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Winner of the “Mining the Future” competition announced

From brick-building to online flow analyses, ideas abound for sustainable reuse of excavated material from a tunnel for a potential future CERN facility thanks to the “Mining the Future” competition held as part of the FCC Innovation Study.

The “Mining the Future” award ceremony, where four shortlisted proposals for the reuse of excavated material were announced and the winning team was awarded a prize to bring their technology to maturity (Image: CERN)

The Future Circular Collider (FCC) Feasibility Study is committed to investigating the technical and financial viability of a future energy-frontier collider at CERN. In this study, high priority is being given to environmental sustainability. In line with CERN’s long-standing tradition, the Organization intends to rely on fruitful collaboration with academia and industry to design and build tomorrow’s facilities.

The “Mining the Future” competition, co-organised by CERN and the University of Leoben, Austria, set out to find answers to the challenge of what to do with the materials excavated to build a tunnel for a future facility. The competition was run as part of the EU-co-funded FCC Innovation Study. Since June 2021, participants have been developing sustainable ways of reusing the large amounts of excavated material produced, and working out how it could be efficiently used as a resource instead of disposed of as waste. How could it be exploited as part of a circular economy? Could such solutions also be applied to other construction projects in the same type of terrain, namely molasse, a soft sedimentary rock commonly found around the Alps? >>

A Word from Raphaël Bello and Mike Lamont

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In line with the strategic objectives of the current CERN Management, CERN has been working on a plan to improve the Organization's energy management in the long term. However, the current energy crisis makes the need to save energy ever more pressing now, and measures are being implemented for the coming winter to ensure that we play our part in mitigating the impact of the crisis. The 2022 year-end technical stop (YETS) will start on 28 November, two weeks earlier than initially planned. In 2023, the YETS is now scheduled to start at the end of October, with a curtailed operational year for the LHC and the operation of the full injector complex reduced by around 20% overall. Should things improve in the meantime, the 2023 plans will be revisited.

In addition, various measures are being implemented to save energy on the CERN campus. These include switching off street lighting overnight, using sleep mode for unoccupied meeting rooms and turning the heating down one degree. Plans have also been developed for reduced-power configurations to face possible load shedding should it be required by our electricity supplier, EDF.

Looking further ahead, work has been proceeding well with our application for ISO 50001 energy management certification. This ISO standard provides a practical way to improve energy performance and allows organisations to integrate energy management into their overall efforts to improve quality and environmental management. As part of the ongoing process, we submitted our energy performance plans for 2022–2026 to the French authorities in June. Our ISO 50001 certification audit is scheduled to be carried out by the French national organisation for standardisation, AFNOR, between 28 November and 2 December. In preparation, we are finalising all relevant documentation and processes, including a new energy management manual, a new procedure for energy procurement, a communications plan dedicated to energy, and a review of the internal bodies responsible for energy management. We are also carrying out a range of technical assessments involving the Laboratory's largest energy consumers to ensure that we conform to the standard. The Enlarged Directorate also recently approved an energy policy document, which will be published shortly.

An important part of our energy management process is communication to ensure that the whole CERN community is aware of the issues, and that everyone is empowered to play their part. To this end, the CERN and the Environment Workshop on 12 and 13 October includes a session on energy management. A dedicated email address will also be set up, in addition to the Environment@CERN Mattermost channel, to encourage dialogue and to give you the chance to make suggestions on how to improve CERN's energy management. This is an area that is vital to all of us, and we encourage everyone in the CERN community to help ensure that CERN is part of the solution, now and in the future.

Raphaël Bello & Mike Lamont

Winner of the “Mining the Future” competition announced

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The Mining the future award ceremony (image: CERN)

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These questions were addressed by 12 proposals submitted during the first phase of the competition. An international jury chaired by Professor Robert Galler (University of Leoben), whittled down the 12 high-quality proposals to the 4 shortlisted for the prize, and a winner was selected based on four evaluation criteria: technical feasibility, economic viability, social value and project relevance. The presentations of the four finalists demonstrate the hard work, technical know-how and inspiration shared by the participants in their journey as well as the relevance of the topic for industry:

A consortium led by the construction engineering firm Amberg proposed sorting, characterising and redistributing the molasse into fractions of its known composition. This would allow each material to be recycled on a large scale, with benefits for the environment and society through the reduction of NOx and CO_2 emissions and significant reduction of other environmental pollutants.

A consortium led by BG Ingénieurs Conseils presented a near real-time flow analysis already used in cement plants to separate excavated material for further processing on site. The team laid out both the technical feasibility and the social benefits of the project, such as job creation and circular economy potential.

Building materials supplier Briques Technic Concept made a case for producing bricks from the excavated material for the construction of buildings on site and in the neighbourhood. The project demonstrated solid environmental contributions and feasibility as well as clear economic advantages over competing materials.

The Edaphos team presented its proposal to process the molasses into topsoil-like material in a process known as soil conditioning. The team illustrated the clear economic benefits of this project – significant cost reduction in the construction of the FCC due to local reuse – as well as benefits for agriculture and woodland.

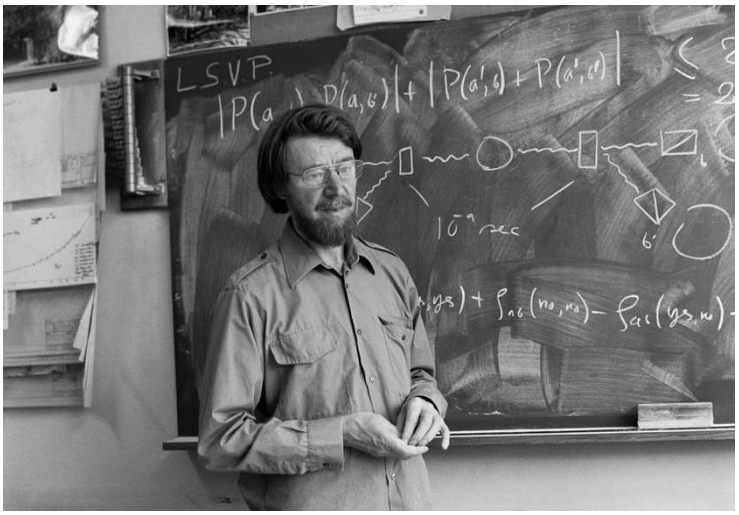
Following the team’s pitches, the consortium led by BG Ingénieurs Conseils was awarded the first prize, including support worth 40 000 euros to bring the technology to maturity. Although only one winner was chosen, it emerged during the ceremony that an integrated approach of all four scenarios in a single, local and innovative scheme would be a valid scenario for managing significant amounts of molasse materials in an FCC construction project.

The solutions identified in the framework of the competition will play an essential role in giving value to the excavated materials. They mark an important step in determining the feasibility of the proposed FCC. As the FCC Feasibility Study's Johannes Gutleber (CERN) noted: "The proposals submitted over the course of the contest show that designing a new research facility amplifies innovation that benefits society at large." Openness should be inherent to the project: Gutleber stressed the importance of an external knowledge base that complements CERN's internal expertise through an open network environment to drive this and future projects.

This new set of innovative ideas upon which the FCC Feasibility Study can draw came about thanks to a competition that, as FCC Feasibility Study leader Michael Benedikt pointed out, "is about strengthening the links between science, research and development, high-tech industry and society in general, and making sustainability and the environment a cornerstone of the FCC Feasibility Study". The credibility of the proposed technical solutions sets an encouraging example for the next steps of the endeavour to design a post-LHC facility.

CERN congratulates winners of 2022 Nobel Prize in Physics

Alain Aspect, John Clauser and Anton Zeilinger share the award for conducting experiments that laid the foundations for advanced quantum technologies



John Bell and his famous theroem (image: CERN)

The 2022 Nobel Prize in Physics has been awarded to Alain Aspect, John Clauser and Anton Zeilinger for groundbreaking experiments with entangled photons that open a path to advanced quantum technologies. Working independently in the 1970s and 80s, their work established the violation of so-called Bell inequalities and pioneered the field of quantum information science.

Quantum entanglement is a striking example of the difference between the microscopic world and everyday macroscopic experience. When two particles exist in an entangled state, a measurement of one determines the state of the other, no matter how far apart they are. First elucidated by Erwin Schrödinger in 1935, leading to his well-known cat paradox, entanglement was rejected by Albert Einstein as "spooky action at a distance" and sparked a long philosophical debate about the physical interpretation of quantum mechanics. Was it a complete theory, or was the paradoxical correlation between entangled particles due to "hidden variables" that dictate in which state an experiment will find them?

In 1964, the late CERN theorist John Bell proposed a theorem, known as Bell's inequalities, that allowed this question to be put to the test. Roughly speaking, it states that if hidden values are in play, the correlation between the results of a large number of measurements will never exceed a certain value; conversely, if quantum mechanics is complete, this value can be exceeded, as measured experimentally.

John Clauser (J. F. Clauser & Associates, US) was the first to investigate Bell's theorem experimentally, obtaining measurements that clearly violated a Bell inequality and thus supported quantum mechanics. Alain Aspect (Université Paris-Saclay and École Polytechnique, France) put the findings on more solid ground by devising ways to perform measurements of entangled pairs of photons after they had left their source, thus ruling out the effects of the setting in

which they were emitted. Using refined tools and a long series of experiments, Anton Zeilinger (University of Vienna, Austria) started to use entangled quantum states to demonstrate, among other things, quantum teleportation, which allows a quantum state to be transferred from one particle to another at a distance.

These delicate, pioneering experiments not only confirmed quantum theory, but established the basis for a new field of science and technology that has applications in computing, communication, sensing and simulation. In 2020, CERN joined this rapidly growing global endeavour with the launch of the CERN Quantum Technology Initiative.

Matthew Chalmers

A glimpse into the past while preparing for the future: CERN is celebrated by millions

This year, CERN celebrated the restart of the LHC, the beginning of the LHC Run 3 and the 10th anniversary of the Higgs boson discovery. These milestones contributed to a surge of interest in CERN and particle physics among the public.

Celebrations at the CCC (image : CERN)

The Large Hadron Collider was switched back on earlier this year, after three years of upgrades and maintenance works. Roughly three months later, on 5 July 2022, the first collisions used for physics data taking took place at the record energy of 13.6 teraelectronvolts, marking the beginning of the LHC's third physics run (Run 3). Just the day before, CERN had celebrated the ten-year mark since the ATLAS and CMS experiments announced the discovery of a new particle consistent with the long-awaited Higgs boson.

The world has changed in many ways over these past ten years, yet the universe's mysteries and the LHC continue to excite and inspire: almost five million people (4.73M) connected live on CERN's social media and through other broadcasting services to watch the engineers in charge of the LHC deliver collisions to the experiments for the first time in three years. At its peak, the event garnered 75 700 viewers; 59 600 comments were posted on social media during CERN's two-hour livestream.

These impressive figures are the fruit of a six-month-long conversation between CERN and its communities, from local to digital, centred around the milestones of the year and involving a legion of physicists, engineers, technicians and communication professionals. The conversation also included events such as a new exhibition, four local film screenings that brought in almost 500 participants, articles for teachers and a scientific symposium that brought together 1150 remote participants and nearly 400 in-person attendees.

In total, news outlets from around the world produced 6900 articles about the anniversary and Run 3 for publications worldwide. On social media, CERN was mentioned 727 100 times from January to August 2022, and 17 800 of those mentions made specific reference to either the restart, Run 3 or the anniversary. Together, the broadcasting of the Scientific Symposium to celebrate the 10th anniversary of the Higgs boson discovery and of the launch of Run 3 caused the hashtags #Higgs10 and #LHCRun3 to "trend" in Switzerland, France, the United Kingdom, Germany and the United States. CERN's website saw a sevenfold increase in traffic, 75% of which was new visitors.

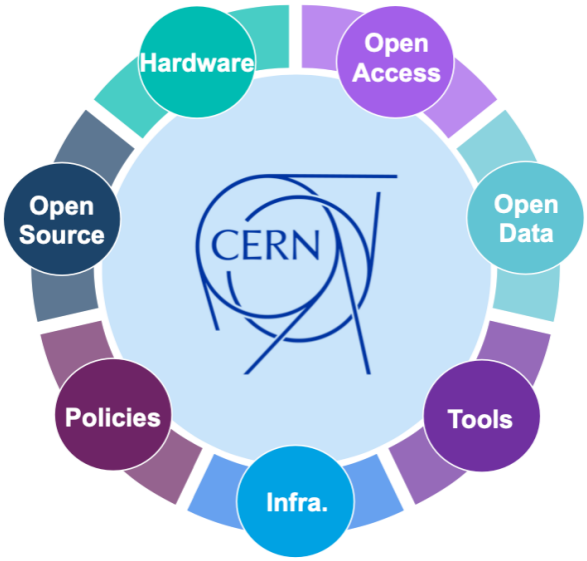
The milestones of the year 2022 allowed the particle physics community to celebrate the achievements of the past ten years while looking forward to a new physics run at the LHC. In parallel, these events afforded CERN an opportunity to reach a broader audience: they brought the curious to CERN's platforms, where

they were able to find more information about the Higgs boson and the Standard Model, the benefits of CERN's research in fields like medical and aerospace technologies, CERN's efforts to mitigate the impact of its research activities on the environment, and our expectations for future projects like the High-Luminosity LHC. In the process, the three milestones set the scene for these future projects, the full operation of the LHC and the search for new physics.

Daniela Antonio

CERN publishes comprehensive open science policy

CERN's core values include making research open and accessible for everyone. A new policy now brings together existing open science initiatives to ensure a bright future based on transparency and collaboration at CERN.



In September 2022, CERN approved a new policy for open science at the Organization, with immediate effect. The policy aims to make all CERN research fully accessible, inclusive, democratic and transparent, for both other researchers and wider society. It was developed by the Open Science Strategy Working Group (OSSWG), which includes members from every CERN department. Drawing on existing bottom-up initiatives, the working group designed comprehensive guidelines for the CERN community on sharing its research within a new framework for open science. Published alongside the policy document is a dedicated website explaining all the open science initiatives at CERN.

The completed policy follows the 2020 update of the European Strategy for Particle Physics, which highlighted the importance of open science, and UNESCO's Recommendation on Open Science, published in 2021. Open science has always been one of CERN's key values, dating back to the signing of the CERN Convention at UNESCO in 1952. Because of this, initiatives at CERN have continually strived for research transparency and accessibility for the benefit of science and society.

"The principles of open science are an integral part of CERN's scientific mission," said Joachim Mnich, CERN's Director for Research and Computing. "This policy represents a significant milestone in our decades-long history in this domain, which has included pioneering efforts in open source, open access and open data. We look forward to continuing to push the frontiers of open science in the years ahead."

The new policy encompasses the existing policies for open access, open data and open source software and hardware, which make all research papers, experimental data and research software and hardware publicly available. It also brings together other existing elements of open science – research integrity, open infrastructure and research assessment, which make research reliable and reproducible – and training, outreach and citizen science, which aim to educate and create dialogue with the next generation of researchers and the public.

Enrica Porcari, CERN's IT Department Head, said: "The publication of the Open Science Policy gives a solid framework in which the popular suite of open source tools and services provided by CERN, including Zenodo, Invenio and REANA, can continue to grow and support the adoption of open science practices, not only within physics but also across the globe's research communities."

CERN's new Open Science Policy heralds a new era in knowledge sharing. The OSSWG will continue to assess how open science operates at CERN, developing the policy in accordance with new

research. Alongside this, a new open science report will be published each year, showing CERN's continued commitment to the initiative.
Michelangelo Mangano, Senior Theoretical Physicist, OSSWG member and Chair of the Scientific Information Policy Board, said: "The new Open Science Policy reflects the values embodied by CERN and high-energy physics, as implied also by the CERN Convention: openly sharing with the science community and society not only the results of our research, but also the tools and innovation developed for and needed by our activity."

Naomi Dinmore

"Image Capital": a new exhibition featuring CERN science and history

"Image Capital", an artistic project by Armin Linke and Estelle Blaschke, explores the history and the present of photography as information technology. CERN and its community have supported the research for the project, which was coordinated by Arts at CERN through Armin Linke's participation in the Guest Artists programme.
Image Capital takes the form of an exhibition in museums throughout Europe, supplemented by a digital publication. In one of its chapters, Image Capital explores the essential role of photography in the development of science, both as a way of producing images and as a recording instrument. In doing so, photography enables us to see processes that the human eye cannot perceive, such as the collisions of accelerated particles.
CERN science and history are tackled in three interviews with key voices in our community: Maria Fidecaro, Rolf Heuer and Peter Jenni discuss how detecting technologies and the visualisation of particle events have been developed and evolved at CERN. The video interviews can be accessed online on the publishing platform.
The museum exhibitions feature images of the LExan Bubble Chamber loaned from the CERN archives. Dating from 1981, the photographs of the Bubble Chamber remind us of the first methods used to visualise and create evidence of subatomic particles. Through these records, the project alludes to the role of photographs in a larger scheme of knowledge production in which images hold a central role.
In addition, the exhibitions feature photographs taken by Armin Linke during his recent visits to CERN, including pictures of the Data Centre, the CERN Control Room, a model of an ALICE event sensor and various close-up images of the LHC's sensor cabling. This collection raises the question of photographs' relationship with material infrastructures and of how they contribute to making these infrastructures visible and accessible.
The Image Capital touring exhibition has already opened at Museum Folkwang, Essen (9 September–11 December 2022) and Fondazione MAST, Bologna (22 September 2022–8 January 2023). It will travel to the Centre Pompidou in Paris and the Deutsche Börse Photography Foundation in Frankfurt in 2023.
You can explore the online publication here (https://image-capital.com) and watch the interviews with Maria Fidecaro, Rolf Heuer and Peter Jenni.

Computer Security: How to avoid being disturbed during your holidays

Aloha! Do you enjoy the sun? The beach? Mountains? A cocktail? Eating out? Theatre? Do you enjoy a relaxing time far away – physically as well as mentally – from work? Here a few hints for how to achieve that and enjoy the perfect break.

In the past few weeks – during the summer holiday season! – we had to handle a series of requests for access to personal data. The requests were made by colleagues and supervisors desperately looking for analysis code, draft papers, documentation, software snippets, etc. Unfortunately, this data was buried deep in individuals' personal folders or stored on personal devices switched off for their own holiday break. Since CERN values your privacy, getting access to that data is not that easy. And it might require action by you, sitting on Aloha beach, to grant access.

Access to personal data stored at CERN or on CERN-owned devices is governed by the CERN Computing Rules (OC5), and in particular by the subsidiary rule on third-party access to users' accounts and data. Depending on the nature of the data, access to it might require the explicit authorisation of the Director-General. Only if the files can be clearly and unequivocally identified as being related to professional business (as indicated by their file names) can the Computer Security Officer use their discretion to advise the data-storage service managers to hand over the files. But before going down either of those routes – turning to the Director-General or triaging by file name – the procedure also involves you as the data owner. Can we reach you? Can we verify your identity? Can we obtain your approval? If so, good news for us.

But not such good news for you. Dragging you out of your vacation dreams. From sandy Aloha beach back to reality. From sunny weather back to the office. Out of the theatre onto the working stage. A small nuisance of a break during your well-deserved break. "Aloha? Sorry to disturb you."

A much better solution is to store all your professional data in central locations: files and analyses should be stored in EOS (or AFS) project folders (i.e. "/eos/project-[A-Z]", "/eos/experiment", "/afs/cern.ch/project" and "/afs/cern.ch/exp/"), or on shared spaces on CERNbox, all documentation should be stored in CDS, EDMS or Indico, and your professional software should reside in the CERN GitLab repository. The same holds true, by the way, for the professional data of any of your students and colleagues who are leaving the Organization to embark on new challenges. Make sure that all their professional data, documents, projects, software, analyses, ntuples, etc., are properly, consistently and completely handed over to you (if not already stored in the central locations mentioned above). While we offer a grace period of six months, after that the data in every personal folder is deleted irrevocably – and with it any professional data residing therein.

Furthermore, all professional devices, virtual machines, services, databases, webpages, e-groups and project folders should be administered by more people than just you so that they can take over while you're on Aloha island. And you can avoid being disturbed during your holidays… Aloha !

The computer security team

Official news

20 October: Annual Information Meeting of the Pension Fund

All members and beneficiaries of the Pension Fund are invited to attend the Annual Information Meeting, which will take place on Thursday, 20 October 2022 from 2.30 p.m. to 3.30 p.m. in the Council Chamber (503-1-001) and by webcast.
As well as providing an update on the Pension Fund, the PFGB Chair and the Fund's Chief Executive Officer will be pleased to answer any questions you may have. However, only the persons present in the Council Chamber will be able to ask questions; members and beneficiaries who plan to attend the session remotely, via webcast, are invited to send us their questions in advance of the meeting, by Monday 17 October at the latest, either by e mail to pension-fund@cern.ch or by post to Mr Doug Heron, Chief Executive Officer, CERN Pension Fund, "Annual Information Meeting", Office 5-5-012, Postbox C23800, CH-1211 Geneva 23, Switzerland. The 2021 Pension Fund Annual Report and Financial Statements are available on the Pension Fund's website: https://pensionfund.cern.ch/en.

Announcements

60 days' trial access to CINDAS databases

As of 1 October, as part of a 60-day trial, the CERN community can access for free two of the databases managed by CINDAS (Center for Information and Numerical Data Analysis and Synthesis), a firm based at Purdue University that collects and disseminates materials properties data. The databases are the following:
The Cryogenic and Low Temperatures Database (https://cindasdata.com/products/cltd), released in May 2021, presents material characteristics in the cryogenic and low temperature ranges. It comprises the thermophysical, mechanical, electrical and other properties of over 2000 materials in the temperature ranges of 0 K to 273 K.

The Thermophysical Properties of Matter Database (https://cindasdata.com/products/tpmd) contains data and information on thermophysical properties. This is the searchable, electronic version of the Thermophysical Properties of Matter, the TPRC data series by Y.S. Touloukian. The database is continually updated and expanded. The TPMD contains over 5200 materials categorised into 94 material groups, 148 properties and 53 241 data curves.
We invite all interested CERN readers to test these two databases and send any feedback to: library.desk@cern.ch.

Learn how to train students and citizens to engage with the Sustainable Development Goals

On 25 October, Ideasquare, CERN's innovation space, will host a workshop sharing the methodology and tools that the team uses to help students and citizens turn their ideas on challenges related to the Sustainable Development Goals (SDGs) into concrete, prototype-like proposals for the Crowd4SDG project.

Through an innovation cycle called GEAR (Gather, Evaluate, Accelerate, Refine), the transdisciplinary Crowd4SDG consortium of six partners (among which CERN) promotes the development of citizen science projects aimed at tackling the Sustainable Development Goals (SDGs), with a focus on climate action.

The consortium is currently running its third call for projects. You can discover the projects developed during the project's first year here and those prepared over the course of the second year here.

If you are interested in organising a hackathon, a more extended series of workshops, or maybe even in developing a curriculum as part of a university course aiming to tackle SDG challenges via the power of the crowd, join us online on 25 October 2022 at 4 p.m. (CET). During the session, we will present the methodology and tools used for the Crowd4SDG GEAR cycle and explore together how these might be useful to you.

Register
here: https://indico.cern.ch/event/1209261

Apply now for the 2023 JUAS school

Registration for the 2023 session of the Joint Universities Accelerator School (JUAS) is now open.
Taught by leading European particle accelerator specialists, JUAS is an international graduate school designed for highly motivated scientists and engineers currently studying to complete a Master's degree or preparing a doctoral thesis. Early career professionals are also encouraged to apply.

The full programme covers accelerator-related topics during 10 weeks from January to March, comprising 2 consecutive courses, which can be taken together or separately :
- The science of particle accelerators (9 January - 10 February 2023)
- The technology and applications of particle accelerators (13 February - 17 March 2023)

For more information and registration, please visit the ESI website (https://www.esi-archamps.eu/juas-presentation/).

20th Wright Colloquium for science – 7–11 November

Don't miss the public lectures organised by the University of Geneva in the framework of the 20th Wright Colloquium for science

The Wright Colloquium for science, held biennially at the University of Geneva since 1984, was founded by Dr. H. Dudley Wright with the aim of presenting the latest scientific findings to the general public and especially inspiring young people towards a scientific career.

The 2022 conferences take place from 7 to 11 November at 6:30 p.m. at Uni-Dufour (underground auditorium), 24 rue Général-Dufour, Geneva. Free entrance.

Lectures in English with simultaneous translation into French.

Introduction to the 2022 edition: Already in Greek antiquity, but probably elsewhere and at other times, humans wondered to what extent it was possible to break down objects, natural or not, into their primordial elements. One of these decompositions proposed that earth, water, fire and air were the four elements of which everything is constructed, but a fifth element seemed necessary to complete the picture: life. The Wright 2022 Conference takes these five elements and offers an original and kaleidoscopic look at our planet, Earth. Each of the elements, which the ancients considered fundamental, is part of the structure of our environment. Each one is familiar and yet each one conceals a richness that science of the last few years has allowed us to understand more fully. All are deeply interconnected. The understanding of the nature of these elements is essential to understand our environment, and to better preserve it by evaluating our actions.

For more information and to find out about the various conferences and events, go to: https://colloquewright.ch/en/.

Registration for “Expanding Your Horizons” is now open!

On Saturday, 12 November 2022, “Expanding Your Horizons” will be back with a day full of fun and hands-on activities aimed at motivating girls to engage with science and maths

The non-profit organisation, “Expanding Your Horizons - Geneva” (EYH), will host the seventh edition of its biennial science event on Saturday, 12 November 2022 at the University of Geneva (Uni Mail building). The event is open to girls aged 11-14 living in and around Geneva, and is designed to encourage them to take up studies, and pursue careers in, science, technology, engineering and mathematics (STEM).

The programme for the day will include several inspiring workshops, a discovery fair and a career forum. The event will offer 25 activities in French and English, and will provide a fun and accessible environment for around 300 young girls to discover science and technology. All the activities will be free of charge, and a complimentary lunch will be provided.

This year, CERN will once again be taking part in the event by sending around ten volunteers to conduct three workshops; the young science enthusiasts will get to explore the power of magnets through a series of interactive challenges, observe the invisible and learn how a website works. Female computer technicians from CERN will also run a stand, presenting the work they do and offering participants the opportunity to take a virtual tour of the Laboratory’s Data Centre.

Find out more and sign up at www.elargisteshorizons.ch

Registration opening date: 9 October 2022
Registration deadline: 1 November 2022

HSE seminar: “Respiratory pathogens: past, present and future” – 16 November

On 16 November, from 2.00 to 4.00 p.m., the HSE unit invites you to a seminar on the past, present and future of respiratory pathogens and the associated public health risks. Speakers from the World Health Organization (WHO), the University of Leicester’s Department of Respiratory Sciences and the French National Research and Safety Institute for the Prevention of Occupational Accidents and Diseases (INRS) will delve into practical aspects, such as ventilation and space occupancy, and their role in the management of pandemics and protection of populations. A talk about CERN and WHO’s collaboration on the quantification and relative importance of the different modes of transmission and associated risks will complete the agenda.

The COVID-19 pandemic has been a stark reminder that viruses are all around us, and has taught us lessons that may equip us for future outbreaks. In this context, the importance of multidisciplinary efforts and science-driven policies is greater than ever. At CERN, the pandemic led to innovations such as the CAiMIRA tool (CERN Airborne Model for Indoor Risk Assessment, previously known as CARA), which was developed to model the concentration of viruses in enclosed spaces. The tool provided precious help with space management during the COVID-19 pandemic and has since been adopted beyond CERN's confines.

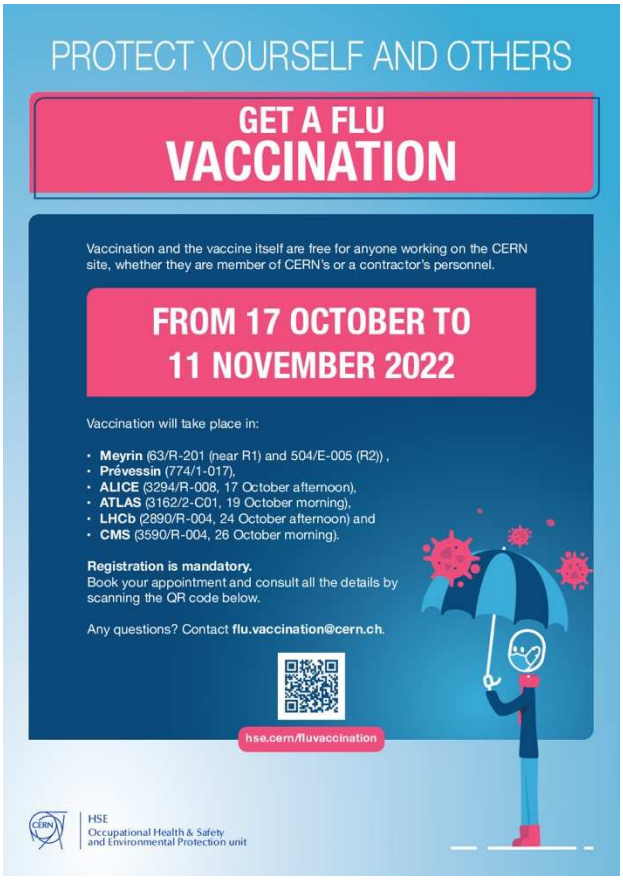
More than a century ago, one of the major breakthroughs in public health was physico-chemical water treatment, which drastically reduced the incidence of several highly infectious and serious diseases. Could this mark the beginning of the era of "air treatment"?

The event will be held in person in the Council Chamber and transmitted via webcast. A recording will be made available after the event.

For more details and to register for in-person attendance, please visit the Indico page (https://indico.cern.ch/event/1192997/) of the event.

We hope many of you will be able to join us!

The CERN flu vaccination campaign begins on 17 October



Make your appointment now on https://plamed.web.cern.ch/.

Ombud's corner

Open Space meeting of UNARIO ombuds – a unique opportunity for experience sharing and professional network support

Thursday, 13 October 2022 is International Ombuds Day, dedicated to the global promotion of the ombud role in organisations. In the past, my predecessors reported to you regularly on their participation in the international conferences of the IOA (International Ombuds Association) and shared with you the topical issues addressed by the profession at its annual get-together, including:

-the ombuds' code of ethics and common standards of practice

-the damaging, abrasive effect of micro-inequities and the healing effect of micro-affirmations

-evaluating fairness in the work environment

-the importance of bystanders' actions

Although I attended the online IOA conference in April this year, I garnered more relevant insights and professional support from the meeting of ombuds in the United Nations and related international organisations (UNARIO) from 19 to 21 September.

With 19 international organisations having sent representatives from their ombud and mediation offices, I had the great pleasure of meeting 30 colleagues from all over the world.

The meeting was facilitated by an external consultant and followed the "Open Space meeting" concept – a first for me – which consisted of establishing the agenda on the first day of the meeting, together with the participants. We were all asked to write down on posters the questions and the concerns that we had had in mind when we had decided to attend the meeting. Then, we were free to take part in as many discussions as we wanted and to stay as long or as little as we felt comfortable. That way, the "bumblebees" going from one meeting to another would help spread ideas and creative proposals between groups.

As a result, some lively, open and extremely useful discussions took place on the following topics put forward by the participants:

-How best to coordinate between ombuds/mediators/ethics/human resources on misconduct and harassment cases?

-Intergenerational conflict such as ageism – how can ombuds help?

-The future of hybrid work and the role of ombuds and mediators

-The role of culture in the ombud's practice

-Neuroscience and conflict resolution

-The evolution of people's relationship with their work – a fact to be aware of?

-How can we support each other's missions?

-Data reporting for ombuds

-What is the return on investment for organisations investing in an ombud function?

-Ombuds services versus mediation services – separate or together?

-Mental health: how can we better support employees and take care of ourselves as ombuds?

-Are ombuds forming a biased view of an organisation or revealing the elephant in the room?

-How to build psychological safety for our organisations and visitors

Following these discussions, a number of working groups were created to build on the fantastic momentum generated, and we are today actively working on developing solutions to these common ombuds challenges.

Throughout my career, I have been a member of various professional networks, in different fields. The UNARIO ombuds network is not only an extraordinary source of inspiration but also a great way to break the isolation of the ombuds' role and foster mutual support among ombuds colleagues. It is also proof that, whatever the nature and mission of the organisation the ombud works for, the difficulties, problems and challenges experienced by our visitors are, to a large extent, the same.

Laure Esteveny