

in various industries such as aeronautics, automobile, electronics and energy. In September 1982, Control Data announced PCD (Programmerless Courseware Development) which allows an author to create courses in standalone mode without a previous knowledge of programming. PCD consists of a set of editors (pedagogical models) addressing various training areas (tutorials, simulation, etc.).

Thursday 30 June

CERN COLLOQUIUM

at 16.30 hrs - Auditorium

Coherence and chaos in nonlinear dynamical systems

by F.T. ARECCHI / Istituto Nazionale di Ottica and University of Florence

Coherent pattern formation, or morphogenesis, is peculiar of nonequilibrium systems, where, for suitable excitations at the boundary, the symmetry of the equilibrium state is broken. This is the analog of a phase transition in an equilibrium system. Morphogenesis is easily measurable for e.m. fields (laser) by the method of photon statistics. Increasing the excitation at the boundary, many independent patterns can coexist, giving rise to a complex structure (chaos or turbulence). A recently discovered mechanism, that is, hopping among many attractors in multistable systems, is shown to introduce long time tails in the correlation functions and hence low frequency spectral divergences, which were absent in the standard formulation of nonequilibrium statistical mechanics. Implications are shown in several areas of physics.

*) Tea and coffee will be provided at 16.00 hrs.

Monday 4 July

EP SEMINAR

at 17.00 hrs – Auditorium

New effects in 'low p_T ' physics in the ISR energy range

by M. SZCZEKOWSKI / CERN-EP

Recent results from the Split Field Magnet detector at the CERN ISR will be presented :

1. *Studies of transverse momentum spectra at low p_T show that the effect of the increase of an average p_T with the multiplicity of charged particles, reported recently at the CERN proton-antiproton collider is observed also at lower energies in proton-proton and proton-antiproton collisions.*
2. *There are non-trivial variations of the average p_T from event to event in proton-proton and alpha-alpha interactions.*

Tuesday 5 July

PRESENTATION

at 16.00 hrs – DD Amphitheatre
(Bldg. 31, 3rd floor)

CYBERNET Applications

by W. PANNEN / Control Data (Suisse)

Tuesday 5 July

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

Large transverse momentum jets at the collider in the UA2 Experiment

by P. JENNI / CERN-EP

Wednesday 6 July

CAS ACCELERATOR SEMINAR

at 14.30 hrs – Auditorium

Test of the Superconducting CERN Acceleration Cavity at PETRA

by H. LENGELER / CERN-EF

POUR INFORMATION / FOR INFORMATION

Vendredi 1 juillet

SÉMINAIRE DU LAPP

à 10.30 h – Amphithéâtre du LAPP

Supra-conductivité, détecteur à micro-billes

par L. GONZALEZ-MESTRES et
D. PERRET-GALLIX

Laboratoire d'Annecy-le-Vieux de
Physique des Particules
Chemin de Bellevue - B.P. 909
F – 74019 ANNECY-LE-VIEUX

TRAINING AND EDUCATION ENSEIGNEMENT

ENSEIGNEMENT GÉNÉRAL Tél. 2844

Jeudi 30 juin

de 13.00 h à 13.30 h – Amphithéâtre

Science pour tous

par R. CARRERAS

*Cet exposé est le dernier du 3^e trimestre 1982/1983.
Le prochain exposé aura lieu en octobre 1983.*

Cours de troisième cycle

THÉORIE DE LA BIFURCATION

Objectifs

L'objectif général de ce cours est la promotion de la recherche.

En particulier ce cours devrait contribuer

- à la relève scientifique (offrir aux jeunes mathématiciens une introduction à la recherche),
- à élargir les connaissances des chercheurs avancés,
- à faciliter aux ingénieurs et physiciens intéressés l'accès à une théorie mathématique importante et 'applicable',
- à encourager le dialogue entre mathématiciens et 'utilisateurs' des mathématiques.

Programme général

L'année académique est divisée en trois trimestres :

1^{er} trimestre : cours de base avec exercices

'THÉORIE DE LA BIFURCATION',

Charles STUART, DMA,

3 h. par semaine.

2^e trimestre : chapitres choisis

1. 'BIFURCATION DE HOPF',
Bruno ZWAHLEN

2. 'MÉTHODES VARIATIONNELLES',
Bernard DACAROGNA

3. 'MÉTHODES NUMÉRIQUES',
Jacques RAPPAZ
3 h. par semaine.

3^e trimestre : cours avancés

1. 'SYMMETRIES IN
BIFURCATION THEORY'
David STATTINGER, Univ. of Minnesota,
Minneapolis, USA

2. 'BIFURCATION THEORY AND
REACTION DIFFUSION EQUATIONS'
Kenneth BROWN, Heriot-Watt University,
Edinburgh, Ecosse

3. 'MÉTHODES NUMÉRIQUES POUR
DES PROBLÈMES NON LINÉAIRES
À FRONTIÈRE LIBRE'
Nabil NASSIF, Université américaine de
Beyrouth, Liban
2 à 3 h. par semaine.

Informations

La finance d'inscription est fixée à Fr. 162.-.

Pour des informations supplémentaires,
s'adresser à :

EPFL – Département de Mathématiques
1015 LAUSANNE

M^{me} De Carmine, tél. 021/47 25 55.

INFORMATIONS

GENERALES

GENERAL INFORMATION

SUGGESTIONS AWARD – A NEW RULE

In order to encourage the staff to bring up more ideas designed to introduce or increase savings and productivity, the Suggestions Co-ordinator has formulated a new and more liberal rule, to which the Directorate have agreed. It is :

1. Suggestions for saving may be made on any CERN activity and they may be related to the staff members work but should be such as to be **outside** what could **reasonably** be expected in the **normal course of work and duties**. The overriding consideration will be the benefit of the Organization. Suggestions should be made in writing on one or two sides of paper and be addressed to the Director-General.

For your convenience, we repeat the remaining and unchanged rules.

2. The proposal should at least :
 - define the object, be it a technical installation or a procedure on which savings in money, time or energy are to be made;
 - say if there is to be an initial investment to achieve the savings proposed and what it is;
 - clearly describe how the savings are to be achieved.

It would be desirable if the proposition can be supported by drawings, tables or calculations; if available these should be appended.

3. Proposals will be investigated by two or three experts in the activity proposed. If these considerations are at all positive, the affair will be brought to the attention of the service involved. From this a final decision can be made on the validity of the proposition. An attempt will be made to give an answer to the proposer as quickly as possible. In the event of a negative answer, a brief statement of the reasons will be made.
4. If the proposal is accepted and effectively implemented, the proposer will receive a reward of 500 Swiss Francs or a multiple of that sum up to a maximum of 2,000 Swiss Francs. The successful cases will be reported in the Weekly Bulletin.
5. G.L. Munday will continue, for the time being, to co-ordinate the scheme, appoint on an *ad hoc* basis the necessary experts and prepare the decisions on validity and appropriate reward. The final decision will be taken by the Director-General.

ON RECHERCHE...

La personne qui aurait été importunée au puits BHA4 par la présence d'un petit établi roulant équipé d'une layette verte (3 tiroirs) ayant sur sa table, (attaché par un câble acier verrouillé), un cric à roulette et un enrouleur 220 volts, est priée de bien vouloir nous informer du lieu où se trouve actuellement cet ensemble. (R. Currat, EF, tél. 2096.)