



SEMINARS SEMINAIRES

Monday 11 June

AT SEMINAR

at 11.00 hrs – LEP Auditorium
bldg 30, 7th floor

**Laser(s) work for CLIC or how to make 10^{12} e
in 10^{-12} s**

by Kryno K. GEISSLER / CERN-AT/DI

Future linear colliders such as CLIC need very short high intensity electron bunches. Photocathodes in accelerating RF structures activated by picosecond-long laser pulses are a promising means of producing them efficiently. Several methods of generating ultra-short high power UV pulses from solid state and dye lasers will be discussed.

Mardi 12 juin

PRESENTATION

à 10.30 h – Amphithéâtre CN
bât. 31, 3-005

**Convivialité et graphisme dans vos applications
temps réel à base de VME**

par L. BATICLE, M. GIRAULT,
Ph. VAUCHER & Ph. MARIJON / Micro-
process, France

- X Window couleur serveur/client sous OS9
- MS DOS sur les cartes VME 80386
- UNIX temps réel Romable sur cartes VME 80386
- une gamme complète d'outils de développement OS9/68030 (C++ , MCC, Pack Dual).

Wednesday 13 June

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

**Quantum groups and non-commutative
differential geometry**

by B. ZUMINO / University of California at
Berkeley & CERN

Quantum groups are relevant to integrable systems, string theory (in the guise of conformal two-dimensional field theory), statistical mechanics, fractional statistics, knot theory, etc. What is a quantum (better 'quantized') group? In this seminar for

non-experts the basic mathematical properties of quantum groups will be elucidated. The geometric aspect will be related to the purely algebraic aspect. Quantum groups provide a concrete example of non-commutative differential geometry. The ultimate aim, of course, is to develop a new kind of field theory.

Prerequisite : some knowledge of ordinary Lie groups and Lie algebras $SU(2)$ should suffice.

Wednesday 13 June

TECHNICAL PRESENTATION

14.30-16.30 hrs – bldg 73, 2-027

British Telecom & Du Pont Technologies (UK), represented by Moor Electronic AG (CH), will introduce their 1300 nm Fibre-Optic Components by Keith Barnes, BT & D. BT & D Technologies manufactures components for fibre-optic transmission. The product range includes connectorised devices (ELED, Laser, PIN, Photodiode), ECL compatible transmitter and receiver modules (also for FDDI), PINFET receiver, optical-switches, -filters, -couplers and -isolators.

Language : English

Information : M. Diraison / FI / 4585

Thursday 14 June & Friday 15 June

SIMULATION TECHNOLOGY SEMINAR

at 09.30 hrs – Technical Training Auditorium
bldg 593, room 11

by S. WOMBELL & N. McNAMARA / CACI
Ltd.

Object oriented and process based simulation techniques will be presented over two days. CACI have been established since 1962 and are world leaders in simulation technology. The first day will cover LAN and WAN systems and the use of the discrete event simulation packages NETWORK II.5 and COMNET II.5. Both packages use animated graphics to present simulation results in an easy-to-understand fashion. The second day will cover current trends in the programming languages SIMSCRIPT II.5, CACI's established simulation

language, and MODSIM II, CACI's new object oriented simulation language with integrated X-Windows graphics support. Mornings will be devoted to formal presentations in the Technical Training Auditorium. In the afternoons there will be the possibility of hands-on experience in the adjacent PC workshop.

Organizer : A. Vascotto / CN

Thursday 14 June

AS SEMINAR

at 16.00 hrs – LEP Auditorium
bldg 30, 7th floor

Electronic Data Interchange (EDI) at CERN

by Michael DORAN & Emmanuel DHEUR /
CERN-AS

The Seminar will be based on the presentation made at the 5th European EDI Conference, which was held in Madrid, 29 to 31 May. It will include an update on the current situation concerning CERN's three EDI pilot projects.

The presentation will be in English, but questions may be asked in both English and French.

La présentation sera en anglais, mais des questions pourront être posées en anglais ou en français.

Friday 15 June

TECHNICAL PRESENTATION

14.00-17.00 hrs – PS Auditorium
bldg 6, 2-024

Test and measurement seminar by LeCroy Corp. (USA/CH)

by Steve MONTGOMERY

The seminar will discuss various aspects of digital oscilloscopes and function generators. Theoretical concepts underlying the data acquisition / generation process will be reviewed and considerations on how to improve measurements will be examined. Slides and visual material are used to highlight concepts. The discussion will be largely informal. Questions from the participants are welcome.

Steve Montgomery is a US chartered engineer with a long experience in the design and marketing of measurement and instrumentation products.

Language : English

Information : M. Diraison / FI / 4585

Monday 18 & Tuesday 19 June

INTERMEDIARY ECFA LHC WORKING GROUPS MEETING

Auditorium

Monday 18 June

9.30 Opening Address (C. Rubbia)

- 10.00 LHC Machine Design (G. Brianti)
- 10.45 Coffee
- 11.00 Experimental Areas (L. Leistam)
- 11.40 Tracking Issues (D. Saxon)
- 12.05 Detector Concept and Limitations (H. Leutz)
- 12.30 LUNCH
- 14.00 Higgs Search (D. Froidevaux)
- 14.30 Heavy Top (L. Fayard)
- 15.00 b-Physics (S. Erhan)
- 15.30 Standard Processes (P. Nason)
- 16.00 Tea
- 16.30 Event Generation (R. Kleiss)
- 17.00 Supersymmetry (F. Zwirner)
- 17.30 New Vector Bosons (M. Greco)
- 18.00 Alternative Symmetry Breaking (S. Dimopoulos)
- 18.30 End of session

Tuesday 19 June

- 9.00 e-p Physics (R. Rueckl)
- 9.50 Measurement of D.I.S. (J. Feltesse)
- 10.10 e-p Detector and Interaction Region (W. Bartel)
- 10.30 Coffee
- 10.45 Nucleus-Nucleus, QCD Thermodynamics (H. Satz)
- 11.25 Higgs Search and Gamma-Gamma Physics (D. Zeppenfeld)
- 11.35 Experimental Aspects (H. Specht)
- 11.45 Generators & Simulation, Software eng. (R. Brun)
- 12.30 LUNCH
- 14.00 Status on radiation tests for future detectors (H. Schonbacher)
- 14.25 Status on radiation resistant electronics available in Europe (F. Wulf)
- 14.45 Signal processing, Trigger, DAQ (S. Cittolin)
- 15.30 Muon Identification (K. Eggert)
- 16.15 Tea
- 16.30 Calorimetry (J. Colas, T. Virdee)
- 17.15 Electron Identification (T. Akesson)
- 18.00 Conclusions

Monday 18 June

EP SEMINAR

at 16.30 hrs – Auditorium

Polarization at SLC

by Mina PEDRATZA / SLAC

Brief description of the physics issues addressed with polarized electrons. Report on the status of the polarized source, spin rotation system, and polarimeters.

Wednesday 20 June

PS SEMINAR

at 09.00 hrs* – PS Auditorium
bldg 6, 2-024

Radiation safety in the PS

Agreements and obligations regarding radiation safety at CERN, the resulting policy and methods of implementation

by K. Goebel

Radiation from the PS and how it is managed
by A.H. Sullivan

Other radiation sources of interest to the PS, i.e. lasers, RF, magnetic fields

by J. Tuyn

The assessment of radiation dose to individuals
by M. Höfert

Each session will last about half an hour with a coffee break after the second session.

* Please note unusual time!

Wednesday 20 June

COMPUTER SEMINAR

at 16.00 hrs – Auditorium

The issue of computability in physical laws

by Roger PENROSE / University of Oxford

There are reasons (coming from mathematical logic and from the ways that mathematicians do mathematics) to believe that conscious brain action may have a non-algorithmic ingredient. How can this be possible? In this talk, the question of whether the known physical laws are in fact computable (i.e. algorithmic) will be addressed. The relevance of the quantum measurement problem to these issues will be of particular concern.

Roger Penrose is Rouse Ball Professor of Mathematics at Oxford and a Fellow of the Royal Society. He has received many honours, including the Eddington Medal, the Dirac Prize, the Wolf Prize, the Royal Medal and most recently the Einstein Prize and Medal. His newly published book, 'The Emperor's New Mind', is an international best-seller and explores the questions to be discussed in this seminar.

* Tea & coffee will be served at 15.30 hrs

TRAINING AND EDUCATION ENSEIGNEMENT

ACADEMIC TRAINING

Tél. 2844-3364

20, 21 & 22 June

11.00 to 12.00 hrs – Auditorium

Trigger and data acquisition

by Ph. CHARPENTIER / CERN-EP

The trigger and data acquisition systems of past and current experiments will be used to outline the evolution with time of these systems. Emphasis will be put on current LEP experiments. Indications will be given on how they should evolve to cope with future high luminosity experiments (e.g. LHC).