



Nos 42 & 43 – 20 & 27 October 2010

## ISOLDE takes big science to nanoscale



Students from the University of Leuven and ITN Lisbon working at ISOLDE on a technique used to locate impurities in materials.

**N**uclear hyperfine interactions and their wide range of applications were the focus of the third Joint International Conference on Hyperfine Interactions and International Symposium on Nuclear Quadrupole Interactions, held at CERN from 12 to 17 September. The conference featured theoretical talks but also studies on magnetic materials, semiconductors, thin films, nano-structures and quantum optics, as well as

**New materials that could replace the semiconductors currently used in Blu-ray and other electronic devices, cost-efficient silicon for a new generation of solar panels, innovative investigation techniques for archaeology, biophysics and biochemistry... behind all this are the studies using nuclear hyperfine interactions. Of paramount importance in such studies is the availability of a large variety of radioactive ion beams: at CERN, these are produced by the ISOLDE facility.**

on topics related to archaeology, biology, chemistry and medicine.

Researchers from ISOLDE, the on-line separator for radioactive ion beams at CERN, actively participated in the conference. The facility is unique for its ability to generate



**A word from the DG**

### A little bit of legal history

**O**n Monday 18 October, a little bit of legal history will be made when the first international tripartite agreement between CERN and its two Host States is signed. This agreement, which has been under negotiation since 2004, clarifies the working conditions of people employed by companies contracted to CERN. It will facilitate the management of service contracts both for CERN and its contractors.

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## A word from the DG

(Continued from page 1)

### A little bit of legal history

**Ever since 1965, when CERN first crossed the border into France, the rule of territoriality has applied. This means that anyone working for a company contracted to CERN whose job involves crossing the border is subject to the employment legislation of both states. The new agreement simplifies matters by making only one legislation apply per contract, that of the country in which most of the work is carried out. This is good for CERN, it's good for the companies, and it's good for their employees. It is something that all three parties to the agreement have wanted for some time, and I offer my heartfelt thanks to those who have made it a reality.**

**There's still some way to go, however, before the change will become reality. Monday is just the first step. The agreement has still to be ratified by our two Host States' parliaments before entering into force. This will take time, but the most difficult part of the process is now behind us.**

**Rolf Heuer**

## ISOLDE takes big science to nanoscale

(Continued from page 1)

a large variety of such probe-isotopes, spanning a wide range of half-lives, at high intensity. Such radio-probes can be used in low concentrations and do not alter the material's structure as much as alternative methods. "ISOLDE produces isotopes, which we use as radioactive probes: once we have implanted them in a material, such as a superconducting solid or a protein, they start experiencing the local environment, and through their decay we can get valuable information about their place in the material lattice", explains Karl Johnston, Solid State Physics Coordinator at ISOLDE, and one of the organisers of the Conference.

In recent years, hyperfine interaction measurements performed in conjunction with optical spectroscopy and lattice location studies have provided important insights into the structure of materials. The technique proved to be particularly powerful in studying the nature and origin of imperfections in the lattice structure of semiconductors, such as those used in solar cells. "For cost reasons the quality of silicon used for solar cells is one order of magnitude lower than that used for computer chips. This creates efficiency problems due to defects in the lattice: we may not be able to eliminate these defects, but by understanding them we hope to be able to reduce their detrimental impact, thus making the processing more cost-efficient", confirms Johnston.

Radio-probes delivered by ISOLDE are also being used to study a potentially very interesting new material, zinc oxide (ZnO). "In optoelectronics applications, such as the lasers used for Blu-ray devices, ZnO is seen as a good candidate for replacing gallium nitride (GaN), which is currently used", explains Johnston. "While with GaN it is difficult to get rid of imperfections in the lattice – making it costly to produce consistently high-quality devices – with ZnO you



### Did you know?

#### Spintronics

Spintronics (a neologism meaning "spin transport electronics") is an emerging technology that exploits the intrinsic spin of the electron and its associated magnetic moment, in addition to its fundamental electronic charge, in solid-state devices.

can grow crystals with few defects. In addition, ZnO has a very high optical efficiency: if you send a laser into it, it will glow with very little help", says Johnston.

Despite these extremely promising properties, ZnO does not seem to be ready for use just yet. In fact, it is difficult to dope in a symmetric way: n-type doping is readily achievable but p-type doping has proved extremely difficult; both dopings are required to produce a useful device such as a transistor. In addition, some of the magnetic properties of ZnO, which have recently been studied by Johnston and his colleagues, do not seem suitable for future use of the material in spintronics (see box) "Other materials are now receiving the attention of the scientific community. At ISOLDE, 19 experiments are either already studying or have submitted letters of intent to study these topics, and we certainly haven't heard the last word on what hyperfine interactions can tell us", concludes Johnston.

*Roberto Cantoni*



# The Latest from the LHC: hitting the target luminosity for 2010!

In the last two weeks the number of bunches injected in each beam has steadily increased to reach 312, of which 295 collide in points 1 (ATLAS experiment), 5 (CMS experiment) and 8 (LHCb experiment). This has allowed the operators to reach a luminosity of  $1.48 \cdot 10^{32} \text{ cm}^{-2} \text{ s}^{-1}$ , comfortably exceeding the target for 2010.

With the present number of bunches, there are over  $3.5 \cdot 10^{13}$  protons per beam and around 20MJ of stored energy per beam. Since 4 October, when 204 bunches per beam were injected into the LHC, some intensity-related effects have started to be observed, notably, a significant rise in the ATLAS background. This is linked to an increase in pressure in the beam vacuum about 60m either side of the interaction point. Investigations have shown that this phenomenon actually started when bunch train operation began on 22 September and that it gets worse as the number of bunch trains increases. It is also

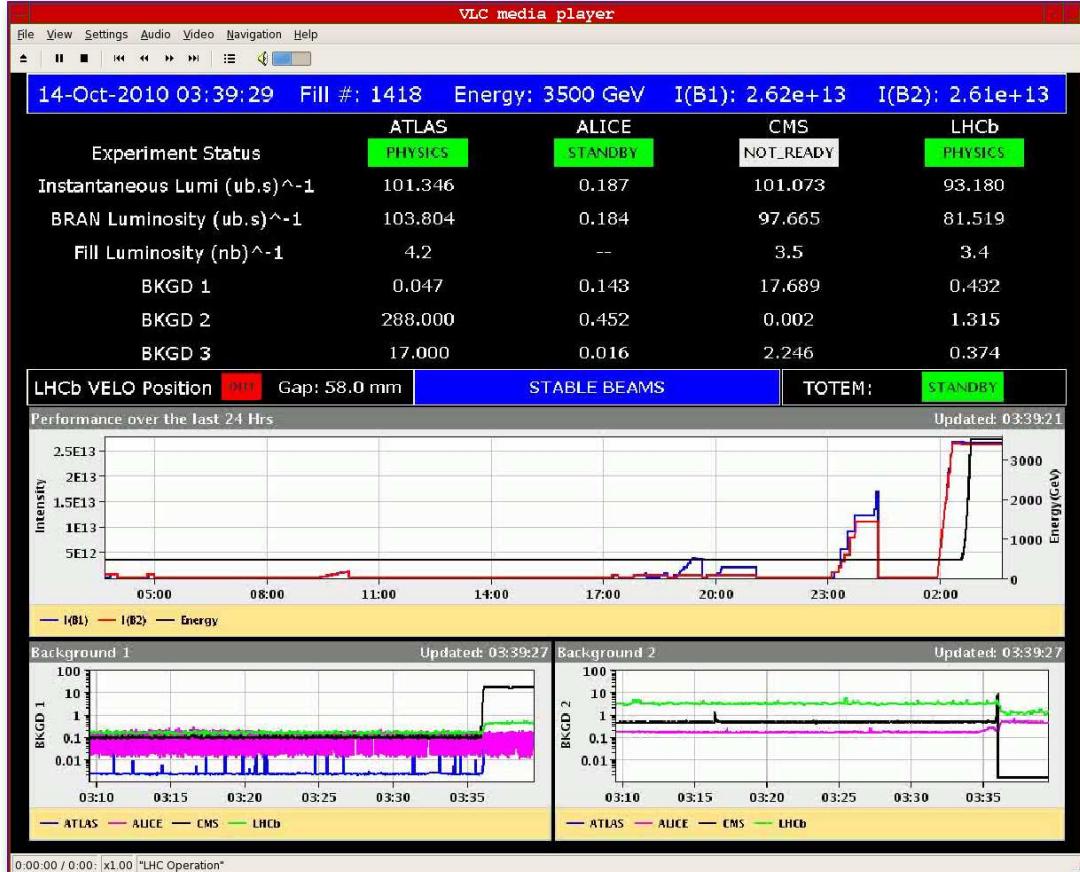
**Thanks to a significant increase in the number of bunches in each beam, the 2010 target peak luminosity of  $10^{32} \text{ cm}^{-2} \text{ s}^{-1}$  was reached on 14 October 2010, with further progress made in the following days. Soon, the attention of the LHC operators will turn to operation with lead ions throughout November.**

linked to the bunch structure in the trains and is only present with two beams in the machine. This interesting effect is certainly not a show-stopper, and lessens with time as the circulating beams clean the surface of the vacuum chamber in this location. On Saturday 9 October experts installed some additional solenoids in the regions where the most significant background had been observed. By powering them when a pressure rise was observed in the vacuum pipe, they were able to demonstrate that turning the solenoid on reduced the pressure rise. This seems to indicate that much – but not all – of the pressure rise is due to electron cloud effects, that is, synchrotron radiation from the beam when it hits the beam screen and knocks out electrons, which can, in turn, hit the wall and knock out more electrons.

Over the last week, another problem has come to light. Starting on Friday 8 October,

increased losses have been observed when injecting Beam 1 into point 2 of the LHC. It has been possible to improve the situation by re-steering the beam through the injection channel, but then the problem became worse on Saturday 16 October. Again it was possible to re-steer through the injection channel, but now there is almost no margin. To investigate the source of the problem, radiation surveys and X-ray imaging have been made, clearly showing an aperture restriction at the transition between two magnetic septa in the injection channel, thought to be due to a non-conformity in the mounting of the interconnection. Since even higher intensity running is foreseen in 2010, it has been decided to interrupt machine operation and make the necessary repairs. This action needs a few days to complete, hence the technical stop foreseen for 1 to 4 November has been advanced to 19 to 22 October, thereby minimizing the impact on the physics program. Proton operation will continue from Friday 22 October to Friday 5 November, when attention will be switched to operation with lead ions for the remainder of the 2010 run.

CERN Bulletin



# Towards a new approach to the labour law applicable to contractors' personnel

A site that straddles the French-Swiss border makes CERN unique among international organizations. Although this unique characteristic is a fine symbol of international collaboration, it also entails some legal and administrative difficulties.

On 18 October, CERN and its Host States will sign a tripartite agreement on the labour law applying to service contractors' personnel. This agreement will be supplemented by a bilateral agreement between France and Switzerland amending the 1965 agreement relating to the extension of the CERN site onto French territory. The purpose of these agreements is to facilitate application of labour law by contractors where they conduct operations simultaneously on the French and Swiss parts of the CERN site. They should also make the working conditions of the personnel concerned more predictable and more stable. This is an important change, given that CERN has about a hundred service contracts.

It will also be the first time that CERN and its two Host States sign a tripartite international agreement. "This first tripartite agreement is the fruit of exemplary collaboration between CERN and its Host States", explains Friedemann Eder, Head of the Relations with the Host States Service.

In accordance with the principle of territoriality established in 1965 when the CERN site was extended onto French territory, contractors and their personnel conducting operations on the Organization's site are

**On 18 October, CERN and its two Host States will sign agreements on the labour law applicable to the personnel of contractors operating on the CERN site. Once they have entered into force, the agreements will facilitate execution of service contracts for both firms and CERN, and will provide the personnel concerned with better security and more stability.**

subject to the legislation of the territory on which the work is performed. The principle of territoriality implies that, when a firm is conducting operations on the French part of the CERN site, it is subject to French law, and when it is conducting operations on the Swiss part, it is subject to Swiss law. This principle complicates the management of contracts by contractors, particularly on the Meyrin site which lies on both Swiss and French territory.

The difficulties are most pronounced in the field of labour law. Imagine, for instance, a contractor's employee who has to paint a wall in Restaurant No. 2 and then cross the road to give a door at the Computer Centre a fresh coat of paint. By crossing the road, the employee passes from the jurisdiction of one labour law to another, with different working hours, leave entitlements and public holidays. It's a real headache for the employer and for the work inspectorates. It's also a source of insecurity and instability for the employee, who cannot accurately predict his working conditions.

Since 2004, a group comprising representatives of the two Host States and CERN has been addressing this issue. To remedy the difficulties encountered in applying two different legislations concurrently, the agreements provide that, in future cases, only one labour legislation

govern the working conditions of personnel of contractors operating on the whole of the site.

"Determining which labour law is applied to a contractor's personnel will depend upon where the predominant share of the contracted work is to be carried out", explain Jean-Michel Favre and Angela Goehring-Crinon of CERN's Legal Service, who took part in drafting the agreements. In other words, if CERN foresees that a firm will have to provide 60% of its services on the Swiss part of the site and 40% on the French part, Swiss labour law will apply to the contractor's personnel. "This puts an end to any ambiguity", underlines Cristina Lara, who is in charge of industrial services in the Finance Department. "The contractor will know from the outset which labour law his employees will be subject to throughout the contract." In addition, the agreements stipulate that the contractor has a duty to share this information with his employees and any subcontractors.

This new rule seems very straightforward but in fact constitutes something of a legal landmark. The Host States have effectively agreed to renounce the normal application of the principle of territoriality in this specific context. As a result, the text has entailed many discussions and validations, including by the European Commission.

And there's still one important stage to complete. The agreements will have to be ratified by the parliaments of the two Host States before they can enter into force, which should take a further year. Until then, contractors will remain subject to the principle of territoriality.

*Corinne Pralavorio*

# Come and share the passion

CERN is the world's largest physics laboratory, operating machines that are among the most complex ever built by mankind. Particle

physics is a highly competitive field, and CERN's facilities attract physicists from all over the world. This is not without its problems, however, as it tends to deflect attention from the other professions and skills. "Studying the number of applications, we realised that some sectors were not sufficiently visible on the employment market, with the result that supply did not always meet demand", explains James Purvis, head of the Recruitment Programmes and Monitoring (HR-RPM) group. "What's more, CERN is finding that some Member State employment markets are harder to penetrate than others." These findings led the Recruitment Unit to set up a new communications strategy.

To get the ball rolling, Leila El Baradei, a member of the RPM group, commissioned a Swedish company to benchmark our recruitment website with the best in Europe. "The study enabled us to identify our weak points", says Leila. The problem stems not from the e-recruitment and application management system (ERT) but from the fact that CERN's job opportunities are not sufficiently visible and do not highlight the essential messages such as the exciting nature of our work, our rich cultural diversity, etc.

In today's world, a simple job description is no longer enough to get young people interested. The Recruitment Unit is working on nothing less than a communication

CERN's Recruitment Unit has set itself the ambitious goal of enhancing the visibility of employment opportunities across the broad spectrum of the Organization's activities in all the Member States. CERN is now present on all the main social media sites.

plan that aims to enhance CERN's image as an employer. "What's missing today is an answer to the first question on any job-seeker's lips: why should I choose CERN in preference to another employer?", says James. "Our goal now is to present job offers as opportunities for the candidates, rather than in terms of CERN's own requirements". A study carried out by a British company specialising in communication has highlighted six factors that define CERN as a unique employer: purpose, challenge, integrity, collaboration, imagination and quality of life.

The Recruitment Unit's new approach also involves placing emphasis on the wide range of professional opportunities CERN has to offer new employees, whatever their level of studies, skills or number of years of experience. "All skills and professions are needed for the Organization to function", says Anna Cook, a member of the RPM group. "Our role is to make sure that new job vacancies convey the right message, based on the six factors identified in the study".

Having established the new messages, the Recruitment Unit is turning its attention to communicating them through various media, including videos, brochures and postcards. "As well as publishing vacancies on CERN's web site, we are organising our recruitment campaigns on four different fronts: multi-posting of our vacancies targeted towards specific professions and



## Did you know?

A recent world-wide study of 130,000 people has shown that Google is the world's Number 1 most desirable employer and this is largely attributable to its employer branding, training opportunities and working environment (e.g. look up 'Working at Google' on YouTube).

trades and specific Member States; creation of CERN job profiles on the most popular professional and social networking sites to improve our visibility and enhance our image as an employer; pinpointing of and active participation in events such as recruitment fairs, company presentation days, etc.; and creation of a key skills pool allowing candidates to submit spontaneous applications", Leila concludes.

Look up the Recruitment Unit on Twitter, Facebook, YouTube, Xing, Plaxo, LinkedIn, CGN, Viadeo and Myspace. Don't hesitate to contact the Unit directly if you need any further information.

Laëtitia Pedroso



# Orienteering World Cup hosted by CERN Club

The final events of the Orienteering World Cup took place in the Old Town of Geneva and Saint-Cergue, with runners following routes prepared by the CERN Orienteering Club. Orienteering is a sport of navigation, using only a compass, map and your sense of direction. The objective is to get to all the points on the map as quickly as possible, choosing your own paths as you run. This was the CERN club's first successful participation in the World Cup, cementing its reputation as a fixture in the international orienteering world.

Orienteering is not your typical Swiss pastime. Developed in Scandinavia, the sport has been gaining popularity internationally. "The Swiss Orienteering Federation wanted to promote orienteering in this region, as it is underdeveloped," says Lennart Jirdén, Swedish-born President of the CERN Orienteering Club. "This is a great opportunity for us to increase exposure to the sport."

The CERN Club was founded ten years ago and it's still the only orienteering club in Geneva. As the sport was not very well known in the region, the CERN club decided to try to engage not only CERN staff, but also the people of Geneva. "We had to start

Elite runners took to the streets of Geneva for the last leg of the Orienteering World Cup, from 8 to 10 October. The Geneva finals were hosted by the CERN Orienteering Club and concluded months of competitions held across 5 countries.

from scratch and it became our job to promote the sport", confirms Jirdén. The club regularly runs beginners-level orienteering events to encourage new participants to join in. Similar programmes have since been developed by other clubs, including Lausanne and Annecy, which hope to emulate the success of the CERN club.

Orienteering is a sport based on intellect. "Physical and intellectual exercise are both required," says Jirdén. "In Scandinavia it's often the higher education establishments like universities where orienteering is very popular. You find that some of the best runners are engineers or physicists." Although typically held in wooded areas, more accessible orienteering events take place in urban areas, as was the case for the World Cup final, where participants work their way around buildings and roads.

The CERN Orienteering Club organizes 16 to 18 big events a year, aimed at all skill levels. Whether you're interested in a leisurely stroll, a day out with the family or learning a new sport, come along to the Orienteering Club's next event. Beginners are invited to

## News – Final Results

Simone Niggli and Daniel Hubmann became the international orienteering champions after this weekend's World Cup. Swiss-born Niggli had been guaranteed the title after her victories in the French World Cup events earlier this month, but by no means was she complacent for the final. She proved unbeatable running on home territory – winning the women's final by a margin of 14 seconds. Hubmann, also from Switzerland, pulled out all the stops to secure his trophy, winning the men's final by 9 seconds.

One hundred and forty runners took part in the World Cup semi-final, and 80 went on to qualify for the final in Geneva Old Town. Held alongside these international events were two Swiss National competitions, each hosting 1200+ Swiss runners.

participate, and can bring along friends and family of any age! For details, visit the club's website:

<http://club-orienteer.web.cern.ch/>

Katarina Anthony



Women's World-Cup winner, Simone Niggli (centre). © İlknur Colak.

# Ready, steady, SORT!

**E**nvironmental protection is never far from the headlines, and CERN has a responsibility to ensure that

the 3000 tonnes and more of waste it produces every year are correctly and selectively sorted. Materials can be given a second life through recycling and re-use, thereby avoiding pollution from landfill sites and incineration plants and saving on processing costs.

The GS Department is launching a new poster campaign designed to raise awareness of the importance of waste sorting and recycling. "After conducting a survey to find out whether members of the personnel were prepared to make an effort to sort and recycle waste, we introduced improvements to facilitate the sorting of aluminium cans, PET bottles and coffee capsules, which are taken to special recycling centres for reprocessing", explains Martine Auerbach of the GS Department, who is in charge of the campaign.

**The selective or ecological sorting of waste is already second nature to many of us and concerns us all. As the GS Department's new awareness-raising campaign reminds us, everything we do to sort waste contributes to preserving the environment.**

Raising awareness about the importance of sorting and recycling at CERN also requires good information and communication. "Our goal is not only to place a sufficient number of bottle banks and waste containers at strategic points across the CERN site but also to make sure that they are correctly and visibly identified", explains Martine.

On Martine's initiative, a brochure entitled "What Goes Where" has been drawn up and made widely available. Every new arrival now receives a copy of the brochure during the induction programme. "We hope that new arrivals will acquire and maintain good habits if we manage to get their attention right at the start", she concludes.

Laëtitia Pedroso

## Waste sorting exhibition

An exhibition of information panels on waste sorting and recycling will be held in the Main Building from 1 to 5 November. All types of waste produced at CERN will be featured, particularly paper, which we consume in large quantities. Objects made from recycled materials by children from the CERN kindergarten will also be displayed. Demonstrations on the recycling of different types of waste will take place every lunchtime throughout the week. Placemats printed on recycled paper using vegetable-based ink will soon be distributed in Restaurant No. 1.

Come along and find out what you can do for the environment!

## Ready, steady, SORT!

The selective or ecological sorting of waste  
is already second nature to many of us and concerns us all.

CERN has an active policy of sorting its waste and  
minimizing the high cost of waste treatment.



For all your waste removal needs, call 7 7777  
or send an e-mail to: sem.support@cern.ch  
For full information on waste sorting, go to: <http://cern.ch/RubbishWaste>

Printed on recycled paper using vegetable-based ink - Imprimé sur papier recyclé avec des encres végétales

## Un, deux, trois, TRIONS!

Le tri sélectif ou tri écologique  
fait désormais partie de notre quotidien et doit être l'affaire de tous.

Le CERN poursuit activement une politique de tri des déchets et s'efforce, dans le même temps, de réduire sa facture – élevée – de leurs coûts de traitement.

novae  
restauration

Pour toute demande d'évacuation de déchets, veuillez contacter le 7 7777  
ou par e-mail à l'adresse suivante: sem.support@cern.ch  
Toutes les informations relatives au tri des déchets se trouvent sur le lien suivant :  
<http://cern.ch/RubbishWaste>



Placemats printed on recycled paper using vegetable-based ink will soon be distributed in Restaurant No. 1.

# A CERN flag is set to wave up in the Himalayas

"Is there any official CERN flag I can carry with me during my trek through Nepal?" Some days ago, the Press Office was confronted with this unusual (however... see box) question by Hubert Reymond.

From 18 October to 10 November, Reymond, who works as an industrial computing engineer in the EN Department, will be trekking across the 55 km-long Annapurna massif in the Himalayas, whose highest point lies at 8,091 m (making it the 10th-highest summit in the world).

The area is well-known to trekkers from around the world, as it includes several world-class circuits, including the Annapurna circuit which Reymond will take.



A view of the Annapurna mountains (source: [www.flickr.com/minutesalone](http://www.flickr.com/minutesalone)).

On 18 October, Hubert Reymond from the Industrial Controls and Engineering group of the EN Department will leave for Nepal with a CERN flag in his backpack. He intends to place it at the highest point of his trek across the Annapurna mountains in the Himalayas, the Thorong La pass, 5,416 m above sea level.

The mountain chain is part of the Annapurna Conservation Area, the first and largest conservation area in Nepal (7,629 km<sup>2</sup>). At altitudes of this kind, one of the main problems is acclimatization: simple headaches, as well as mountain sickness, are always just around the corner. "The Annapurna trek will start at 800 m above sea level, then we will gradually go up in altitude, in stages of 500 m every day, in order to get our bodies used to the new conditions. The pressure at altitudes above 5,000 m is half what it is at sea level, so breathing becomes difficult and you need time to get used to it", Reymond

explains. Day after day, he will pass through different environments, taking in rice fields, conifer forests, alpine-like vegetation of rocks and sparse blades of grass, and even areas with perpetual snow. The highest point of the Annapurna circuit will be the

**Did you know?**



In 2005 Miguel Cerqueira Bastos (AB/PO), David Collados Polidura (IT/GM), Sandra Sequeira Tavares (PH/CMI) and Daniel Cano Ott (n\_TOF) raised the official CERN Jubilee flag at an altitude of 5,895 metres. If you are aware of CERN flags photographed in other exotic places in the world, don't hesitate to contact the Bulletin.

Thorong La pass, at 5,416 m, and it is there that CERN's flag will be placed.

Reymond is already familiar with the problems of acclimatization: even if he does not consider himself a sportsman, this is not his first trekking experience. "This will be my first time in Nepal, but I have already trekked across Kilimanjaro in Tanzania in 2008", says Reymond. "When I went to Tanzania, I took a poster with me bearing the name of my home town in Haute-Savoie. I said to myself 'I'll take a picture of myself with the poster at the top. In fact, what I needed was something to motivate me so I wouldn't let tiredness or sickness tempt me to abandon the trek before I reached the top. For this trek in Asia, I thought it would be nice to have a CERN flag".

Roberto Cantoni

## Making Restaurant No. 1 greener

The extension of a section of the terrace of Restaurant No. 1, which was part of the infrastructure consolidation programme that began in April 2009, will be completed at the end of this year. The new terrace will have an area of 1770 m<sup>2</sup> (compared with 1650 m<sup>2</sup> today) and will stretch the length of the restaurant extension.

The new building is a striking example of the use of renewable energies, comprising high-performance photovoltaic panels with an innovative sealing system integrated in the roof that cope particularly well with low amounts of sun. The electric cables and connections of each module are hidden and integrated in the roof, giving it a uniform appearance.

The roof comprises two rows of 12 modules, each measuring 11.6 m<sup>2</sup>. Their

total annual energy production capacity is around 14 MWh. By comparison, the building's estimated annual energy consumption

is 98 MWh, depending on the conditions of use.

Roberto Cantoni



# Brand-new signs for the CERN shuttles

Larisa Kuchina, a graphic designer in the Communication Group, restyled the shuttle signage to make it more visible and intelligible. "I was inspired by the very clear and user friendly interface of the Geneva Public Transport system (TPG)", explains Larisa. "Each timetable will also include the corresponding shuttle route. We will soon introduce new road signs for shuttle stops to make sure they are visible from a distance".

There are currently four shuttle lines, serving 28,000 passengers since February 2010: two of them operate between Meyrin and

If, after reading the title of this article, you're striving to remember what the signs for the CERN shuttles look like, then you just hit the nail on the head: we bet that only a few people can actually do so. In order to make it easier for CERN users to move around the CERN sites, a graphic restyling of the shuttle signage has been implemented. You will start to see the new timetables in the coming days.

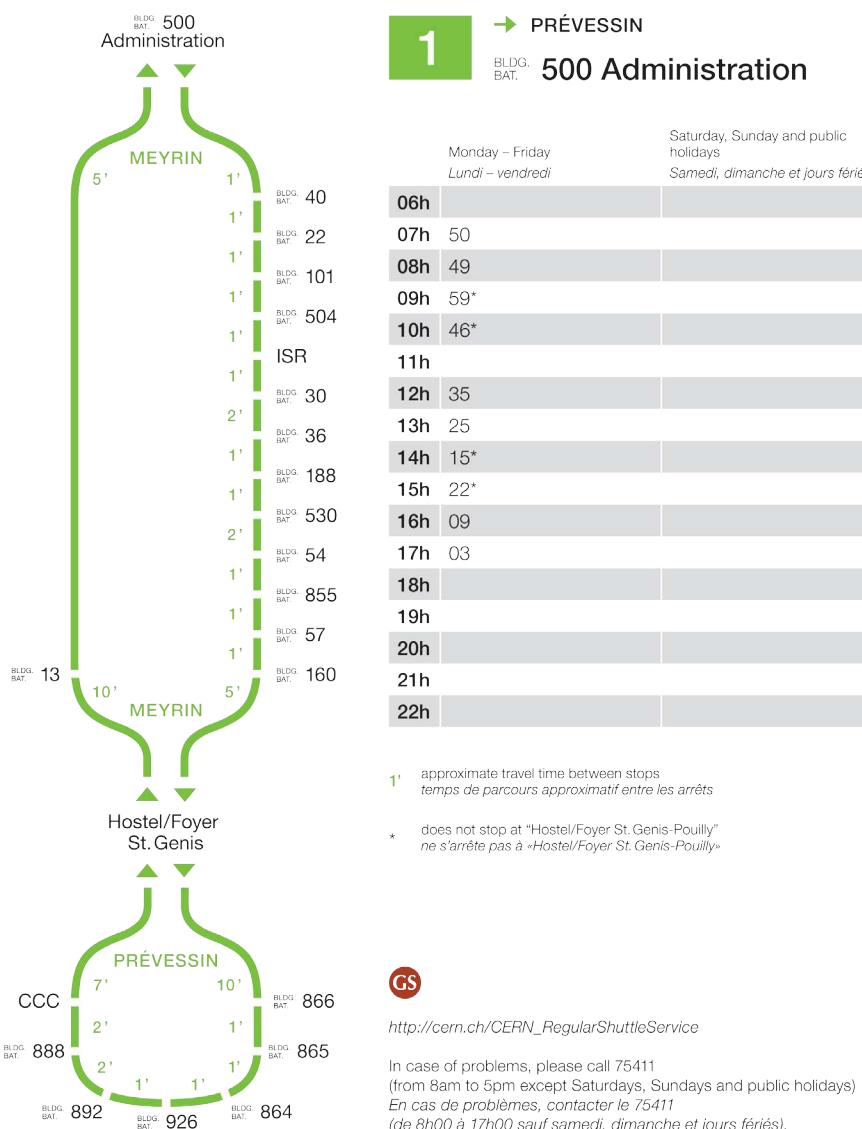
Prévessin, one takes you from the Main Building (Building 500) to the airport and back, and one serves several sites of the LHC and the SPS experiments. The first three operate on week days, while the fourth transports shift workers around CERN even at the weekend.

New panels with clear information about routes and timetables will be placed in the Main Building and at each shuttle

stop. "The service is free of charge to all CERN users. Passengers coming from the airport will be asked to show their access cards to be allowed into CERN. In case they haven't got a card, they'll be dropped at Building 33 where they'll be able to complete all the entrance formalities", Caroline Laignel and Véronique Marchal from the General Infrastructure Services Department explain.

A new website showing all the timetables and routes will be available within the next two weeks (until then, the old website will be available at <https://espace.cern.ch/info-RegularShuttleService/default.aspx>). The new signage will be in place at the beginning of next year.

Roberto Cantoni





## Working with words? The Chicago Manual of Style is there to help

Among the many useful resources the Library can offer you, the style manuals occupy a central role. According to Wikipedia, "a style guide or style manual is a set of standards for the writing and design of documents, either for general use or for a specific publication, organization or field. The implementation of a style guide provides uniformity in style and formatting of a document."

The 16th edition of the Chicago Manual of Style is now available online to the CERN community. It will provide you with general guidelines for preparing electronic manuscripts for books, along with citation, spelling, punctuation and abbreviations guidelines.

You can access it here:

<http://www.chicagomanualofstyle.org/>

Don't hesitate to send us your suggestions for any other style manuals that could be added to the Library collection. The contact email address for feedback is library.desk@cern.ch.

CERN Library

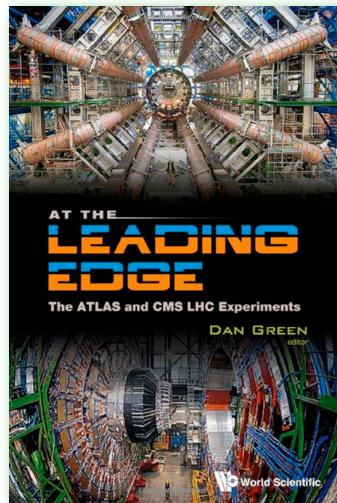
## Literature in Focus

# "At the Leading Edge: the ATLAS and CMS LHC experiments"

edited by Dan Green

Too often descriptions of detectors focus on the "what" and not the "why". This volume aims to elucidate how the requirements of the physics at the Large Hadron Collider (LHC) define the detector environment. In turn, the detector choices are made to adapt to that environment. The goal of LHC physics is to explore the mechanism for electroweak symmetry breaking. Because of the minuscule cross-sections which need to be explored, 0.1 fb, the LHC needs to provide 100 fb<sup>-1</sup>/yr, or an instantaneous luminosity of 10<sup>34</sup> / (cm<sup>2</sup> sec).

With a bunch crossing interval of 25 nsec, well-matched to detector speeds, there will be 25 events occupying each bunch crossing. Thus the physics requires fast, finely segmented, low noise and radiation-resistant



detectors which provide redundant measurements of the rarely produced electrons and muons. To achieve those goals, new ground was broken in constructing the A Toroidal LHC ApparatuS (ATLAS) and Compact Muon Solenoid (CMS) detectors, the vertex detectors, tracking systems, calorimetry, strong magnets, muon systems, front end electronics, trigger systems, and in the data acquisition methods used.

"At the Leading Edge: the ATLAS and CMS LHC experiments" edited by Dan Green, World Scientific, 2010, will be presented by the author on Tuesday 19 October, at 3-30 p.m. in the Library (Bldg. 52 1-052). Tee and coffee will be served.

CERN Library

## The Pays de Gex celebrates science

From 18 to 23 October, the *Fête de la Science* will be celebrated at various venues in the Pays de Gex and at CERN.

The Physiscope team will give demonstrations for schools and the general public in the Globe, performing awe-inspiring experiments to answer questions like "Can you drive a nail in with a banana?" or "Is it possible to survive a 100,000 volt shock?"

The *Esplanade du Lac* in Divonne-les-Bains will host a *Café des Sciences* and performances by the children of the *Lycée International* in Ferney-Voltaire.

The Physiscope is an educational venture of the Physics section of the University of Geneva and the research programme MaNEP.

The programme of the *Fête de la Science* can be consulted at:

[http://outreach.web.cern.ch/outreach/FR/evenements/programme\\_annuel.html](http://outreach.web.cern.ch/outreach/FR/evenements/programme_annuel.html)

Corinne Pralavorio



Physiscope will perform awe-inspiring demonstrations in the Globe.

# Awards and Honours



Nobel Prize winners Andre Geim (left) and Konstantin Novoselov (right). © Sergeom, Wikimedia Commons, and University of Manchester, UK.

## Graphene collects the Nobel prize

The Nobel Prize in Physics for 2010 has been awarded to Andre Geim and Konstantin Novoselov, both from the University of Manchester, for their "groundbreaking experiments regarding the two-dimensional material graphene". Graphene has exceptional properties that have made it a micro-laboratory for quantum physics. Not only is graphene the thinnest material ever made, it is also the strongest, as well as being an excellent conductor and almost completely transparent.

At a time when many researchers believed that it was impossible for such thin materials to be stable, Geim and Novoselov extracted graphene from a piece of graphite using only normal adhesive tape. Novoselov, 36, first worked with Andre Geim, 51, as a PhD student in the Netherlands. He subsequently followed Geim to the UK. Both originally studied and began their careers in Russia and are now professors at Manchester.

## ALICE's Paolo Giubellino awarded Medal by Mexican Physical Society

Paolo Giubellino, the elected spokesman of ALICE, has been awarded the Medal of the Division of Particles and Fields by the Mexican Physical Society. As the first European to be awarded the medal, Paolo is recognized for his work in the development of high-energy physics in Mexico.

Paolo has played a significant role in developing collaboration between Europe and Latin American institutes. His support led to Mexico's involvement in ALICE, particularly in the successful construction of the V0 detector and the Cosmic Ray detector.



Prof. Jens Jørgen Gaardhøje (Chair of the Medal Selection Committee and President of the Science Committee of the Danish National Commission for UNESCO and a member of the ALICE collaboration at CERN) with Prof. Sir Tim Berners-Lee (now W3C, MIT; Boston, formerly CERN), Prof. Sir John Pendry (Imperial College, London), Deputy Director-General of UNESCO, Mr. Getachew Engida, and Prof. Kip S. Thorne (Caltech, Pasadena), at the UNESCO Awards Ceremony. © Hasse Ferrold.

## Berners-Lee receives UNESCO-Niels Bohr gold medal

At a ceremony held at the Royal Danish Academy of Science and Letters in Copenhagen on 14 September, three leading researchers received the UNESCO-Niels Bohr Gold Medal for their outstanding contributions to research in physics which have or could have a significant influence on the world. The medal, which UNESCO created in 1985 to commemorate the centenary of Niels Bohr's birth, was previously awarded in 1998 and 2005. The 2010 laureates are Sir Tim Berners-Lee from the Massachusetts Institute of Technology, Sir John Pendry from Imperial College London and Kip Thorne from the California Institute of Technology.

Berners-Lee is honoured "for the development of hypertext, the World Wide Web and their far-reaching consequences for global communication and exchange of information"; Pendry "for pioneering contributions to the development of metamaterials, i.e.

materials with remarkable and new optical properties" and Thorne "for groundbreaking contributions to the study of black holes and gravitational waves".

Pierpaolo Mastrolia, winner of the Sofja Kovalevskaja award, and former CERN fellow. © Humboldt Foundation.



## CERN theorist wins Sofja Kovalevskaja Award

Pierpaolo Mastrolia, former CERN fellow, has won the Sofja Kovalevskaja Award, presented by the Alexander von Humboldt Foundation. These awards are given to young scientists, helping them develop research groups at German host institutes. Pierpaolo will be continuing his research at the Max Planck Institute of Physics, Munich.



Paolo Giubellino is awarded the Medal of the Division of Particle and Fields in a special session of the 5th Workshop on High Energy Physics, celebrated from September the 27th to October the 1st in Mexico City.

## CERN scientists listed in The Times "Most important people in British science"

Eureka!, the science magazine of The Times Newspaper, has named the 100 most important people in British science. Chosen by a panel of experts, the list includes scientists from CERN. Congratulations to all of them!

Katarina Anthony

# Homage to Endel Lippmaa, distinguished scientist and politician

Recently, during the last TOTEM collaboration meeting, one of its most eminent members, Professor Endel Lippmaa, celebrated his 80th birthday. TOTEM was proud to pay homage to his impressive list of achievements. After obtaining a PhD from the Tallinn Technical University in 1956 and a DSc from the Institute of Chemical Physics in Moscow in 1969, he was appointed Doctor honoris causa at the University of Jyväskylä (1975), the Tallinn Technical University (1991) and the University of Tartu (1999). Professor Lippmaa has held a number of positions at the Estonian Academy of Sciences since becoming a member in 1972. He is currently a member of several Academies of Sciences. After being a leading force in the Baltic independence drive during the "Singing Revolution" against Soviet occupation in 1987, he served as a minister in three Estonian governments (1991–1996) and is now a member of the Estonian parliament.

During his career, Endel Lippmaa has contributed to a number of breakthroughs in

science. His interest in physics began during the Second World War when he started reading books and papers on the subject. "In 1953", he says, "my first publication was in chemical physics. One of my most important contributions in this field was related to the NMR, a very powerful and widely used analytical technique which is at the base of all modern sciences: chemistry, physics, semiconductor electronics, etc. At that time all the technologies I was using were very similar to the ones used at CERN, so for me it was easy to join the work being done at the Laboratory."

His first contact with CERN dates back to 1992 when, as head of the Department of Physics of the Institute of Cybernetics in Estonia, he was contributing to the early stages of the CMS experiment, approved four years later. At that time his research programmes were closely related to chemical physics, radio spectroscopy, electronics, information science, quantum computing, biophysics and environmental science, as well as nuclear and particle physics.

"My collaboration with TOTEM began with my involvement in forward physics", he explains. "Already with FELIX (which pursued a physics programme complementary to that of the other planned LHC experiments), this branch of physics was becoming more and more important. Today I am delighted to see that the small TOTEM experiment is ready to look for interactions involving very forward particles that have not been seen before at the LHC."

Throughout his long career, Professor Lippmaa has observed a close relationship between science and politics: they both involve lots of competition. He further states, ironically: "like the Olympic Games, what is important is not the taking part but the winning. Only the best results, which the others have not foreseen, are worth striving for." As advice to young researchers, he concludes: "You won't get medals, but the winner will surely be known everywhere: are you ready for that?"

Beatrice Bressan and  
Virginia Greco, TOTEM Outreach



Endel Lippmaa (to the left) enjoys his 80th birthday with his colleagues from the TOTEM collaboration.

Born on 15 September, 1930 in Tartu, Estonia

- 1948 Tallinn Nomme Gymnasium
- 1953 Tallinn Technical University
- 1956 PhD in engineering
- 1969 DSc in physics and mathematics
- 1971 Professor
- 1990 Foreign Member of the Finnish Academy of Sciences
- 1992 Foreign Member of the Royal Swedish Academy of Engineering Sciences
- 1992 Member of the New York Academy of Sciences
- Since 1980, Laboratory of Chemical Physics, Estonian National Institute of Chemical Physics and Biophysics
- Since 2001, Head of Centre of Excellence of Analytical Spectrometry



## Ombuds' Corner Le coin de l'Ombuds

Starting with this issue, the Bulletin introduces a new series of articles aiming to better explain the role of the Ombuds at CERN. We will publish practical examples of situations of potential misunderstanding that could have been resolved by the Ombuds if he had been contacted earlier. Please note that, in all the situations we present, the names are imaginary and used only to improve clarity.

### Supervisor and supervisee

John\* and his supervisor Pat\* have been working together for about four years, during which time they have had several disagreements and a few real explosions. They usually avoid each other for some time after each incident until things calm down again.

During a meeting between them concerning objectives, the latent tension between them resulted in a fight during which John told Pat that she was mobbing him. Pat ended the meeting by throwing John out of her office. She said that she was no longer prepared to talk to him alone. John asked the Ombuds to facilitate the situation.

When contacted by the Ombuds, Pat refused and said that she could handle the situation by herself, as always. In addition, she no longer wanted any one-to-one discussion with her staff members. John then bypassed Pat and talked to her supervisor Bill\*, who said that Pat should discuss the matter with the Ombuds and John. Bill also remarked to Pat that it would probably be useless, but that it was politically correct to do so.

Pat then called the Ombuds saying that any discussion would be worthless.

### Conclusion

The earlier that problems are dealt with, the easier it is to agree on a positive means of resolving them. If any of the people concerned had come to the Ombuds after the first clashes, they could still have reached a workable agreement. But at this stage, the conflict has almost reached the stage of no-return.

### Contact the Ombuds early!

<http://cern.ch/ombuds>

Vincent Vuillemin

\* Names and story are purely fictitious.



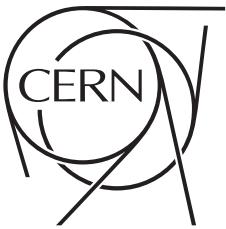
### REMINDER - EXTENSION/SUPPRESSION OF ALLOWANCE FOR DEPENDENT CHILDREN AGED 20 TO 25

Members of the personnel with dependent children aged 20 to 25 (or reaching 20 during the 2010/2011 school year), for whom an allowance for dependent children is currently paid, are invited to provide the Education fees service with a:

CHOOL CERTIFICATE

Unless we receive, **by October 31, 2010 at the latest**, a school certificate or similar written proof (contract of work placement, sandwich courses or apprenticeship) covering your child / children for the school year 2010/2011, we will be obliged to stop payment of the allowance for dependent children as well as affiliation to the health insurance at the appropriate date and retroactively if necessary.

Education fees service  
HR/SPS-SER  
Tel. 72862 / 71421



## Lunchtime Film Presentation

### ***Projekt Zukunft/ Tomorrow Today***

By Deutsche Welle (2009)

**D**eutsche Welle TV's weekly science journal explores the LHC at CERN with host Ingolf Baur. Please note that we will show both the German and English versions of this broadcast. Each episode is about 27 minutes long.

**Projekt Zukunft/Tomorrow Today  
will be presented on**

**Friday, 29 October from 13:00 to 14:00  
in the Main Auditorium**

**Language: German version  
followed by the English version**

*Carolyn Lee*



## Take note

### PARKING REGULATIONS ON THE CERN SITES

The site surveillance service is also responsible for supervising compliance with the parking regulations ([https://admin-eguide.web.cern.ch/admin-eguide/voitures/proc\\_circulation.asp](https://admin-eguide.web.cern.ch/admin-eguide/voitures/proc_circulation.asp)) on the CERN site.

In that context, it ensures that the following rules are complied with on the CERN car park:

- Vehicles may not be left on a CERN car park for longer than 5 consecutive working days. However, CERN users are entitled to leave their vehicles parked at CERN for a longer period in the car park near Building 588 , subject to completing the application form "Demande d'autorisation pour un stationnement de longue durée" (application for a long-term parking permit, <https://edms.cern.ch/document/1077265/>) and sending it to the Reception and Access Control Service (access.surveillance@cern.ch) prior to departure.
- Parking spaces, which are in short supply in many crowded areas of the CERN site, must not be occupied by abandoned vehicles/wrecks. The service organizes the disposal of such vehicles.

Any CERN users wishing to get rid of a private vehicle parked on one of the CERN car parks (for disposal at a breaker's yard) should get in touch with the Reception and Access Control Service (access.surveillance@cern.ch), which will help them to complete the necessary formalities and arrange, free of charge, for their vehicles to be destroyed.

Remember: the removal of an abandoned vehicle/wreck helps to free up much needed parking spaces!

Thank you for your collaboration.

GS-SEM Group  
General Infrastructure Services Department

### 14<sup>e</sup> COLLOQUE WRIGHT POUR LA SCIENCE

**15-19 nov 10**

Uni Dufour



UNIVERSITÉ  
DE GENÈVE

# La révolution QUANTIQUE

Conférences publiques tous les soirs à 18h30. Entrée libre.



### REGISTRATION SERVICE

Following a reorganization in Building 55, please note that the Registration Service is now organised as follows :

- Ground floor: access cards (76903).
- 1st floor :
  - registration of external firms' personnel (76611 / 76622);
  - car access stickers (76633);
  - biometric registration (79710).

Opening hours: 07-30 to 16-00 non stop.

GS-SEM Group  
General Infrastructure Services Department

### ROAD WORKS

From Monday 11 October until Friday 29 October 2010, the flow of traffic will be disrupted by road works at the roundabout in front of Restaurant No. 2;

The number of spaces available in the car park in front of Rest. No. 2 will be reduced.

Thank you for your understanding during this period.

GS/SEM Group





Take note



Sauvez des vies  
Donnez votre sang

**Le mercredi 03 novembre 2010  
de 8h30 à 16h00**

## COLLECTE DE SANG

Organisée par l'EFS (Établissement Français du Sang) d'Annemasse

CERN  
RESTAURANT 2

**On wednesday 3 November 2010  
From 8.30 to 16.00**

## BLOOD DONATION CAMPAIGN

Organized by EFS (Établissement Français du Sang) of Annemasse

Veuillez, si possible, vous munir de votre carte de groupe sanguin.  
If possible, please, bring your blood group Card.





## Take note

From 8 to 11 November 2010  
Administration Building, Bldg. 61  
From 9-00 to 17-30

### HOLLAND AT CERN – INDUSTRIAL EXHIBITION

Sponsored by EVD, an agency of the Dutch Ministry of the Economy

Twenty seven companies will present their latest technology at the industrial exhibition "Holland at CERN". Dutch industry will exhibit products and technologies which are related to the field of particle physics.

Individual interviews will take place directly at the stands in the Main Building. The firms will contact relevant users/technicians but any user wishing to make contact with a particular firm is welcome to use the contact details which are available from each Departmental secretariat or at the following URL:

[http://gs-dep.web.cern.ch/gs-dep/groups/sem/ls/Industrial\\_Exhibitions.htm#Industrial\\_exhibitions](http://gs-dep.web.cern.ch/gs-dep/groups/sem/ls/Industrial_Exhibitions.htm#Industrial_exhibitions)

You will find the list of exhibitors below.

#### LIST OF EXHIBITORS:

- |                                     |  |  |
|-------------------------------------|--|--|
| 1. Schelde Exotech                  | 10. Imtech Industry International B.V. | 19. Sience &Technologies BV            |
| 2. Vernooy BV Triumph Group         | 11. VDL ETG Projects                   | 20. 3D Worknet BV                      |
| 3. INCAA Computers                  | 12. Machinefabriek Boessenkool B.V.    | 21. Veenstra-Glazenborg                |
| 4. DeMaCo Holland bv                | 13. Dutch Space B.V.                   | 22. Bayards Aluminium Constructies BV  |
| 5. TNO Science & Industry           | 14. Heinmando BV                       | 23. Hitec Special Measuring Systems BV |
| 6. Janssen Precision Engineering BV | 15. Stirling Cryogenics BV             | 24. Sumipro BV                         |
| 7. Hositrad VacuumTechnology        | 16. CryoZone BV                        | 25. Heemskerk Innovative Technology    |
| 8. Velmon Lastchniek BV             | 17. IRMCO bv                           | 26. Heeze Mechanics                    |
| 9. Genius Klinkenberg Int BV        | 18. ECM Technologies                   | 27. Wijdeven                           |

Information: K. Robert / GS-SEM-LS / 74407

### VACCINATION AGAINST SEASONAL INFLUENZA

This year, as usual, the Medical Service is helping to promote vaccination against seasonal influenza.

Vaccination against seasonal flu is especially recommended for anyone who suffers from chronic pulmonary, cardiovascular or kidney disease or diabetes, is recovering from a serious illness or major surgery, or is over 65 years of age.

The flu virus is transmitted through the air and through contact with contaminated surfaces, so frequent hand-washing with soap and/or an antiseptic hand wash is of great importance.

As soon as the first symptoms appear (fever above 38°, shivering, coughing, muscle and/or joint pains, generalised weakness), you are strongly recommended to stay at home to avoid spreading the virus.

Anyone working on the CERN site who wishes to be vaccinated against seasonal flu should go to the Infirmary (Building 57, ground floor), with their dose of vaccine.

The Medical Service will issue a prescription on the day of the vaccination for the purposes of reimbursement through UNIQA.

The Medical Service does not perform vaccinations for family members or for pensioners, who must contact their family doctor.



## Language training

Language Training  
English Courses

Nathalie Dumeaux Tel. 78144  
nathalie.dumeaux@cern.ch

### New courses - University of Cambridge ESOL examination course

We will be starting two new courses in October leading to the Cambridge First Certificate in English (level B2 of the European Framework) and the Cambridge Advanced English (level C1) examinations.

These courses will consist of two semesters of 15 weeks with two two-hourly classes per week. There will be an average of eight students per class. Normally the examination will be taken in June 2011 but strong participants could take it earlier.

People wishing to take these courses should enrol:

[http://cta.cern.ch/cta2/f?p=110:9:1927376177842004::NO::X.Course\\_ID,X\\_Status:4133%2CD](http://cta.cern.ch/cta2/f?p=110:9:1927376177842004::NO::X.Course_ID,X_Status:4133%2CD)

and they will then be required to take a placement test to check that their level of English is of an appropriate level.

Please note that we need a minimum of seven students enrolled to open a session.

For further information please contact Tessa Osborne 72957.

### General and Professional English Courses

The next session will take place from 4th October 2010 to 5th February 2011 (2 weeks break at Christmas).

These courses are open to all persons working on the CERN site, and to their spouses.

For registration and further information on the courses, please consult our Web pages:

<http://cern.ch/Training>

or contact Nathalie Dumeaux, tel. 78144.

### Oral Expression

The next session will take place from 4th October 2010 to 5th February 2011 (2 weeks break at Christmas).

This course is intended for people with a good knowledge of English who want to enhance their speaking skills.

There will be on average of 8 participants in a class. Speaking activities will include discussions, meeting simulations, role-plays etc. depending on the needs of the students.

### Writing Professional Documents in English

The next session will take place from end of September to end of January 2011 (2 weeks break at Christmas).

This course is designed for people with a good level of spoken English who wish to improve their writing skills. Timetable will be fixed after discussion with the students.

For registration and further information on these courses, please consult our Web pages:

<http://cern.ch/Training>

or contact Mrs Dumeaux: tel. 78144, or Tessa Osborne: tel. 72957.



## Technical training

Marie-Laure LECOQ 74924  
ENSEIGNEMENT TECHNIQUE  
TECHNICAL TRAINING  
[technical.training@cern.ch](mailto:technical.training@cern.ch)

### CERN TECHNICAL TRAINING: AVAILABLE PLACES IN FORTHCOMING COURSES

The following course sessions are scheduled in the framework of the 2010 CERN Technical Training Programme and places are still available. You can find the full updated Technical Training course programme in our web catalogue (<http://cta.cern.ch/cta2/f?p=110:9>).

#### Software and system technologies

Agile Project Management with Scrum	15-Nov-10	16-Nov-10	English	2 days
Business Objects advanced	20-Oct-10	20-Oct-10	English	1 day
C++ Part 2: Object-Oriented and Generic Programming	22-Nov-10	25-Nov-10	English	4 days
CERN openlab Multi-threading and Parallelism Workshop	10-Nov-10	11-Nov-10	English	2 days
Emacs - way beyond Text Editing	09-DEC-10	09-DEC-10	English	3 days
ITIL Foundations (version 3)	22-Nov-10	24-Nov-10	English	1 day
ITIL Foundations (version 3) EXAMINATION	28-Oct-10	28-Oct-10	English	1 hour
ITIL Foundations (version 3) EXAMINATION	13-DEC-10	13-DEC-10	English	1 hour
JAVA - Level 1	25-Nov-10	29-Nov-10	English	3 days
JAVA 2 Enterprise Edition - Part 1: Web Applications	27-Oct-10	28-Oct-10	English	2 days
JAVA 2 Enterprise Edition - Part 2: Enterprise JavaBeans	13-DEC-10	15-DEC-10	English	3 days
JCOP - Finite State Machines in the JCOP Framework	17-Nov-10	19-Nov-10	English	3 days
JCOP - Joint PVSS-JCOP Framework	29-Nov-10	03-DEC-10	English	4.5 days
Linux LPI 101 - Introduction à Linux et LPI 102 Administration systèmes sur Linux	1-Nov-10	4-Nov-10	English	4 days
Object-oriented Design Patterns	06-DEC-10	08-DEC-10	English	3 days
Oracle - Programming with PL/SQL	06-DEC-10	08-DEC-10	English	3 days
Oracle - SQL	01-DEC-10	03-DEC-10	English	3 days
Oracle Database SQL Tuning	25-Oct-10	27-Oct-10	English	3 days
PERL 5 - Advanced Aspects	30-Nov-10	30-Nov-10	English	1 day
PERL 5 - Introduction	25-Oct-10	26-Oct-10	English	2 days



Python - Hands-on Introduction

18-Oct-10 21-Oct-10 English 4 days

Python: Advanced Hands-On

16-Nov-10 19-Nov-10 English 4 days

XML - Introduction

01-DEC-10 02-DEC-10 English 2 days

## Electronic design

Certified LabVIEW Associate Developer (CLAD)

26-Nov-10 26-Nov-10 1 hour

Durcissement d'électronique sous radiation (fr) & Radiation hard electronics

18-Nov-10 19-Nov-10 English 1.5 day

LabVIEW Connectivity with RADE applications

11-Nov-10 12-Nov-10 Bilingual 2 days

LabVIEW Core I with RADE introduction

29-Nov-10 01-DEC-10 Bilingual 3 days

LabVIEW Core II

02-DEC-10 03-DEC-10 Bilingual 2 days

LabVIEW Core III

8-Nov-10 10-Nov-10 Bilingual 3 days

LabVIEW Data Acquisition and Signal Conditioning Course

4-Nov-10 5-Nov-10 Bilingual 2 days

## Mechanical design

ANSYS DesignModeler

28-Oct-10 29-Oct-10 French 2 jours

AutoCAD Electrical 2010

25-Oct-10 12-Nov-10 French 5 jours

CATIA-Smartteam Base 2

26-Nov-10 14-DEC-10 French 7 jours

CATIA-Smartteam Base1

8-Nov-10 24-Nov-10 French 6 jours

## Office software

A hands-on overview of EVO

26-Nov-10 26-Nov-10 English 0.1 day

CERN EDMS - Introduction

27-Oct-10 27-Oct-10 English 1 day

CERN EDMS - Introduction

17-Nov-10 17-Nov-10 French 1 jour

CERN EDMS for Engineers

20-Oct-10 20-Oct-10 French 1 jour

Dreamweaver CS3 - Level 2

22-Nov-10 23-Nov-10 French 2 jours

EXCEL 2007 - level 1 : ECDL

29-Nov-10 30-Nov-10 English 2 days

EXCEL 2007 - Level 2: ECDL

21-Oct-10 22-Oct-10 French 2 jours

EXCEL 2007 (Short Course I) -

HowTo... Work with formulae, Link cells, worksheets and workbooks

15-Nov-10 15-Nov-10 Bilingual 0.5 day

EXCEL 2007 (Short Course II) - HowTo... Format your worksheet for printing

15-Nov-10 15-Nov-10 Bilingual 0.5 day

EXCEL 2007 (Short Course III) - HowTo... Pivot tables

16-Nov-10 16-Nov-10 Bilingual 0.5 day

Individual Coaching

19-Oct-10 19-Oct-10 Bilingual 1 hour

Individual Coaching

4-Nov-10 4-Nov-10 Bilingual 1 hour

Individual Coaching

02-DEC-10 02-DEC-10 Bilingual 1 hour

Powerpoint 2007 - Level 2

5-Nov-10 5-Nov-10 French 1 jour

Project Planning with MS-Project

15-Nov-10 19-Nov-10 French 2 days

Sharepoint Collaboration Workspace

25-Nov-10 26-Nov-10 French 2 jours

Sharepoint Collaboration Workspace

13-DEC-10 14-DEC-10 English 2 days

Windows 7

16-Nov-10 16-Nov-10 English 3 hours

WORD 2007 - level 2 : ECDL

18-Nov-10 19-Nov-10 French 2 hours

WORD 2007 (Short Course II) -

Working with long document: styles and tables of contents

4-Nov-10 4-Nov-10 Bilingual 0.5 day

If you are interested in attending any of the above course sessions, please talk to your supervisor and/or your DTO, and apply electronically via EDH from the course description pages that can be found at: <http://cta.cern.ch/cta2/f?p=110:9> under 'Technical Training' with the detailed course program. Registration for all courses is always open – sessions for the less-requested courses are organized on a demand-basis only. CERN Technical Training courses are open only to members of the CERN personnel (staff members and fellows, associates, students, users, project associates, apprentices and employees of CERN contractors, with some restrictions). In particular, quoted prices and programmes refer specifically to the CERN community.





# Seminars

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## MONDAY 18 OCTOBER

### TH BSM FORUM

11:00 - TH Auditorium, Bldg. 4

### UV-Completion by Classicalization

G. GIUDICE / CERN

### CERN COLLOQUIUM

11:00 - Main Auditorium, Bldg. 500

### "Towards a Future Linear Collider" and "The Linear Collider Studies at CERN"

S. STAPNES / CERN

### COMPUTING SEMINAR

11:00 - IT Auditorium, Bldg. 31-3-004

### EpiCollect: An open framework for mobile data collection

D. AANENSEN / DEPARTMENT OF INFECTIOUS DISEASE EPIDEMIOLOGY, IMPERIAL COLLEGE LONDON

### TH JOURNAL CLUB ON STRING THEORY

14:00 - TH Auditorium, Bldg. 4

### Quantization of Riemann Surfaces

T. DIMOFTE / CALTECH

## TUESDAY 19 OCTOBER

### TH STRING THEORY SEMINAR

14:00 - TH Auditorium, Bldg. 4

### Massive type IIA string theory cannot be strongly coupled

A. TOMASIENNO / UNIVERSITÀ DI MILANO-BICOCCA

## WEDNESDAY 20 OCTOBER

### TH COSMO COFFEE

11:00 - TH Auditorium, Bldg. 4

### Dark energy perturbations and parameterisations of modified growth

L. HOLLenstein / GENEVA UNIVERSITY

### TH THEORETICAL SEMINAR

14:00 - TH Auditorium, Bldg. 4

### QED is not imperiled by the proton's running radii

A. DE RUJULA / CERN

### ISOLDE SEMINAR

14:30 - Bldg. 26-1-022

### New technologies for High-Purity Germanium detectors read-out

F. ZOCCA / INST. DE ESTRUCTURA DE LA MATERIA-CONSEJO SUPERIOR DE INVESTIGACIONES

## THURSDAY 21 OCTOBER

### TRAINING AND DEVELOPMENT

09:00 - Kjell Johnsen Auditorium, Bldg. 30-7-018

### MUX - Microelectronics Users eXchange / MUX 2010 - Microelectronics Users eXchange

A. MARCHIORO / CERN

## FRIDAY 22 OCTOBER

### DETECTOR SEMINAR

11:00 - Salle Dirac, Bldg. 40-S2-D01

### Cloud Experiment

J. DUPLISSY / CERN

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## MONDAY 25 OCTOBER

### TH JOURNAL CLUB ON STRING THEORY

14:00 - TH Auditorium, Bldg. 4

TBA

M. BUICAN / CERN

## TUESDAY 26 OCTOBER

### TH STRING THEORY SEMINAR

14:00 - TH Auditorium, Bldg. 4

### Holographic systems at finite density with spontaneous symmetry breaking

J. SONNER / IMPERIAL COLLEGE LONDON

## WEDNESDAY 27 OCTOBER

### TH COSMO COFFEE

11:00 - TH Auditorium, Bldg. 4

### New stabilization symmetries for Dark Matter

B. BATELL / PERIMETER INSTITUTE

### TH THEORETICAL SEMINAR

14:00 - TH Auditorium, Bldg. 4

TBA

M. REDI / CERN PH-TH

### ISOLDE SEMINAR

14:30 - Bldg. 26-1-022

### CRIS: collinear resonance ionization spectroscopy physics and progress at ISOLDE

K. FLANAGAN / KU-UNIVERSITY OF LEUVEN

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## THURSDAY 28 SEPTEMBER

### TH BSM FORUM

14:00 - TH Auditorium, Bldg. 4

### Bs mixing and EDMs

B. BATELL

## FRIDAY 29 SEPTEMBER

### PARTICLE AND ASTRO-PARTICLE PHYSICS SEMINARS

14:00 - TH Auditorium, Bldg. 4

TBA

S. JAGER