



Information sur les cours, dates et places disponibles sur WWW:
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<http://www.cern.ch/Training/>

**ENSEIGNEMENT ACADEMIQUE
ACADEMIC TRAINING**

F. Benz Secretariat ☎ 73127
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LECTURE SERIES

4, 5, 6, 7 & 8 May

11.00 to 12.00 hrs – Auditorium

Introduction to superconductivity

by P. DARRIULAT / CERN-EP

The lecture series will address physicists, such as particle and nuclear physicists, familiar with non-relativistic quantum mechanics but not with solid state physics. The aim of this introduction to low temperature superconductivity is to give sufficient bases to the student for him/her to be

able to access the scientific literature on this field. The five lectures will cover the following topics :

1. Normal metals, free electron gas, chambers equation
2. Cooper pairs, the BCS ground state, quasi particle excitations
3. DC superconductivity, Meissner state, dirty superconductors
4. Self consistent approach, Ginsburg Landau equations, Abrikosov fluxon lattice
5. Josephson effects, high temperature superconductivity

**PLACES DISPONIBLES
PLACES AVAILABLE**

Plusieurs cours prévus peuvent encore accueillir quelques participants. Vous les trouverez dans la liste ci-dessous.

Some places are still available in forthcoming courses. These courses are indicated underneath.

Programming in JAVA level 1 – 2 days	4-5.5.98
Programming in JAVA level 2 – 3 days	6-8.5.98
Programmation en JAVA niveau 2 – 3 jours	18-20.5.98
Objectivity /DB for C++ Developers – 3 days	26-28.5.98
An Overview of the JAVA programming language – 1 day	2.6.98
Introduction au PC du CERN avec Windows 95 – 4 demi-journées	23-26.6.98

Si vous désirez participer à l'un de ces cours, inscrivez-vous électroniquement en direct depuis les pages de description des cours dans le Web que vous trouvez à l'adresse :

<http://www.cern.ch/Training/>

ou remplissez une "demande de formation" disponible auprès du Secrétariat de votre Division ou de votre DTO (Délégué divisionnaire à la formation). Les places seront attribuées dans l'ordre de réception des inscriptions.

If you wish to participate to one of these courses, please apply electronically directly from the course description pages that can be found on the Web at : <http://www.cern.ch/Training/> or fill in an "application for training" form available from your Divisional Secretariat or from your DTO (Divisional Training Officer). Applications will be accepted in the order of their receipt.

**ENSEIGNEMENT TECHNIQUE
TECHNICAL TRAINING**

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**DAMAGE MECHANICS
Didier Marquis – CERN &
Ecole Normale Supérieure de Cachan**

The basic notions and concepts of Continuum Damage Mechanics (CDM) are presented. The objective of CDM is to take into account in mechanical analysis of structures the influence of progressive degradation due to different loading (creep, fatigue, plasticity, etc.). CDM allows to determine for a structure :

- the residual strength
- the conditions for crack initiation
- the residual stiffness
- the life duration

The programme of the sessions will be devoted to :

- 30.4.1998** : Introduction to CDM. Mechanisms of damage
- 14.5.1998** : Evaluation and measurements of damage. Scalar and tensorial damage variables
- 28.5.1998** : Introduction of damage in a constitutive law. Evolution laws for brittle, creep, ductile, fatigue damages.
- 4.6.1998** : Structural analysis with damage mechanics. Statistical approach to rupture.

All sessions will take place as follows :

from 11.00 to 12.00 in room 11, barrack 593

These sessions are free of charge and no prior application is needed