

mi-novembre, sur une base volontaire, le début des entretiens annuels dans les cas où cette date conviendrait mieux au programme de travail de certaines divisions. L'Association du personnel ne s'est pas opposée à cette proposition, étant entendu que les entretiens commenceront par le haut de la hiérarchie et que l'avancement de la date de ces entretiens sera décidé par accord mutuel entre le superviseur et le supervisé.

3.4 .Année de congé annuel

L'Association du personnel a soulevé un problème pratique résultant des mesures de transition visant à changer la date du début de l'année de congé annuel, qui passera du 1^{er} avril au 1^{er} octobre. La discussion de cette question a été reportée à une réunion ultérieure du CCP.

COMMISSION PARITAIRE CONSULTATIVE DES RECOURS

La Commission paritaire consultative des Recours s'est réunie pour examiner le recours introduit par Madame Luce LEVRAT (Division PPE) contre la décision de ne pas lui accorder un changement de filière de carrière au 1^{er} juillet 1993.

L'intéressée n'ayant pas formulé d'objection, les recommandations de la Commission et la décision définitive du Directeur général sont portées à la connaissance du personnel, conformément à l'Article R VI 1.11 du Règlement du Personnel.

Ces documents seront donc affichés aux tableaux du Bâtiment de l'Administration (No 60) du 19 au 30 septembre 1994.

Division du Personnel
Tél. 4128

SEMINARS SEMINAIRES

Monday 19 to Wednesday 21 September

THIRD INTERNATIONAL WORKSHOP ON OPTIMIZATION AND INVERSE PROBLEMS IN ELECTROMAGNETISM

The aim of the Workshop is to discuss informally recent developments in mathematical optimization techniques and inverse field problem solving and their applications. Special emphasis is put on the combination of these methods with tools for numerical field calculation. It is also intended to formulate some benchmarks for optimization in electromagnetics.

Monday 19 September

09.00 to 11.00 hrs – Council Chamber

Session I, Inverse Problems I

W. Lord, S. Ross
Iowa State University, Ames, USA
NDT Diffusion and Wave-Based Inverse Problems

G. Chen, K. Miya
Nuclear Engineering Research Laboratory, Tokyo, Japan

and that the advancement of the date of the interviews will be decided by mutual agreement between supervisor and supervised.

3.4. Annual Leave Year

The Staff Association raised an implementation problem resulting from the transitional measures to change the annual leave year from 1 April to 1 October. Discussion of this matter was deferred to a later meeting of the SCC.

JOINT ADVISORY APPEALS BOARD

The Joint Advisory Appeals Board has examined the appeal lodged by Mrs Luce LEVRAT (PPE Division) against the non-award of a change of career path on 1 July 1993.

As the appellant has not objected, the recommendations of the Board and the final decision of the Director-General are brought to the notice of the personnel in accordance with Article R VI 1.11 of the Staff Regulations.

The relevant documents will therefore be posted on the notice boards of the Administration to 30 September 1994.

Personnel Division
Tel. 4128

An Inverse Approach to Reconstruction of Surface Shape of Cracks with Wavelet Analysis

M. Rudnicki, T. Jokinen, P. Neittaanmaki
Institute of Electrical Engineering, Warsaw, Poland
Helsinki University of Technology, Espoo, Finland
University of Jyväskylä, Jyväskylä, Finland
Artificial Neural Networks and Advanced Stochastic
Methodologies for Inverse Electromagnetic Modelling

11.15 to 12.45 hrs

Session II, Global Optimization I

A. Gottvald
Academy of Sciences of the CR, Brno, Czech Republic
Meta-optimization and Statistical Regularization in
Electromagnetics

M. Kaper, K. Hameyer
Technische Universität Berlin, Berlin, Germany
Katholieke Universiteit Leuven, Leuven, Belgium
A More Efficient and Reliable Method for Stochastic
Optimization

J.A. Vasconcelos, L. Krahenbuhl, A. Nicolas
Electrical Eng. Department, Brazil
Centre de Genie Electrique de Lyon, Lyon, France
Genetic Algorithm Coupled With the Augmented
Lagrangian Method for Design Optimization

14.00 to 15.30 hrs – Council Chamber

Session III, Inverse Problems II

M. Gramz

Technical University of Szczecin, Szczecin, Poland
Electrical Impedance Tomography with Rotating
Magnetic Field Excitation

T. Rymarczyk, J. Sikora

Technical University of Lubin, Lubin, Poland
Technical University of Warsaw, Poland
New Method of Nondestructive Testing of the Copper-
mine Ceiling

J. Pavo, K. Miya

Nuclear Engineering Research Laboratory, Tokyo, Japan
A Two-Step Optimization Process for the Reconstruction
of Crack Shape using Eddy Current Measurements

15.45 - 17.15 hrs – Council Chamber

Session IV, Global Optimization II

D. Dutta, C. Pal

Tokyo Denki Tokki Co. Ltd., Tokyo, Japan
Nissan Motor Corporation, Tokyo, Japan
Global Optimization of Electromagnets by
Random Tabu Search Techniques

S. Palko

Helsinki University of Technology, Espoo, Finland
The Application of Genetic Algorithm in a Design of a
New Slot Geometry for Cage Induction Motors

H.-B. Lee, H.-B. Jung, S.-Y. Hahn, C. Cheon, K.-S. Lee
Seoul National University, Seoul, Korea
Topological Optimization of H-plane Waveguide Tee
Junction Using Edge Finite Element Method

Tuesday 20 September

09.00 to 11.00 hrs – Council Chamber

Session V, Applications I

S. Russenschuck

CERN, Geneva, Switzerland
A Survey of Mathematical Optimization and Inverse
Problems in Electromagnetism - with Applications to the
Design of Superconducting Magnets

O. Mohammed, G.F. Uler

Florida International University, Miami, USA
An Integrated Optimization Environment for
Electromagnetics Applications

F. Meot

CERN, Geneva, Switzerland
The Ray-Tracing Code Zgoubi

G. Henneberger, B. Fahimi, A. Weber

RWTH Aachen, Aachen, Germany
Geometrical Optimization of a Switched Reluctance
Motor based on its FE Field Analysis

11.15 - 12.45 hrs – Council Chamber

Session VI, Applications II

G. Costanzo, M. Nervi, M. Repetto, F. Levati

Politecnico di Torino, Torino, Italy

Universita di Genova, Genova, Italy

Use of Automated Optimization Techniques in the
Design of the Magnetic System for a Cesium Frequency
Standard

M. Savelainen, J. Ikaheimo

Helsinki University of Technology, Espoo, Finland
Iron Circuit Optimization in MFISC Model Magnet

D. Dutta, C. Pal

Tokyo Denki Tokki Co. Ltd., Tokyo, Japan
Nissan Motor Corporation, Tokyo, Japan
Shape Optimization of Flexible Lattice Structure by
Continuum Model

S.-H. Hwang, H.-B. Lee, S.-Y. Hahn, I.-H. Park

Seoul National University, Seoul, Korea
Sensitivity Analysis of Induction Heating Systems for
Temperature Distribution Control

Wednesday 21 September

09.00 to 11.00 hrs – Council Chamber

Session VII, Numerical Methods

C. Paul, Ch. Magele, A. Klauser, G. Schonwetter,
K. Preis, W. Renhart, K.R. Richter
Graz University of Technology, Graz, Austria
Parallel computation of higher order evolution strategies

A. Kwiatkowska, M. Mitosz, J. Sikora

Politech. Lublin, Lublin, Poland
Material Derivative Concept for Optimal Shape Design:
One Dimensional Case

G. Kozlovsky

CERN, Geneva, Switzerland
High-Accuracy Adaptive Solution of Partial Differential
Equations

11.15 to 12.15 hrs – Council Chamber

Session VIII, Benchmark Problems

M. Kasper, O. Mohammed, S. Russenschuck

Technische Universität Berlin, Berlin, Germany
Florida International University, Miami, USA
CERN, Geneva, Switzerland
Different Optimization Procedures for the Design of
a Superferric Octupole

A. Gottvald, P. di Barba, A. Savini

Academy of Sciences of the CR, Brno, Czech Republic
University of Pavia, Pavia, Italy
Global Optimization of Loney's Solenoid:
A Benchmark Problem

Monday 19 September

PPE SEMINAR

at 16.30 hrs – Auditorium

**Recent results in the scalar meson sector
with the Crystal Barrel**

by Jens BROSE / University of Mainz

A huge statistics of different mesonic final states of antiproton
proton (deuteron) annihilation at rest and in flight has been
accumulated using the Crystal Barrel detector at LEAR. The
final states $\pi^0\pi^0\pi^0$, $\pi^0\pi^0\eta$, $\pi^0\eta\eta$, $\pi^0\eta\eta'$, $\pi^+\pi^-\pi^0$, $\pi^-\pi^0\pi^0n$,

$\pi^+\pi^-\pi^0\pi^0$ were selected and analysed using different dynamical assumptions. Special emphasis is given to the scalar sector where besides known resonances a new state at 1500 MeV in the decay modes $\pi^0\pi^0$, $\eta\eta$ and $\eta\eta'$ is observed. The decay branching ratios indicate its interpretation as glueball candidate or state with large gluonic admixture.

Tuesday 20 September

TECHNICAL PRESENTATION

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

Top down design tools add focus

by Ulrich ROEDDER / President Roedder GmbH

Roedder GmbH has gained through its years of expertise in the IC Design fields and the various products it distributes, extensive knowledge in IC Design and its problematics. With the ever increasing complexity of designs it is mandatory that more automatic tools be used to speed the time to market, to manage the design structure and cycle, and to focus the engineers' expertise. The correct tools focus the design from concept through to silicon.

Roedder will present :

- **Foresight** For system concept level simulations.
- **FlowHDL** For graphical entry and automatic HDL code generation.
- **ALTA** Design and simulation of DSP Systems
- **Zycad** For simulation acceleration, rapid prototyping & ASIC emulation.
- **OEA** Solutions for high speed interconnect modelling problems.

Information : S. Cannon / CN / 5036

Tuesday 20 September

TECHNICAL PRESENTATION

at 10.00 hrs – bldg 73/2-027

Workshop on key software technologies for the next ten years

by G. CASTELLI / Etnoteam (I)

Software development nowadays is not any more a matter of personal skill of the single programmer, but a more and more complex process based on rules and technologies well formulated. Furthermore, the diversity and heterogeneity of hardware platforms make the maintenance of what is already developed more complicated.

The presentation proposes a unique combination of the hottest subjects about software technologies:

- application portability: engineering or guesswork?
- complex interactive sensing systems
- towards software usability

showing how easy these matters can result, using the right tools and, of course, know-how.

G. Castelli is the Director of the Technology and Software Engineering division of Etnoteam, and a researcher at "Department of Information Science" at the University of Milan. He has been working on software technologies for more than 20 years, participating also in many European projects (ESPRIT). Etnoteam is a leading Italian software company founded in 1978, employing about 220 people, with a turnover of 30 billion Italian liras.

Language : English

Information : M. Diraison / FI-A / 4585

Wednesday 21 September

TECHNICAL PRESENTATION

08.30 to 17.30 hrs – car park bldg 63

VERO Products News, especially Power Supplies and Microsystems, including our new power supply generation, the EC-series (economy) and MMS (Modular Micro Systems), VMExcel, backplanes

by VERO Electronics GmbH (D)

Languages : English, German

Information : M. Diraison / FI-A / 4585

Wednesday 21 September

PS SEMINAR

at 11.00 hrs – PS Auditorium

Photon colliders

by Valery TELNOV / INP, Novosibirsk

Future linear colliders offer unique opportunities to study gamma-gamma and gamma-electron interactions. Using the laser backscattering method one can obtain gamma-gamma, gamma-e beams with the high energies and luminosities (comparable to that in electron-positron collisions or even higher). In this talk principles of photon colliders are described and various problems concerning the accelerator, laser, interaction region and luminosity are discussed. Some examples of physical processes are given.

Wednesday 21 September

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Evidence for quark-like objects and string forces in quantum antiferromagnets

by R. LAUGHLIN / Stanford University

Wednesday 21 September

INSTITUTION OF ELECTRICAL ENGINEERS LECTURE

at 16.30 hrs – Council Chamber

Saudi Arabian Oil Refinery Project

by Marcel BICHARA

Marcel Bichara will present the planning and implementation of a comprehensive communications infrastructure, which is part of the project of what is now the largest fully operating oil refinery in Saudi Arabia. The scope of the project included the construction of the refinery and a new town to house its staff and family. The talk will cover the description of the telephone, radio, television, fire detection, anti-sabotage as well as the microwaves linking the town and the remotely sited refinery to the Saudi Arabian Telecommunications Network. This lecture is particularly interesting for its widely different telecommunications aspects.

Jeudi 22 septembre

PRESENTATION TECHNIQUE

09.00-12.00 h et 14.00-16.00 h – bât. 17/1-007

Exposition et démonstration des vannes et accessoires EBRO pour applications industrielles

par BROER ABSPERRARMATUREN EST.
+ C0. KG (D/CH)

Divers modèles de vannes papillon, servomoteurs électriques et pneumatiques, robinets à boule seront présentés.

Langue : français

Renseignements : M. Diraison / FI-A / 4585

Thursday 22 September

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

The Z line-shape — 5 years later

by A. BLONDEL / ALEPH and Ecole Polytechnique, Palaiseau

The first physics run of LEP took place from 20 September to 9 October 1989 leading to the determination of the number of light neutrino species, with 3000 hadronic Z decays per experiment. The statistics are now 1000 times larger. Due to beam energy calibrations by resonant depolarization and high precision luminosity monitors, the Z mass is now known with a precision of 4×10^{-5} , the number of neutrinos to 2% of a family, the Z width with a precision of 1.5×10^{-3} , and the weak mixing angle with a precision of 2×10^{-3} . The experimental techniques will be reviewed and the averaged LEP results will be given. These data, through virtual radiative effects, allow a determination of the top quark mass of $177 \pm 11 \pm 18$ GeV, and begin to place limits on the Higgs boson mass.

* Tea & coffee will be served at 16.00 hrs.

Friday 23 September

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

CKM matrix – present status and future prospects

by A. ALI / CERN-TH and DESY, Hamburg

Constraints on the parameters of the quark flavour mixing matrix V_{CKM} are presented incorporating new and old experimental information. The new experimental input is :

- (i) $m_t = 174 \pm 10^{+13}_{-12}$ GeV (CDF),
- (ii) $\Delta M_d = 0.500 \pm 0.033$ (ps) $^{-1}$ (LEP, ARGUS & CLEO),
- (iii) $\Delta M_s > 6.0$ (ps) $^{-1}$ (ALEPH),
- (iv) $B(B \rightarrow X_s \gamma) = (2.32 \pm 0.67) \times 10^{-4}$ (CLEO).

In addition, the following quantities are also used in the CKM fits :

- (v) $|\epsilon|$, the CP-violating parameter in K decays,
- (vi) the matrix elements $|V_{cb}|$ and $|V_{ub}|$,
- (vii) B-hadron lifetimes.

The resulting picture is consistent with the CKM matrix being unitary. However, there are still large uncertainties in the CKM parameter space mainly due to theoretical uncertainties. Present data do somewhat restrict the allowed values of the coupling constant product $|B_d| \sqrt{\hat{B}_{B_d}}$ and the renormalization-scale-invariant bag constant $\hat{B}_K$. With the updated CKM matrix the currently-allowed range of the ratio $|V_{td}|/|V_{ts}|$, as well as the standard model predictions for the B_s^0 - B_s^0 mixing parameter x_s , and the quantities $\sin 2\alpha$, $\sin 2\beta$ and $\sin^2 \gamma$, which characterize the CP-asymmetries in B-decays, are presented. The role of the unitarity triangle in precision studies of the Standard Model is emphasized. Suggestions for determining the matrix element $|V_{td}|$ from the flavour-changing neutral current rare B decays and the mixing ratio $\Delta M_d / \Delta M_s$ will also be discussed.

Monday 26 September

TECHNICAL PRESENTATION

at 15.00 hrs – CN Auditorium
bldg 31/3-005

Digital's ATM Strategy

by James E. KUENZEL / High Performance Networks Group, Digital Equipment Corporation, Littleton USA

Asynchronous Transfer Mode (ATM) offers exciting possibilities for the complex, distributed network of the 1990's. The presentation will focus on Digital's ATM product rollout and strategy. Digital's ATM rollout includes a series of products with deliveries that started in June of this year. The Digital strategy includes a comprehensive vision and implementation schedule that is consistent with the developments in the market place.

Information : S. Cannon / CN / 5036

Tuesday 27 September

TECHNICAL PRESENTATION

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

High Performance Analog Data Acquisition

by Pentland Systems Ltd.

Information : S. Cannon / CN / 5036

Tuesday 27 September

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

Penguin-decays of the bottom quark

by E. H. THORNDIKE / University of Rochester, USA

Wednesday 28 September

SYMPOSIUM IN HONOUR OF ANDRÉ MARTIN'S 65TH BIRTHDAY

at 09.30 hrs – Auditorium

- 09.30-12.30 K. CHADAN : Bound states and scattering with potentials
W. THIRRING : Stability of Matter
T. KINOSHITA : Precise determinations of the fine structure constant
Lunch
- 14.30-17.30 J. STUBBE : Order and spacing of energy levels
J.L. ROSNER : Charm and beauty in particle physics
N.N. KHURI : General properties of scattering amplitudes, past and future

Thursday 29 September

TECHNICAL PRESENTATION

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

The quest for general purpose parallel computing

by Burton SMITH / chief scientist, TERA COMPUTER Co., Seattle USA

Information : S. Cannon / CN / 5036