CERN Bulletin

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TECHNOLOGY FOR HELPING PEOPLE

The first THE Port hackathon problem-solving workshop was held at CERN from 31 October to 2 November in the framework of the 60th anniversary celebrations. The aim of the event was to develop technological projects that can help to solve the day-to-day needs of people living in areas of the planet that experience conflicts or natural disasters.

THE Port hackathon. Credit: THE Port association

The event was dedicated to humanitarian and social topics inspired by members of non-governmental organisations. "There is plenty of room for technology to help in humanitarian fields. That's why we came up with the idea of bringing people together to work on these topics," explains Ines Knäpper, Project Manager of THE Port hackathon. "We started six months ago setting up THE Port association.* The success of the event was only possible because of the joint effort of a team of roughly twenty people. They were inspired by the aim of the hackathon and worked very hard in their free time."

There were 35 participants from 25 different countries, divided into five teams and supported by mentors also from CERN. Once selected, the participants had six weeks of preparation time in which they started working on the project their team had been assigned. "We tried to make the teams as interdisciplinary as possible putting together people with different skills. We assigned a topic to each team to bring the participants out of their comfort zone so that, along with experts, they could contribute new and fresh points of view," adds Iulia Pascu, one of the organisers.

"One of the teams developed an application started at the CERN Summer Student Webfest which detects ground elevation in order to map potential sites for refugee camps in post-war or natural disaster zones," says Knäpper. "It's vital to have reliable data on ground elevation otherwise people who have already left behind everything they had, risk losing their home again, in the event of heavy rain." UNOSAT and UNITAR are working with this team to check the accuracy of the data they gathered. They're using CERN as a "calibration tool", because of the high accuracy of the ground elevation data for the CERN site.

"Another team developed a tracking system for dogs trained to detect land mines. It heavily decreases the time needed for the operation and records the area traced by the dogs for later use (Smart dog system)," explains Tomoko Muranaka, another organiser. Another team built the Bluetooth Passport application for ambulances, which allows them to be easily identified and pass faster through the check-points in zones where conflicts are happening.

(Continued on page 2)

HELPING CERN GIVE BACK TO SOCIETY

The CERN & Society mission: 'To spread the CERN spirit of scientific curiosity for the inspiration and benefit of society.'

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A word from the DG

(Continued from page 1)

HELPING CERN GIVE BACK TO SOCIETY

Digital library schools in Africa, Arts@CERN, a beam line for schools competition and perhaps soon a dedicated biomedical research facility: CERN infrastructure and expertise have a great influence on society, and we have the potential to do much more. For that, however, we need help, and that's why we have launched the CERN & Society initiative, which this week sees the publication of a new website for those who want to understand more about how our research touches everyday life, as well as for those who wish to help CERN in this new endeavour.

Fundamental research fulfils a very human need. The quest to understand the universe we live in is as old as humanity itself, and CERN is in the vanguard of that effort today. For our scientists and engineers, pushing technology to the limit is part of their day job, and in doing so they have created an unrivalled set of facilities for physics research, a pool of expertise that you'll find nowhere else on Earth and a potential for society that we are only just beginning to exploit.

CERN & Society was launched some three years ago to realise that potential. It identifies projects, or potential projects, through which CERN can benefit society by building capacity, promoting scientific culture, or applying the results of our innovation to tackle immediate societal needs. All these things are vital for an organisation like CERN. They are part of our moral obligation, but they go beyond our core remit of fundamental research. We therefore needed to look beyond our traditional funding sources for support. To this end, we have established the CERN & Society Foundation, backed up by a development office and a set of ethical guidelines for our fundraising activity. Since its creation earlier this year, the Foundation has received funds from a range of organisations and individuals that are already helping us leverage the impact of our work to the benefit of society through a range of projects. The CERN & Society website launched this week outlines those projects, and allows anyone wishing to make a contribution to do so.

CERN has always worked hard to ensure that our innovation reaches society. The CERN & Society initiative aims to take that to the next level.

Rolf Heuer

TECHNOLOGY FOR HELPING PEOPLE

More information about the workshop and its results can be found at **theport.ch.**

Robin M. Coupland, a surgeon and medical advisor to the International Committee of the Red Cross, in the final presentation on Sunday, lauded the initiative: "I'd like to congratulate you because you will make a big difference to a lot of people."

**THE Port is a Swiss association under Article 60 of the Code Civil Suisse.*

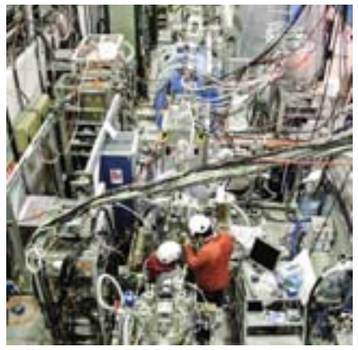
Rosaria Marraffino

LS1 REPORT: A BRAND NEW SET-UP FOR ASACUSA-CUSP

ASACUSA is running for the first time with a totally new set-up. Three new vital instruments have been designed, produced and installed during LS1 in addition to several other major modifications. The collaboration is now ready to perform the first high-precision measurement of the hyperfine structure of antihydrogen – a study that aims at comparing the inner properties of matter and antimatter.

The ASACUSA-CUSP collaboration comprises about 30 scientists from various institutes in Europe and Japan. Because of the Japanese contribution, the experiment is often known by its Japanese pronunciation, the experiment's logo is in Japanese, and the logbook uses Japanese time!

This year, for the first time, the experiment is running with a completely new set-up, which now includes a new superconducting double cusp magnet, a new tracking detector and a new final antihydrogen detector. "The magnet is the heart of the ASACUSA experiment," explains Yasunori Yamazaki. "It allows us to create a spin-polarised beam of antihydrogen, which is then studied in flight using microwave radiation. Our young colleagues have played vital roles in designing, developing and commissioning these new set-ups in parallel during LS1."



The ASACUSA set-up.

ASACUSA aims to measure a property of antihydrogen called the "hyperfine structure" precisely and compare it to the well-known value for hydrogen in order to detect any tiny difference. Since this measurement is very sensitive to magnetic fields, ASACUSA aims to create a beam of antihydrogen atoms that can fly to a region where no disturbing fields are present.

Downstream, along the bore of the "double cusp" magnet, a new semi-cylindrical tracker has been installed to extract detailed information on the formation processes of antihydrogen atoms. "The tracker is a precision three-dimensional annihilation Micromegas detector that implements very thin flexible insulator films on which metallic patterns are printed, immersed in a gas mixture to follow the particle trajectory precisely," explains Yasunori Yamazaki. "This is the first time a Micromegas detector has been used in a configuration with such a small curvature of ~100 mm."

A third addition to the previous set-up is the final antihydrogen detection system comprising a BGO crystal in a vacuum and eight reed-shaped plastic scintillators surrounding it. This is needed to allow the experiment to distinguish accurately between antihydrogen particles coming from the beam (which are therefore to be measured and studied) and spurious particles coming from unshielded cosmic rays and from antiproton annihilations upstream of the antihydrogen detector primarily in the cusp magnet.

"Thanks to the new set-up, we hope to be able to measure precisely for the first time the hyperfine structure of the antihydrogen already during this run," says Yasunori Yamazaki. The experiment has completed the commissioning phase and will be taking data for another two weeks. The beam at the Antiproton Decelerator, which is feeding ASACUSA, will then be stopped to allow construction work in preparation for ELENA. The data-taking period for ASACUSA is expected to restart in June 2015.

Antonella Del Rosso

Meanwhile, elsewhere...

Powering tests have begun in Sectors 8-1 and 1-2, although they remain on hold in Sector 6-7 while maintenance of the cooling and ventilation systems at Point 6 is ongoing. ELQA tests are being carried out in Sector 5-6.

CSCM tests have been completed in Sectors 2-3 and 7-8, where cool down to nominal temperature (1.9 K) has now begun. These same tests have begun in Sector 4-5. This sector saw difficulties earlier this autumn when a leaky water-cooled cable was discovered at Point 5. This issue has since been resolved, with the cable replaced and re-tested.

Meanwhile, the Operations team has been training the magnets in Sector 6-7 (use the QR code to see the footage). The first training quench in one of the dipole circuits was performed on 31 October and a current of 9779 Amperes was reached, corresponding to a magnetic field of 6.9 Tesla needed to guide beams around at 5.8 TeV of energy (the nominal energy for Run 2 being 6.5 TeV).

Overall, the machine is well into the winter season, with the average temperature below 10K.

See the video:

The footage includes comments by LHC Engineer-in-charge, Kajetan Fuchsberger, and LHC Operations team leader, Mirko Pojer.

ALICE OPENS ITS NEW NERVE CENTRE

Twenty-nine fully equipped and ergonomic workstations, one meeting area and 11 large format screens in a completely refurbished room: the ALICE Run Control Centre (ARC) implements the best and newest solutions for its shift workers and expert operators, including access for persons with reduced mobility and very soon a magic window for Point 2 visitors.

The ALICE Run Control Centre.

"Our initial intention was just to optimise the old layout," says Federico Ronchetti from *Laboratori Nazionali di Frascati* (Italy), a CERN scientific associate currently appointed as ALICE Run Coordinator and person in charge of the ALICE Consolidation Task Force. "However, during the review process, we carried out a study of all the existing control rooms at CERN and became aware we needed a radical change. Hence we started planning a complete redesign of the workspace." Designed and equipped over many years, the old ALICE control room did not have enough space to fit all the shift workers and detector experts in one single environment. In addition, the room suffered from the presence of large structural pillars, internal walls and a corridor that fragmented the precious usable space. Such a layout did not help information exchange among the operators, needed for a flawless quick response to critical issues.

Inaugurated last July, the new room can now very comfortably fit the four main operators plus the 19 detector experts and the Run Coordination team who will control and monitor 24/7 all the sub-systems of the ALICE detector and its interface with the LHC accelerator. "The detector workstations are not initially assigned to any defined system," explains Ronchetti. "Following the approach seen in the main CERN Control Centre, a common software interface allows all the

operators to connect to their sub-detector from any computer in the room." A small but functional meeting area has been added within the room's open space so that the coordinators can get together and quickly react to unplanned run configuration changes. "The shift leader and Run Coordinators now have more central and dedicated workspaces compared to the old layout, allowing them to catch any change in conditions quickly during the data taking operations," adds Ronchetti.

The new ARC also includes a variable-intensity LED light system, which combines well with the natural light coming in through the two side windows left uncovered by the large-size TV array, and a new access ramp for persons with reduced mobility, while three large windows have been opened along the hangar corridor to provide visitors with a good view of the room. One of these will become a "magic window" to be used by guides at Point 2. "The magic window will turn opaque on demand," explains Ronchetti. "In this way, the window transforms into a super-size touch screen for the guides to run interactive presentations. Once done, we can toggle the window back to the normal glass transparency and our visitors will enjoy a "shift leader's" view of our Run Control Centre."

A full collection of photographs showing the transition from the old to the new control room is available on the Facebook public page of the Run Coordination project (**www.facebook.com/alice.run.control**). Posts targeting the general public concerning ALICE highlights, the experiment's day-to-day activity and the progress of data-taking operations are periodically published, so do not hesitate to visit and "like" it!

CERN & SOCIETY LAUNCHES DONATION PORTAL

The CERN & Society programme brings together projects in the areas of education and outreach, innovation and knowledge exchange, and culture and arts, that spread the CERN spirit of scientific curiosity for the inspiration and benefit of society. Today, CERN & Society is launching its "giving" website – a portal to allow donors to contribute to various projects and forge new relationships with CERN.

"The CERN & Society initiative in its embryonic form began almost three years ago, with the feeling that the laboratory could play a bigger role for the benefit of society," says Matteo Castoldi, Head of the CERN Development Office, who, with his team, is seeking supporters and ambassadors for the CERN & Society initiative. "The concept is not completely new – in some sense it is embedded in CERN's DNA, as the laboratory helps society by creating knowledge and new technologies – but we would like to do more."

The CERN & Society programme is funded primarily by individuals, trusts, organisations and commercial companies around the world. They give through the CERN & Society Foundation, a public-benefit foundation based in Switzerland, which follows the CERN Policy for Ethical Fundraising. "The Foundation allows a fundraising structure that is otherwise not possible for CERN, and creates a clear separation between CERN research and the CERN & Society activities," says Castoldi. Through the foundation, the public can donate to the various projects that fall outside CERN's core remit of fundamental science, which is paid for by contributions from the Organization's 21 member states.

To be eligible for the initiative, each project must have a clear and direct impact on society. Current examples include the beam line for schools project, which makes a working beam line available for use by high-school students; the OPENMED biomedical facility for cancer treatment; and the Collide@CERN residency programme, which sponsors artists to visit CERN to seek creative inspiration. "With the help of donors and supporters we can really make a change and bring direct benefits from CERN to society," says Castoldi.

If you would like to know more about CERN & Society projects or donate to a project, check out: **giving.web.cern.ch/content/ways-give**. And if you have got a project at CERN that you think would be eligible for help from the CERN & Society Foundation, contact the Development Office: **development.office@cern.ch**.

Cian O'Luanaigh

GENDER: AN ISSUE FOR SCIENCE?

Last week, CERN was invited to participate in the United Nations Economic Commission for Europe (UNECE) regional review meeting on how to accelerate gender equality in the European region. Representatives from CERN joined the conversation and proposed concrete examples of what needs to happen to enable more active participation by women in science and in decision-making positions.

In September 1995, around 10,000 participants, 30,000 activists, and government representatives from 189 countries all over the world met in Beijing for the Fourth World Conference on Women. The outcome was the Beijing Declaration and Platform for Action. Almost 20 years later, this document is considered the most progressive declaration for the advancement of women's rights. In March 2015, the United Nations Commission on the Status of Women will carry out a review and appraisal of the implementation of the declaration with a global summit at United Nations Headquarters, New York.

In view of this meeting, the United Nations Economic Commission for Europe (UNECE) and UN Women organised a regional review meeting on the progress made and challenges met in the implementation of the Beijing declaration in the European region. "CERN was invited to join this high-level meeting to share with country delegates and NGO representatives what diversity means in our Organization, and to talk about best practices and concrete initiatives," says Geneviève Guinot, CERN Diversity Programme leader. "It was also an opportunity to learn more about the progress of and setbacks to gender equality in the European region over the last twenty years."

In addition to being a prestigious knowledge-exchange opportunity, CERN values its participation in the meeting as part of its relations with the United Nations. "It was important for CERN, in its capacity of Observer to the UN General Assembly, to participate in this event on gender equality and empowerment of women and girls, which is a stand-alone Sustainable Development Goal (SDG) in the post-2015 development agenda that the UN will finalise in 2015," explains Maurizio Bona, who is in charge of CERN's relations with international organisations. "CERN will monitor, in the coming months, the evolution of the process for the definition of the whole set of SDGs and associated targets, and provide our input as needed."

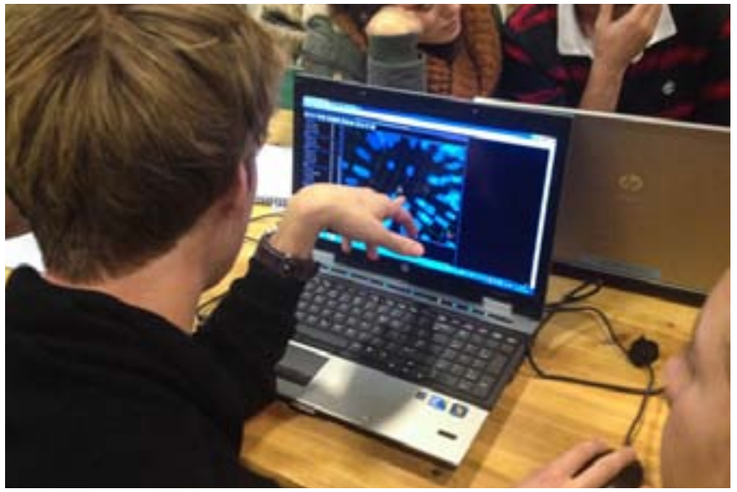
During the two-day meeting, country delegates presented their status reports and had animated discussions on the following key topics in dedicated sessions: long-term trends in gender equality and the empowerment of women and girls in the ECE region, economic and social policies, women's representation in policy and decision-making, prevention of violence against women and girls, and governance and justice.

Laurette Ponce, applied physicist from CERN's Beams department, in charge of operations at the LHC, joined the session on "The way forward: gender equality for inclusive and sustainable societies" with a speech and a panel discussion. The ECE Executive Secretary, Christian Friis Bach of Denmark, chaired this session. Ponce presented her story as an eloquent example of how societal conditions - such as access to education and family support - together with favorable working environments, like CERN, can encourage, enable and empower women in science and technology. "We talked about what we put in place to make working in science possible, such as family-friendly and work/life balance support structures, as well as an employment opportunity specifically tailored to the needs of people returning to the workplace after a career break, and other measures," concludes Guinot. "For me it is important to be aware of the challenges that many women still have to deal with in many European countries in order to compare and improve our policies. We have to keep on working to provide, maintain and develop a work environment of mutual respect and inclusiveness, for all dimensions of diversity."

Marina Gampietro

CMS LAUNCHES NEW EDUCATIONAL TOOLS

On 5 and 11 November, almost 90 pupils from the Fermi scientific high school in Livorno, Italy, took part in two Masterclass sessions organised by CMS.



CMS Masterclass participants.

The pupils took over a hall at CERN for an afternoon to test a new software tool called CIMA (CMS Instrument for Masterclass Analysis) for the first time. The software simplifies the process of recording results and reduces the number of steps required to enter data. During the exercise, each group of pupils had to analyse about a hundred events from the LHC. For each event, the budding physicists determined whether what they saw was a candidate W boson, Z boson or Higgs boson, identified the decay mode and entered key data. At the end of the analysis, they used the results to reconstruct a mass diagram. CIMA was developed by a team of scientists from the University of Aachen, Germany, the University of Notre-Dame, United States, and CERN.

CMS has also added yet another educational tool to its already large collection with the introduction in recent weeks of virtual tours. Several hundred students, from Egypt, Pakistan and Iran among others, have already been on one of these virtual tours, during which they were able to view the detector from every angle. With just a few weeks to go before the end of "real" underground tours, virtual tours from the control room or the service caverns will mean that CMS's doors remain open, virtually at least, to schools and the general public.

Corinne Pralavorio

AN EXERCISE IN SAFETY

On 14 October, a large-scale evacuation exercise took place. Ten buildings (1-2-3-4-50-51-52-53-58-304), with a total capacity of almost 1900 people, were successfully evacuated.

The exercise, which for the first time involved all of the central buildings on the Meyrin site, was organised by the PH Department in collaboration with the HSE Unit, the GS Department and the safety officers of all the various departments involved. On the day, around 400 people were evacuated in just a few minutes. "It took us three months to prepare for the exercise," explains Niels Dupont, safety officer for the PH Department, who organised the exercise. "Around 100 people: safety officers, firefighters, emergency guides, observers, representatives from the control centre, etc. attended four preparatory meetings and five training sessions. We also purchased equipment such as evacuation chairs, high-visibility vests and signs to mark the evacuation route."

The decision to carry out an evacuation exercise for this group of buildings was taken following an evaluation of fire hazards in 2012, which highlighted in particular hazards associated with the interconnected layout of the buildings, which could exacerbate the propagation of smoke in the event of fire and make it difficult for people to find their way around in an emergency.

CERN Bulletin

MYSTERY PHOTOS: CHALLENGE NO. 3!

In recent weeks, we have been asking Bulletin readers to help us identify mystery pictures from the CERN archive.

Over 23,000 pictures have now been uploaded, more than 16,000 of which have been matched to some 1,100 albums. We have checked over 500 of these albums to make sure they contain the right pictures, improving and translating their titles as we go along. But we still need help in getting picture-level information.

The public response has kept up at a steady pace and we are still receiving many useful e-mails every day from all around the world (if you have sent us an e-mail, we promise to answer it as soon as possible). Especially helpful contributions have come from the many CERN retirees contacting us to share their memories, especially in terms of recognising individual people. But we are also very glad of the contributions from people who have experience working in similar technical fields who recognise pieces of equipment, or even people with no connection to CERN at all but who have even the slightest inkling of what the pictures show.

We would again like to express our sincerest thanks to everyone who has been getting in touch.

Here are a few more pictures which we have confidently identified since the last article:

And some more tricky ones:

If you recognise any of these pictures, please get in touch.

Thanks to recent additional efforts by the CERN Document Server team, the photo archive now has a comments feature. Logged-in users on the CERN website (people who do not have CERN accounts can create a lightweight account for free: **https://account.cern.ch/account/Externals/)** can now submit their suggestions directly to the system.

For any other comments about the project, please get in touch by e-mail on **photo.archive@cern.ch**.

This digitisation project is a collaboration between the Collaboration and Information Services Group (IT-CIS) and the Scientific Information Service (GS-SIS).

Alex Brown, Jens Vigen

An (accidental) caption contest...

While surfing through the many sites that picked up the story about the mystery photos, we found a large number of comments. Some of them helped the archivists in their quest, but others were just for fun… Here are some of our favourites:

The last two comments reference (respectively) "The Treachery of Images" by Belgian surrealist artist René Magritte and the 1985 movie Back to the Future's DeLorean time machine.

Rosaria Marraffino

Computer Security

GENEVA, SUISSE ROMANDE AND BEYOND

To ensure good computer security, it is essential for us to keep in close contact and collaboration with a multitude of official and unofficial, national and international bodies, agencies, associations and organisations in order to discuss best practices, to learn about the most recent (and, at times, still unpublished) vulnerabilities, and to handle jointly any security incident. A network of peers - in particular a network of trusted peers - can provide important intelligence about new vulnerabilities or ongoing attacks much earlier than information published in the media. In this article, we would like to introduce a few of the official peers we usually deal with.*

Directly relevant for CERN are SWITCH, our partner for networking in Switzerland, and our contacts within the WLCG, i.e. the European Grid Infrastructure (EGI), and the U.S. Open Science Grid (OSG). All three are essential partners when discussing security implementations and resolving security incidents. SWITCH, in particular, runs twice yearly a dedicated security workshop for Swiss universities and labs discussing a multitude of aspects surrounding "security". SWITCH also provides monthly reports, which are available via our public website: **https://cern.ch/security/reports/en/switch_reports.shtml**.

Outside this academic circle is the "Geneva Information Security Special Interest Group" ("GISSIG") which is attended by chief information security officers, computer security officers and IT security experts from different international organisations based in Geneva. Generally, the GISSIG coordinates security implementations across UN organisations, but also discusses different security solutions and threat scenarios relevant to all members. The current members are (in alphabetical order): CERN, the Global Fund, the ILO, the International Committee and the International Federation of the Red Cross and Red Crescent, the Office of the UN High Commissioner for Human Rights, the IOM, the ITU, the UN Offices at Geneva, the UNHCR, the UN International Computing Centre, WIPO, the WHO and the WTO.

In addition to these dedicated, closed forums, three distinct associations provide more open, public forums for organisations, companies, enterprises and individuals interested in computer security, privacy and data protection. All three schedule regular evening sessions where different security aspects are presented and discussed. The GRIFES sessions happen 2-3 times a year and are usually open to the general public once you've registered with them. The CLUSIS sessions are open to all its members and the CERN Computer Security Team holds an enterprise membership (for CLUSIS) so that all CERN people can freely attend. It provides a wide programme, with many presentations scheduled almost every other month. The annual membership fee for the Swiss Romande chapter of the International Information Systems Security Certification Consortium ((ISC)^2) is around 20 CHF and enables you to attend their meetings. All of these meetings are open to any interested parties and usually take place in the evenings - so feel free to attend! Please refer to their websites for their upcoming programmes. You might also find a few presentations and training sessions (**https://cern.ch/security/reports/enpresentations.shtml**) given by the CERN Computer Security Team to these forums.

Finally, there is a rather loose collaboration between organisations, labs and institutes concerned about the cyber-security of control systems deployed for their experiments and accelerators ("CS2HEP"). This community meets every other year just prior to the ICALEPCS conference.

**Of course, in parallel to these "official" partners, every security expert has built up during his/her career a network of unofficial peers whom he/she trusts and by whom he/she is trusted. However, those peers usually prefer to remain unnamed…*

Check out our website **https://security.web.cern.ch** for further information, answers to your questions and help, or e-mail **Computer.Security@cern.ch**

If you want to learn more about computer security incidents and issues at CERN, just follow our Monthly Report: **https://cern.ch/security/reports/fr/monthly-reports.shtml**

EMILIO PICASSO (1927-2014)

It was with great regret that all who knew and had worked with Emilio received the sad news of his death on 12 October. While being deeply interested in fundamental physics, he had a particular gift for leadership: transmitting enthusiasm, being open for discussion, but also capable of making hard decisions when necessary. Emilio's joviality, loyalty and friendliness with staff at all levels made him a colleague and friend appreciated by everybody.

Born in Genoa, Emilio read physics at the city's university, where he received his doctorate in 1956 and stayed until he was offered a position as Research Associate at CERN in 1964. By then he had already begun to work with the team at CERN that was designing and constructing the world's first muon storage ring to measure the "g-2" value of the muon. He obtained a staff contract at CERN in 1966 and later, as group leader, went on to mastermind the construction of a new, larger muon storage ring for CERN's third g-2 experiment. This ultimately allowed the measurement of g-2 to a precision of 7.3 parts per million. From July 1972 to December 1977 he was Division Leader of the Nuclear Physics (later Experimental Physics) Division and deputy to the Director of the Physics I Department.

After finishing the third g-2 experiment in 1978, Emilio developed an interest in detecting gravitational waves using superconducting RF cavities, and became an expert in these devices. The result was that in Spring 1979, he was made responsible for coordinating the development of superconducting RF cavities that had started in several European laboratories (in Genoa, Karlsruhe, Orsay and Wuppertal, as well as at CERN) in view of the possible construction of the Large Electron-Positron collider (LEP). Then in June 1980 he was nominated LEP Project Leader, in charge of all the preparatory work that was already under way. When the Council formally agreed on the construction of LEP in December 1981, he was appointed LEP Project Director, a position that fit extremely well with all of his personal qualities. The project was successfully finished according to plan in July 1989.

Emilio retired in 1992 but this did not end his love for physics problems. He moved to Pisa as director of the *Scuola Normale Superiore*, where he had been named professor a decade earlier. There he focused once again on his interest in the detection of gravitational waves, which had continued even while he was a director at CERN, when he supported the installation of the EXPLORER gravitational-wave detector at CERN in 1984. In Pisa, he played a key role in supporting the approval of Virgo - the laser-based gravitational-wave detector adopted by INFN and CNRS, which is currently running near Cascina, Pisa.

Emilio had a unique ability to bring out the best in people, to inspire them and to bring them together in warm fellowship. He radiated warmth and welcome. Now, very sadly, this bright light is dimmed: but the afterglow remains and will be with us for many years.

His friends and former colleagues

Official news

CHIS - INFORMATION CONCERNING THE HEALTH INSURANCE OF FRONTALIER WORKERS WHO ARE FAMILY MEMBERS OF A CHIS MAIN MEMBER

We recently informed you that the Organization was still in discussions with the Host State authorities to clarify the situation regarding the health insurance of frontalier workers who are family members (as defined in the Staff Rules and Regulations) of a CHIS main member, and that we were hoping to arrive at a solution soon.

After extensive exchanges, we finally obtained a response a few days ago from the Swiss authorities, with which we are fully satisfied and which we can summarise as follows:

1) *Frontalier* workers who are currently using the CHIS as their basic health insurance can continue to do so.

2) Family members who become *frontalier* workers, or those who have not yet exercised their "right to choose" *(droit d'option)* can opt to use the CHIS as their basic health insurance. To this end, they must complete the form regarding the health insurance of *frontaliers,* ticking the LAMal box and submitting their certificate of CHIS membership (available from UNIQA).

3) For family members who joined the LAMal system since June 2014, CERN is in contact with the Swiss authorities and the Geneva Health Insurance Service with a view to securing an exceptional arrangement allowing them to leave the LAMal system and use the CHIS as their basic health insurance.

4) People who exercised their "right to choose" and opted into the French Sécurité sociale or the Swiss LAMal system before June 2014 can no longer change, as the decision is irreversible. As family members, however, they remain beneficiaries of the CHIS, which then serves as their complementary insurance.

5) If a *frontalier* family member uses the CHIS as his or her basic health insurance and the main member concerned ceases to be a member of the CHIS or the relationship between the two ends (divorce or dissolution of a civil partnership), the frontalier must join LAMal.

We hope that this information satisfies your expectations and concerns. We would like to thank the Host State authorities for their help in clarifying these highly complex issues.

We remind you that staff members, fellows and beneficiaries of the CERN Pension Fund must declare the professional situation and health insurance cover of their spouse or partner, as well as any changes in this regard, pursuant to Article III 6.01 of the CHIS Rules. In addition, in cases where a spouse or partner wishes to use the CHIS as his or her basic insurance and receives income from a professional activity or a retirement pension, the main member must pay a supplementary contribution based on the income of the spouse or partner, in accordance with Article III 5.07 of the CHIS Rules. For more information, see **www.cern.ch/chis/DCSF.asp.**

The CHIS team is on hand to answer any questions you may have on this subject, which you can submit to **Chis.Info@cern.ch**. The above information, as well as the Note Verbale from the Permanent Mission of Switzerland, is available in the frontaliers section of the CHIS website: **www.cern.ch/chis/frontaliers.asp**

Take note

TREE FELLING 2014

With a view to creating new landscapes and making its population of trees safer and healthier, this winter CERN will complete the tree-felling campaign started in 2010.

Tree felling will take place between 15 and 22 November on the Swiss part of the Meyrin site.

This work is being carried out above all for safety reasons. The trees to be cut down are at risk of falling as they are too old and too tall to withstand the wind. In addition, the roots of poplar trees are very powerful and spread widely, potentially damaging underground networks, pavements and roadways.

Compensatory tree planting campaigns will take place in the future, subject to the availability of funding, with the aim of creating coherent landscapes while also respecting the functional constraints of the site. These matters are being considered in close collaboration with the Geneva nature and countryside directorate (*Direction générale de la nature et du paysage*, DGNP).

GS-SE Group

CLOSURE OF MICROCOSM FOR REFURBISHMENT

Since 1994, the Microcosm exhibition has given the opportunity to visitors of all ages and backgrounds to have a first glimpse into the secrets of physics.

To ensure that Microcosm can continue fulfilling its educational aims at the same level of quality for many years to come, it is closing for renovation work on 8 December 2014 and is expected to reopen during Summer 2015.

During the closure, the "Fun with Physics" workshop will not take place, but the Universe of Particles exhibition in the Globe and the Passport to the Big Bang circuit will remain accessible to the public, free of charge and with no need to book in advance.

Guided tours of CERN are also available (advance booking required via: **http://outreach.web.cern.ch/outreach/visites**).

UPCOMING RENOVATIONS IN BUILDING 63

***La Poste* will close its doors in Building 63 on Friday, 28 November. It moves to Building 510 and where it will open on 1 December.**

UNIQA will close its HelpDesk in Building 63 on Wednesday, 26 November and will re-open the next day in Building 510.

La Poste and UNIQA are expected to return to their renovated office space between April and May 2015.

2015 LATIN AMERICAN SCHOOL OF HIGH-ENERGY PHYSICS | IBARRA, ECUADOR | 4 - 17 MARCH 2015

We would like to draw your attention to the 2015 Latin-American School of High-Energy Physics, to be held in Ibarra, Ecuador from 4 to 17 March 2015.

PLEASE NOTE THAT THE DEADLINE FOR APPLICATIONS IS 21 NOVEMBER 2014.

The lectures will cover a broad range of HEP topics at a level suitable for students working towards a PhD in experimental particle physics. Note that financial support may be available for Latin American students attending the School. Although the School is targeted particularly at students from Latin American countries, it is open to self-funding students from other regions.

More details: **http://physicschool.web.cern.ch/PhysicSchool/CLASHEP/CLASHEP2015**

FRANCE @ CERN | COME AND MEET 37 FRENCH COMPANIES AT THE 2014 "FRANCE @ CERN" EVENT | 1-3 DECEMBER

The 13th "France @ CERN" event will take place from 1 December to 3 December 2014. Thanks to Ubifrance, the French agency for international business development, 37 French firms will have the opportunity to showcase their know-how at CERN.

These companies are looking forward to meeting you during the B2B sessions which will be held on Tuesday, 2 December (afternoon) and on Wednesday, 3 December (afternoon) in buildings 500 and 61 or at your convenience in your own office. The fair's opening ceremony will take place on Tuesday, 2 December (morning) in the Council Chamber in the presence of Rolf Heuer, Director-General of CERN and Nicolas Niemtchinow, Ambassador, Permanent Representative of France to the United Nations in Geneva and to international organisations in Switzerland.

For more information about the event and the 37 participating French firms, please visit: **www.la-france-au-cern.com/**

Training

SAFETY TRAINING: PLACES AVAILABLE IN NOVEMBER AND DECEMBER 2014

Places are available in the forthcoming Safety courses. For updates and registrations, please refer to the Safety Training Catalogue: cta.cern.ch.

Safety Training, HSE Unit
safety-training@cern.ch

Seminars

FRIDAY NOVEMBER 21, 2014

11:00 TH Cosmo **Coffee EPFL/CERN/UNIGE Discussion Sessions**
14:00 **Particle and Astro-Particle Physics Seminars TBA** TH Conference Room

SUNDAY NOVEMBER 23, 2014

14:00 **CERN Accelerator School Plasma Wake Acceleration 2014** Council Chamber

MONDAY NOVEMBER 24, 2014

15:30 **Computing Seminar Growth, Management and Renewal in Long-Lived Codebases** IT Amphitheatre

TUESDAY NOVEMBER 25, 2014

14:00 **TH String Theory Seminar TBA** TH Conference Room

WEDNESDAY NOVEMBER 26, 2014

11:30 **TH Cosmo Coffee TBA** TH common room
14:00 **TH Theoretical Seminar TBA** TH Conference Room

THURSDAY NOVEMBER 27, 2014

11:00 **Collider Cross Talk H->WW from ATLAS and CMS**

TUESDAY DECEMBER 02, 2014

08:30 **Induction Sessions INDUCTION PROGRAMME - 2nd Part** IT Amphitheatre
11:00 **Academic Training Lecture Regular Programme Introduction to Cryptography and the Bitcoin Protocol (1/2)** Salle Anderson
14:00 **TH String Theory Seminar TBA**