

TRAINING AND EDUCATION ENSEIGNEMENT

ACADEMIC TRAINING

Tél. 2844-3674-3364

11 & 12 December

11.00 to 12.00 hrs – Auditorium
Accelerators for the 21st Century
by E.J.N. WILSON / CERN-PS

18, 19, 20, 21 & 22 December

11.00 to 12.00 hrs – Auditorium
**Differential algebra and its use in
accelerator theory**
by M. BERZ / Lawrence Berkeley Laboratory

Differential algebraic techniques allow the compilation of transfer maps describing accelerators and beamlines in a very general and efficient manner. After an overview, we begin with a discussion of the

mathematical tools associated with the specific differential algebras we are using here, including an excursion into a theory of infinitesimals and non-archimedean analysis. This is followed the different ways to use the formalism for the computation of phase space maps. As a first application it is shown how the maps can be used for efficient symplectic tracking in circular machines. The real virtues of the technique, however, become apparent in the ease and simplicity with which analytic studies of the accelerator can be performed. These include the direct computation of chromaticities and non-linear tune-shifts, non-linear invariants and normal forms, all of which can also be studied in their dependence on certain parameters of the system. A detailed discussion of the computational aspects of using differential algebraic techniques will also be given. This includes the efficient implementation of the fundamental operations and functions, the use of a pre-compiler to use the method in existing codes, and finally the new general purpose design and analysis code CO SY INFINITY.

1989-1990 ACADEMIC TRAINING PROGRAMME

2nd TERM

15, 16, 17 & 18 January

11.00 to 12 hrs – Auditorium
New physics at LEP and future machines
by R. BARBIERI / Scuola Normale Superiore,
Pisa

5, 6, 7 & 8 February

11.00 to 12.00 hrs – Auditorium
Elementary introduction to strings
by S. FERRARA / CERN-TH

14, 15 & 16 February

11.00 to 12.00 hrs – Auditorium
Design of LHC
by J. GAREYTE / CERN-SPS

19, 20, 21, 22 & 23 February

11.00 to 12.00 hrs – Auditorium
Non accelerator physics
by B. DEGRANGE / Ecole Polytechnique,
Palaiseau

12, 13 & 14 March

11.00 to 12.00 hrs – Auditorium
Topology in contemporary mathematical physics
by M. ATIYAH / University of Oxford

19, 20 & 21 March

11.00 to 12.00 hrs – Auditorium
**Radiation risk – past experience and future
trends**
by W. JACOBI / GSF, Institut für
Strahlenschutz, Neuherberg

26, 28, 29 & 30 March

11.00 to 12.00 hrs – Auditorium
Physics of B-mesons and B-meson factories
by K.R. SCHUBERT / University of Karlsruhe

The lectures are open to all those interested, without application.

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

Secretariat : tel. 2844-3674-3364

INFORMATICS TUTORIALS 1989

Title	: VAX/VMS management and performance			
By	: Clay PRESTIA / Salcom Rabbit Software			
When	: Monday 11 December & Tuesday 12 December (all day)			
Where	: DD Auditorium, bldg 31, top floor			
Agenda	Monday	09.00-12.00	VMS Tuning	2 hours
			Input/Output	1 hour
	13.30-18.00	The VAX CPU		1 hour
		Operations Management		1 hour
		VMS Memory Management		30 minutes
		Data Gathering and Analysis		2 hours
	Tuesday	09.00-12.00	Programming Techniques	1 hour
			Terminal I/O	1 hour
			The Need for Capacity Planning	1 hour
	13.30-18.00	Components of Performance		2 hours
		Rabbit Software Products		1.5 hours
		Questionnaire and Questions		1 hour

Registration : There is no limit on the number of attendees except for the size of the room (approx. 100 places) but we should like to know in advance how many people to expect. Therefore, if you intend to come to all or part of this Tutorial, please send a mail to Alan Silverman (VXCERN::ALAN or ALAN@VXCERN.CERN.CH)

Lecturer : Clay Prestia is the founder of the RAXCO company which offers various software products in the area of VMS performance optimization, disc backup and defragmentation, accounting, etc. Mr Prestia himself gives such tutorials regularly and is an acknowledged expert in the field.

SERVICE D'APPUI LINGUISTIQUE LINGUISTIC SUPPORT SERVICE

Secrétariat (après-midi seulement) : 31.27
Secretariat (afternoon only) : 31.27

FRENCH COURSES

Next term : 15 January to 6 April 1990

Applications forms are available in building 54, ground floor (Education Services) opposite office R.001.

These courses are open to all persons working on the CERN site, and to their spouses.

1. General language courses : 3 to 7 hours a week according to student need and level (9 levels).

2. Written French : 2 hours a week (1 courses)

89FR1E: Spelling and grammar (exercices, dictation of letters, etc.) course for non-native speakers having a good level of oral expression.

N.B. For the written French course write the code 89FR1E under the heading "Remarks" of the application form.

Further information about the courses can be obtained from the Language Courses Secretariat : Building 54, Office R.001, tel. 3127 (afternoons only).

COURS D'ANGLAIS

Il reste quelques places disponibles pour les cours d'anglais du prochain trimestre (du 15 janvier au 6 avril 1990).

Si vous êtes intéressé(e) veuillez contacter immédiatement :

Ulrich LIPTOW, Bât. 54-R-027, tél : 2957

INFORMATIONS GENERALES GENERAL INFORMATION

PUBLICATION DU BULLETIN DE FIN D'ANNEE

La dernière édition (no. 51-52/89 et 1/90) du Bulletin hebdomadaire de l'année 1989 paraîtra, sinon le vendredi 15 décembre, en tout cas le plus rapidement possible dès la fin des dernières réunions des Comités de décembre, et couvrira les événements au CERN des périodes des 18-22 décembre 1989 et 2-5 janvier 1990.

Les annonces pour publication dans cette dernière édition devront parvenir à la Section Publications, ou à l'Association du Personnel (selon le cas) avant midi, le mardi 12 décembre.

Section des Publications
Tél. 3475

END-OF-YEAR PUBLICATION OF WEEKLY BULLETIN

The final edition (no. 51-52/89 and 1/90) of the Weekly Bulletin for 1989 will appear on Friday 15 December (or as soon as possible after the December Committee Meetings), and will cover events at CERN during the periods 18-22 December 1989 and 2-5 January 1990.

Announcements for publication in this issue should reach the Publications Section or the Staff Association (as appropriate) by noon on Tuesday 12 December.

Publications Section
Tel. 3475

ASSURANCE VIE COLLECTIVE FACULTATIVE

Les membres du personnel qui ont été assurés contre le risque de décès par le contrat cité en référence durant la période du 1.7.88 au 30.6.1989 recevront, avec leur traitement de décembre 1989, la quote-part qui leur échoit de la participation au bénéfice afférente à cette période.

Division des Finances

COLLECTIVE LIFE INSURANCE (OPTIONAL)

Members of the personnel insured under the above insurance during the period 1.7.88 to 30.6.1989 will receive, with their December salary, their share of the profits distribution relating to that period.

Finance Division

CENTRAL TELEPHONIQUE STK

Un nouveau logiciel a été installé dans le central téléphonique numérique STK le 21 novembre. Veuillez prendre note de ce qui suit :

1. Tonalités

Les tonalités émises par les centraux Hasler et STK sont maintenant identiques.

STK TELEPHONE EXCHANGE

New software was installed in the STK digital telephone exchange on 21 November. Please note the following points :

1. Dial tones

The dial tone on both the Hasler and the STK exchanges are now the same.