## **CERN Bulletin**

## The Russian invasion of Ukraine: one year on



On the first anniversary of the military invasion of Ukraine by the Russian Federation, CERN reiterates its condemnation of this unlawful act and deplores the untold suffering of the Ukrainian population. Over the past year, the Organization has put several measures in place to support Ukraine, and in particular the Ukrainian CERN community. Despite the dramatic consequences of the war, Ukraine continues to contribute to CERN's scientific programme with strong motivation and commitment. As the war enters its second year, we'll be looking at new ways in which we can support our Ukrainian scientific community and Ukrainian people more broadly. CERN remains resolutely behind Ukraine and reaffirms its core value of peaceful collaboration across borders.

Fabiola Gianotti CERN Director-General

#### A Word from Mike Lamont

#### **News from the Chamonix workshop**

The first Chamonix workshop, dedicated to LEP performance, took place in 1991 – we've come a long way since then!

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No, don't do anything!

### A Word from Mike Lamont

### **News from the Chamonix workshop**

The first Chamonix workshop, dedicated to LEP performance, took place in 1991 – we've come a long way since then!

For the first time since 2018, representatives from across the community headed to Chamonix for the traditional four-day LHC workshop. This is a technical workshop aimed at providing the opportunity to discuss plans, expectations and challenges for the upcoming years in an open and collaborative way. One session was dedicated to energy management and sustainability, and the workshop closed with a panel-led debate on future colliders. The event takes a lot of preparation, and it's intense. Sessions go well into the evening and discussion continues unabated over coffee and the odd beer.

2022 saw the cross product of injectors, luminosity, availability, system performance and machine protection mapping onto a diverse physics programme, covering protons and ions, forward physics, luminosity calibration and the appearance of a diverse variety of new experiments exploiting the LHC's potential for far forward physics. The year wasn't without incident, but was ultimately successful: both injector and LHC performance bode well for Run 3. Nonetheless, two key strategic issues stand out... Firstly, the inner triplet quadrupoles and associated corrector magnets situated on either side of ATLAS and CMS take a serious hit from luminosity debris coming from the interaction point. The associated radiation levels anticipated for Run 3 could eventually compromise their performance. The LHC Triplet Task Force has analysed the impact of radiation on equipment lifetime in the LHC inner triplet regions and proposed a number of mitigation measures, some of which will be deployed immediately to minimise the local integrated radiation dose. Additional measures and supporting activities are under study.

Secondly, electron cloud is an issue in the LHC and, when operating with high bunch currents, the associated heat load deposited on the beam screens in the main dipoles pushes the cryogenics system to the limits. Following the long

shutdowns, the situation appears to be degrading locally in some sectors, and the effects have become a potential intensity limitation for the HL-LHC era. The complex surface chemistry involved appears to be understood, and a variety of mitigation measures are being considered.

Looking ahead to the challenges of Run 4, a baseline machine configuration has been defined, and the potential impact of electron cloud folded into performance expectations. Planned upgrades of key hardware systems, such as the full remote alignment system, machine protection, beam instrumentation, beam dumps, crab cavities and RF power systems, are advancing well. In 2022, the main dipoles operated well at 6.8 TeV after a long training campaign, and the hurdles to go to 7 TeV for Run 4 are well understood – the potential operational cost must still be carefully considered. There has been sustained international effort and good progress on the HL-LHC magnet front. The production of the interaction region magnets is progressing well, and prototyping and production of the NbTi magnets have passed through critical phases. The INFN twin aperture D2 separationrecombination dipole prototype has integrated in the cold mass at CERN and tested horizontal, while the D1 prototype has been tested vertical at KEK and is expected to arrive at CERN in March 2023 for the final horizontal test. Good progress has also been made towards mastering the major challenges of the high-field Nb<sub>3</sub>Sn inner triplet quadrupoles (MQXF). Six out of the eight US-made MQXFA magnets have reached performance requirements. The first prototypes of the CERN-produced **MOXFB** exhibited performance limitations below nominal current, but a three-stage programme was put in place to address the root causes and the final prototype and first series magnet both reached the target current following the staged deployment of the first two phases of the programme.

The workshop also included a look forward to the huge amount of work to be done in preparation

for and during LS3. The pre-LS3 period will include the production and testing of key HL components in SM18 and full-scale testing of interaction region magnets and associated systems at the inner triplet (IT) string. Besides the HL-LHC work, LS3 will see the implementation of major new CO<sub>2</sub> cooling systems in ATLAS and CMS, and phase one of a major consolidation programme for the North Area. The overall coordination of the integrated programme will be a challenge, and detailed planning is already under way.

The sustainability session covered various topics related to energy management, emissions reduction and sustainability in the context of CERN's present and future operations. These included exploring energy management options, reducing emissions from fluorinated gases, and sustainable accelerator development. Additionally, there were discussions on descoping

options and helium usage, as well as follow-up on the recent CERN and Environment Workshop. These topics are relevant for both medium and long-term plans and highlight CERN's ongoing efforts towards sustainability.

The workshop finished with an interesting Q&A session on the future options open to us after the LHC.

The next six years are going to keep us busy – ensuring the whole complex delivers a full and diverse physics programme, while securing the future out to the 2040s.

All the presentations may be found at: https://indico.cern.ch/event/1224987/

A workshop summary will be presented in the main auditorium on 15 March at 2.00 p.m.

Mike Lamont Director for Accelerators and Technology

## Managing energy responsibly: CERN is awarded ISO 50001 certification

This reference international standard provides a practical way to improve energy performance

CERN's accelerators are responsible for most of its energy consumption. As powerful research instruments, these machines make a unique scientific programme possible and support a global community of scientists. CERN makes every effort to run them in the most energy-efficient way possible. Powering CERN's unique array of accelerators, detectors and infrastructure primarily needs electricity, which accounts for about 95% of CERN's energy use. In addition, the Laboratory uses gas for heating, as well as fuel for transport and for backup diesel generators.

CERN is committed to improving its energy performance as part of its commitment to environmentally responsible research. In this context, the Organization began the ISO 50001 certification process in 2022.

This reference international 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 associated continual improvement process, CERN submitted its energy performance plan for

2022–2026 to the French authorities in June 2022. The ISO 50001 certification audit, carried out by the French national organisation for standardisation (AFNOR), took place at the end of the year.

CERN provided AFNOR with all relevant documentation and information on its processes, including, but not limited to, a new energy management manual, a new procedure for procurement in view of assessing energy performance, a communications plan dedicated to energy, and the updated energy management governance and structure. A range of technical assessments were performed, involving the Laboratory's largest energy consumers, to ensure that we conform to the standard.

Further, the Organization's Energy Policy was published in October 2022. The policy is designed to continuously improve CERN's energy performance and minimise the impact of its activities on the environment. Its objectives are to keep the energy required for its activities to a minimum, improve energy efficiency and recover waste energy. The continuous improvement of

CERN's energy performance will be achieved by defining, monitoring and updating guidelines, objectives and indicators based on energy use measurements, best practices and feedback; training and raising awareness among the CERN community; monitoring trends, regulatory developments and best practices in energy performance; and maintaining energy management system compliant with the ISO 50001 standard.

The ISO 50001 certification was officially awarded on 2 February 2023 for a period of three years, i.e.

until 1 February 2026, and covers all of the Organization's sites, activities and energies.

During those three years, surveillance audits will be carried out on a yearly basis by AFNOR to confirm compliancy and continuous improvement. The first one is expected to be scheduled for early 2024.

For more information about energy management at CERN, see: https://hse.cern/content/energy-management.

### Winners of the 2022 ATLAS Thesis Awards announced



From left to right: ATLAS Thesis Awards Chair Antonella De Santo; ATLAS Thesis Awards winners Bastian Schlag, Giulia Ripellino, Brian Moser, Daniel Camarero Muñoz, Giuseppe Carratta and Guglielmo Frattari; ATLAS Collaboration Board Chair Lucia Di Ciaccio; and ATLAS spokesperson Andreas Hoecker. (Not pictured: winners Maria Mironova and Emily Anne Thompson).

The ATLAS collaboration celebrated some of its best and brightest PhD students at the recent Thesis Awards. Since 2010, these awards have recognised the outstanding contributions made to the ATLAS collaboration in the context of PhD theses.

The winners of the 2022 ATLAS Thesis Awards were announced at an awards ceremony held in CERN's Main Auditorium on 16 February 2023. The recipients are Daniel Camarero Muñoz (Universidad Autónoma de Madrid), Giuseppe Carratta (Università di Bologna & INFN), Guglielmo Frattari (Sapienza Università di Roma & INFN), Maria Mironova (University of Oxford), Brian

Moser (Universiteit van Amsterdam & NIKHEF), Giulia Ripellino (Royal Institute of Technology (KTH), Stockholm), Bastian Schlag (Johannes Gutenberg-Universität Mainz & CERN) and Emily Anne Thompson (Albert-Ludwigs-Universität Freiburg & DESY).

For the first time since 2020, ATLAS members were able to applaud the winners in person as they received their awards. All of these new graduates faced the extra challenge of a pandemic while undertaking their PhD. The scientific excellence of their results, despite countless COVID-related complications, is especially remarkable.

Explore the winning theses:

- Daniel Camarero Muñoz: Measurements of the inclusive isolated-photon and photon-plusjet production in pp collisions at 13 TeV with the ATLAS detector
- Giuseppe Carratta: Search for type-III seesaw heavy leptons in leptonic final states using proton—proton collisions at 13 TeV with the ATLAS detector
- Guglielmo Frattari: Investigating the nature of dark matter and of the Higgs boson with jets and missing transverse momentum at the LHC
- Maria Mironova: Search for Higgs boson decays to charm quarks with the ATLAS experiment and development of novel silicon pixel detectors
- Brian Moser: Boson production at high energy in decays to bottom quarks and their

interpretations with the ATLAS experiment at the LHC

- Giulia Ripellino: Haystacks and needles Measuring the number of proton collisions in ATLAS and probing them for the production of new exotic particles
- Bastian Schlag: Advanced algorithms and software for primary vertex reconstruction and search for flavor-violating supersymmetry with the ATLAS experiment
- Emily Anne Thompson: Search for longlived supersymmetric particles using displaced vertices with the ATLAS detector at the LHC

## CERN openlab CTO co-founds Swiss chapter of Women in High-Performance Computing advocacy group

Women in HPC works to reduce this gender gap in high-performance computing, or "HPC"



The four founders of the new chapter of Women in HPC, photographed during a special networking session at last year's Platform for Advanced Scientific Computing (PASC22) Conference in Basel, Switzerland. (Image: CERN)

CERN openlab's Chief Technology Officer, Maria Girone, is one of four founding members of a new Swiss chapter of the Women in HPC (WHPC) advocacy group. The announcement comes on the International Day of Women and Girls in Science, which is dedicated to reducing gender disparity in all research fields and at all levels of scientific endeayour.

Women in HPC works to reduce this gender gap in high-performance computing, or "HPC". Founded in 2014 at the University of Edinburgh Parallel Computing Centre, Women in HPC organises awareness-raising workshops and provides support and mentorship for women working in this field.

Maria Girone's fellow co-founders of the new Swiss chapter of the organisation are Florina Ciorba of the University of Basel in Switzerland, Sadaf Alam of the University of Bristol in the UK and formerly of the Swiss National Computing Centre (CSCS), and Marie-Christine Sawley of the International Centre for Earth Simulation and formerly of both the CMS experiment and Intel (a long-standing CERN openlab partner company). They have since been joined by Cerlane Leong of CSCS, too.

This chapter is underpinned by a Swiss association called ideas4HPC, which was also created by the leading female computer scientists listed above, with Marie-Christine Sawley as President. The team members have seven main goals:

Building a diverse and inclusive HPC workforce Promoting the benefits of inclusivity

Raising awareness of the under-representation of women in HPC

Highlighting diversity and inclusivity initiatives Raising the visibility of women role models in HPC Helping members of under-represented groups in HPC to build their professional networks

Inspiring key stakeholders in the HPC community to embrace diversity and inclusivity initiatives.

Over the next three years, the founders of this new chapter and association will create targeted scholarships, provide financial support for participation in top conferences, run training sessions for mentors, and organise events promoting inclusivity and diversity in HPC. One of the first events organised under this new chapter will be a workshop at the Platform for Advanced

Scientific Computing Conference (PASC23) in Davos, Switzerland, in June.

"We are very excited to welcome a new Swiss chapter to the WHPC family," says Cristin Merritt, Business Management Executive for WHPC. "WHPC chapters provide a very accessible option for women and allies to find support and engage with the under-representation of women in scientific computing." She continues: "The Swiss team has a fantastic track record in supporting Women in HPC and promoting opportunities for women in computational science. We look forward to working with the Swiss chapter and all of the other WHPC chapters over the coming years towards the WHPC mission."

"I have always been passionate about equity, diversity and inclusion," says Maria Girone, who is

Vice-President of the new association and was also recently appointed as one of the two diversity and inclusion officers for the CERN IT department. "We've come a long way, but there is still a lot to be done. The creation of this chapter and association is an important concrete action for supporting women and under-represented minorities in HPC, particularly in the key early stages of their careers."

You can find out more about work at CERN to reduce the gender gap in science on the website of the CERN Diversity and Inclusion programme. There you will also find information on the Organization's efforts to improve other aspects of diversity.

Andrew Purcell

### CERN celebrates Data Protection Day with ESA, EMBL and ESO

On 30 January, CERN joined forces with the European Space Agency (ESA), the European Molecular Biology Laboratory (EMBL) and the European Southern Observatory (ESO) to host the 2023 edition of Data Protection Day, which was held online.

This year's discussions focused on the theme of artificial intelligence. More than 400 attendees listened to the various talks on this new technology that has changed our daily lives.

All speakers emphasised the need to regulate the use of artificial intelligence so that it remains ethical and respectful of the privacy of all those involved with it.

Lively question and answer sessions, as well as the results of a survey distributed to participants, attested to the growing concerns surrounding

artificial intelligence in society, in particular regarding data protection. But the event also highlighted the interest and excitement sparked by AI – participants were keen to learn more about its concrete implications in everyday life.

If you want to discover or rediscover the webinar, you can watch the recordings on the Indico page of the event.

We would like to thank all of the organisations involved for their work and contribution to making this webinar interesting and informative.

If you are interested in learning more about data protection at CERN, sign up for the data privacy training course. Additional information is also available on the website of the Data Protection Office (DPO).

# Computer Security: Winter season, virus time – one free pill for your device

The winter season – a time for runny noses, coughs and colds, headaches and malaises, viruses

and infections. And a time for boosting your immune system. Hot teas and warm baths. Early

nights and long sleeps. As you take measures to protect your physical well-being, maybe it's also a good moment to think about your digital well-being? In other words, protecting your digital devices against viruses and infections.

Remember that many aspects of your digital life revolve around your laptop. The one that stores the photos and videos of your friends and family, your personal documents, passport copies, official papers, emails. The one you use for social media, for private and professional video calls, for chats, for gaming. The one you use for online banking and shopping. The one that's always within reach — in your office, in your living room, on your nightstand.

Imagine what would happen if a third party got access to your laptop. A malicious attacker – pure evil – that steals your data, encrypts it, deletes it or publishes it on some obscure dark net webpage and forces you to pay a ransom (so-called "ransomware"). That sniffs out your passwords or goes shopping with your money (plain and simple theft). That enables your webcam and microphone without you noticing. Spying on you, recording your conversations, videoing your home life, stalking you. And threatening to publish those videos on some obscure dark net webpage unless you pay up (so-called "doxware").

Such malicious access happens more quickly than you might think. One wrong click on a malicious webpage. One wrong snapshot of a malicious QR

code. One wrong opening of a malicious attachment. One wrong mod of your favourite game. One wrong password entry on a malicious log-in page. Click. And boom. Enter the evil attacker. See your digital life shattered.

Anti-virus to the rescue! To better protect your digital life, CERN offers you free anti-virus/antimalware software. Download it from the CERN app store for Windows ("ESET Endpoint Security") or via the Mac Self-Service ("ESET Endpoint Antivirus"). Installation\* is free on any Windows or Mac computer you own, including those used for teleworking. The only conditions are that you must be affiliated with CERN as a member of the personnel and hold an eligible CERN computing account. With that account, just enrol your device(s) with the CERN/Microsoft Windows app store or the Mac Self-Service, respectively, and install the corresponding installation package ("ESET..."). Its licence is valid for 12 months and must be renewed for each subsequent year (again using the CERN app store or Mac Self-Service, respectively).

So, for the sake of your physical and digital wellbeing, give it a go to avoid this winter season's viruses and infections!

\*Note that the installation includes a "CERN software" agent that keeps track of licence usage (as someone still has to pay for that anti-malware software).

The Computer Security team

### Official news

### **Taxation in Switzerland**

Memorandum concerning the internal tax annual certificate, the individual annual statement and income tax declaration forms in Switzerland for the reference year 2022

## I – Internal tax annual certificate and individual annual statement for 2022

The internal tax annual certificate or the individual annual statement for 2022, issued by the Finance and Administrative processes Department, is available since 14 February 2023 via MyFiles

(https://myfiles.cern.ch/, under "Financial and Social Benefits"). The document that you have received (certificate or statement) depends on your situation at CERN in 2022. It is intended exclusively for the tax authorities.

If you are currently a member of the CERN personnel, you have received an e-mail containing a link to your certificate or statement, which you can print out if necessary.

If you are no longer a member of the CERN personnel or are unable to access your certificate or statement as indicated above, you will find information explaining how to obtain one here (https://admin-

eguide.web.cern.ch/en/procedure/annual-internal-taxation-certificate).

#### II – 2022 income tax declaration forms in Switzerland

The Admin e-guide can be found on this page (https://admin-

eguide.web.cern.ch/en/procedure/income-tax-declaration-switzerland) to provide further general indications for completing the 2022 income tax declaration form, and to offer support in this matter.

If you have any specific questions, please contact your tax office directly.

NB: The information regarding the French income tax declaration form is usually available in April.

Contact: HR-Internal-tax@cern.ch

### Summer work for children of members of the personnel

During the period from 5 June to 8 September 2023 inclusive, there will be a limited number of jobs for summer work at CERN (normally unskilled work of routine nature), which will be made available to children of members of the personnel (i.e. anyone holding an employment or association contract with the Organization). Candidates must be aged between 18 and 24 inclusive on the first day of the contract, and must have insurance coverage for both illness and accident. The duration of all contracts will be 4 consecutive weeks and the allowance will be CHF 1557 for this period. Candidates should apply via

Department's electronic recruitment system, SmartRecruiters: https://smrtr.io/cVgsF.

Completed application forms must be returned by 12 March 2023 at the latest. To allow as many people as possible to benefit, each child may participate in this programme only once.

The results of the selection will be available mid of May 2023.

For further information, please contact: Virginie.Galvin@cern.ch Tel. 72855 (Geraldine.Ballet@cern.ch Tel. 74151)

### **Announcements**

## BBC comedy show The Infinite Monkey Cage comes to CERN | 16 March

The BBC's multi-award-winning science/comedy show The Infinite Monkey Cage is coming to CERN and invites the CERN community to be part of the audience for this special recording.

The hugely popular British radio show and podcast sees hosts Professor Brian Cox and comedian Robin Ince joined by a panel of scientists and celebrity science enthusiasts. Please join them on 16 March, with special guests Ben Miller and Katy Brand, as they discuss how discovering the Higgs boson has shaped our understanding of the fundamental building blocks of our Universe. Where: Main Auditorium (500/1-001)

When: 16 March, 4.30-5.30 p.m. (doors open at

4.00 p.m.)

Language: English

Registration on Indico mandatory:

https://indico.cern.ch/event/1246258/

# CERN QTI launches its new series of online lectures to explore quantum science

As a follow-up to the first International Conference on Quantum Technologies for High-Energy Physics (QT4HEP22), the CERN Quantum Technology Initiative has organised a new lecture series in the framework of its education and training programme. Starting on 1 March 2023, the curated talks will cover various aspects of four key research areas: quantum theory and simulation; quantum sensing, metrology and materials; quantum computing and algorithms; and quantum communication and networks. The first lectures will capitalise on poster contributions submitted for QT4HEP22, but all young researchers and doctoral students who would like to present their ongoing research are welcome to give a talk.

The primary goal of the programme is to provide a platform for young scientists to showcase their work and experiences, exchange ideas with fellow emerging professionals and bring new insights into the rapidly evolving field of quantum science. Each lecture is intended to raise awareness and understanding of the recent developments, opportunities and challenges in various areas of quantum research, and will also offer resources and tools to learn more about the topics covered independently.

Free and open to all, the online lectures will take place regularly, on Wednesdays, starting at 11.00 a.m. CET. They will be broadcast live for participants worldwide and will also be made available via Zoom to everyone who has a valid

Indico account. All lectures will be recorded and published on the CERN QTI website and on the CERN Lectures YouTube channel to watch and rewatch in the future.

The first round of talks, coming up in March, is listed below, and a full list of lectures can be found here\* (https://indico.cern.ch/category/14582/). Join us as we explore the exciting possibilities of quantum technologies together!

#### Wednesday, 1 March 2023

"Noisy gates approach for simulating quantum computers" by Michele Vischi and Giovanni Di Bartolomeo (University of Trieste)

The full information and connection details are available here: https://indico.cern.ch/event/1247873/

#### Wednesday, 15 March 2023

"Classical Splitting of Parametrized Quantum Circuits" by Cenk Tüysüz (DESY)

The full information and connection details are available here:

https://indico.cern.ch/event/1248668/

#### Wednesday, 29 March 2023

"On the construction of useful quantum kernels" by Massimiliano Incudini (University of Verona)
The full information and connection details are available here:
https://indico.cern.ch/event/1251853/

## The Women in Technology group launches its sixth mentoring exercise

Women in Technology (WIT) has launched its sixth WIT Mentoring programme, which offers early-career professionals the opportunity to discuss their professional development with an experienced mentor

The CERN-based Women in Technology (WIT) group has launched its yearly WIT Mentoring programme for the sixth time. The programme, running from May to December 2023, pairs experienced CERN or CERN Alumni professionals with those looking to build their careers, and creates opportunities to exchange personal and professional experiences. The call for applications will be open from 1 March to 2 April 2023.

The Women in Technology initiative was born in 2016, when a group of members of the IT department created an informal network where colleagues could exchange ideas on common challenges and share career advice and experiences. The new WIT community hoped to replicate networks similar to those its members had benefited from in both academia and industry.

In addition to the sixth Mentoring programme, this year marks the launch of the Mentoring Circles, an alternative mentoring experience where a small group of mentors and mentees focus on topics such as work–life balance, professional development and more. It will also be an opportunity for networking.

## Your experience with the WIT Mentoring programme

**Mentees** will benefit from the support of a senior colleague with a good knowledge of CERN and beyond. In their mentoring relationship, they should find a safe space where coaching will be offered on how to develop skills such as self-confidence, self-advocacy, critical thinking and

many others. The programme is open to anyone motivated to work on their personal and professional development.

Mentors benefit from informative sessions, resources, online seminars, reminders and guidance from the WIT Mentoring team during the exercise. Besides a feeling of personal realisation, being a mentor has been proven to help develop skills such as active listening, communication, coaching and problem solving; mentoring enables these skills to be internalised as time goes on.

#### How to get involved

Become a mentor: Fill out the application form and let us know in which areas you feel comfortable mentoring others. Registration is open all year round, but if you would like to become a mentor in 2023, please fill it out by 23 April 2023.

**Become a mentee**: Fill out the application form by 2 April 2023. The more information you provide, the higher the chances of finding you a suitable mentor.

**Join WIT Mentoring**: Would you like to help us shape the programme and be involved in the organisation of mentoring activities? Get in touch with the WIT Mentoring team.

#### Other resources:

WIT Mentoring programme: https://wit-hub.web.cern.ch/mentoring/
Applications for mentors and mentees: https://indico.cern.ch/event/1246888/.

### Moving out of Academia to Software Engineering | 31 March

Building on the success of previous events in this series "Moving Out of Academia" we would like to provide CERN Alumni - or soon to be alumni - with

the opportunity to learn more about how fellow alumni successfully managed a transition from Academia to software engineering. If you are considering moving into this sector of activity, this is your opportunity to come along with your questions and obtain first-hand information from our panellists.

The first part of the event is focused on the nature of the work carried out by our panellists and on other skills, they acquired at CERN which have helped them (or not) in the transition. They also explain which additional skills they had to develop after CERN for a successful career move.

The second part of the event will provide you with very practical advice on how to prepare for such a transition, how to get started, what errors to avoid, where to look for help and how to promote your assets.

When: on 31 March 2023, from 2 p.m. to 6 p.m. Where: Please register here (https://alumni.cern/networks/events/105751) for the event to receive the zoom link.

### Next blood donation campaign on 7 March

The last blood donation campaign held on 13 September 2022 was another great success: 161 donors came along to give blood, including 56 first-timers, and 106 donations were collected.

On 7 March, from 8.30 a.m. to 4.30 p.m. in Restaurant 2, CERN will hold another blood donation session, in collaboration with the Hôpitaux universitaires de Genève (HUG).

Before coming to the Restaurant 2 donation point, make sure that:

-you are in good health and have no symptoms such as fever, cough, a cold or breathing difficulties;

-you are eligible to give blood – please consult this information sheet (https://www.hug.ch/sites/interhug/files/structur es/don\_du\_sang/cts-gb\_sheetinfo\_v0223.pdf) and complete this questionnaire (https://www.hug.ch/sites/interhug/files/structur es/don\_du\_sang/cts-gb\_qmedical\_v0223.pdf) issued by the HUG (but note that only the predonation conversation with the nurse or doctor on the day can confirm your eligibility).

As a thank you, the HUG will be giving each donor a 10 CHF voucher, to be used in Novae's Restaurants 1 and 2 at CERN.

The Geneva blood barometer, which is regularly updated, shows that blood stocks are currently running extremely low. We therefore hope to see many of you at the donation point! Give blood, save lives.

### "Indico Workshop 3.5" at CERN and UN Geneva | 20-21 March

The Indico Workshop 3.5 will be an opportunity for Indico service providers, developers, and administrators from around the world to get together, exchange impressions and ideas and learn from each other.

This workshop will be co-organised by two Genevan institutions for the first time: CERN and the United Nations.

Participants will get the chance to:

- -Meet the community and the Indico Team in person;
- -Share experiences and ideas;

- -Learn about the Indico ecosystem;
- -Get to know more about Indico's future;
- -Make their voice heard, share their vision;
- -Celebrate the latest achievements of the Project and the Community.

Some of the topics discussed will include:

- -The latest developments in Indico 3.2 and what to expect in upcoming versions;
- -Best practices for the deployment of Indico; Indico and Web accessibility;
- -Customisation of Indico for organisational workflows;

- -Sharing experiences of Indico server management;
- -Exchanging impressions with other Indico developers, admins and users and discussing possible collaborations.

If you manage an Indico server or are considering to do so, please visit the event website (https://indico.cern.ch/event/1218989/) to find out more, register, and submit a talk.

### A new video on data privacy services at CERN

The world of data protection has its own language, and it can be difficult to find one's way through these concepts and new terms.

For those of you finding the world of data privacy hard to navigate, the Office of Data Privacy (ODP), together with the Data Privacy Coordination Committee (DPCC), is producing a series of short videos to provide a brief and practical guide to data privacy at CERN.

This second episode of the "Privacy in a nutshell " series delves into the role of controlling and processing services in a practical way and directs you to resources on the subject.

If you found this video helpful and would like to learn more, please visit the ODP website (https://privacy.web.cern.ch/fr)

Watch the video on CDS: https://videos.cern.ch/record/2297430/embed

# CERN Accelerator School: Normal- and Superconducting Magnets | 19 November - 2 December 2023

The CERN Accelerator School is organising a course on "Normal- and Superconducting Magnets" in collaboration with MedAustron from 19 November to 2 December in St. Pölten, Austria. This unique two-week residential course will be of interest to staff and students in research laboratories, universities, and companies involved in accelerator magnets.

The course will review the state-of-the-art magnet technology in the field of particle accelerators for both normal- and superconducting magnets. It will the fundamentals: magnet design, computational methods, materials and lowparticular and high-temperature superconductors, stability and quench protection aspects, fabrication and measurement techniques,

and testing. Various magnets for a wide range of applications will be discussed.

The lectures will be complemented by hands-on exercises for the design of normal- and superconducting magnets, as well as magnet measurements.

In addition to the fundamental and technical knowledge presented by distinguished experts, the course will give the participants plenty of networking within opportunity for superconductor and magnet communities. Registrations Indico are open on (https://indico.cern.ch/event/1227234/). Please note that participants will be selected on a "first come, first served basis".

### Library resource - O'Reilly Learning Platform

Did you know that the CERN Library has been providing the CERN community with access to the O'Reilly Learning Platform for many years?

This platform offers more than 50 000 e-resources, including e-books, courses, videos and audiobooks. Many topics are IT-related: cloud computing, data engineering, data science, machine learning and artificial intelligence, programming languages, software architecture, IT operations, security, etc. Related topics such as project management and business strategy are also covered.

The platform is accessible from any device, using a browser or the dedicated O'Reilly app.

More information on how to connect is available on our website (https://scientific-info.cern/search-and-read/online-

resources/oreilly-learning-platform).

E-books are also available via the CERN Library Catalogue.

For any questions or feedback, please contact library.desk@cern.ch

### 3rd CERN Service Management Forum | 2 March

The Service Management team is excited to invite you to the 3rd CERN Service Management Forum, which will take place on 2 March at 10.30 a.m.. During this forum:

- -Jorge and Nicole will explain tips and tricks for creating and maintaining helpful Knowledge Base articles. These articles can be used by the users of your service, by members of your team, or by the Service Desk.
- -Émilie, CERN Service Desk manager, will give a presentation on how the Service Desk works and can support your team.
- -Georgina and Katarina, from the SY Central Secretariat will explain how they are using

ServiceNow as a ticketing system to communicate with their users and the benefits of this approach compared to a shared email account (they will also address drawbacks).

Hands-on: follow Florentia in an exercise to create a report and filter that includes tickets and web form information (from record producers).

Find the event's agenda and the Zoom link on the Indico page:

https://indico.cern.ch/event/1232103/

We hope you can join us for this informative and helpful forum!

### **Traffic disruption on Route Gregory from 15 February**

Roadworks are scheduled by the SCE department on Route Gregory (between the water tower and Gate E) from Wednesday 15 February to Wednesday 15 March 2023. Reversible commuter lanes will be implemented and diversion signs put in place.

It is strongly recommended to use Route Arago as an alternative during this period.

Thank you for your understanding.

# University of Geneva conference on the accelerating expansion of the universe | 2 March

Join the audience for a theoretical physics conference at the University of Geneva on 2 March at 6.30 p.m. on the theories explaining the accelerating expansion of the universe.

In order to test Einstein's theory, theoretical physics professor Camille Bonvin will present her method for comparing the time and space distortions generated by galaxies and clusters in the universe. Einstein's general relativity predicts

that these two distortions are equal, in contrast to alternative theories of gravitation, according to which these distortions generally differ.

Uni Dufour, Rue du Général Dufour 24 2 March - 6.30 pm Free admission, no registration Event in French

## Take part in the CERN-wide Engagement Survey before 2 March

Help identify CERN's strengths and areas for improvement for the benefit of all

Make your voice heard! You have until 2 March to answer the CERN Engagement survey by clicking on the personal link sent to you by Effectory, our external partner, via e-mail.

We thank you in advance for your collaboration and look forward to your input.

### **Obituaries**

### Karel Cornelis (1955 - 2022)



Our dear colleague and friend Karel Cornelis passed away unexpectedly on 20 December 2022. After finishing his studies in physics at the University of Leuven (Belgium), Karel joined CERN in 1983 as Engineer in Charge of the SPS at the time when the machine was being operated as a proton-antiproton collider. During his career, Karel contributed greatly to the commissioning, performance development and follow-up of the SPS during its various phases as a protonantiproton collider, a LEP injector, a high-intensity fixed-target machine and an LHC injector of proton and ion beams. Karel had a profound and extensive knowledge of the machine, from beam-dynamics aspects complex engineering details of its various systems, and was

the reference whenever new beam requirements or modes of operation were discussed.

Karel was an extremely competent and rigorous physicist, but also a generous and dedicated mentor who trained generations of control room technicians, shift leaders and machine physicists and engineers, helping them to grow and take on responsibilities and always remaining available to lend a hand when needed. His positive attitude and humour have left a lasting imprint: "think like a proton: always positive!" has become the motto of the SPS operation team and is now displayed in the SPS island in the CERN Control Centre.

Karel had the rare gift of being able to explain complex phenomena with simple, but accurate models and clear examples, whether in the realm of accelerator physics and technology or of physics and engineering more generally. As an example, Karel gave a fascinating series of machine shutdown lectures covering the history of the SPS, synchrotron radiation and one of his passions, aviation, including a talk on "Air and the Airplanes that Fly in It".

He was a larger-than-life tutor, friend, reference point, expert and father figure to generations of us and has been much missed in the SPS island and beyond since his retirement in September 2019. He will be even more so now.

It's a measure of his generosity of spirit, kindness, enthusiasm and humour that we still look back on the part he played in our lives with much affection. Memories of him grabbing a pen and a piece of paper and explaining anything from beam—beam to where the latest aperture restriction was...

His colleagues and friends

### Claude Rosset (1946 – 2023)



Claude Rosset passed away suddenly on 28 January 2023.

Claude began his career at CERN in 1976, in the Experimental Physics (EP) department – more specifically, in the unit responsible for mechanical engineering for the detectors. He spent his whole career there, retiring early at the end of 2001 due to a debilitating illness.

His capacity to invent, organise and deliver made him highly sought after for the most difficult and innovative work and rapidly earned him a great reputation in his field. Throughout his long career, he devoted himself to the design and production of all kinds of magnets and coils, creating the tooling needed to get them up and running. He was one of the first to develop cables containing superconducting wires, which he used to build a solenoid for the R-108 experiment at the Intersecting Storage Rings (ISR) in 1977. It proved to be a great success.

Among the many devices designed by Claude, all of which were true works of art, it would be remiss not to mention the special magnets made for the PS and the NA4, UA6 and NA10 experiments, or the large and complex coil for the UA1 magnet, which was later adopted by the NOMAD experiment (the magnet is still in use today at the T2K experiment in Japan). Claude was also closely involved in designing the impressive magnets for the LEP experiments: OPAL, ALEPH, DELPHI and L3. His incredible willpower spurring him on in spite of his illness, he turned his attention to the magnets for the CHORUS, HARP and CAST detectors, then helped to develop and fine-tune the ATLAS experiment's muon chambers and, finally, the LHCb magnet, which would be his last project.

Claude's passion and tireless devotion were an inspiration. His former colleagues remember him as an open, friendly and fiercely determined man. He enjoyed close relationships with those who shared his passion and interests and pushed his colleagues towards excellence, both in the workshop and at the drawing board.

Our thoughts go out to his wife Michèle, who supported him through so many difficult years, and to his children, François and Frédéric, and their families.

His former colleagues

### Ombud's corner

### No, don't do anything!

My first duty as Ombud is to listen actively to the visitors who, in my office, explain the challenging situation they're facing. Listening actively to them enables me to understand the situation, measure the impact that the problem is having on them and get a sense of what their goals are. Only after summarising my understanding and checking with them that it's correct do we explore together what can be done. This depends on what their needs are and what positive outcome they hope to see.

My second most important duty is to empower my visitors to tackle their issue. I check with them what they've already tried in order to solve the problem and what results they've achieved. We discuss possible ways forward; the options that have the highest chance of success are the ones that the visitors come up with themselves. I like using the white board for that, as I've seen the power of drawing to clarify thoughts and trigger insights into possible solutions.

I can help concretely with some of the possible paths to overcome a difficult situation, all of them informal. I can contact the other party in a conflict, to convey messages and try to make dialogue possible again. I can propose mediation. I can contact a supervisor to describe a particular situation seen from the position of the supervisee, who may not feel comfortable approaching the supervisor directly. Where appropriate, I may also refer the visitor to another response channel. I can contact the Medical Service to obtain an appointment rapidly, if necessary. I can also get in touch with the relevant contact person in HR in order to discuss the situation.

These are all possible informal routes where I can act, provided that my visitors clearly give me their authorisation to do so. The Ombud will not do anything without their green light.

Agreeing to the Ombud's proposals can be highly beneficial. I can help resolve misunderstandings at an early stage. I can present an issue to a supervisor in the context of systemic trends in the Organization so that the supervisor does not feel criticised personally. I can place a problem in the

context of the CERN values and Code of Conduct. Most importantly, I can understand the situation from the other party's point of view and help dialogue and empathy to flow again.

However, of the 151 visitors who exchanged with me in 2022, less than 11% allowed me to intervene and take informal action to help solve the issue. This is less than in 2021, when 13% of my visitors gave their authorisation. So, why is it that the Ombud is so rarely given a chance to act beyond listening and exploring solutions?

My visitors put forward a variety of reasons:

In some cases, they'll share a feeling of pointlessness: "It won't help, nothing will change, I've already tried that."

In other cases, they're simply looking for another perspective on their situation or for advice.

Some junior colleagues who recently started at CERN may say, "I just want to check whether what I've experienced so far is normal here."

In other cases, their problem could be too intimate and they don't feel at ease sharing it with anyone else, even via the Ombud.

Quite often, my visitors are concerned that they're not equipped for difficult conversations. They're afraid they might have an angry outburst or burst into tears, even when I offer to facilitate the conversation.

These are some of the reasons given. However, in the majority of cases, the reason for not authorising the Ombud to intervene informally is the fear of negative consequences.

Indeed, when colleagues are in their probation period, when they're waiting for a contract extension, when they're in the process of writing their thesis, when they've applied for an LD, or when they hope to get an IC contract or a promotion, in most cases, they won't speak up freely about problems.

They fear that speaking up about an issue will have consequences on pending decisions regarding their career.

In these cases, I try to find out what the fear is about, and the answers that I get include:

"My issue is with my direct boss, who decides about my contractual situation." Indeed, the majority of issues raised (36% in 2022) are difficulties with the hierarchy. My visitors feel helpless given the other party's power.

"I'm afraid this will make my situation worse."

"I don't trust the system." This is an expression of mistrust in the overall managerial structure and/or processes of the Laboratory.

Some supervisors, who share difficulties in managing their team, don't want to share these difficulties with anyone else.

Another reason I hear is that my visitors are afraid that, by asking the Ombud to intervene, they might harm other colleagues whom they want to protect.

Let's face it, underlying all the reasons is the fear of speaking up.

Here, I would like to recall an extract from the Ombud's mandate:

"The Organization and persons working at or on behalf of CERN shall assist and cooperate with the Ombud in the performance of his/her functions. Attempted or actual retaliation against a person who contacted or cooperated with the Ombud shall not be tolerated and may result in disciplinary action."

This is also what Vincent Vuillemin, the first CERN Ombud, highlighted in an article published in June 2011, which is still very valid today.

As you see, should my visitors suffer from any kind of negative consequences because they authorised me to take informal action to resolve a dispute, I could expose a possible act of retaliation to the relevant actors.

We are not equal when dealing with problems at work; some people are better equipped to face conflict and they will find the assertiveness to discuss it with their supervisors or any other party. Others will not. They will continue to feel ill at ease at work, and this will ultimately be detrimental to their performance and their health.

So, what is needed to make our Laboratory a psychologically safe place where all contributors feel safe to speak up about issues and trust their management to help them, without the fear of negative consequences?

A lot could be done, including raising awareness of the huge benefits of increased psychological safety. But maybe the first step is for managers to invite their team members to discuss with them any issue they might face and truly listen to them. I would like to remind managers that the Ombud is also available to help them discuss the issues they face, explore solutions and — with their authorisation — take concrete steps towards informal dispute resolution.

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