAFETERIA FROM 2 TO 6 AUGUST

Please note that the *O'délices* cafeteria located in building 774 on the Prévessin site will be exceptionally closed from Monday 2 August to Friday 6 August.

Thank you for your understanding.

Département SCE

LIBRARY WELCOME DESK STAFFED AGAIN STARTING FROM 19 JULY

The Library welcome desk (building 52-1-052) is going to be staffed again as of Monday, 19 July 2021. A librarian will be at on duty from Monday to Friday from 9 a.m. to 5 p.m. The Bookshop will reopen on the same date.

If you wish to borrow books outside opening hours, please send an email to library.desk@cern.ch listing the barcodes located on the inside cover of the books.

As usual, you can contact the Library team by email at library.desk@cern.ch, on our mattermost channel or by phone at 72444.

Important : When visiting the Library, we remind our readers to respect the health measures: follow the signs, wear a mask at all times, disinfect your hands before touching the books and do not move the chairs. At this stage, fewer seats and computer stations will be available in order to facilitate physical distancing. Hand sanitiser distributors are stationed throughout the Library.

Obituaries

PAUL BOSSARD (1936 – 2020)

It is with great sadness that we inform you of the death of Paul Bossard, a retired member of the CERN personnel who worked for several decades on the construction of magnets in the CERN accelerator chain together with their electrical systems.

Paul originally came from the Swiss Canton of Aargau and graduated in electrical engineering from the prestigious Federal Institute of Technology in Zürich (ETHZ). Armed with this qualification, he joined CERN in the late 1960s, starting in one of the groups responsible for building magnets for the Laboratory's particle accelerators. In his early years at CERN he worked on the construction of the PS Booster (PSB), which was a cutting-edge machine at the time.

In 1971, Paul was promoted to lead a section responsible for the PSB magnets and their electrical power supplies. He then took up key responsibilities in the technical services for the accelerator, all the time keeping a foothold in the magnet systems. He would pursue these activities in various groups across the Organization right up until his retirement in 1996.

Paul stood out at CERN for his jovial character, his passion for his work and his active and enthusiastic involvement in CERN's clubs and associations. Among other things, he was responsible for the “Ski-touring and Nordic competitions” section of the CERN Ski Club, for which he also worked as an instructor. He partially occupied the presidency of CERN's purchasing cooperative, today known as INTERFON.

Paul's lust for life also found expression away from work, as he pursued many adventures both in the mountains (he climbed Mont-Blanc several times) and on water (he loved sailing and canoeing). He is survived by four children, who are today mourning his loss.

We will forever remember Paul, a determined and humble worker, and loyal friend. We send our sincere condolences to his family and to everyone he held dear.

His colleagues and friends

Ombud's corner

STAYING IN THE DRIVER'S SEAT: ON THE PRINCIPLE OF INFORMALITY

Often, visitors come into my office and say: *"This is not right, I want someone to know about this."* To avoid any confusion, I always take care to reply: *"Yes, the ombud will know about this, but NOT the Organization."*

This is all about the Ombud's code of ethics fourth principle – *informality* –, and I would like to return with you today to what this key principle means and how it serves my visitors.

A synonym of *"informality"* could be *"off the records"*. Whereas I, as CERN Ombud, will help you navigate through the options available for resolving issues or concerns and provide information on the administrative processes you may choose to initiate, I will not take part in any of those processes, neither will I conduct any investigation nor advocate for you.

Once you decide, as a result of a conflictual situation, to initiate a formal process, I can no longer be part of this process.

Although I will provide – where appropriate - valuable anonymised input to the services in charge of reviewing the Organization's policies, I will not take part in the process of drafting these policies.

By staying away from the formal processes, I help you keep control over the issues and concerns that bring you to my office.

Very importantly, to preserve my ability to stay informal, I keep **no formal records** in the Ombud's office and will destroy any notes I might have taken during our conversations.

The Ombud's principle of informality holds several benefits for you, as a visitor:

- You have the possibility to determine **your own outcomes** rather than end up in a lose-win situation.
- An informal process will require you significantly **less time and energy** than a formal administrative process.
- Whether in joint or separate meetings, you have the opportunity to evenly **balance the level of power** between you and the other party involved, as everyone has an equal voice in the Ombud's office.
- The Ombud will help you gain confidence to conduct difficult conversations and **advocate for yourself**.
- If your chosen resolution path does not work, the Ombud stays **available for follow–ups**. If you wish, and when appropriate, I can suggest other options, including bringing the issue to the Management's attention, without breaking confidentiality.
- If you are new at CERN, and in need of help, you will gain confidence on how to navigate the Organization and **where to find support**.
- Last but not least, by using informal conflict resolution, there is a possibility, through mediation, that you may actually **strengthen the relationship** with the other party involved, rather than worsen it.

Because a visit to the Ombud is informal, you will remain in the driver's seat and will determine your own path towards the resolution of the conflict.

Laure Esteveny

This article is inspired by the excellent resources available on the International Ombudsman Association website.

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