

Nos 36 & 37 – 8 & 15 September 2010

## A different view of CERN



**O**ne of the first questions that springs to mind when you hear this is: "how does she manage?" Happily, modern computer technology makes it possible for Rania to work like any other translator. "I have two ways of reading a text on my computer," Rania explains. "Either I use the voice function, where the text on screen is dictated by a voice-synthesis programme, or I use my special braille terminal (see photo and box) which plugs into a USB port and reproduces the on-screen text under my fingers."

Rania brought all these devices with her to CERN so that she could get straight to work on the first day of her placement. Among various texts she translated from English into French during her first week, Rania

**Rania Python is twenty-five years old and in the second year of her Master's Degree at Geneva University's School of Translation and Interpreting (ETI); she arrived at CERN on 16 August to start a two-month placement in the Translation and Minutes Service. Nothing remarkable about that, you might say...until you find out that she's blind.**

was responsible for the French versions of several articles for the Bulletin ("The Rainbow School of Physics" and "A Garden of Possibilities"). She can also translate from Italian into French.

Rania was not born blind. She already had serious eyesight problems as a young girl but using a 100-times magnifying glass she was still able to read. So she does remember shapes and colours. Sadly, a blow to the face left her completely blind. "After my accident at the age of seven I had to start learning braille. Working two hours a week, it took me a whole year to master the language," she recalls.

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**A word from the DG**

### Geneva international synergies

**G**eneva has a long history of hosting international organizations, which is part of the reason that CERN is here, and it makes the canton an ideal place to forge links between such organizations. Over recent weeks, CERN has signed agreements with the ITU, WIPO and the WMO. At first sight, there may not seem to be much common ground between CERN and, say, the World Meteorological Organization, but scratch the surface, and you'll soon find a common thread. All of these organizations have a vocation to stimulate technological innovation, and together we're stronger.

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# Next stop: space

Weighting 7.5 tonnes and measuring 5 by 4 by 3 metres, AMS-02 is one of the most complex scientific instruments ever built for space. The experiment, assembled and tested at CERN, uses particle physics technologies but smaller and

lighter (by particle physics standards) to fit into the Space Shuttle cargo bay for its voyage to the International Space Station. And luckily so, as it only just about fitted inside the C 5's large belly and only after its lid was taken off to gain the missing 7 cm!

CERN, in collaboration with Geneva International Airport, organised a press conference followed by a visit to the aircraft, to watch the loading of the detector onto the C5 Super Galaxy, especially made available by the US Air Force. "Our job is to move anything anywhere anytime", said Donald Erbschloe, USAF chief scientist, during the press conference. "Moving this big science project on its last terrestrial voyage to the Kennedy Space Centre was a challenge we couldn't resist. The air force has relied on science since its earliest days, as to move something in the air requires a lot of technology, and science and the air force have grown up together".

AMS-02 has been built by an international collaboration involving 15 countries mainly from Europe and Asia, the largest interna-

At 6:30 a.m. on 25 August, the runway at Geneva International Airport was more crowded than usual, as dozens of airport staff and a few CERN personnel gathered as close as possible to watch the landing of one of the world's largest aircraft, a USAF (US Air Force) C5 Super Galaxy. Having left Afghanistan (where it transported provisions for the US military contingent) the day before, it had spent a few hours at a US military base in Iraq before finally landing in Geneva on a very special mission: to load AMS-02, the Alpha Magnetic Spectrometer, into its huge cargo bay.

tional collaboration for a single experiment in space. "The ISS is a unique platform in space, providing the infrastructure to enable AMS-02 to search for new physics and astrophysics phenomena from primary sources millions of light years beyond our galaxy", said Nobel Laureate Professor Sam Ting, AMS-02 leader, to the 20 journalists from the international media gathered at the press conference.

Space is a vantage point from which to observe the flux of cosmic rays in which AMS-02 specializes, since the charged particles in the cosmic flux cannot make it through the atmosphere without being annihilated. With its sensitivity and a magnet 4000 times stronger than the magnetic field of the Earth, AMS-02 has a chance to observe dark matter particles directly from space by studying the details of cosmic ray distribution. For this reason it is complementary to underground experiments looking for dark matter particles that might be able to penetrate through rock, water or ice without being stopped, and to the LHC, which will produce candidate dark matter



On 25 August, after an 11 hour-long flight, the US Air Force C-5 Galaxy carrying the Alpha Magnetic Spectrometer (AMS-02) experiment landed at the Kennedy Space Centre (KSC) in Florida, US.



## Did you know?

### AMS-02 history

AMS-02's long voyage to the Space Station started in 1994, when Professor Ting initiated the project. In 1998, a first configuration of AMS-02 flew for ten days on board Space Shuttle Discovery (STS-91), collecting nearly 100 million cosmic rays, and this successful first flight made sure that the AMS-02 collaboration could continue to work with NASA. Following the Columbia disaster in 2003, the entire space shuttle program was called into question by NASA, as was the scheduled flight for the AMS-02 final detector. In 2008, Professor Ting managed to persuade the US Congress that "after spending 100 billion dollars on the ISS, it is worth making an effort to have good science there" and last year Congress unanimously approved a bill requesting NASA to send AMS-02 into space. Last February, after a few months of test beams on the primary proton source from the SPS at CERN, AMS-02 was shipped to Nordwijk in the Netherlands, where it was placed in ESA's thermo-vacuum room. Exhaustive tests there played an important role in the decision in June to replace the original superconducting magnet by a permanent one with a longer life expectancy.

particles. But the real reason for this experiment is to look for surprises, as Roberto Battiston, deputy spokesperson of AMS-02, pointed out at the press conference. "Once you look very carefully with a very powerful detector for a long time at something that has never been observed with enough attention, you may find surprises and this is why we are doing that. We're motivated by these theoretical models, but in reality we are looking for something new".

At 11.18 a.m. Florida time on 26 August, after an 11-hour flight, the US Air Force C-5 Galaxy plane carrying AMS-02 and some forty members of the collaboration landed on the Space Shuttle runway at the Kennedy Space Centre. "This is a major milestone for AMS-02 in its long and exciting journey that started 15 years ago", said Saoul Gonzales of the US Department of Energy. At KSC,

(Continued on page 3)

## Next stop: space

(Continued from page 2)

AMS-02 will undergo a few additional tests in NASA's Space Station Processing Facility (SSPF) before being launched on board Space Shuttle Discovery on its final mission to space. The official launch date is February 2011, but the leader of the experiment is pushing NASA to get an earlier window for launch (December 2010), and the AMS-02 collaboration is working hard to make it ready for final loading onto the Space Shuttle by 15 November to maximize the chances of an earlier launch.

The installation of AMS-02 on the exterior of the Space Station, using both the shuttle and the station arms, on the right of the station's truss, or backbone, will be quite a delicate operation, and will be carried out by ESA astronaut Roberto Vittori, an Air Force colonel with a degree in physics (and a former student of Roberto Battiston). Once docked on the International Space Station, the experiment is expected to remain active for the entire lifetime of the ISS and will not return to Earth. "For the next 20 years, during the lifetime of the Space Station, there will be only one large physical science experiment, and that will be AMS-02!" and with these words Professor Ting concluded the press conference.

Paola Catapano



### A word from the DG

(Continued from page 1)

## Geneva international synergies

Let's start with ITU, the International Telecommunications Union. There, the synergies are evident. When ITU organized the World Summit on the Information Society in 2003, CERN provided a significant side event examining the Role of Science in the Information Society. The current agreement builds on that, allowing our two organizations to work together on important societal issues such as the extension of broadband to developing countries, training in digital librarianship in these countries, cybersecurity and the engagement of the public in science.

With WMO, the World Meteorological Organization, the agreement covers similar ground. In common with particle physics, the science of meteorology deals with large quantities of information and distributed information systems. Accordingly, this agreement

## Latest news from the LHC

After a very successful week that saw intense beams circulating for long periods (a total of 76.5 hours of stable beams, corresponding to about 40% of the time), there has been a technical stop this week. Over the coming days, experts will work on bunch trains with 150 ns spacing between bunches (the current minimum spacing is 1000 ns). This will involve making the necessary changes throughout the injector chain, as well as in the LHC itself. In the LHC, bunch trains imply working with a crossing angle throughout the machine cycle, in order to avoid unwanted parasitic collisions, which means that the whole process of injection, ramp and squeeze will have to be re-commissioned. The task also includes re-commissioning all the protection systems, both at injection and elsewhere in the cycle. This is particularly important now that the energy stored in each beam is about 3 MJ and is set to increase further in the coming weeks.

Last week the LHC passed the threshold of  $3 \text{ pb}^{-1}$  total integrated luminosity delivered to the experiments, of which about half was delivered in just one week. These excellent results were achieved by operating the machine with up to 50 nominal bunches per beam.

In parallel with these operations, the LHC teams will bring the higher speed energy ramp (10A/s) into operation, which will reduce the time needed to fill the machine.

The initial aim of this re-commissioning phase is to bring a few high intensity bunches in trains into collision for physics and later move from 50 up to 96 bunches injected in each direction. Once again, this should result in a significant increase in the luminosity delivered to the experiments.

CERN Bulletin

focuses on high bandwidth capacity networks; collaborative on-line software tools for data and information analysis; management of mass data and storage systems; and capacity building and e-education tools, especially in developing nations. And, of course, we should not forget that CERN is actively contributing to meteorological science through the CLOUD experiment.

Finally, the agreement with the World Intellectual Property Organization is all about innovation, and how best to ensure that technological innovations made in the name of particle physics find applications in everyday life. Basic science is the driving force for innovation. Without it there is no science to apply. It is therefore vital for organizations like CERN to ensure that their knowledge and technologies find fertile ground for development. WIPO has precisely that expertise.

These agreements are important to CERN for many reasons. Within Geneva's international community, CERN has long been perceived as being out in the suburbs and out on a limb. Our newfound engagement is being very positively seen, and we are not the only ones who are learning that the harder we look for synergies, the more we find. These agreements show recognition that the investment our Member States make in basic science at CERN has value to society far beyond the Laboratory's walls. Our accumulated know-how, expertise and technological prowess bring benefit to society across many domains. I have been positively surprised by the depth and breadth of common ground we've already found with the ITO, WIPO and the WMO. I'm sure these will prove to be just the beginning.

Rolf Heuer

# A different view of CERN

(Continued from page 1)

Rania and her parents had to fight hard for her to follow a conventional academic path. "I went to a special school for the visually impaired for a year-and-a-half. Even though this kind of school is specially structured for the blind, it was a very bad experience for me because the working methods just didn't suit me. My parents and I did everything we could to get me back into my old school with my old friends," she explains.

But daily life throws up many obstacles to test a blind person's mettle, like road works or simply an object out of place. In CERN's labyrinthine corridors, it's easy to imagine the challenges Rania must face - simply to find her way to her office. "The slightest change can completely throw us off course and it takes ages to find our bearings again. For example, it's easy to get lost at CERN, and all the refurbishment work currently going on doesn't make life any easier. Thankfully I always have someone with me, so I feel quite safe," Rania explains.

What's more, Rania has a faithful friend to help her through the trials of everyday life – her guide-dog Jenny, who accompanies her wherever she goes. The complicity between mistress and dog is total, to the point where Rania doesn't need a cane and

can rely entirely on Jenny, who alerts her to the slightest obstacle.

The placement at CERN is very important for Rania as it's her first professional experience. It can often be an uphill struggle for the visually impaired to get training or find a job. "I've done some free-lance work in the past, but this placement at CERN has introduced me to office life and given me a proper start in my chosen profession. It's a really great experience in both professional and human terms," she confirms.

The day after she arrived, Rania visited SM18, where she took time to touch and feel everything in her path, especially the mock-up of the LHC tunnel. "With my sense of touch I can get a good picture of my surroundings. The visit was fantastic and next time I hear about the LHC magnets I'll have a good idea of what they are," she concludes.

Rania's dream is to become a conference interpreter, and she will shortly be taking the entrance tests. We wish her a long and successful career.

*Laëtitia Pedroso*

## Did you know?



### The Translation and Minutes Group

The Translation and Minutes (TM) Group comprises four French mother-tongue and four English mother-tongue translators.

Their role is to translate official CERN documents to and from the Organization's two working languages, French and English, and occasionally from German and other European languages.

The Group is also responsible for writing the minutes for official meetings of CERN's governing bodies (Council, FC, SPC, TREF etc.). Every year, in the framework of the administrative students programme, TM plays host to three French-mother-tongue student translators from ETI in Geneva and ESIT in Paris.

The publication of the CERN Bulletin in two languages is only possible thanks to the members of the TM Group, and we would like to take this opportunity to thank them all !

For more information on the Translation and Minutes Service, click here:

<http://service-translation-dsutm.web.cern.ch/service-translation-dsutm/fr/Welcome.html>



## Did you know?

### Braille (source: Wikipedia)

Braille is a tactile writing system using raised dots, named after its French inventor, Louis Braille (1809-1852), who lost his sight after an accident.

### Voice synthesis, refreshable braille display, character recognition

Voice synthesis is yet another field where technology has made great strides. Not so long ago, blind people were alone in being able to decipher sentences pronounced by reading software. Now it can be understood by everyone and punctuation is clearly audible. Reading software converts text on screen into a page of braille or the spoken word.

Then comes the refreshable braille display, a keyboard-like pad comprising a succession of rectangles on which six dots rise and fall to form braille characters. This is how a line of text displayed on the screen is converted into braille on the display. The refreshable braille display is also called a braille terminal.

Blind people can read text from the computer screen using two scroll modes on the braille terminal: either by pressing a button once the end of the line is reached to scroll on to the next line, or by allowing the text to scroll automatically at a given speed. Blind people should soon be able to consult diagrams on their computers using the Hyperbraille interface. The full Wikipedia page is available here:

<http://cdsweb.cern.ch/journal/CERNBulletin/2010/36/News%20Articles/en.wikipedia.org/wiki/Braille>

# Being a researcher for one night

The European Researchers Night is an EU initiated and funded initiative, which aims at highlighting the appeal of being a researcher. Meeting scientists in a 'fun' and festive context gives the public, especially the young, the opportunity to get to know the job better and be inspired to pursue a career in research. "CERN scientists already took part in last year's event, but only through a web connection with Frascati in Italy", explains Paola Catapano, a member of the Communication group and organiser of the activities taking place at CERN. "This year it's the first time we are participating in the event by opening the doors of the LHC control rooms and producing an eight-hour webcast".

The event is organised in the framework of the EU-funded BEST project, whose other partners are the *Frascati Scienza* association in Italy – which is also co-ordinating the project – the Erasmus Medical Centre in The Netherlands and the EFDA-JET Institute in the UK. "Our partners in the project come from different scientific fields and this is a very positive thing. Through the webcast we will show that research is intrinsically multi-disciplinary, international and collaborative",

On 24 September from 5 p.m. to 1 a.m., European Researchers Night will give some 100 young students from local schools the opportunity to sit side by side with scientists and operators in the LHC control rooms. At the same time, a live webcast will connect CERN with various institutes around Europe participating in the Being a European Scientist Today (BEST) project. You are all invited to take part!

says Paola Catapano.

The second main activity of the European Researchers Night organised at CERN specifically targets the local young public, which is invited to apply to experience the excitement of shadowing and working together with scientists and operators in the control rooms. "We have sent all local schools the invitation to participate in the initiative", explains Corinne Pralavorio, who is responsible for communication with the local community. "Students in the 12-19 years age range are already applying through a web questionnaire in which they are asked to briefly give the reasons for their application to take part. About 100 students will be selected to spend a couple of hours in the control rooms of the experiments and the CERN Control Centre (CCC) and participate in the activities organised for them, which researchers will be directly involved in".

The webcast will be broadcast in French from the Globe and in English from the



## Did you know?

### How to participate

To participate in the activities taking place from 5 p.m. to 1 a.m. in the LHC control rooms and in the Globe during the European Researchers Night, you must register using the forms you can find online: the first is for students from 12 to 19 years of age wishing to take part in the control rooms experience; the second is for everyone wanting to participate in the Globe Show.

ATLAS control room. It will feature video connections with the other experiments' control rooms, as well as with the CCC and several scientific sites around the world. Many other initiatives are being organised around the main show. They include hands-on activities as well as visits to Microcosm and the Universe of Particles exhibition in the Globe. All the sites involved in the European Researchers Night event will exceptionally stay open until 1 a.m. on 24 September.

More information at:

[www.cern.ch/nuitdechercheurs](http://www.cern.ch/nuitdechercheurs)

Roberto Cantoni



# Portuguese-language high school teacher programme extends its reach to South America and Africa

CERN usually focuses on the Member States when organizing its national teacher programmes, providing them with additional return on their investment in the Laboratory by helping to train and inspire the next generation of scientists. However, Portugal's *Laboratório de Instrumentação e Física Experimental de Partículas* (LIP), through the Agency Ciência Viva, has taken the initiative to go beyond the borders of Portugal and include other countries that speak Portuguese. Last year there were 60 participants in the programme, including 11 teachers from Brazil and 5 from Mozambique. This year brings even more teachers from more African countries, with 45 from Portugal, 20 from Brazil, 5 from Mozambique, 3 from Angola, 1 from Cape Verde and 1 from São Tomé. "This is the first time CERN has made a connection with Angola, Cape Verde and São Tomé," said Mick Storr, head of the Teachers and Visits section in CERN's PH Department. This programme is sponsored jointly by CERN, LIP and the Brazilian Federal Government through *Sociedade Brasileira de Física* and *Centro Brasileiro de Pesquisas Físicas* (CBPF). Travel for the Angolan teachers is funded by the Angolan Government.

Pedro Abreu, one of the main local organizers for this programme and a physicist at LIP, says he has received a tremendous amount

**From 5 to 10 September, a record 75 teachers from Portugal, Brazil, Mozambique, Angola, São Tomé and Cape Verde will take part in the Portuguese-language high school teacher programme at CERN.**

of feedback from last year's first Portuguese-language programme. "Teachers send us updates about Big Bang projects they are working on and there has been an increase in the number of teachers from Portugal taking their classes to visit CERN, as well as in the number of seminars held by Portuguese physicists at schools in Portugal (which is done prior to any visit to CERN)," said Abreu. "The Portuguese community at CERN is very committed, and most of the researchers are connected to LIP. The teachers like to feel that these physicists could have come from their school and that their current students could one day hold such positions."

Participants will attend lectures in the mornings on topics such as particle physics, detectors, accelerators, computing and physics applications in medicine. Afternoons will include hands-on activities, such as building working cloud chambers, as well as visiting various locations around the CERN site including the LHC experiment's control rooms, the CERN Control Centre, and the LHC Superconducting Magnet Test Facility.

"Courses such as this one cover two strategic missions of CERN – training the scientists

of tomorrow through contact with teachers and promoting international collaboration," said Storr. "By inspiring one teacher, we are potentially reaching 100 students, and if we have 1000 teachers participating each year, then in 10 years we've theoretically reached a million young people." Currently, 850 teachers take part in these teacher programmes each year, and about 3500 teachers have attended since the current series started in 1998.

CERN has been hosting national programmes for teachers in their native tongues since 2006. "We started with Hungarian, which was a bit of a challenge, but if we can do it in Hungarian we can probably do it in any language," said Storr. To date, these programmes have been held in 15 different languages. Portugal's decision to invite other countries to take part opens up all sorts of possibilities for networking with other Non-Member States.

"The success of CERN's Teacher Programmes is due to a big collaborative effort between CERN physicists and engineers, users and national scientists" said Storr. "They have really taken to heart the value of educating the scientists of tomorrow and I would like to say a huge thank you to them. Without their efforts it would not be possible to run these programmes."

Carolyn Lee



The group of Portuguese-speaking teachers who visited CERN in 2009.

# Bulgarian folk dances at CERN

The visit of the Bulgarian dance group was organized by Zornitsa Zaharieva, a member of the Beams

Department, and Svejina Dimitrova, Director of the Varna Astronomical Observatory. "The students were enthusiastic about the opportunity to visit CERN", says Zornitsa. "The idea of the performance came from the dance group itself, who wanted to express their gratitude for being given this chance".

The group, comprising around 25 children aged between 11 and 16 from the city of Varna, was hosted by the CERN Dancing Club. For their show, the young dancers, choreographed by Tashka Pavlova, performed traditional dances and songs from

On Sunday 29 August, the Bulgarian folklore dance group Rhythm visited CERN. After their visit to the ATLAS visitor centre and the SM18 hall, they performed a show in the Pump Room, introducing CERN people to the musical traditions of their country.

different Bulgarian regions. "As a member of the CERN Dancing Club committee, I proposed that the Club assist in the organization of this event, and the rest of the committee members took up the initiative with enthusiasm", concludes Zaharieva. The audience that gathered on a Sunday morning to see the show seemed to really appreciate the festive atmosphere. At the end of the show, some members of the audience even joined in and danced together with the young dancers..

Roberto Cantoni



## Marie Curie poster exhibition "Training for Europe"

Are you an enthusiastic researcher desperately looking for opportunities to explore your potential? Do you know what the Marie Curie/People Programme (MC) is? Do you want to know what opportunities it gives to young researchers and how to apply?

Come and visit the poster exhibition "Training for Europe" in the area between the Main Auditorium and the Council Chamber at CERN from 13 to 17 September.

Individual posters will show you the impact of the MC programme on the career of MC fellows at CERN by illustrating all the opportunities they have been able to take advantage of in terms of conferences, courses and on-the-job training.

In addition, the main projects in which the MC fellows are currently participating (ACEOLE, CLOUD, DITANET, MC-PAD, and PARTNER) are described in overview posters.



Some current fellows will be available during dedicated day slots (see indico event for details <http://indico.cern.ch/conferenceDisplay.py?ovw=True&confId=105902>) and they will be happy to answer all your questions about how to apply for the program.

Adriana Telesca  
Marie Curie Fellow CERN PH-AID



## News from the Library

A series of events and book presentations is scheduled for the 2010 CERN Book Fair.

- Springer will present its new products and services (eBooks, MyCopy Softcover Editions, SpringerBriefs, and a new physics journal: "Historical Perspectives on Contemporary Physics") and SpringerMaterials, the electronic version of the Landolt Boernstein book series.
- Wiley will present two books: "A History of International Research Networking: The People who Made it Happen", edited by B. Bressan and H. Davies, and "Field computation for accelerator magnets : analytical and numerical methods for electromagnetic design and optimization" by S. Russenschuck.

# CERN Book Fair 2010 - Events and Book Presentations

– Finally, World Scientific will present the series "Reviews of Accelerator Science and Technology (RAST)".

The calendar is available here:

[http://indico.cern.ch/  
conferenceDisplay.py?confid=105651](http://indico.cern.ch/conferenceDisplay.py?confid=105651)

CERN Library

Organized by the CERN Bookshop and the CERN Library. Major publishers and book distributors will come to CERN to display titles of interest. Several book presentations are scheduled: <http://indico.cern.ch/conferenceDisplay.py?confid=105651>. Book sale each day from 9 a.m. to 6 p.m.

Companies attending:  
Oxford University Press, World Scientific, Imperial College Press, Princeton University Press, Cambridge University Press, Springer, Cambridge University Press, McGraw-Hill.

Logos for Springer, World Scientific, Oxford University Press, Cambridge University Press, Taylor & Francis, Cambridge University Press, McGraw-Hill.

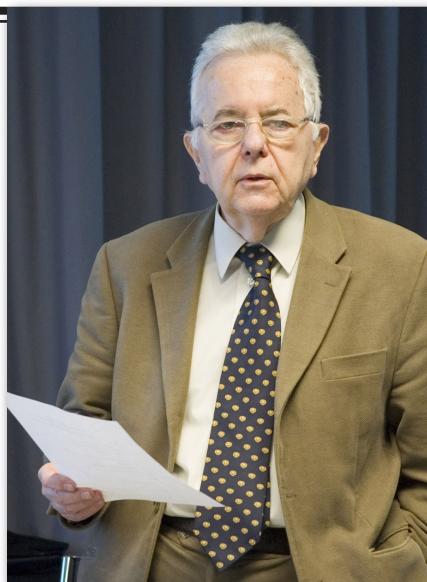
## Nicola Cabibbo 1935-2010

Nicola Cabibbo, one of the most important theoretical physicists of our time, died of cancer in Rome on 16 August, 2010 at the age of 75.

Before the discovery of quarks, he gave the correct formulation of the weak current couplings that in modern terms corresponds to the phenomenon of quark mixing. His formulation, in terms of the famous Cabibbo angle, was later extended to three families of fermions (and more recently also applied to neutrino mixing), and plays an essential role in the Standard Model of fundamental interactions.

Over the years he applied his extremely lucid, deep and flexible mind to a wide range of problems, also including experiments, such as the measurement in 1963 of the electron helicity in muon decay, and the conception and design of the parallel computers APE, which he developed, starting in the early 1980s, for the simulation of the QCD theory of the strong interactions on discrete space-time.

Highly respected for his broad range of competence, international recognition, and political and managerial skills, he was appointed to important positions in Italy:



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he was President of INFN from 1983 to 1992 and President of ENEA, the Italian energy agency, from 1993 to 1998.

Since 1993 he had been President of the Pontifical Academy of Sciences. During practically all of his scientific career he was a Professor in Rome, where he was a leading actor in making the theory group one of the

most reputed ones in Europe. Outstanding theorists like Parisi, Testa, Petronzio and Martinelli were among his students. Altarelli and Maiani were among his younger collaborators in the 1970s.

Throughout his life he had a continuous connection with CERN, and his most famous work, the 1963 paper on mixing, shows CERN as his affiliation. He was later a member of the SPC and of the Council and visited CERN regularly.

Recently, in 2004, he spent a year at CERN as guest professor. Free from non-scientific burdens, with youthful enthusiasm he plunged back into current research, joined the NA48 collaboration and, among other contributions, quantitatively explained an intriguing feature of the data in K-> 3pi decay in terms of the final state pi-pi interaction computable from chiral symmetry theory.

Nicola Cabibbo will be sorely missed by all those who had the chance to work with him and to appreciate directly his outstanding qualities as a person and as a physicist.

*His friends and colleagues*



## GENERAL MEETING OF THE PENSION FUND

All members and beneficiaries of the Pension Fund are invited to attend the

**Annual General Meeting to be held in the CERN Council Room  
on Monday 6 September 2010, from 2-00 to 4-30 p.m.**

The Agenda comprises:

1. Opening Remarks - F. Ferrini
2. Presentation of the 2009 Financial Statements - T. Economou

*Copies of the 2009 Financial Statements are available from Departmental Secretariats.*

3. Management Update - T. Economou
4. Report by the Chairman of the Pension Fund Governing Board - F. Ferrini

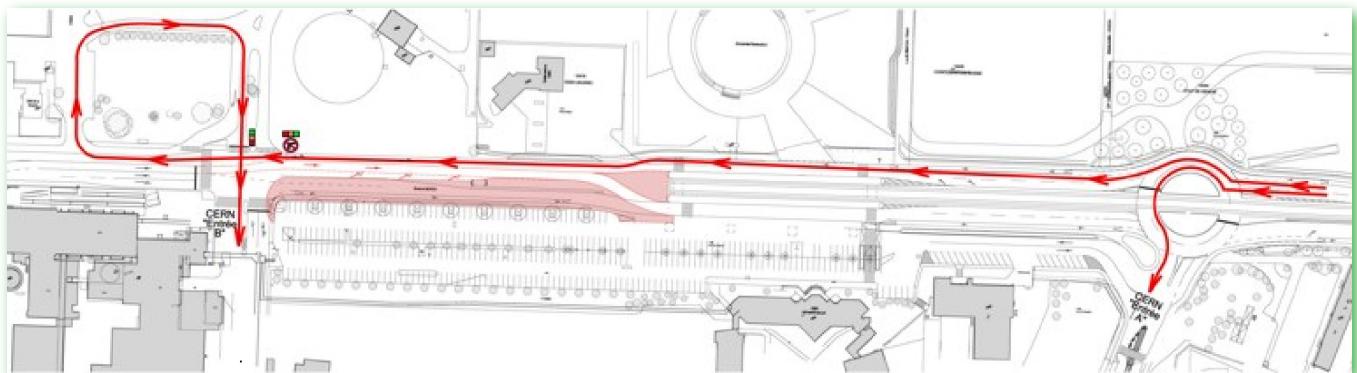
5. Questions from members and beneficiaries

Persons wishing to ask questions are encouraged to submit them, where possible, in writing in advance, addressed to the Secretariat of the Pension Fund.

6. Conclusions - F. Ferrini

As usual, participants are invited to drinks after the Meeting.

NB The minutes of the 2009 General Meeting are available from the Administration of the Fund (tel. + 41 22 767 27 42 ; e-mail Barbara.Brugger@cern.ch)



## TRAFFIC DISRUPTION AT ENTRANCE B - TRAM- RELATED WORK

Due to work being carried out for the TRAM we inform you that vehicles coming from Geneva will be prohibited from turning left into Entrance B.

This restriction will be in place for approx. 10 weeks\*) starting from Monday 30 August 2010.

You are highly recommended to enter CERN through Entrance A during this period even though a diversion will be put in place to allow access to CERN from Entrance B (as shown in the attached sketch).

In addition, approx. 20 car parking spaces will be temporarily unavailable at the western end of the flags car park.

We thank you in advance for your kind understanding.

\*) The exact end date of the work will be communicated in due course.



## ACCU MEETING

**DRAFT Agenda  
for the meeting to be held  
on Wednesday 8 September 2010  
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. Matters arising
- 5. News from the CERN Management
- 6. Report on services from GS Department
- 7. An update on Safety at CERN
- 8. The CERN Summer Student program
- 9. Bringing Library services to users
- 10. Reports from ACCU representatives on other committees
- 11. Users' Office news
- 12. Any Other Business
- 13. Agenda for the next meeting

Anyone wishing to raise any points under item 12 is invited to send them to the Chairperson in writing or by e-mail to

**Christopher.Onions@cern.ch**

*Chris Onions (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 to ACCU are (CERN internal telephone numbers in brackets):

Austria	G. Walzel (76592)	Norway	J. Nystrand (73601)
Belgium	C. Vander Velde (Chairperson) (71539)	Poland	M. Witek (78967)
Bulgaria		Portugal	P. Bordalo (74704)
Czech Republic	S. Nemecek (71144)	Slovak Republic	A. Dubnickova (71127)
Denmark	J.B. Hansen (75941)	Spain	I. Riu (76063)
Finland	K. Lassila-Perini (79354)	Sweden	K. Jon-And (71126)
France	N. Besson (75650)	Switzerland	M. Weber (71271)
	A. Rozanov (71145)	United Kingdom	M. Campanelli (72340)
Germany	H. Lacker (78736)	Non-Member States	S. McMahon (77598)
	O. Biebel (72974)		D. Acosta (71566)
Greece	G. Tsipolitis (71162)		E. Etzion (71153)
Hungary	F. Siklér (76544)		C. Jiang (71972)
Italy	G. Passaleva (75864)		N. Zimine (75830)
	N. Pastrone (78729)	CERN	E. Auffray (75844)
Netherlands	G. Bobbink (71157)		F. Teubert (73040)

CERN Management is represented by S. Bertolucci (Director for Research and Computing), S. Lettow (Director for Administration and General Infrastructure) and J. Salicio Diez/PH with C. Onions/PH as Secretary. Human Resources Department is represented by J. Purvis, the General Infrastructure Services Department by M. Tirakari and the CERN Staff Association by M. Goossens. Other members of the CERN Staff 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 (75039 or Christopher.Onions@cern.ch).

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



## Take note

### CERN COLLOQUIUM

**16 September 2010**

10:00 - Bldg. 222/R-001

#### EXCEPTIONAL COLLOQUIUM:

#### Digital scholarship and the changing nature of scientific publication

by R.d Holliman & E. Scanlon / Open University, UK

Digital media have extended the number of channels that scientists (and other academics) use to communicate and share information. Digital technologies have the potential to make all stages of the research process more visible in the public sphere, and to audiences that have, on occasion, opportunities for interaction and engagement. But digital technologies also are introducing novel demands on researchers, requiring skills and competencies on the part of scientists that are encapsulated by the concept of digital scholarship. In this presentation we explore this developing context via a case study: the publication of emails from the Climatic Research Unit at the University of East Anglia (also known as 'climategate'). The findings of three reviews of 'climategate' will be discussed in terms of their implications for science communication. This episode may indirectly influence the ways that scientific knowledge is produced and verified, and what information and data are required to be archived for circulation in the public sphere when a peer reviewed paper is published. In the light of this, we argue that there is a need to develop norms to inform scientific publication in the widest sense of the term, to include all forms of science communication that are available in the public sphere.



## Academic training

### CERN ACADEMIC TRAINING PROGRAMME 2010

#### LECTURE SERIES

**6, 7 and 8 September 2010**

11:00-12:00 - Bldg. 1-1-025

#### Black Holes in the Cosmos, the Lab, and in Fundamental Physics

by Dr. Steve Giddings / University of California, Santa Barbara, USA

Black holes present the extreme limits of physics. They are ubiquitous in the cosmos, and in some extra-dimensional scenarios they could be produced at colliders. They have also yielded a puzzle that challenges the foundations of physics. These talks will begin with an overview of the basics of black hole physics, and then briefly summarize some of the exciting developments with cosmic black holes. They will then turn to properties of quantum black holes, and the question of black hole production in high energy collisions, perhaps beginning with the LHC. I will then overview the apparent paradox emerging from Hawking's discovery of black hole evaporation, and what it could be teaching us about the foundations of quantum mechanics and gravity.

Organiser: Maureen Prola-Tessaur/PH-EDU



### RESULTS OF THE HEARING CAMPAIGN FROM 12 TO 16 JULY 2010

Seventy people who are exposed to noise during their professional activities or leisure hours (MP3 players, concerts with loudspeakers, etc.) had their hearing tested as part of the screening campaign organised by the nurses of the CERN Medical Service. The results of the hearing tests were each accompanied by individual reports underlining the harmful effects of noise on hearing acuity. The various types of individual protective equipment were presented and advice was given on the specific activities of each participant in the campaign.

A high proportion of young people (18-30 years) took part in the campaign (40%). Analysis of the results confirmed that the major risks for this age group are associated with leisure activities – music in particular – resulting in early hearing loss and tinnitus (droning or whistling) of an often permanent nature.

The campaign underlined the importance for everyone to preserve and protect their hearing on a daily basis, whether at work or at play.

Please consult the DVD entitled « le bruit toxique » (in French only) :

[http://www.dailymotion.com/video/x3mimf\\_reportage-sur-les-bruit-toxique-pou\\_news](http://www.dailymotion.com/video/x3mimf_reportage-sur-les-bruit-toxique-pou_news)

DGS Department

## 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

Business Objects Basic	18-Oct-10	19-Oct-10	tbc	2 days
Business Objects Advanced	20-Oct-10	20-Oct-10	English	1 day
C++ Part 1 - Hands-On Introduction	20-Sep-10	23-Sep-10	English	4 days
CERN openlab/Intel Computer Architecture and Performance Tuning Workshop	22-Sep-10	23-Sep-10	English	2 days
Developing secure software	6-Sep-10	6-Sep-10	English	3,5 hours
ISTQB International Software Testing Qualifications Board	13-Sep-10	16-Sep-10	English	4 days
ITIL Foundations (version 3) EXAMINATION	28-Oct-10	28-Oct-10	English	1 hour
JAVA 2 Enterprise Edition - Part 1: Web Applications	27-Oct-10	29-Oct-10	English	2 days
JCOP - Joint PVSS-JCOP Framework	11-Oct-10	15-Oct-10	English	4,5 days
Oracle Database SQL Tuning	25-Oct-10	27-Oct-10	English	3 days
Oracle Databases: Advanced PL/SQL Programming	27-Sep-10	29-Sep-10	English	3 days
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
Web Applications with Oracle Application Express (APEX) 3.2	20-Sep-10	22-Sep-10	English	3 days

### Electronic design

Altium Designer - Advanced training for experts	8-Oct-10	8-Oct-10	French	1 day
Altium Designer - migration for occasional PCAD users	5-Oct-10	7-Oct-10	French	3 days
Altium Designer 6.0 - Foundation & Board Implementation	22-Sep-10	30-Sep-10	French	5 days
Comprehensive VHDL for FPGA Design	27-Sep-10	1-Oct-10	English	5 days
LabVIEW Core I with RADE introduction	11-Oct-10	13-Oct-10	Bilingual	3 days
LabVIEW Core II	14-Oct-10	15-Oct-10	Bilingual	2 days
Siemens - STEP7 : level 2	13-Sep-10	17-Sep-10	French	5 jours
Siemens: Profinet IK-PNSYS	28-Oct-10	29-Oct-10	French	2 jours

### Mechanical design

ANSYS DesignModeler	28-Oct-10	29-Oct-10	French	2 jours
AutoCAD 2010 - level 1	30-Sep-10	8-Oct-10	French	4 jours
AutoCAD Mechanical 2010	30-AUG-10	31-AUG-10	French	2 jours
Schneider: Automate Modicon Premium UNPP2	14-Sep-10	17-Sep-10	French	4 jours

### Office software

ACCESS 2007 - Level 1 : ECDL	27-Sep-10	28-Sep-10	French	2 jours
CERN EDMS for Engineers	20-Oct-10	20-Oct-10	French	1 jour
CERN EDMS for Local Administrators	5-Oct-10	6-Oct-10	French	2 jours
Dreamweaver CS3 - Niveau 1	30-Sep-10	1-Oct-10	French	2 jours
EXCEL 2007 - level 1 : ECDL	7-Oct-10	8-Oct-10	French	2 jours
EXCEL 2007 - Level 2: ECDL	21-Oct-10	22-Oct-10	French	2 jours
Indico - Conference Organization	7-Oct-10	7-Oct-10	English	0,5 jour
Indico - Meeting Organization	7-Oct-10	7-Oct-10	English	0,5 jour
Individual Coaching	19-Oct-10	19-Oct-10	tbd	1 hour
OUTLOOK 2007 (Short Course I) - E-mail	18-Oct-10	18-Oct-10	Bilingual	0,5 jour
OUTLOOK 2007 (Short Course II) - Calendar, Tasks and Notes	18-Oct-10	18-Oct-10	Bilingual	0,5 jour
OUTLOOK 2007 (Short Course III) - Meetings and Delegation	19-Oct-10	19-Oct-10	Bilingual	0,5 jour
Sharepoint Collaboration Workspace	11-Oct-10	12-Oct-10	English	2 days
Sharepoint Designer (Frontpage) - Level 2	14-Oct-10	15-Oct-10	French	2 jours
Windows 7	28-Sep-10	28-Sep-10	French	3 hours
WORD 2007 - level 1 : ECDL	4-Oct-10	5-Oct-10	English	2 days
WORD 2007 (Short Course I) - HowTo... Mail merge (with Outlook)	27-Sep-10	27-Sep-10	Bilingual	0,5 day



## Technical training

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

### Special course

Demonstrating Reliability with Accelerated Testing  
Designing Effective websites

20-Sep-10    21-Sep-10    English    2 days  
27-Sep-10    28-Sep    Bilingual    2 days

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.



## Language training

Language Training  
English Courses

Nathalie Dumeaux Tel. 78144  
[nathalie.dumeaux@cern.ch](mailto:nathalie.dumeaux@cern.ch)

## ENGLISH COURSES

### 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=110:9:192,7376177842004::NO::X.Course\\_ID,X.Status:4133%2CD](http://cta.cern.ch/cta2/f?p=110:9:192,7376177842004::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.



# Seminars

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## MONDAY 6 SEPTEMBER

### ACADEMIC TRAINING LECTURE

### REGULAR PROGRAMME

11:00 - Globe, Bldg. 80 1st Floor

### **Black Holes in the Cosmos, the Lab, and in Fundamental Physics (1/3)**

S. GIDDINGS / UNIVERSITY OF CALIFORNIA, SANTA BARBARA, USA

## TUESDAY 7 SEPTEMBER

### HR SEMINAR

08:30 - Bldg. 13-2-005

### **INDUCTION PROGRAMME - 2nd Part**

C. GRANIER, M. SGOURAKI / CERN

### ACADEMIC TRAINING LECTURE

### REGULAR PROGRAMME

11:00 - Globe, Bldg. 80 1st Floor

### **Black Holes in the Cosmos, the Lab, and in Fundamental Physics (2/3)**

S. GIDDINGS / UNIVERSITY OF CALIFORNIA, SANTA BARBARA, USA

## WEDNESDAY 8 SEPTEMBER

### ACADEMIC TRAINING LECTURE

### REGULAR PROGRAMME

11:00 - Globe, Bldg. 80 1st Floor

### **Black Holes in the Cosmos, the Lab, and in Fundamental Physics (3/3)**

S. GIDDINGS / UNIVERSITY OF CALIFORNIA, SANTA BARBARA, USA

### TH THEORETICAL SEMINAR

14:00 - TH Auditorium, Bldg. 4

### **Observing the dark energy**

M. KUNZ / UNIGE

## MONDAY 13 SEPTEMBER

### TH INSTITUTES

08:00 - TH Auditorium, Bldg. 4

### **v TheME: Neutrino Theory, Models, and Experimental perspectives**

A. DE GOUVEA, G. GIUDICE, S. KING, J. LESGOURGUES, H. MURAYAMA, S. PARKE, S. PASCOLI, S. PETCOV, T. SCHWETZ, P. SERPICO

## TUESDAY 14 SEPTEMBER

### CERN JOINT EP/PP SEMINARS

11:00 - Bldg. 222-R-001

### **Recent results from HARP-CDP and the "LSND anomaly"**

A. ZHEMCHUGOV / JOINT INST. FOR NUCLEAR RESEARCH (JINR))

### TH STRING THEORY SEMINAR

14:00 - TH Auditorium, Bldg. 4

### TBA

F. PASSERINI / HUMBOLDT-UNIVERSITÄT ZU BERLIN

## WEDNESDAY 15 SEPTEMBER

### TH COSMO COFFEE

11:00 - Bldg. 1-1-025

### TBA

S. TULIN / TRUMF, VANCOUVER

### COMPUTING SEMINAR

14:00 - IT auditorium, Bldg. 31-3-004

### **Lifecycle quality management from requirements, test cases to defects**

N. BERNEY / IBM SWITZERLAND

### TH THEORETICAL SEMINAR

14:00 - TH Auditorium, Bldg. 4

### **TBA [Neutrino TH Institute]**

## THURSDAY 16 SEPTEMBER

### CERN COLLOQUIUM

10:00 - Bldg. 222/R-001

### **EXCEPTIONAL COLLOQUIUM : Digital scholarship and the changing nature of scientific publication**

R.D HOLLIMAN & E. SCANLON / OPEN UNIVERSITY, UK

### CERN COLLOQUIUM

16:30 - Main Auditorium, Bldg. 500

### **Modeling volcanic ash dispersal**

G. MACEDONIO (/ ISTITUTO NAZIONALE DI GEOFISICA E VULCANOLOGIA, OSSERVATORIO

### OTHER CERN EVENTS

20:30 - Globe, Bldg. 80 1st Floor

### **Astronomie, écologie et poésie par Hubert Reeves**

H. REEVES, F. BON

## FRIDAY 17 SEPTEMBER

### CONFERENCE & WORKSHOPS

14:00 - Main Auditorium, Bldg. 500

### **Celebration in Honour of Magda and Torleif's 80th Birthday**