

SEMINARS SEMINAIRES

Monday 30 May

PRESENTATION

at 14.00 hrs – CN Auditorium
bldg 31/3-005

XVT-Develop Cross-Platform GUI

Applications in C and C++

by Eurodis Data AG

XVT allows you to port your GUI (Graphical User Interface) application to seven different GUI's on over 30 hardware platforms. The supported GUI's are: MS Windows, Windows NT, Macintosh, OS/2, OSF/Motif, Open Look and character screens for DOS, Unix, and VMS. XVT ensures true native look-and-feel on all platforms and significantly reduces the design, development and test cycles. XVT is implemented as a thin layer on the top of the native GUI Application Programming Interface (API). This provides instant access to native functionality without overloading your application's performance and size. XVT is the most powerful portable GUI solution available today.

Information : S. Cannon / CN / 5036

Monday 30 May

SPECIAL ECP MICROELECTRONICS SEMINAR

at 15.00 hrs – Auditorium

Implementing Intelligence on Silicon Using Neuron-Like Functional MOS Transistor

by Tadashi SHIBATA / Associate Professor, Dept. of Electronic Engineering, Tohoku University (Japan)

A new MOS transistor which emulates the behavior of biological neurons at a single transistor level has been developed. The functional device has a very simple structure and is easily manufacturable by the present-day ULSI technology. The device is called 'Neuron MOS Transistor' (neuMOS in short) due to its similarity to neurons. Use of the neuMOS as a building block of integrated circuits has led to several new circuit architectures, being characterized by a high degree of parallelism in hardware computation, a large flexibility in hardware configuration and a dramatic reduction in the circuit complexity when compared to conventional integrated circuits. Search for the most resembling data in a memory cell array, for instance, can automatically be carried out on hardware without any software manipulation. 'Soft Hardware', which we named, can arbitrarily change its logic function in real time by external control without any hardware modification. These are all non-neural applications of a neuMOS. As a neuMOS application in the neural network field, we have developed a low-power voltage-mode-operation neural network equipped with on-chip self-learning capability. Through the studies of neuMOS intelligent circuit implementation, we noticed an interesting similarity in the architectures of neuMOS logic circuitry and biological systems.

Monday 30 May

PPE SEMINAR

at 16.30 hrs – Auditorium

A direct measurement of the top quark mass at CDF

by Alessandra CANER / CERN-PPE

The Collider Detector at Fermilab (CDF) collaboration has recently reported evidence for the reaction $p\bar{p} \rightarrow t\bar{t} + X$. The data were collected at the Fermilab Tevatron collider at $\sqrt{s} = 1.8$ TeV and amount to a total integrated luminosity of 19 pb^{-1} . The search includes standard model $t\bar{t}$ decays to dileptons and single lepton + jets final states. In the dilepton topology 2 events are observed with an expected background of $0.56^{+0.25}_{-0.13}$. Two b-tagging algorithms have been used to search for $t\bar{t} \rightarrow WbWb \rightarrow l\nu q\bar{q}b\bar{b}$. A search for displaced vertices selects 6 events while 2.3 are expected; tagging b quarks by their semileptonic decay yields 7 events with a background of 3.1 ± 0.3 . The probability that these combined results are due to a fluctuation of the background is 0.26%; the statistics are too limited to firmly establish the evidence of the top quark. In this talk a measurement of the top mass is presented, assuming that the excess yield over background is due to $t\bar{t}$ production. Topologies containing one lepton, missing transverse energy and four jets allow for full reconstruction of the event kinematics. Performing constrained fits on the subset of these events which is b-tagged, a mass of $174 \pm 10^{+13}_{-12}$ GeV is estimated for the top quark.

Tuesday 31 May

DETECTOR R & D COMMITTEE

Open session

at 09.00 hrs – Council Chamber

1. RD-3 Status Report: Liquid argon calorimetry with LHC-performance specifications (Alberta-Alma Ata –LAPP–Barcelona–BNL–CERN–DAPNIA–SPP Saclay –ISN Grenoble–Madrid–CPP Marseille–Milano–Montreal–LAL Orsay–LPNHE Paris VI et VII–Royal Inst. of Tech. Stockholm–Victoria; DRDC 94-18; D. Fournier).
2. RD-11 Status Report: Embedded architectures for second-level triggering [EAST] (NIKHEF-H Amsterdam–Inst. of Atomic Physics and Polytecnic Inst. Bucharest–Central Research Inst. for Physics Budapest–CERN–NBI Copenhagen–RAL–LHSE JINR Dubna–Inst. f. Angewandte & Technische Informatik Jena–Inst. of Nucl. Physics Krakow–LIP Lisbon–Royal Holloway & Bedford New College London–University College London–Manchester–Inst. of Computer Science V Mannheim–Inst. of Computer and Information Science Prague–Weizmann Inst. of Science Rehovot–Federal University Rio de Janeiro–Utrecht–Institute of High Energy Physics Zeuthen; DRDC 94-20; R.K. Bock).
3. RD-12 Status Report: Readout system test benches (CERN–HEP SEFT Helsinki–Tampere–LAPP–Padova–Pavia–Ecole Polytechnique Paris–KFKI Budapest–MIT–Univ. of California San Diego; DRDC 94-16; S. Cittolin).
4. RD-13 Status Report: A scalable data taking system at a test beam for LHC (CERN–CPP Marseille–Pavia–DAPNIA–SEI C.E. Saclay; DRDC 94-24; G. Mornacchi).
5. RD-16 Status Report: A digital front-end and readout microsystem for calorimetry at LHC (CERN–Dept. of Physics & Measurement Tech. Linköping–Industrial Microelectronics Center Linköping–LPNHE Univ. Paris VI–VII–Politecnico di Milano–Dip. di Fisica Nucleare e Teorica & Dip. di Elettronica Pavia–Royal Inst. of Tech. & Univ. Stockholm–ABB HAFO AB Järfälla–CAEN S.p.A. Viareggio–SiCon AB Linköping; DRDC 94-17; G. Goggi).
6. RD-24 Status Report: Application of the scalable coherent interface to data acquisition at LHC (CERN–Dept. of Physics & Department of Informatics Oslo–La Sapienza Rome–INFN Lecce–IHEP Protvino–IFIC Valencia–RAL–

Manchester-Dolphin Interconnect Solutions A.S. Oslo-Digital Equipment Corporation, Joint Project at CERN-Creative Electronic Systems Geneva-Apple Computer Inc. Cupertino-Thomson-TCS Semiconducteurs Specifiques Orsay; DRDC 94-23; H. Müller).

7. Development of diamond tracking detectors for high luminosity experiments at the LHC (Aveiro-Bristol-CERN-CPP Marseille-Imperial College London-King's College London-Lawrence Livermore Nat. Lab.-Pavia-INFN Milano-LEPSI Strasbourg-Los Alamos Nat. Lab.-MPI Heidelberg-Ohio State-Rutgers-Inst. für Hochenergiephysik, Österr. Akademie d. Wissenschaften Vienna; DRDC 94-21/P56; W. Trischuk).
8. Research and development of a hadron calorimeter for high magnetic fields (ErPI Erevan-INRNE & SU Sofia-BRPAPM & NCPHEP Minsk-IHEP Beijing-IHEP TSU Tbilisi-TIFR Bombay-IHEP Protvino-INR, ITEP & JINR Moscow-CERN-Fermilab-HEPG Florida State-Iowa-Iowa State-Maryland-Michigan-Michigan State-Minnesota-Northeastern-Notre Dame-Purdue-Princeton-Rochester-VPI & State Univ. Blacksburg-KSU, KhFTI & ISC Kharkov-INP Tashkent; DRDC 94-22/P57; D. Green).
9. Macrame ECP Project (B. Martin).
10. Fibre Channel ECP Project (R. McLaren).

Closed session

following the Open Session continuing on
Wednesday 1 June
at 09.00 hrs, 6th floor Conference Room

Mardi 31 mai

PREMIÈRE RÉUNION DU

GROUPE D'UTILISATEURS SIMATIC (GUS)

à 09.00 h – bât. 30, 7^e étage, salle 012

A la dernière réunion de la Coordination des Contrôles Industriels de Processus (CCIP) il a été décidé de créer un groupe d'utilisateurs de matériel Simatic (GUS). Ce groupe a pour objectif :

- d'échanger des expériences et des informations sur les produits,
- d'organiser des présentations techniques et un suivi de la gamme des produits,
- de réaliser des économies en faisant circuler (prêts, copies) au sein de l'Organisation les produits Simatic en notre possession (matériels, logiciels, manuels, consoles de programmation, etc.)

La coordination de ce groupe a été confiée à D.Brahy. Les personnes concernées sont priées de le contacter au 8648 ou par courrier électronique à l'adresse jacky@SL3.msm.cern.ch).

Tuesday 31 May*

COMPUTING SEMINAR

at 10.00 hrs – AT Auditorium
bldg 30, 7th floor

The Energy Research Videoconferencing Network

by David MARTIN / HEP Network Resource Center,
Fermilab

The Energy Research Videoconferencing Network (ERVN) began in 1991 as a pilot project between three US HEP sites. Today ERVN encompasses over twenty sites and is in use daily by physics researchers around the world. This talk will discuss the basic technology used in ERVN, detail its current configuration and address the evolution of ERVN to an open

network supporting a wide variety of codecs and connection methods.

* Please note unusual day, time & venue

Tuesday 31 May

PRESENTATION

at 10.00 hrs – CN Auditorium
bldg 31/3-005

Open systems from Desktop to Mainframe

by H-P. ROTHER / Director Open Systems,
AMDAHL (Schweiz) AG, Zurich

Designed specifically for use with large-scale applications, Amdahl's A+Edition exploits the SPARC V8 multiprocessor architecture and tailors the Solaris Kernel to optimise response time, capacity and throughput on SPARCServer 1000 and SPARCcenter 2000. A+Edition demonstrates improved multiprocessor efficiency (e.g. MP-factor) for additional CPUs than observed for native SOLARIS 2.3. This efficiency is part of the alliance between AMDAHL and SUN MICROSYSTEMS announced in September 1993. Amdahl has developed extensions to SunSoft's "SOLARIS" operating environment to better meet the needs of the high-end server market. Amdahl's multiprocessor behaviour allows the A+Edition to provide consistent and uniform levels of throughput in high-multiprocessor, high-load environments. The Amdahl Enterprise File Manager consists of a suite of data management software, services and hardware products, strategically integrated to give customers a complete enterprise-scale data management services that endusers have been asking for. Today A+UserAccess and Amdahl's A+UniTree Hierarchical Storage Manager perform automatic backup's of heterogeneous, distributed desktop, server and midrange systems to central SOLARIS or UTS operating systems.

Agenda

- Amdahl Open Systems Strategy.
- Alliance Amdahl and Sun Microsystems.
- Amdahl Software Products for SPARC.
- A+UMA Performance Measurement
- A+OpenTune Performance Monitor.
- A+UserAccess Automatic Backup.
- A+UniTree Hierarchical Storage Manager.
- A+Edition Solaris Extension.

Information : S. Cannon / CN / 5036

Tuesday 31 May

PRESENTATION OF THE AUSTRON STUDY

Chairman : K. Johnsen

Open session

at 13.30 hrs – AT Auditorium
bldg 30, 7th floor

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|-------------|--|
| 13.30-14.10 | Introduction and Lattice, P. BRYANT |
| 14.10-14.50 | Injection Chain, E. GRIESMAYER |
| 14.50-15.30 | Injection and Acceleration in RCS,
H. SCHONAUER |
| 15.30-16.00 | Break |
| 16.00-16.30 | Collective Effects, B. ZOTTER |
| 16.30-17.00 | Magnets, F. BAUMANN |
| 17.00-17.30 | Vacuum (to be confirmed) |
| 17.30-18.15 | Invited talk : Aspects of ISIS Relevant to the
Austron Design, G. REES, RAL |

Wednesday 1 June

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

SUSY SO_{10} and fermion masses

by Stuart RABY / Ohio State University

Quantitative predictions for fermion masses and mixing angles have been obtained in a class of effective SO_{10} SUSY GUTs defined at a scale $M_G \sim 10^{16}$ GeV. In this talk I will show how to derive an effective theory at M_{Pl} which reproduces one of our successful models.

Wednesday 1 June

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium

bldg 31/3-005

ATM : Hype and Reality

by Brian CARPENTER / CERN-CN

Asynchronous Transfer Mode (ATM) has been widely publicised in the technical press as the future solution for many if not all networking problems. This seminar will give a brief overview of ATM, describe the current state of ATM standards and products related to computer networks, and describe some practical experience already gained at CERN. Finally, some tentative predictions about the future will be made.

Thursday 2 June

LEP EXPERIMENTS COMMITTEE

Open session

at 09.00 hrs – Auditorium

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|-------------|--|
| 09.00-09.20 | Start-up and performance of LEP I (<i>S. Myers</i>) |
| 09.20-09.50 | Progress report on the LEP II superconducting RF system (<i>D. Boussard</i>) |
| 09.50-10.20 | Status report on the bunch-trains working group (<i>T. Camporesi</i>) |
| 10.20-10.50 | Coffee break |

Reports on the LEP experiments

- | | |
|-------------|--------|
| 10.50-11.20 | OPAL |
| 11.20-11.50 | DELPHI |
| 11.50-12.20 | ALEPH |
| 12.20-12.50 | L3 |
| 12.50-14.00 | Lunch |

Closed session

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

Jeudi 2 juin

PRESENTATION TECHNIQUE

09.00 -16.00 h – bât. 17/1-007

Capteur de mesure de flux thermique, capteur de très faible débit (effet Peltier) et convertisseur de mesure analogique, par M.A.H.T. Mesures et applications de hautes technologies (F).

Liste des produits: capteur de convection rayonnement conduction, capteur de rayonnement, capteur de flux haute température, capteur de débit très faible vitesse 1 cm/s à 5m/s effet Peltier, convertisseur analogique.

Services: thermique, cryogénie et mécanique des fluides.

Etude des feux.

Applications: mesure des propriétés thermiques des matériaux, étude expérimentale dans les souffleries, mesure des pertes d'énergie, mesure précise des échanges de chaleur (pertes ou gains), mesure sur des lignes de transfert Hélium, mesure des débits massiques.

Langues : français (anglais)

Renseignements : M. Diraison / FI-A / 4585

Thursday 2 June

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Spontaneous symmetry breaking and the Higgs mass: a lattice test

by Maurizio CONSOLI / Catania University

The generally accepted "triviality" of ϕ^4 theories does not prevent Spontaneous Symmetry Breaking, but implies a trivially free shifted field which becomes effectively controlled by a quadratic Hamiltonian (in the absence of other interactions). As a consequence, one expects the one-loop effective potential to be exact in a pure ϕ^4 theory. A lattice computation of the effective potential nicely confirms this expectation and suggests that, beyond perturbation theory, the magnitude of the Higgs mass does not represent a measure of the observable interactions in the scalar sector of the standard model.

Thursday 2 June

ISOLDE SEMINAR

at 16.00 hrs – TH Conference Room

The incomplete parity-violation in leptonic and semi-leptonic weak interactions : status and perspectives

by J. DEUTSCH / I.P.N., Université Catholique de Louvain, Louvain-la-Neuve, Belgium

We describe the various experiments performed in muon-decay and nuclear beta-decay to search for eventual deviations from the full parity-violation predicted by the Standard Model and compare their results to the ones obtained from other sources both in the Standard Model and in some of its extensions. Experiments of a novel type were initiated to overcome the eventual systematic errors of the previous absolute measurements. The status and perspectives of these new experiments will be described.

Friday 3 June

SEMINAR ON HEAVY QUARK PHYSICS WITH LEP

at 10.00 hrs – TH Conference Room

Exclusive and semi-exclusive decays of charm and beauty : status and perspectives at LEP

by P. COLAS and I. BIG

The LEP measurements on exclusive and semi-exclusive decays of charm and beauty hadrons will be summarised. It is analysed how a precise measurement of the mass of beauty hadrons and a study of semi-exclusive decays will help improve our understanding of the strong forces affecting heavy flavour decays. It is discussed how future data on exclusive nonleptonic beauty decays will elucidate these issues further.

Monday 6 June

PPE SEMINAR

at 16.30 hrs – Auditorium

Deep inelastic scattering results from the 1993 ZEUS data

by Ioannis GIALAS / Columbia University

During the 1993 run, ZEUS collected about 550 nb^{-1} . The proton structure function F_2 has been measured for Q^2 between 10 and 10000 GeV^2 and $0.0003 < x < 0.6$. F_2 shows a significant increase towards lower x . Using the F_2 measurements, one can derive the gluon structure function. The early indications are that the gluon component increases at low x . The DIS data confirm the new class of events, with a large rapidity gap, first seen in the ZEUS 1992 data. These events have properties consistent with a diffractive production mechanism involving the exchange of a colorless object.

Tuesday 7 June

LARGE HADRON COLLIDER COMMITTEE

Open Session

at 09.00 hrs – Auditorium

- 09.00–09.15 Status of the LHC project (C. Llewellyn Smith)
09.15–09.45 Status of the LHC machine (L. Evans)
10.00–10.45 Presentation of CMS Status Report (LHCC 94-20; M. Della Negra, M. Pimiä).
11.00–11.30 Coffee Break
11.30–12.15 Presentation of ATLAS Status Report (LHCC 94-22; B. Mansoulié).

Closed Session

at 14.15 hrs – 6th floor Conference Room Main Building, bldg. 60 (continued on Wednesday 8 June)

Mardi 7 juin

PRESENTATION

à 09.00 hrs – Amphithéâtre SL,
bât. 864 /1-D02

Formation sur le nouveau système de développement XILINX "XACT 5.0"

par XILINX (F) & AVNET (F)

Langues : Présentation : français
questions et réponses : français ou anglais.

Renseignements : S. Cannon / CN /5036

Tuesday 7 June

TECHNICAL PRESENTATION

at 10.00 hrs – CN Auditorium
bldg 31/3-005

PROXIMA 2800 & 8300 LCD Projectors

by Mr Galata, Audio Visuel BT SA Lausanne

Information : S. Cannon / CN /5036

Tuesday 7 June

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

B Physics news from CLEO : exclusive

semileptonic decays, t_B / t_{B^0} and rare decays

by David G. CASSEL / Cornell University & CERN

Thursday 9 June

SEMINAR

at 12.00 hrs – TH Conference Room

Do the EPR correlations depend on the choices of the inertial frames?

by Antoine SUAREZ / Center for Quantum Philosophy of Geneva*

Friday 10 June

FIFTY-FIFTH PLENARY ECFA MEETING

at 10.00 hrs – Council Chamber

- 10.00 1. Approval of the Draft Minutes of the Fifty-fourth Plenary ECFA Meeting
2. Approval of the Draft Agenda
3. Chairman's Report
4. Status of the LHC
– LHC Project (L.R. Evans)
– LHC Detectors (W. Hoogland)
– Funding and Participation (C.H. Llewellyn Smith)
5. ECFA Statement on LHC
13.00 Lunch
6. Status Report on HERA (E. Lohrmann)
7. LEP200 Progress Report (C. Wyss)
8. Neutrino Physics Programme at CERN (J. Panman)
9. Any Other Business
17.00 End of meeting.

POUR / FOR INFORMATION

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Wednesday 1 June

PARTICLE PHYSICS SEMINAR

at 17.00 hrs – Stückelberg Auditorium

Some Explorations of Dense Nuclear Matter Using Relativistic Heavy Ion Collisions

by Hal KALECHOFKY / University of Geneva

By way of introduction, the background of relativistic heavy ion collisions and some possible experimental signatures of deconfined quark matter will be outlined. Recent results on particle spectra, abundances, and Bose-Einstein interferometry using p+A and S+A interactions from several CERN experiments will then be presented. Some general trends in these data will be discussed.