

## Jeudi 6 Juin

### SEMINAIRE TIS

à 14.30 h – Salle de Conférence du PS

Maladies professionnelles au CERN

par le Dr. J.-P. DISS

## TRAINING AND EDUCATION ENSEIGNEMENT

### ENSEIGNEMENT GENERAL

Tél. 2844

#### Jeudi 30 mai

de 13.00 h à 13.30 h – Amphithéâtre

Science pour tous

par R. CARRERAS

### ACADEMIC TRAINING

Tel. 2844-3364

#### 29, 30 and 31 May

11.00 to 12.00 hrs – Auditorium

Highlights on proton-antiproton collider results

by L. DI LELLA /CERN

#### 3, 4 and 5 June

3 and 4 June : 11.00 to 12.00 hrs

5 June : 10.00 to 11.00 hrs

LEP Auditorium (last floor of bldg. 30)

Hamiltonian mechanics

by J.S. BELL /CERN

*Hamilton's equations; Hamilton's principle; Lagrange's equations; Poisson brackets; Lagrange brackets; Symplectic transformations; Poincaré invariant; Liouville's theorem; Canonical transformations; Angle and action variables; Perturbation theory. These lectures are intended for accelerator physicists.*

#### 5, 6 and 7 June

11.00 to 12.00 hrs – Auditorium

Physics at LEAR

by R. ARMENTEROS and P. LEFEVRE /  
CERN

*Lecture 1, by P. LEFEVRE*

*Short description of the Lear machine and its experimental area. Indications of present performances. Overview of options for the future.*

*Lectures 2 & 3, by R. ARMENTEROS*

*The lectures will concentrate essentially in a description of the physics aims of the different experiments. They*

*are still in different phases of data taking and consequently few final results will be presented. An effort will be made, nevertheless, to describe how the analyses are progressing.*

### LECTURE NOTES

Participants to the lectures on 'e<sup>+</sup>e<sup>-</sup> physics', by G. FLÜGGE, are informed that the copies of the transparencies have been printed and may be obtained (**on self-service**) in the Entrance Hall of Building 54 (SB Division building).

### INFORMATICS TUTORIAL 1985-3

#### 24 to 27 June

09.00 to 12.00 hrs and from 14 to 17.00 hrs

Prolog for expert systems

by Jacques MENU / Department of Mathematics, EPF Lausanne

*The programming language PROLOG was defined by a team led by A. Colmerauer in Marseille in 1972, influenced by the work of J.A. Robinson and R.A. Kowalski. It relies on the key idea that the logical specification of a problem may be used as a program to solve the problem itself. Interest in PROLOG has boomed since it was selected for the Japanese 5<sup>th</sup> Generation Computer project in 1981. Dialects of the language are available on various computer systems and are used for applications such as natural language interfaces, logical circuit analysis, compilers and expert systems.*

*Expert Systems are computer programs performing automatic reasoning in a well defined field. Knowledge is usually expressed as a set of rules, independent from the reasoning mechanism, and the system can perform deductions based on the knowledge it has and information provided by the user. The knowledge base can easily be modified, and the system is also able to explain how it has derived the answer.*

*This course will present the PROLOG language through examples, review traditional techniques of Artificial Intelligence and introduce the fundamentals of Expert Systems. The lectures will be combined with practice with C-Prolog under Vax VMS. Some experience in high level language programming is required.*

*The course material will include the book 'PROGRAMMING IN PROLOG' by W.F. Clocksin and C.S. Mellish, copy of the lecture notes and the C-Prolog User's Manual.*

*To register, please contact Mrs Monique Antal, DD Division, phone 2396, before June 11. The attendance will be limited to 32.*

*On June 19 at 16.00 hrs J.P. Muller will give a DD seminar on 'Expert Systems : future and reality'.*

*Jacques MENU is Assistant Professor at the Department of Mathematics of the EPFL. He graduated in Mathematics from EPFL in 1977 and received a PhD in Computer Science from the same school in 1983. He developed two compilers for the high level programming language NEWTON. His current interests include logic programming, automated reasoning, compilation and man-machine interfaces.*