

CONSEIL D'ADMINISTRATION DE LA CAISSE DE PENSIONS

GOVERNING BOARD OF THE PENSION FUND

ELECTIONS DES MEMBRES DU CONSEIL D'ADMINISTRATION DE LA CAISSE DE PENSIONS

Cette année, **deux** sièges de membres du Conseil d'administration de la Caisse de pensions sont à pourvoir.

Vous avez donc la possibilité de mettre, au maximum, deux bulletins dans l'enveloppe intérieure.

Les candidats seront classés par ordre décroissant selon le nombre de voix obtenues.

Administration de la Caisse de pensions

ELECTIONS OF MEMBERS TO THE GOVERNING BOARD OF THE PENSION FUND

This year there are **two** members to be elected to the Governing Board of the Pension Fund and you can therefore put a maximum of two ballot papers inside the inner envelope.

The candidates will be placed in the order of votes cast in their favour.

Administration of the Fund

SEMINARS SEMINAIRES

SEMINAIRES POUR LE BULLETIN HEBDOMADAIRE

Le Bulletin devient de plus en plus volumineux chaque semaine.

L'une des raisons principales en est la longueur des résumés des séminaires, présentations, etc. Cela nous pose des problèmes car le tirage du Bulletin atteint près de 7500 exemplaires et le volume total doit rester limité, vu la capacité restreinte de l'imprimerie et surtout le délai de livraison le vendredi.

Nous vous prions donc de réduire les résumés de séminaires dans la mesure du possible.

Merci de votre compréhension.

Médias et Publications
Tél. 3475

SEMINARS FOR THE WEEKLY BULLETIN

The Bulletin is becoming fatter and fatter every week.

One of the main reasons for this is the length of seminar summaries, presentations, etc. This raises problems for us, as we now have to produce nearly 7500 copies and the overall volume has to be restricted owing to the limited capacity of the printing shop and, in particular, the Friday delivery deadline.

We should therefore be grateful if you could make the seminar summaries as brief as possible.

Thank you for your co-operation.

Media and Publications
Tel. 3475

Monday 13 November

TECHNICAL SEMINAR

at 11.00 hrs – ECP Conference Room, bldg 13/2-005

**Report on the First Workshop on Electronics
for LHC Experiments**

by François BOURGEOIS / CERN-ECP

The seminar will give an overview of the organisation and the content of this Workshop organised by LIP Lisbon last September on behalf of the LHC Electronics Review Board.

The Workshop gathered together 187 physicists and engineers from 20 countries including the USA and Japan. Radiation hardness, electronics for tracking, calorimetry and muon detectors, electro-optic, trigger and data acquisition issues in LHC experiments were presented in plenary sessions followed by panel discussions.

Most subjects were thoroughly reviewed and they gave rise to fruitful discussions.

Monday 13 & Tuesday 14 November

FIRST MEETING OF THE LHC MACHINE ADVISORY COMMITTEE

Open sessions

Monday 13 November

at 14.00 hrs – AT Auditorium, bldg 30/7th fl.

14.00 Introduction by S. Tazzari

14.20 Overview of LHC project by L. Evans

15.40 Performance/Intensity-dependent effects by J. Gareyte

16.15 Linear and non-linear optics by J.-P. Koutchouk
16.50 Injector chain by K. Schindl
17.25 End of session

Tuesday 14 November

at 09.00 hrs – AT Auditorium, bldg 30/7th fl.

09.00 Beam dump by E. Weisse
09.20 Lattice magnets by R. Perin
09.55 Insertion magnets by T.M. Taylor
10.15 Cryogenics by P. Lebrun
11.10 Vacuum by A. Mathewson
11.35 Collimation and beam cleaning by J.B. Jeanneret
11.55 RF system by D. Boussard
12.30 End of session

Monday 13 November

UMTF COMPUTING TUTORIAL

14.00-16.00 hrs – CN Auditorium, bldg 31/3-004&5

Basic Unix Commands / Unix File System

by J.H. PETERS / DESY & CERN

(Repetition of the Tutorial given on 8 November)

This is the third tutorial in a regular lecture series organized by the User Migration Task Force of the CN division. It is targeted to users who need to migrate from CERNVM or any other other platform to Unix and need to acquire enough knowledge for their everyday work on one of the Work Group or PLUS Servers or any other workstation running the recommended HEP Unix environment.

This first lecture on Unix will focus on how to work with files in Unix. The file tree structure will be explained and how you find your way around in it (relative and absolute path names). Also covered are the manipulation of files and directories (i.e. creation, deletion, printing and how you can share files with other people), the special files `stdin` and `stdout`, and the concept of redirection.

Further information may be found in WWW, including the slides of the lecture: <http://consult.cern.ch/umtf/training>

Until the end of this year the following dates and topics are foreseen for further lectures: The program will continue next year covering topics as scripting languages like Perl and Tk/Tcl, X sessions, mailing lists, etc. The timetable for these will be published in due course.

Monday 13 November

PPE SEMINAR

at 16.30 hrs – Auditorium

Studies of QCD using Event Shape Observables in e^+e^- Annihilation at the Z^0 Energy

by Stefan KLUTH / CERN PPE

Determinations of the strong coupling α_s with event shape observables using OPAL data from LEP I will be shown. Distributions of these observables derived from multihadronic Z^0 decays will be compared with predictions of QCD, yielding measurements of α_s by means of fits. Two approaches exist in QCD for approximate perturbative calculations. Either a truncated power series expansion up to $O(\alpha_s^2)$ is employed or the Next-to-Leading-Log-Approximation (NLLA). Both types of calculation and a combination of the two will be considered leading to measurements of the strong coupling with a precision of about 5%. The analysis will be generalised to study the gauge group structure of QCD by introducing as extra parameters into the fits the QCD structure factors C_A, C_F

and N_f depending on the gauge group. Results for these parameters will be compared with theoretical expectations.

Tuesday 14 November

LEP EXPERIMENTS COMMITTEE

at 08.45 hrs – Auditorium

Reports on the LEP machine

08.45-09.30 LEP performance in 1995 and expected future performance by Steve Myers
09.30-10.00 Status of the LEP 2 superconducting rf system by Daniel Boussard
10.00-10.30 LEP energy calibration by John Yamartino
10.30-11.00 *Coffee break*

Reports on the LEP experiments

11.00-11.30 ALEPH by Olivier Callot
11.30-12.00 L3 by Richard Mount
12.00-12.30 OPAL by Chris Hawkes
12.30-13.00 DELPHI by Jean-Eudes Augustin
13.00-14.00 *Lunch*

Closed session

at 14.00 hrs, 6th floor Conference Room, Main Building

Tuesday 14 November

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

The RICH Detector - generic development and exploitation for physics

by T. EKELOF / Uppsala University, Sweden

Ring Imaging Cherenkov (RICH) Detectors are currently in use for particle identification in a number of High Energy Physics experiments. After a short introductory review of the early generic development work and the build-up of RICH detectors for different experiments, an overview will be given of the variety of physics results obtained from such experiments. Then will follow an outline of the different development projects currently in operation and their exploitation potential for future High Energy Physics experiments.

* Tea & coffee will be served at 16.00 hrs.

Wednesday 15 November

UMTF COMPUTING TUTORIAL

10.00-12.00 hrs – CN Auditorium, bldg 31/3-004&5

Handling your Mail on Unix with PINE

by A. MIOTTO / CERN CN

This is the fourth tutorial in a regular lecture series organized by the User Migration Task Force of the CN division. It is targeted to users who need to migrate from CERNVM or any other platform to Unix and need to acquire enough knowledge for their everyday work on one of the Work Group or PLUS Servers or any other workstation running the recommended HEP Unix environment. This tutorial will give you an introduction of how to handle your mail on Unix with the recommended mail agent pine. Topics treated are how to read messages and store them in one of several folders, how to write messages, use aliases for mail addresses, and how to receive and send non-text material by mail in the MIME attachment format.

Further information may be found in WWW, including the slides of the lecture: <http://consult.cern.ch/umtf/training>

The program will continue next year covering topics as scripting languages like Perl and Tk/Tcl, X sessions, mailing lists, etc. The timetable for these will be published in due course.

Wednesday 15 November

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Space, time and colour in hadron production via $e^+e^- \rightarrow Z^0$ and $e^+e^- \rightarrow W^+W^-$

by Klaus GEIGER / CERN

I will talk about work in collaboration with John Ellis, in which the time-evolution of jets in hadronic e^+e^- events at LEP is investigated in both position- and momentum space, with emphasis on effects due to colour flow and particle correlations. We address dynamical aspects of the four simultaneously-evolving, cross-talking parton cascades that appear in the reaction $e^+e^- \rightarrow \gamma^* / Z^0 \rightarrow W^+W^- \rightarrow q_1\bar{q}_2 q_3\bar{q}_4$, and compare with the familiar two-parton cascades in $e^+e^- \rightarrow Z^0 \rightarrow q_1\bar{q}_2$. We use a QCD statistical transport approach to solve kinetic equations simultaneously in position and momentum space. We compare three different model treatments of colour flow, and find large effects due to the correlations of partons from different W parents. In particular, we find in our preferred model a shift of several hundred MeV in the apparent mass of the W , which is considerably larger than in previous model calculations.

Wednesday 15 November

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium, bldg 31/3004&5

Object-Oriented Programming with Ada 95

by Stephane BARBEY / Software Engineering Laboratory, EPFL

Ada 95 – the revised definition of the Ada programming language – is the first internationally standardized language to provide support for object-oriented programming. This seminar gives you a comprehensive introduction to object-oriented programming with Ada. We examine the object-oriented features of the language, their use, and how they fit into Ada's strong type system and genericity mechanisms. We also show how to integrate these mechanisms into good programming practices; topics include heterogeneous data structures, and mixin inheritance. Finally, we compare some aspects of Ada and C++.

Organiser : G.Folger / CN

Mercredi 15 novembre

SÉMINAIRE POUR LES GUIDES DU CERN

organisé par le Service des Visites – Groupe DSU/CP

à 16.00 h – Amphithéâtre

Les applications industrielles de la physique des particules

par Oscar BARBALAT / CERN-AC

Ce séminaire (donné en français) est spécialement réservé aux Guides du CERN, mais il est ouvert à toutes les personnes intéressées.

Thursday 16 November

TECHNICAL PRESENTATION

at 10.00 hrs – CN Auditorium, bldg 31/3-004&5

The new SGI/MIPS R10000 Microprocessor : Architecture & Applications

by Chris ROWEN / Silicon Graphics

The MIPS R10000 is one of the fastest and most sophisticated general purpose processors ever produced. It combines high clock rate (starting at 200MHz) with multiple parallel functional units and speculative, out-of-order instruction execution. Pre-fetching, non-blocking, set-associativity caches at each level of the memory hierarchy significantly reduce average memory reference latency. Moreover, the R10000 is implemented in a low-cost multi-sourced 0.35 micron CMOS fabrication technology. The system interface incorporates novel features for glueless multiprocessing and support of advanced distributed shared memory architectures. This confluence of silicon, micro-architecture and systems innovation makes the R10000 suitable for both vector-style throughput codes, and less well-structured integer and scalar floating point codes that typify high-energy physics applications.

Chris Rowen of Silicon Graphics is the Director of Core Technology for Europe, responsible for development of Silicon Graphics in high-performance technology markets, including RISC processors and supercomputing. He was the initiator of the R10000 project for MIPS. He helped establish the RISC concept as one of the principal designers of the Stanford MIPS machine in the early 80's. As one of the founding engineers of MIPS Computer Systems, he directed a number of processors and systems designs based on Silicon Graphics' MIPS architecture. He received a bachelor's degree in physics from Harvard in 1978 and a doctorate in electrical engineering from Stanford in 1985.

Thursday 16 November

AC SEMINAR

at 16.30 hrs – AT Auditorium, bldg 30, 7th

The European Spallation Source (ESS)

A next generation neutron source for condensed matter studies

by H. LENGELER / CERN-AT & ESS, KFA Jülich

In December 1994, a two year site independent study for an advanced spallation neutron source has been started. This study is supported by the European Community and by seven European Countries.

The basic design parameters for the ESS are:

- Proton beam power of 5 MW
- Pulse length of target 1 μ s
- Repetition rate of 50 Hz
- Two target stations.

Given the present status of accelerator technology, these requirements can be fulfilled by a combination of a high intensity linear accelerator followed by a compressor ring or a rapid cycling synchrotron. After a short comparison between n-scattering and synchrotron radiation for condensed matter studies, the choice of accelerator and target layouts and its specific characteristics are discussed.

Friday 17 November

TECHNICAL PRESENTATION

at 09.30 hrs – CN Auditorium, bldg 31/3-004&5

Tools for Motif Developers. GUI Builder, Relational Database Integration, C++ Development

by M. MIGNACCO / Marketing Manager, Softeco Italy
& T. PIERPOINT / Senior Scientist, Integrated Computer Solution USA

This talk will discuss ICS's recent releases that give Motif developers the power to work faster when creating mission critical applications.

Recent releases includes :

- Builder Xcessory 3.5.1, the best selling Motif GUI builder now includes new powerful editing features, a complete