

SEMINARS SEMINAIRES

Lundi 22 septembre

PRESENTATION TECHNIQUE

de 09.00 à 12.00 h et de 13.30 à 16.30 h
bât. 61, 1er étage

Dans le cadre de la campagne SOUDAGE ET SECURITE les matériels (ou informations) suivants seront présentés :

- ARC MACHINES, Inc. (USA/CH)
Source de courant, têtes de soudage - soudage orbital de tuyaux, de tubes - système de soudage de tubes à plaques tubulaires - système de soudage contrôlé par microprocesseur - système de soudage par commande à distance (vidéo), pour environnement contaminé - instruments de soudage de tubes, barres obliques, raccords - système de soudage utilisable sur site pour échangeur de chaleur.
- COMASEC (F)
Gants pour soudeur, lunettes, masques, tabliers, vêtements, guêtres.
- EGLI, FISCHER & Co. AG (CH), KNÜRR AG (D)
Matériel de soudage pour l'électronique.
- Ets GÉRIN SA (F)
Lunettes, casques, gants, vêtements, aspirateurs.
- HULFTEGGER & Cie SA (CH)
Système de soudage à l'arc Elma-Anaslog 05 (programme individuels, système modulaire)
- Schweissindustrie OERLIKON BÜHRLE AG (CH)
Accessoires de soudage, gants, casques, lunettes, tabliers, écrans, établis, aspirateurs.
- UTP Schweissmaterial AG (CH)
Machines à souder électriques, à gaz, machines à couper plasma, aspirateurs de fumée.
- UTP-Protection SA (CH)
Casques, gants, lunettes, souliers, tabliers.

Langues : allemand, anglais, français.
Renseignements : M. Diraison / FI / 4585

Monday 22 September

EP SEMINAR

at 16.30 hrs – Auditorium

Strong field effects on pair creation and radiation in crystal targets at ultrarelativistic energies (NA33 Experiment)

by J. REMILLIEUX / Institut de Physique nucléaire (et IN2P3), Université Claude Bernard, Lyon-1

At high energies (30 - 200 GeV) the interaction of $e^\pm$ and photons with aligned crystal targets had been predicted to be dominated by quantum electrodynamic effects, because of the strong macroscopic crystalline fields. The NA33 experiment has demonstrated that a new pair creation process shows up when photons of energies higher than about 30 GeV are aligned with major axial directions of Ge crystals. It has also shown that the energy radiated by $e^\pm$ is strongly enhanced or suppressed by channeling. However, the photon spectrum of channeled e^- presents features that are not explained at all.

Mardi 23 septembre

PRESENTATION TECHNIQUE

de 10.00 à 16.00 h
bât. 73, 2-027

SYMECORA, Syndicat de la Mesure, du Contrôle et de la Régulation Automatique (F), propose en exposition démonstration les produits des 13 firmes suivantes :

1. ADAREG
Vanne supercryogénique, clapets magnétiques, vanne microdébit.
2. BOURDON
Capteurs TRANSBAR, gamme CERAMLIN.
3. GEORGIN
Contrôle pression, température, débit, relayage de sécurité intrinsèque.
4. J.P.B.
Capteurs et transmetteurs de pression, accéléromètres.
5. KROHNE
Débitmètres, contrôleurs de débit, niveaux.
6. MECILEC
Appareil d'acquisition et d'enregistrement centralisé VISILEC.
7. MORS AUTOMATISMES
Convertisseurs de mesure, échelles lumineuses, indicateurs numériques, régulateurs, automates programmables.
8. O.F.P.
Transmetteurs électroniques de pression différentielle, débitmètres, régulateur électronique, microcalculateur avec simulateur.
9. SCAIME
Capteurs de grandeurs physiques électronique, associée.
10. SEGOR
Photorésistances, photocoupleurs, potentiomètres optiques.
11. SEREG
Capteur de pression différentielle à inductance variable. Extension : capteur à jauge pour pressions relative et absolue.
12. THERMOCOAX
Thermocouples, éléments chauffants, capteurs spéciaux, câbles absorbeurs de neutrons, câbles spéciaux.
13. TRANSBAR
Cellules céramiques de pression, transmetteurs de pression.

Langues : anglais, français
Renseignements : M. Diraison / FI / 4585

Tuesday 23 September

DD SEMINAR

at 16.00 hrs – DD Auditorium
bldg 31, 3-005

A tool for building computer network architectures

by Imrich CHLAMTAC / Computer Science
Dept, Technion, Haifa, Israel

An approach for constructing a software network emulator is presented. The emulator allows the hierarchical

specification of communication protocols, interfaces and communication environments for forming complete multi-layered network descriptions. The software package automatically generates a network simulator which provides concurrent execution of the specified protocols as peer processes. The package thus supplies the user with simulation aided verification and performance evaluation with no additional effort beyond the specification of the network architecture. The tool is demonstrated and its applications are discussed.

Mercredi 24 septembre

PRESENTATION TECHNIQUE

de 09.15 à 12.00 h et de 13.15 à 16.30 h
bât. 17, 1-007

GOULD ELECTRONICS (CH/F/GB/USA) propose en exposition démonstration ses systèmes d'acquisition, de mesure, d'analyse et de reproduction de signaux.

Domaines d'applications

électricité, électronique et mécanique.

- *DASA 9000 et DASA 4600*
Systèmes clefs en main d'acquisition et d'analyse de signaux basés sur IBM-PC (4 à 112 canaux).
- *TMS*
Systèmes d'acquisition de transitoires comprenant oscilloscope à mémoire numérique, processeur de signaux, table traçante numérique. Logiciels pour PC disponibles.
- *RTO/DSO*
Les dernières nouveautés en oscilloscopie conventionnelle et, en GRANDE PREMIERE, les oscilloscopes à mémoires numériques rapides, 100 et 400 MHz.
- *LA*
Analyseurs logiques, de la classe compacte à la classe système, à hautes performances pour résoudre des problèmes de matériel et d'intégration matériel/logiciel.
- *REC*
Enregistreurs graphiques multicanaux et enregistreurs XY/t. Conditionneurs de signaux, conçus pour répondre à la plus grande variété de besoins tant dans le domaine industriel que scientifique.

Langues : anglais, français, allemand

Renseignements : M. Diraison / FI / 4585

Wednesday 24 September

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

New macroscopic forces?

by R. BARBIERI / CERN

Do we expect any new interaction with a range accessible to laboratory or geophysical macroscopic experiments? What would its discovery mean? On general grounds, the search for a deviation from Newton's law may shed light on the fate of symmetries, like baryon or lepton number. After a brief digression on ultra-weak forces mediated by quasi-Goldstone boson exchanges, I discuss a theoretical scheme, based on extended supergravity, where such phenomena might be incorporated. Although no realistic theory is at hand, a consistent toy-model shows the pos-

sibilities and the difficulties of the approach, originally suggested by J. Scherk. I also comment briefly on possible experiments.

Wednesday 24 September

LEP SEMINAR

at 14.30 hrs – LEP Auditorium
bldg 30, 7th floor

The LEP radio-frequency fibre-optic transmission and fast synchronization systems

by J. SLADEN / CERN-LEP

The transmission of the LEP RF signal from the LEP/SPS control centre to the RF stations will be via monomode fibre-optic links. The feedback scheme for compensating transmission path delay variations will be presented. Precise timing signals are derived from the RF for beam observation and synchronization to the SPS. For this, a 352 MHz bucket counter has been developed.

Wednesday 24 September

CERN COMPUTER SEMINAR

at 16.00 hrs – Auditorium*

Cray communications in the CERN environment

by Bryan T. KOCH / Networking and Communications, Cray Research, Inc.

The addition of new computing equipment often raises concern about the ability of the new systems to fit into existing environments. Cray Research been faced with this issue frequently, because its systems must fit into many diverse environments. Bryan Koch will present a high-level overview of Cray's communications products as they relate to the computing environment at CERN. He will discuss Cray's overall direction in communications, present an overview of Cray's 'Station' protocol, and describe features of Cray's networking product TCP/IP. A brief description of Cray's current developments in communications will close the presentation.

* Tea and coffee will be provided at 15.30 hrs.

Friday 26 September

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 11.00 hrs – TH Conference Room

New Z bosons from E_6

by F. ZWIRNER / CERN

The possibility of new E_6 neutral gauge bosons in the (100 GeV - few TeV) region is considered. After reviewing some theoretical motivations, a general parametrization is introduced : popular superstring-inspired models are recovered as particular cases. Constraints from the mixing with the standard Z can give limits on the mass of the extra Zs and predictions for their decay rate into $W^+ W^-$. Cross-sections and asymmetries for Drell-Yan production of lepton-antilepton pairs at present and planned hadron colliders are presented.

Wednesday 1 October

LEP SEMINAR

at 14.30 hrs – LEP Auditorium
bldg 30, 7th floor

Synchrotron radiation induced gas desorption in the LEP vacuum chambers

by A.G. MATHEWSON / CERN-LEP

TRAINING AND

EDUCATION ENSEIGNEMENT

ENSEIGNEMENT GENERAL

Tél. 2844

Jeudi 25 septembre

de 13.00 h à 13.30 h – Amphithéâtre

Science pour tous

par R. CARRERAS

ACADEMIC TRAINING

Tel. 2844-3364

6, 7, 8, 9 and 10 October

11.00 to 12.00 hrs - Auditorium

Superstrings

by L. IBANEZ & A. NEVEU / CERN

29, 30 et 31 octobre

11.00 à 12.00 h - Amphithéâtre

Introduction à la robotique (in French)

par A. FOURNIER / Université du Languedoc

3, 4, and 5 November

11.00 to 12.00 hrs - Auditorium

Future colliders – physics and machines

by C.H. LLEWELLYN SMITH / University of Oxford

11, 12, 13 and 14 November

11.00 to 12.00 hrs - Auditorium

Introduction to optical communication

by R. SALATHE / PTT, Berne

20 and 21 November

11.00 to 12.00 hrs - Auditorium

Cosmic rays open the field of particle physics

by M. CONVERSI / University of Rome

24, 25, 26, 27 and 28 November

11.00 to 12.00 hrs - Auditorium

Computer-aided engineering in mechanics and electronics

by R. DASSLER / CONTRAVES, Zurich
& P. DE WILDE / Technological University, Delft

3 and 4 December

11.00 to 12.00 hrs - Auditorium

**Epistemology and
Realism in quantum mechanics**

by K. POPPER / University of London

15, 16 and 17 December

11.00 to 12.00 hrs - Auditorium

**The statistics of very small samples
Bayesian and classical approach**

by F. JAMES / CERN

The abstract of the lectures, as well as any changes in the above details (dates, time, place, title, etc.) will be published in the CERN Bulletin and by Notices before each series of lectures.

PLASMA PHYSICS COURSE

23 September to end November

Every Tuesday and Thursday

from 15.30 to 17.15 hrs

PS Auditorium, bldg 6, 2-024

by Felix DOTHAN / CERN-PS

Presentation and audience

The course is an introduction to Plasma Physics for physicists and engineers not familiar with the subject.

Topics

Properties and behaviour of a gas of charged particles (a 'plasma'); various theoretical approaches; some gas discharges; electromagnetic waves in a plasma; a few applications to accelerators.

Material

A more detailed syllabus can be obtained from Felix Dothan / PS / 3071 or 3926. Lecture notes will be distributed during the course.

About the lecturer

F. Dothan is a Professor of Physics at the Hebrew University in Jerusalem. His background is in high voltage engineering and gas discharge physics.