

SEMINARS SEMINAIRES

Monday 7 June

COSMOLOGY WORKSHOP

at 14.00 hrs – TH Conference Room, bldg 4

UHE Neutrinos: Interactions, Detection and Possibilities

by R. GANDHI / Mehta Research Institute

UHE Neutrinos, expected from various astrophysical sources, offer unique opportunities for particle physics. Several major experimental efforts are underway in order to detect these neutrinos resulting from some of the most energetic processes in the universe. We review the status of this field, with emphasis on the interactions, detection rates and physics possibilities of these neutrinos.

Tuesday 8 June

SEMINAR

at 10.00 hrs – SL Auditorium, bldg 864, 1st floor

Exposure to cosmic radiation at aircraft altitudes

by Denis O'SULLIVAN / Dublin Institute for Advanced Studies School of Cosmic Physics Dublin, Ireland

Cosmic radiation penetrates deeply into the Earth's atmosphere and produces a complex field at aviation altitudes. Although its existence at these altitudes has been known for a long time developments in air transport over recent decades have given rise to concern for aircrew and frequent travellers. Recent work by European scientists to investigate the situation will be outlined.

Tuesday 8 June

at 14.00 hrs – SL Auditorium, bldg 864/1D-002)

Control using the WorldFIP Fieldbus Actual and future projects at CERN

by Guy BARIBAUD, Gary BEETHAM, Raymond BRUN, Edmond CIAPALA, John PETT, Pedro RIBEIRO & Jean-Jacques SAVIOZ

14.00 Introduction (Raymond BRUN)

- "WorldFIP tools acquired at CERN and training"

14.10 Actual projects using WorldFIP at CERN

- "Generic WorldFIP controls interface and Universal time distribution (Raymond BRUN)"
 - MICROFIP interface
 - FULLFIP interface
 - Universal time distribution over the WorldFIP Fieldbus"
- "How WorldFIP could be used for LHC Power Converter Control" (John PETT)
- "LAN to WorldFIP gateway (Pedro RIBEIRO)."
 - Implementation under LynxOS
 - Synchronisation
 - Variables refreshment & closed loop control"

14.55 Potential future projects

- "Integration of WorldFIP in the SPS experimental area" (Guy BARIBAUD)
- "WorldFIP and machine timing aspects" (Gary BEETHAM)

Vous pouvez aussi consulter

For information on these seminars, please see

<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

- "WorldFIP application in LHC RF Control" (Edmond CIAPALA)

- "LHC Beam instrumentation front-end Real Time control" (Jean-Jacques SAVIOZ)

15.25 Discussion

15.40 End of session

Note:

- All peoples interested by the real time fieldbuses, the Schneider's and Siemens's PLCs are welcome.
- WorldFIP-CERN Site
<http://nicewww.cern.ch/sl/rfgroup/fip/fipmenua.htm>

Raymond BRUN, SL/LRF (76946-Linkman WorldFIP CERN).

E-Mail : Raymond.Brun@cern.ch

Tuesday 8 June

IT INFORMATICS TUTORIAL

14.00-16.00 hrs – IT Auditorium, bldg 31/3-004

Windows 95 basics

by Raul RAMOS POLLAN / CERN-IT

A practical introduction for people novice to the Windows 95 world. I will present the basic elements of the system and show the minimum operational skills in order to start working with it. The talk will provide participants with the essential information to comprehend the use of the desktop, execute applications, view resources and manage files. No previous knowledge is required.

Information: <http://wwwinfo.cern.ch/support/training>

Organisers: M.Marquina and R.Ramos /IT-User Support

Tuesday 8 June*

COMPUTING SEMINAR

at 14.00 hrs – bldg 40/SS-A01

CORBA Tutorial

by Sergei KOLOS / CERN-PNPI

This tutorial aims to give a practical introduction to the The Object Management Group's (OMG) Common Object Request Broker Architecture (CORBA).

The Common Object Request Broker Architecture (CORBA), is the Object Management Group's answer to the need for interoperability among the rapidly growing number of hardware and software products available today. With CORBA, users gain access to information transparently, without having to know on what software or hardware platform it resides or where it is located on an enterprises' network. Simply stated, CORBA allows applications to communicate with one another no matter where they are located or who has designed them.

The tutorial will cover the following points:

1. Brief description of OMG and history of CORBA.
2. Explanation of the basic mechanics of the architecture of CORBA. Give an overview of CORBA components and provide the listener with some vocabulary used in the OMG documents.

3. Overview of CORBA services and facilities. Provide more detailed explanation for the most currently used services (Naming, Event).
4. Comparison of CORBA to similar systems (ActiveX/DCOM/OLE, DCE, Java RMI), and some results of the research connected with it's interfacing with CORBA.
5. Current status of real-time extensions to CORBA development.
6. Overview of existing CORBA implementations including commercial and free products with some comparison between them.
7. Information about OMG currently going CORBA related activities and future plans.

Information : <http://wwwinfo.cern.ch/seminars>

Organiser : Bob Jones, EP/atd

* Please note unusual day, time, and place

Tuesday 8 June

DUALITY WORKSHOP

at 14.00 hrs – TH Conference Room, bldg 4

String thermodynamics in D-brane backgrounds

by S. ABEL / CERN - TH

We discuss the thermal properties of string gases propagating in D-brane backgrounds in the weak coupling limit and at temperatures close to the Hagedorn temperature. We outline where such a weak coupling Hagedorn regime belongs in the general phase diagram of the interacting theory and discuss some implications for early cosmology.

Tuesday 8 June

SEMINAR IN HONOUR OF UGO AMALDI ON THE OCCASION OF HIS 65TH BIRTHDAY

at 14.30 hrs – Auditorium, bldg 500

Programme

- Introduction, by G. Kalmus
- Standard Model and Beyond, by P. Langacker (University of Pennsylvania)
- The Electron-proton Collider HERA, by G. Wolf (DESY)
- The DELPHI Experiment at LEP, by D. Treille (CERN)
- Studies of Linear Colliders, by W. Schnell (former CERN)
- Therapy with particles beams, by M. Goitein (Northeast Proton Therapy Center, Boston)
- High school text books and the Amaldi family, by F. Enriques (Zanichelli, Bologna)
- Address, by U. Amaldi
- Closing remarks, by L. Maiani, Director-General of CERN

A reception, offered by Prof. L. Maiani, at CERN, Salle des Pas Perdus, will follow.

Wednesday 9 June

COMPUTING SEMINAR

at 16.00 hrs – IT Auditorium, bldg 31/3-005

Simulation of Distributed Processing Systems

by Iosif LEGRAND

The computing models for the LHC experiments envisage a complex set of data servers connected over wide area, regional and local area networks, creating a distributed architecture computing systems. Systems of even similar complexity will not exist for several years to come, and a joint R&D project (MONARC) was started last year to develop the simulation tools and to perform feasibility

studies of distributed architecture systems for LHC experiments analysis and computing. A simulation program, built using Java technology, which provides adequate tools for developing a flexible and powerful distributed process oriented simulation, is described.

Information : <http://wwwinfo.cern.ch/seminars>

Organiser : G.Folger / IT

Thursday 10 June

CERN HEAVY ION FORUM

at 14.00 hrs – TH Conference Room, bldg 4

Imaging the Space-Time Evolution of High Energy Nucleus-Nucleus Collisions with Bremsstrahlung

by Joseph KAPUSTA / University of Minnesota, CERN visitor

The bremsstrahlung produced when heavy nuclei collide at very high energies is estimated. Bremsstrahlung photons with energies of order 1 MeV in the centre-of-mass frame can easily be detected and used to infer the final net charge rapidity distribution.

Photons with energies of order 100 MeV are needed to discern the gross features of the space-time evolution of electric charge. This is illustrated explicitly by considering two very different models, one Bjorken-like and the other Landau-like, both of which are constructed to give the same final net charge rapidity distribution but which give rise to very different photon distributions.

Organisers: Yiota Foka & Ulrich Heinz

<http://home.cern.ch/a/alicedoc/www/chic/>

Friday 11 June

CERN-ITU MANAGEMENT BRIEFING

09.00-12.00 hrs – bldg 32/1-A24

CERN, in partnership with the International Telecommunications Union (ITU), Helsinki Business School of Economics and Stratnet SA, organizes an informal seminar series in strategic management. The aim of the seminar series is to summarize the recent developments in strategic management disciplines, using practical case examples from ITU which is currently undergoing a management transformation process. These half-day seminars are aimed at different management levels throughout the organization. Participation to these seminars does not require prior knowledge about ITU nor about CERN-specific management processes. The fourth session, open to anyone interested in strategic management issues, is entitled 'COMPETENCY-BASED RENEWAL OF EXPERT ORGANIZATIONS'. The aim is to discuss the CERN culture and management styles in the light of the ITU experiences and the distributes material which can be found at <http://www.cern.ch/CERN/Divisions/DSU/spu/ITU/welcome.html>

Interested participants are kindly asked to confirm their attendance by email to markus.nordberg@cern.ch

Organiser: M. Nordberg/DSU/77377

Friday 11 June

IT INFORMATICS TUTORIAL

10.00-12.00 hrs – IT Auditorium, bldg 31/3-004

Introduction to Expect

by Tony WILDISH / EP Division

Expect is an extension to the Tcl scripting language. It allows you to automate interactive processes such as telnet, or any

process which traditionally needs a user to type at a keyboard. As such, it can be used for a number of problems that cannot be solved easily, if at all, in other ways. Expect is available on all platforms with access to the ASIS repository on a self-service basis (no central support). I will try to give a feel for what it is like to develop an Expect script, to give you an idea of the effort you will need to invest, as well as showing something of what the language can do.

Information: <http://wwwinfo.cern.ch/support/training>
Organisers: M.Marquina and R.Ramos /IT-User Support

Friday 11 June

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room, bldg 4

Non-universal scalar masses and SUSY searches at the Tevatron

by A. DATTAS / Jadavpur University, Calcutta

Non-standard D-terms may significantly alter the conventional sparticle spectrum at low energies by introducing non-universal scalar masses at the GUT scale. It is shown that in such cases the relative sizes of the multileptons + jets + missing energy signals, as well as their characteristics at the Tevatron and its upgrades, may be very different from the expectations based on the conventional spectrum. Such signals, if seen, may provide glimpses of the SUSY breaking patterns at a high scale long before the advent of the NLC. If no signals are found, the resulting bounds on the squark – gluino masses may be quite different in the presence of non-universality.

Tuesday 15 June

IT INFORMATICS TUTORIAL

14.00-16.00 hrs – IT Auditorium, bldg 31/3-004

The Java Series: Network Programming and Security

by Raul RAMOS POLLAN / IT Division

Information: <http://wwwinfo.cern.ch/support/training>
Organisers: M.Marquina and R.Ramos /IT-User Support

Tuesday 15 June

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium, bldg 500*

Results from the CAPRICE Cosmic Ray Experiment

by Tom FRANCKE / Royal Institute of Technology, Stockholm, Sweden

CAPRICE is a series of balloon-borne experiments to measure the flux of rare particles in cosmic radiation, e.g. positrons and antiprotons, using a superconducting magnet spectrometer and advanced particle identification detectors (RICH, TRD and imaging calorimeter). No evidence for exotic sources of either positrons or antiprotons is observed. However, the measurements show that the models for cosmic ray fluxes are incomplete. Detailed measurements of the muon fluxes during the ascent in the atmosphere indicate important discrepancies with the predictions from simulations of atmospheric shower production.

Organiser: Jasper KIRKBY / EP Division

* Tea & coffee will be served at 16.00 hrs.

Wednesday 16 June

COORDINATION OF INDUSTRIAL PROCESS CONTROLS SEMINAR

14.00-16.00 hrs – SL Auditorium, bldg 864/1-D02

Critical Control System Design: the CIS project

by Francisco Javier VARAS / GTD S.A. Barcelona

The aim of the seminar is to present the SPS main power converters Control and Interlock System (CIS). The CIS project is a example of collaboration between CERN and industry for the development of a critical control system dedicated to specific accelerator equipment using industrial technology. The CIS is now in its second year of operation. The seminar will cover the technical solutions (reactivity, synchronisation, etc.) as well as the contractual framework adopted for an effective outsourcing approach.

Organiser: Claude-Henri SICARD - LHC/LAS

Mercredi 16 juin

PRÉSENTATION TECHNIQUE

14.00-16.00 hrs – bât. 54/2-035

La Gestion de Projet:

Application aux grand projets industriels ou scientifiques

par Jean-Louis BECH / Directeur de PLANITEC (FR)

A travers de cette présentation, Planitec – vouée exclusivement au management et à la gestion de projets dans les différents secteurs de l'industrie et particulièrement dans les secteurs à haute technologie – voudrait mettre à disposition son savoir-faire (confirmé par une certification ISO 9001) au service des responsables de projets (Directeurs, Chefs de Projet, Ingénieurs) et ainsi collaborer à la réussite des projets du CERN.

Planitec s'appliquera lors de cette présentation à vous décrire:

- L'organisation et la structuration du projet
- La maîtrise des délais
- La maîtrise des coûts
- La maîtrise des circuits d'informations
- La coordination et le reporting
- L'assistance méthodologique et la formation

Planitec, qui dispose d'un effectif de 65 personnes dont 80 % d'ingénieurs, compte parmi ses références des projets d'envergure avec de grands donneurs d'ordre industriels.

Langues : français, anglais

Information : S. Shearer / SPL / 76360

Wednesday 16 June

COMPUTING SEMINAR

at 16.00hrs – IT Auditorium, bldg 31/3-005

Desktop Environments for UNIX

by Victor ROBLES FORCADA / IT-DIS Division

The number of desktop computers running UNIX-like operating systems is increasing steadily specially due to the success of the Linux OS and in spite of their rather spartanic human/computer interface.

Some developers realised the importance of this UI barrier for users and started to work on "Desktop" environments for Linux and UNIX in general.

Two rivaling desktop projects, KDE and GNOME, started recently and now appear on the users desk. They are both based on X-Windows and offer functionalities and look and

feel similar to Microsoft's Windows.
A comparative analysis of both desktops will be made.

Information : <http://wwwinfo.cern.ch/seminars>
Organiser : G.Folger / IT

Thursday 17 June

CERN COLLOQUIUM

at 16.30 hrs – TH Conference Room*, bldg 4**

Contrasting Chaos and Mini-Chaos

by Douglas HOFSTADTER / Center for Research on
Concepts and Cognition, Indiana University,
Bloomington

In my 1979 book "Goedel, Escher, Bach", I briefly discussed the "meta-Fibonacci" function $Q(n)$, whose values are recursively defined by

$$Q(n) = Q[n-Q(n-1)] + Q[n-Q(n-2)]$$

I mentioned that Q seems to exhibit an ordered type of chaos. Since then, not a single fact has been proven about Q . Greg Huber and I have recently taken up the study of Q again, exploring a family of "cousins" of Q , where the constants "1" and "2" in the recursion relation are replaced by parameters "r" and "s":

$$X(n) = X[n-X(n-r)] + X[n-X(n-s)]$$

On the collective level, this family of functions exhibits an amazing kind of regularity, and yet, there are very weird irregular patterns. In my talk, I will discuss what is currently known and unknown about this new family of Q 's cousins, visualizing the ideas mainly through a series of computer-generated graphs displaying the tantalizing eccentricities that Greg and I, working with a few others, have uncovered.

About the speaker

Douglas Hofstadter is College Professor of computer science and cognitive science, and Director of the Center for Research on Concepts and Cognition, at Indiana University. He received his PhD in physics from the University of Oregon (1975).

He has written five books. The Pulitzer-prize-winning "Goedel, Escher, Bach" (1979) has had considerable impact on people in many disciplines.

Hofstadter's research focusses on exploring creativity and consciousness, by designing and implementing computer models of high-level perception and analogical thought in idealized domains. He also studies and writes about cognitive phenomena in other areas, e.g. the relationship between words and concepts, the mechanisms underlying human error making, or between discovery and creation in mathematics.

Organiser : Luigi Di Lella / EP Division

* Tea & coffee will be served at 16.00 hrs.

** Please note unusual place.

Friday* 18 June

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium, bldg 500*

First results on direct CP violation from NA48

by Pascal DEBU / CERN & CEA Saclay, DSM/DAPNIA

We will present a preliminary measurement of ϵ'/ϵ , the direct CP violation parameter in $K \rightarrow 2\pi$ decays, by the NA48 experiment at CERN. The measurement is made with the data taken in 1997, which represents about 10% of the final statistics.

Organiser : Jasper KIRKBY / EP Division

* Please note unusual day.

** Tea & coffee will be served at 16.00 hrs.

FOR INFORMATION /POUR INFORMATION

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24, quai Ernest-Ansermet
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Tel. 022 702 6273
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Wednesday 9 June

PARTICLE PHYSICS SEMINAR

at 17.00 hrs – Stückelberg Auditorium

Antihydrogen Atoms – A Glimpse of the Anti-World ?

by Rolf LANDUA / CERN

Since there appears to be no primordial antimatter in the Universe, the question arises what mechanism led to the violation of matter-antimatter symmetry after the Big Bang? The spectroscopy of very cold (< 0.1 meV) antihydrogen atoms - using experimental methods developed for hydrogen spectroscopy - will provide new possibilities of testing the CPT symmetry with a precision of 10^{-15} , far beyond existing limits for baryons and leptons.

The seminar will give an overview about the new antiproton decelerator (AD) at CERN, its experimental programme, and the two phases of the new antihydrogen experiment, ATHENA. Finally, an outlook on future possibilities with ultracold antihydrogen atoms will be given.