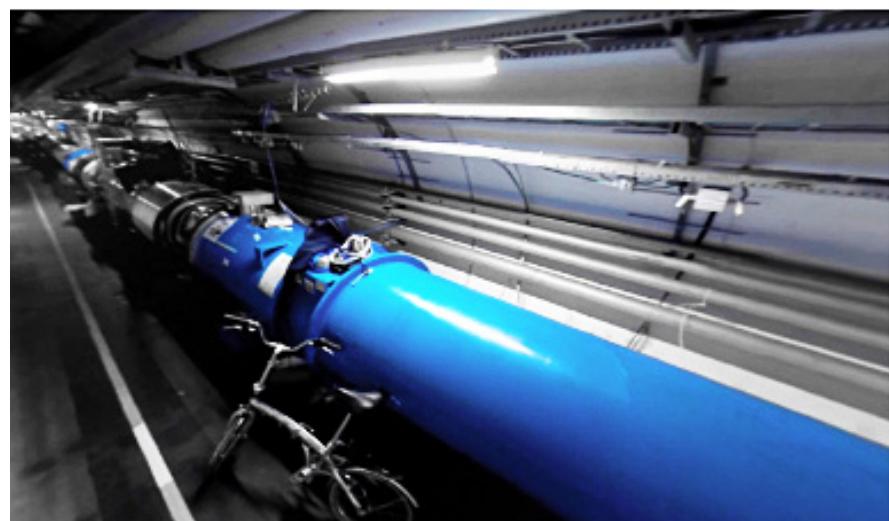


WHEN A PICTURE IS WORTH A THOUSAND MAPS

Your first time underground? Can't find the element you're looking for? Even when equipped with a good map and a guide, it can be tough to find your way around the CERN accelerator complex. Luckily, CERN 360° is here to help.



Back in 2010, while providing radiation protection support to engineers on the ground, CERN's Timothée Schmittler came to a realisation: "I noticed that a lot of time was being lost while people got their bearings," he explains. "Most didn't immediately know where to go or what to look out for – especially the technicians from external companies. So when I saw my first adjustable, 360° video (see box), I immediately saw its potential: people could learn the machine and the tunnels before they go underground, reducing their presence in the tunnel to a minimum."

And so the CERN 360° project was born. Armed with the strong support of the radiation protection group of the HSE unit, Schmittler set out to take high definition, panoramic views of the entire accelerator complex and its experiments. These videos can provide technicians and engineers with detailed views to help guide their activities when time in the tunnel is at a premium. "Immersive videos will also contribute to limiting the doses received by workers in accordance with CERN's ALARA (As Low As Reasonably Achievable) approach, which aims at optimising doses. In addition, they will



USA LAYS OUT STRATEGIC VISION FOR PARTICLE PHYSICS

Last week saw the publication of the latest P5 report in the United States. Shorthand for Particle Physics Project Prioritisation Panel, the P5 report is the US equivalent of the European Strategy update that was published last year, and it's good to see that the two reports present a common vision of the direction our field should take over the coming years.

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A word from the DG

USA LAYS OUT STRATEGIC VISION FOR PARTICLE PHYSICS

P5 was charged with developing a 10-year plan for US particle physics, identifying compelling scientific opportunities. Its approach was similar to the European one, based on a broad consultation among the particle physics community.

For the energy frontier, the report is clear. The LHC will be the focus for the US particle physics community for the immediate and short-term future. The report goes on to lay out a bold vision for development of a unique world-class neutrino programme in the US, with the long-term focus being a reformulated Long Baseline Neutrino Facility (LBNF) hosted at Fermilab. This is a very positive development for the field globally, and it chimes well with the European Strategy, which recommends that: "Europe should explore the possibility of major participation in

leading long-baseline neutrino projects in the US and Japan". The P5 report's commitment to LBNF allows us to put that recommendation into action, and we'll be taking a proposal to support coordinated European participation in LBNF to the June meeting of Council.

Throughout the P5 report, there are points of contact with the European strategy, allowing us to develop a joint approach to the full exploitation of the LHC's potential, and to look beyond the LHC to possible future colliders. Like the European Strategy, this includes support for both linear and circular options, and therefore opens the door to a truly global strategy that has the capacity to build strong projects in all regions into the long term. The synergy between the reports also allows us to progress together as

we master the opportunities offered by astroparticle physics.

Of course, we should not be surprised that Europe and the US share a common vision for the development of particle physics. We are all part of one global community, and our long-term planning processes take into account the views of particle physicists from all over the world. In this way, the US and Asia contribute to the European planning process, Europe and Asia give input to the P5 report, and Europe and the US are invited to take part in Asia's planning process. This level of global coordination is good for particle physics. It shows the maturity of the field, and our global commitment to advancing the frontiers of human knowledge together.

Rolf Heuer

WHEN A PICTURE IS WORTH A THOUSAND MAPS

also support the ALARA approach during the planning phase of works in radiation areas," adds Doris Forkel-Wirth, radiation protection group leader.

While raising awareness about this initiative has been a slow going, the overall response has been positive. What started as a small project driven by a single individual now involves not only the radiation protection group of the HSE unit, but also people from DG-CO and EN-MEF. Among them is Katy Foraz, LS1 activities coordinator who was one of the first to support the initiative of the radiation protection group: "These videos will be very useful for preparing and training for select underground jobs," she explains. "As LS1 comes to an end and access to the tunnel is prohibited, they will become even more invaluable when planning works for short shutdowns and emergency interventions."

This year, with greater support, the CERN 360° team has been filming the accelerator complex in earnest, before the machines close up for run 2. Once complete, there is still much in store for the CERN 360° project: "We hope to further improve the videos by using a custom stabiliser, currently being developed by the EN department," says Schmittler. "We would also love to link the videos to the GIS portal and layout database, so that people

can type in the name of a piece of equipment and not only find the location, but also a 360° view of it!" And, of course, the videos could be excellent outreach tools, giving a virtual visit of different zones while the machine is in operation.

With so many ideas on the table, watch this space for new and exciting developments from the CERN 360° team!

Full immersion

Far from your typical 360° panorama, these videos fully immerse you into an environment where you can change viewing planes and angles with a simple click. But don't take my word for it, find out for yourselves! The CERN 360° team has put together a "promo" exploring the accelerator chain from the CERN Control Centre to the CMS experiment. To take the tour yourself, visit <https://promoproject360.web.cern.ch/PromoProject360/> (CERN NICE login required).

Katarina Anthony

(Continued from page 1)

(Continued from page 1)

LS1 REPORT: NEARING THE FINISH LINE

The LS1 team popped the champagne on Tuesday 27 May, celebrating the completion of the consolidation of the splices in the framework of the SMACC project.



A technician works on one of the final shunts during LS1.

"It has been a long journey into the heart of the LHC, tackling over 27,000 shunts*," says Luca Bottura, TE-MSC Group leader. "We are happy that the final train has, at last, reached its rest station, and look forward to sending it on many new adventures," confirm Frédéric

Savary, TE-MSC Large Magnet Facility Section leader, and Jean-Philippe Tock, SMACC Project leader.

Also in the LHC, pressure tests in Sector 1-2 - the third sector to be tackled - are almost

complete. The temperature in Sector 6-7 is around 100K and it will be accessible again from next week.

As for the SPS, all the LSS1 beam elements excluding one monitor are back in position. Vacuum teams are now working hard in order to be ready on time; they will have six weeks before access to the SPS ends.

Elsewhere in the accelerator complex, hardware commissioning for the PS was completed on Thursday 22 May and the machine was handed over to OP for cold checks on Friday 23 May. Cold checks are likewise under way in the PS Booster. Work is also going well in the AD, where RF commissioning has begun, and in LEIR, where hardware commissioning is in progress.

*For more information about this activity, read the CERN Bulletin article: "A train for the bus(bars)".

Katarina Anthony

10,170 FLAWLESS WELDS

The welding of tubes containing the principal current-carrying busbars in the LHC magnets was one of the main activities of the SMACC project. After a year of preparation and another of intense activity in the tunnel, the last weld was completed on Wednesday 14 May. Over 10,170 welds have been inspected and not a single fault has been found.

Each of the eight sectors of the LHC contains around 210 interconnects between the superconducting magnets. Consolidating these interconnections was the SMACC project's primary objective.

One of the last jobs before closing the interconnects is the welding of the M lines: each has a 104 mm diameter and a radial clearance of just 45 mm. In total: 10,170 welds carried out in a single year of activities. A true challenge, which was carried out by a team of 30 highly specialised welders, working under the supervision of Said Atieh, a member of the MME Group in the EN Department. "The team consisted of

welders, technicians and engineers from various CERN Groups and Member States, but also from Pakistan, with whom we signed a collaboration agreement before the start of the project," Atieh explains. "The work began in 2012 when the procedures were qualified and a quality plan established, followed by a training programme on mock-ups that were built to simulate the conditions in the tunnel as closely as possible."

The teams started welding in the LHC tunnel in May 2013. "Thanks to the preparation and the performance of the people involved, we managed to keep up a constant rhythm for the whole 12 months of this campaign

without sacrificing quality," says Atieh. "We finished, as planned, on 8 May 2014." But the last two welds were saved for the end-of-activity ceremony on 14 May!

Considering the proximity of the tubes that needed soldering, the materials and the geometry that left no margin for error, the welders used orbital welding machines manufactured by an industrial partner on the basis of an original design produced by CERN. "It was a very special welding technique so the technicians had to be trained for it," Said explains. "The two ends of the tubes are actually welded with no filler metal."



The welder (above) creates the weld using an orbital welding machine (below) specifically designed for CERN.

Once welded, each weld has to be checked one by one. "We kept the quality control process separate from the production throughout the works," says Jean-Michel Dalin, who supervised quality control throughout the year of works. "In addition to visual checks by the welders themselves, a team of inspectors from an external body carried out a full visual inspection and archived the automatically-recorded orbital videos of each of the welds, while other inspectors regularly audited the welding parameters of each machine."

As a result of this attention to quality, every one of the 10,170 welds was declared compliant with welding quality standard ISO 5817, Level B, which corresponds to the highest requirement and attests to the absence of structural faults. Bravo!

Antonella Del Rosso

CMS INAUGURATES ITS HIGH-TECH VISITOR CENTRE

The new Building SL53 on CERN's Cessy site in France is ready to welcome the thousands of visitors (30,000 in 2013) who come to learn about CMS each year. It boasts low energy consumption and the possibility, in the future, of being heated by recycling the heat given off by the detector.



The new Building SL53 at CERN's Cessy site in France was inaugurated on 24 May 2014.

"Constructed by the GS Department and the firm Dimensione, the building meets the operational requirements of the CMS experiment, which require the uninterrupted

use of its infrastructure," explains Martin Gastal, the member of the collaboration in charge of the project.

Its 560 m² surface area features a meeting room, eight offices, an open space for CMS users, a rest area with a kitchen, sanitary facilities including showers, and a conference room in which to receive visitors. "The new conference room on the ground floor can accommodate 50 people," Martin tells us. "It will enable us to introduce a new itinerary for CMS site visits and, along with the notable enlargement of the external car park, will increase the capacity and quality of the visits."

The focus of the building is on its energy performance: compact and with improved insulation thanks to the low-emissivity triple glazing and sun-shading, SL53 was designed from the beginning to keep its primary energy consumption to a minimum. "Domestic hot water is produced by solar panels and we have installed a high-performance reversible heat pump that can heat and cool the building," Martin explains. "In addition, all the air-exchange circuits are equipped with an energy-recovery system and the building also has 'smart' systems that control the temperature based on the occupancy of a room, automatic lighting (LED) and no false

ceilings, which act as hot/cold air pockets."

The future's even greener for SL53 as the building will be used as a prototype to evaluate the potential of the technology used to recycle the energy dissipated in the cooling

towers. Indeed, the heat from the water used to cool the detector could be recycled, by injecting it into the floor heating system of the building.

Antonella Del Rosso

A ROYAL VISIT

On Wednesday, 21 May, CERN received His Majesty Philippe, King of the Belgians, for a full-day visit of the Laboratory.



From left to right: Tiziano Camporesi, CMS Spokesperson; François Englert, Nobel Prize in Physics 2013; Rolf Heuer, CERN Director-General; His Majesty Philippe, King of the Belgians; Philippe Courard, Belgium's State Secretary for Scientific Policy and Walter Van Doninck, CERN Council Vice-President.

Director-General Rolf Heuer welcomed King Philippe to CERN at Point 5 (Cessy). This was to be no small visit, with His Majesty accompanied by a host of diplomats, prominent Belgian physicists - including François Englert - and even members of Belgium's press corps.

After quick introductions, the morning began with a tour of the CMS underground experimental area and the LHC tunnel at Point 5, guided by the CMS Collaboration Spokesperson, Tiziano Camporesi, and the Director for Accelerators and Technology, Frédéric Bordry, among others. Before heading to the Meyrin site, King Philippe stopped by the LHC's superconducting magnet test hall (SM18).

Following a brief lunch at Restaurant 1, the visit continued with a trip to Building 170. There His Majesty was introduced to many non-LHC experiments carried out at CERN, including ISOLDE, MINIBALL and CRIS. Next was a tour of the LHC Data Centre, guided by the IT Department Head, Frédéric Hemmer. King Philippe and his delegation ended their visit at the *Universe of Particles* exhibition in the Globe.

Katarina Anthony

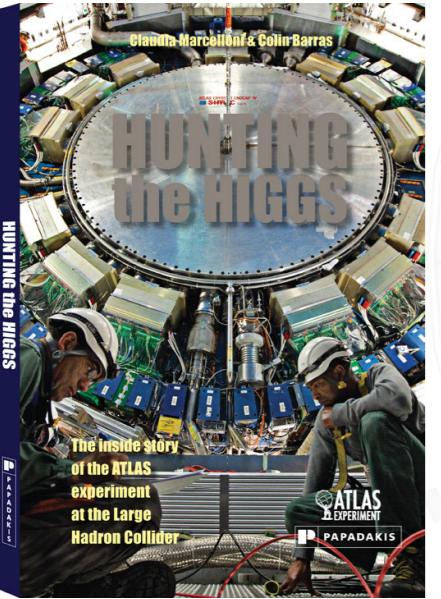
ATLAS BOOK WINS THE IPPY AWARDS

Hunting the Higgs, published by Papadakis Publishers in collaboration with the ATLAS experiment has won the Bronze prize in the Science category of the Independent Publisher Book Awards. The Award ceremony will be held on 28 May in New York on the eve of the BookExpo America.

"Ours is a souvenir book that gives viewers a glimpse of the discovery of the Higgs boson and the collaborative effort behind it of

thousands of scientists in ATLAS," says Claudia Marcelloni, communications officer of the ATLAS Experiment, who worked on the book

with freelance science writer Colin Barras. "The science is noble and the collaboration heartwarming, and the IPPY Award is a great



way to celebrate the mind-blowing story of human achievement."

Hunting the Higgs is the inside story of the ATLAS experiment at the Large Hadron Collider. It tells the journey of the experiment, from before the detector was born to the announcement of the discovery of the Higgs boson, and what ATLAS physicists hope to continue exploring.

The IPPY awards received more than 4,000 entries for its various categories. This year, the Gold prize in Science went to *Sabertooth*, by Mauricio Antón (Indiana University Press) and the Silver went to *The Naked Eye*, by Dr Gerard Sutton and Dr Michael Lawless (A.K.A. Publishing).

Abha Eli Phoboo

CAS COURSE ON POWER CONVERTERS IN BADEN, SWITZERLAND

The CERN Accelerator School (CAS) and the Paul Scherrer Institute (PSI) recently organised a specialised course on Power Converters, which was held at the Hotel du Parc in Baden, Switzerland from 7 to 14 May 2014.



Photo courtesy of Markus Fischer, Paul Scherrer Institut.

Following some recapitulation lectures on accelerators and the requirements on power converters, the course covered a wide range of topics related to the different types of power converters needed for particle accelerators. Topical seminars completed the programme.

The course was very successful, attended by 84 students representing 21 nationalities, mostly from European countries but also from

America, Brazil, Canada, China, Iran, Jordan and Thailand. Feedback from the participants was very positive, reflecting the high standard of the lectures and teaching.

In addition to the academic programme, the participants also had an opportunity to take part in a full-day site visit to ABB and PSI and an excursion to the Rhine Falls.

Sponsoring in the form of scholarships was offered by CAENels, OCEM and CERN to deserving students who would otherwise not have been able to attend.

Forthcoming CAS courses will be a specialised school on Plasma Wake Acceleration to be held at CERN, Geneva, Switzerland from 23 to 29 November 2014 and a US-CERN-JAPAN-RUSSIA Joint International Accelerator School course on Beam Loss and Accelerator Protection to be held in Newport Beach, California, USA from 5 to 14 November 2014. More information on both of these schools is available on the CAS website: <http://cas.web.cern.ch>

CERN Accelerator School

WERNER ALBRECHT (1924 - 2014)

Werner Albrecht, one of the very first mechanical designers recruited by CERN, passed away on 28 March. Born and educated in Zurich, where he spent the first years of his professional life, he joined CERN in June 1955.

Thanks to his experience and personality, he soon became the deputy to Frank Blythe, the head of the Synchrocyclotron (SC) technical office. The office, which included a large mechanical workshop, had been created in the light of the development and construction of the SC - the first of CERN's accelerators.

For around 25 years Werner kept this position at Frank's side while the services under their responsibility evolved to become the natural facility to provide design and development for a large range of apparatus required by experimental physicists.

After Frank's retirement in 1980, Werner became head of the office, maintaining its typical character as an efficient, informal and friendly service. Omega, UA1, Aleph, Opal and Delphi are examples of large installations that they extensively supported. Werner was serious, competent, reliable and always happy to help. Greatly respected by his collaborators and by the engineers and physicists using

his services, he was always able to find straightforward satisfactory solutions to technical problems, as well as the way to implement them rapidly. He retired from CERN in 1989.

Werner had the greatest respect for the institutions of his country and he felt it was his duty to serve the community. Thus, in Grand-Saconnex, where he lived, he assumed the roles of councillor and President of the Council. After retirement he held the posts of treasurer and Vice-President of the CERN Pensioners' Association (GAC).

Our heartfelt condolences go to his wife Marguerite, his children Roger and Catherine and their families. We, his old friends from CERN, will remember Werner with deep gratitude and respect.

His CERN colleagues



JACQUES SPALTER (1929 - 2014)

It is with great sadness that we announce the death of Jacques Spalter on 1 April. His funeral took place in the presence of family and close friends.



A graduate of the ESPCI in Paris and then of Stanford where he completed his PhD, Jacques Spalter started work at CERN in 1968. He spent his entire career in the DD Division (which later became the IT Department) and retired in 1994. Throughout this period, he was held in high esteem by successive heads of the Division, who entrusted him

with administration, planning and budget management responsibilities, as well as with the task of representing the Division on personnel recruitment committees.

He lived through the days when IT and computers were still in their formative years, and went on to participate in the extraordinary advances in this field, which changed the way in which physics experiments were performed and in which data was automatically analysed. All of the computing power was centralised, and the CDC and IBM supercomputers and their systems became more and more complex. It was therefore necessary to construct the huge Computing Centre, at the instigation of the Director, Mervyn Hine. But in the 1960s and 70s, mini and microcomputers took the experiment halls by storm and, connected together in networks, revolutionised the methods used for both physics and

administration. In the 1980s, CERN played an important role in the digital revolution, which underpins today's information society, and the DD Division was the stage for creations such as the WWW and PET, after having been a pioneer in networks and the processing of "big data".

Jacques provided the essential administrative support our Division needed to succeed in these endeavours. We remember that he approached his work with passion, precision and rigour. He fiercely defended these values, sometimes showing a degree of impatience, but always remaining courteous. For his closest colleagues, Jacques became a friend and we will miss him greatly.

To his wife, children and grandchildren, we address our sincere condolences.

His colleagues and friends

Behind the scenes of GS

HEALTH IN THE WORKPLACE

CERN has had its own Medical Service since 1965. Open to members of the personnel, users and visitors, the team offers care and advice with professionalism and commitment.



Completely refurbished at the end of 2013/beginning of 2014, the CERN infirmary now welcomes patients under optimal conditions. Here you can see the brand new waiting room.

The Medical Service team, currently consisting of three doctors, four nurses, a lab technician, a psychologist and two administrative assistants, provides an ever-increasing number of consultations. In 2013, around 7800 people were seen by the Medical Service, mainly at walk-in consultations, and more than 6665 further tests were performed (e.g. electrocardiograms, hearing tests, lung function tests, urine tests, blood tests). While its chief objective is to monitor the health of the CERN community in relation to their

work through regular medical check-ups, the Medical Service also performs an important primary care function: "More than 10,000 people work in CERN's offices, workshops, tunnels and worksites every day. As in any community of that size, sometimes certain situations arise that demand immediate action or even hospitalisation, emergencies which the Medical Service deals with on a regular basis," explains Dolores Richard, head of the infirmary. "In less urgent cases, we refer patients to the appropriate specialists. We put a lot of

emphasis on the quality of our interactions with patients and do our best to establish a solid and trusting relationship with each of them. To this end, medical confidentiality is of course guaranteed."

The Medical Service is heavily involved in accident prevention and in the promotion of health in the workplace, in collaboration with other internal and external services. "Numerous prevention measures have been put in place in cooperation with departments," says Dr Eric Reymond, head of the Medical Service. "For example, we are currently working with the Fire and Rescue Service, the Radiation Protection Group and the *Hôpitaux Universitaires de Genève* to establish protocols to improve the treatment of wounds contaminated with radioactive substances. In addition, throughout the year, we visit people at their workstations to remind them about ergonomics and, often in partnership with the HSE Unit, we run specific campaigns about the various hazards we may encounter at CERN."

The Medical Service also plays a key role in encouraging a healthy lifestyle. Testament to that are its "Move! Eat better" campaign, launched in 2012, and its support for the CERN Relay Race (which this year will take place on 5 June) and for the upcoming Bike to Work challenge (in June 2014).

CERN Bulletin

Seminars

MONDAY JUNE 02, 2014

- 08:30 Induction Sessions **INDUCTION PROGRAMME - 1st Part** 80-1-001 GLOBE

TUESDAY JUNE 03, 2014

- 14:00 Technical Seminar **17eme Forum Utilisateurs CATIA au CERN** Kjell Johnsen Auditorium
- 14:00 TH String Theory Seminar **Anomalies and rational terms in the S-matrix** TH Conference Room

WEDNESDAY JUNE 04, 2014

- 11:30 TH Cosmo Coffee **TBA** TH common room

TUESDAY JUNE 10, 2014

- 08:30 Induction Sessions **INDUCTION PROGRAMME - 2nd Part** Globe (tbc)
- 11:00 Computing Seminar **Fifty Years of Programming, Twenty Years of STL** IT Amphitheatre

THURSDAY JUNE 05, 2014

- 11:00 Collider Cross Talk [TBA : **Quarkonia Production in pPb collisions from ALICE-LHCb**] TH common room
- 14:00 TH BSM Forum **Natural SUSY and Dynamical Flavour with Metastable vacua** TH common room
- 14:00 Globe Conférence finale dans la peau d'un chercheur 80-1-001
- 16:30 CERN Colloquium **Quantum life** Main Auditorium

Computer Security

THE SECURITY MARATHON

If you believe that "security" is a sprint, that a quick hack is invulnerable, that quick bug fixing is sufficient, that plugging security measures on top of existing structures is good, that once you are secure your life will be easy... then let me convince you otherwise.

An excellent example of this is when the summer students join us at CERN. As the summer period is short, software projects must be accomplished quickly, like a sprint. Rush, rush! But often, this sprint ends with aching muscles.

Regularly, these summer students approach us to have their project or web server made visible to the Internet. Regularly, quick security reviews of those web servers diagnose severe underperformance with regards to security: the web applications are flawed or use insecure protocols; the employed software tools, databases or web frameworks are sub-optimal and not adequately chosen for that project; the operating system is non-standard and has never been brought up-to-date; and the server hardware is old and no longer supported. So, unfortunately, we often must decline making their project public on the Internet. Their fun sprint ends with them in the hospital. Game Over.

In reality, "security" is a marathon. It requires detailed preparation, proper integration

and scheduling. Just as running a marathon becomes a part of life, "security" is a part of software development. Thus, as for every marathon run, you need to prepare well. In software programming, being "well prepared" means having a proper software development lifecycle (SDLC).

sessions on web application development and programming, Java, C/C++, Python, PHP and Perl.

Check out our website 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](#).

Computer Security Team

Ombud's Corner

FELLOWS AND STUDENTS – A WIN-WIN EQUATION

The hundreds of Fellows and students working at CERN bring precious new blood into the Laboratory. At the same time, CERN offers them invaluable work experience that will have a significant impact on their future careers. It is important that we all work together to make this a win-win situation with lasting positive effects for all concerned over the years to come.

Fellows and students are just setting out on a great professional adventure. Some of them are very young, others are a bit more experienced ... and what happens during this early period can have vast consequences on their approach to work and indeed on their overall careers. They all come here with their hard earned skills and a high degree of motivation, ready to make the most out of an internship at CERN.

Sometimes, they are called to integrate into well-established units; at other times, they

are asked to join complex collaborations. Almost always they have to deal with new information, new cultures, new techniques... CERN is a demanding work environment, rich in diversity and exciting challenges, a combination that can be quite daunting for all newcomers, and even more so for those who are discovering the work experience for the first time.

Effective guidance is key to the success of any work experience. New colleagues, usually at CERN for limited amounts of time, need to

be given clear directions and well-defined deadlines as well as broader information about the context and the challenges at stake. This is of course the job of the supervisor. It is also important to ensure that newcomers are well integrated into existing teams and that they are made to feel welcome and able to contribute rapidly and effectively to whatever is required of them.

This guidance becomes even more essential in the case of Fellows and students where we have a primary responsibility to help them

to develop and grow into their professions. It is of course important, in assigning them to projects and tasks, that we check their understanding of what is expected of them and that they have the necessary competencies or training required to do the job. It is, however, additionally important, with this particular population, to be available to them, to build an atmosphere of trust where they feel encouraged to ask questions or seek advice and to follow up regularly to ensure that they are continually learning and gaining from these work experiences in ways that will be meaningful to them in the longer term.

Unfortunately, with all the pressures of work that we face, we do not always make this additional aspect a priority and, as a result, Fellows and students are sometimes left to

their own devices and can end up feeling lost or out on a limb with no clear guidance or support. This leads to situations where they perceive themselves to be treated like the fifth wheel in the team, sometimes called in to do odd jobs without clear longer-term goals; at other times left alone facing a difficult situation or caught in a cross-exchange between more senior people who are engaged in technical debates that are beyond their sphere of responsibility. On some rare occasions, it may also happen that they are assigned to tasks that are simply not compatible with their profiles or beyond their means. Of course, many of these situations can be avoided through regular communication and feedback, but it is understandable that this is a step that Fellows and students do not always feel

able to initiate. Supervisors and colleagues therefore play an important role in making life easier for the younger members of the team by maintaining an open and steady dialogue, helping them to learn from understanding the bigger picture and enabling them to work independently in the knowledge that support is available whenever needed.

A motivated and well-oriented younger generation ensures that excellence is maintained over time. With a positive work experience at CERN behind them, these Fellows and students will go on to become the leading scientists and engineers of tomorrow – as well as the best of ambassadors for our Organization.

Sudeshna Datta-Cockerill

The CERN Management is represented by Rolf Heuer (Director-General), Sergio Bertolucci (Director for Research and Computing), Sigurd Lettow (Director for Administration and General Infrastructure). The Physics Department is represented by Jose Salicio Diez and Doris Chromek-Burkhart (Head of the Users' Office), the Human Resources Department by Ingrid Haug, the General Infrastructure Services Department by Reinoud Martens, the Information Technology Department by Mats Moller, the Occupational Health Safety and Environmental protection Unit by Ralf Trant, and the CERN Staff

Association by Michel Goossens. ACCU Secretary: Michael Hauschild.

Other members of the CERN personnel attend as necessary for specific agenda items. Anyone interested in further information about ACCU is welcome to contact the appropriate representative, or the Chairperson or Secretary (73564 or ACCU.Secretary@cern.ch).

<http://cern.ch/ph-dep-ACCU/>

Training

SAFETY TRAINING: PLACES AVAILABLE IN JUNE

There are places available in the forthcoming Safety courses. For updates and registrations, please refer to the Safety Training Catalogue.

Safety Training, HSE Unit

Title of the course EN	Title of the course FR	Date	Hours	Language
Chemical Safety				
ATEX Habilitation - Level 1	Habilitation ATEX - Niveau 1	24-Jun-14	09.00 - 17.30	French
ATEX Habilitation - Level 2	Habilitation ATEX - Niveau 2	05-Jun-14 to 06-Jun-14	09.00 - 17.30	French
Respiratory Protective Equipment	Équipement de Protection Respiratoire	27-Jun-14	08.30 - 12.00	French
Cryogenic Safety				
Cryogenic Safety - Fundamentals	Sécurité Cryogénie - Fondamentaux	12-Jun-14	10.00 - 12.00	English
Electrical Safety				
Habilitation Electrique - Electrician Low Voltage - Initial	Habilitation électrique - Électricien basse tension - Initial	30-Jun-14 to 02-Jul-14	09.00 - 17.30	French
Habilitation Electrique - Electrician Low Voltage - Refresher	Habilitation électrique - Électricien basse tension - Recyclage	18-Jun-14 to 19-Jun-14	09.00 - 17.30	English
Habilitation Electrique - Electrician Low and High Voltage - Initial	Habilitation électrique - Électricien basse et haute tension - Initial	30-Jun-14 to 03-Jul-14	09.00 - 17.30	English
Habilitation Electrique - Electrician Low and High Voltage - Refresher	Habilitation électrique - Électricien basse et haute tension - Recyclage	23-Jun-14 to 24-Jun-14	09.00 - 17.30	French
Habilitation Electrique - Non-Electrician - Initial	Habilitation électrique - Non-Electricien - Initial	05-Jun-14 to 06-Jun-14	09.00 - 17.30	French
Habilitation Electrique - Non-Electrician - Refresher	Habilitation électrique - Non-Electricien - Recyclage	11-Jun-14	09.00 - 17.30	French
Fire				
Fire Extinguisher	Extincteur d'Incendie	04-Jun-14	10.30 - 12.00	French
		04-Jun-14	14.00 - 15.30	French
		05-Jun-14	10.30 - 12.00	French
Lifting and Heights				
Mobile Elevated Working Platform - Driving - Initial	Plate-forme élévatrice mobile de personnel - Conduite - Initial	24-Jun-14 to 25-Jun-14	08.30 - 17.30	French
Mobile Elevated Working Platform - Driving - Refresher	Plate-forme élévatrice mobile de personnel - Conduite - Recyclage	13-Jun-14	08.30 - 17.30	French
Overhead Crane - Operator and Slinger - Initial	Pontier-élingueur - Initial	16-Jun-14 to 17-Jun-14	08.30 - 17.30	French
Overhead Crane - Operator and Slinger - Refresher	Pontier-élingueur - Recyclage	18-Jun-14	08.30 - 17.30	French
Working at Heights - Using a harness	Travail en hauteur - Utilisation du harnais	24-Jun-14	09.00 - 17.30	French
		26-Jun-14	09.00 - 17.30	English
Non-Ionizing Radiation				
Laser - Expert	Laser - Expert	23-Jun-14 to 24-Jun-14	09.00 - 17.30	English
Magnetic Fields	Champs Magnétiques	26-Jun-14	09.30 - 12.00	French
		27-Jun-14	09.30 - 12.00	English
Oxygen Deficiency Hazard (ODH)				
Confined space	Espace confiné	10-Jun-14	09.00 - 17.30	French
		02-Jun-14	10.30 - 12.00	French
		02-Jun-14	14.00 - 15.30	English
		10-Jun-14	10.30 - 12.00	French
		10-Jun-14	14.00 - 15.30	English
Self-Rescue Mask - Initial				
	Masque auto-sauveteur - Initial	16-Jun-14	10.30 - 12.00	French
		16-Jun-14	14.00 - 15.30	English
		23-Jun-14	10.30 - 12.00	French
		23-Jun-14	14.00 - 15.30	English
		30-Jun-14	10.30 - 12.00	French
		30-Jun-14	14.00 - 15.30	English
Self-Rescue Mask - Refresher				
	Masque auto-sauveteur - Recyclage	03-Jun-14	10.30 - 12.00	English
		05-Jun-14	10.30 - 12.00	English
		12-Jun-14	10.30 - 12.00	French
		19-Jun-14	10.30 - 12.00	English
		24-Jun-14	10.30 - 12.00	French
Radiation Protection				
Radiation Protection - Controlled Area - CERN Employees and Associates	Radioprotection - Zone contrôlée - Employés et associés CERN	10-Jun-14	09.00 - 17.00	English
		20-Jun-14	09.00 - 17.00	English
		25-Jun-14	09.00 - 17.00	French
		30-Jun-14	09.00 - 17.00	English

104TH ACCU MEETING

DRAFT Agenda for the meeting to be held on Tuesday 3 June 2014 at 9:15 a.m. in Room 60-6-002.

1. Chairperson's remarks
2. Adoption of the agenda
3. Minutes of the previous meeting
4. News from the CERN Management
5. Report on services from GS and IT Departments
6. Progress on Health Insurance for Users
7. Users'Office News
8. Reports from ACCU representatives on other committees
- a. Academic Training Committee
9. Matters arising
10. Any Other Business
11. Agenda for the next meeting

Anyone wishing to raise any points under "Any Other Business" is invited to send them to the Chairperson in writing or by e-mail.

Michael Hauschild (Secretary)

ACCU is the forum for discussion between the CERN Management and the representatives of CERN Users to review the practical means taken by CERN for the work of Users of the Laboratory. The User Representatives in ACCU are:

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2014 CERN ACCELERATOR SCHOOLS: PLASMA WAKE ACCELERATION

A specialised school on Plasma Wake Acceleration will be held at CERN, Switzerland from 23-29 November, 2014.

This course will be of interest to staff and students in accelerator laboratories, university departments and companies working in or having an interest in the field of new acceleration techniques. Following introductory lectures on plasma and laser physics, the course will cover the different components of a plasma wake accelerator and plasma beam systems. An overview of the experimental studies, diagnostic tools and state of the art wake acceleration facilities, both present and planned, will complement the theoretical part. Topical seminars and a visit of CERN will complete the programme.

Further information can be found at: <http://cas.web.cern.ch/cas/PlasmaWake2014/CERN-advert.html> and <http://indico.cern.ch/event/285444/>



INTERNAL LECTURE: THE DAWN OF THE STANDARD MODEL'S REVOLUTION | 6 JUNE | MAIN AUDITORIUM

"The dawn of the Standard Model's revolution", by Luigi di Lella and Alvaro de Rujula.

Lecture by Luigi di Lella: Experiments at CERN in the decade 1964-1974

Abstract

I will present the most significant physics results obtained by CERN experiments in the decade 1964-1974. These include

the discovery of neutral current neutrino interactions, studies of CP violation, searches for new hadronic states, studies of two-body processes at high energies with and without polarized proton targets, and the results obtained in the first years of operation of the CERN Intersecting Storage Rings (ISR), which was the first hadron collider ever built. The precise measurements of the muon anomalous magnetic moment in three consecutive experiments will also be reviewed.



Luigi di Lella.

concerning in particular quarks as partons, the asymptotic freedom of QCD, charmonia and the first openly charmed particles.



Alvaro de Rujula.

Career

Alvaro de Rújula was at Harvard University during the Standard Model revolution. Before and after, amongst many other places, he worked at CERN.



Career

Luigi di Lella studied physics at the *Scuola Normale Superiore*, Pisa, Italy, and obtained a degree in physics from the University of Pisa in 1959. He came to CERN as a fellow in 1961, and then as a research physicist until the end of 1968. He was then a visiting associate professor of physics at Columbia University, New York (1969-70), and finally a senior research physicist at CERN until his retirement at the end of 2002. He is presently associated with the Physics Department of the University of Pisa.

Luigi di Lella has taken part in many experiments covering a variety of subjects: muon capture and decay; high-energy hadron scattering on polarized protons; studies of proton-proton collisions at the CERN ISR, and of proton-antiproton collisions at the CERN proton-antiproton collider; neutrino oscillations; solar axions; decays of charged K-mesons. He is the co-author of more than 100 publications, including review papers and invited talks at international conferences.

Lecture by Alvaro de Rujula

Abstract

In the few years around November 1974, particle physics changed very significantly and at a frantic pace. Practitioners began to get accustomed to the successful predictions of the Standard Model, which did not have many believers at that time. I shall recall the main experimental and theoretical advances,