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**ACADEMIC TRAINING  
ENSEIGNEMENT ACADEMIC**

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**LECTURE SERIES**

**23, 24, 25, 26 & 27 February**

11.00 to 12.00 hrs – Auditorium

**The Standard Electroweak Theory**

by G. ALTARELLI / CERN-TH

Introduction. Structure of gauge theories. The QED and QCD examples. Chiral theories. The electroweak theory. Spontaneous symmetry breaking. The Higgs mechanism. Gauge boson and fermion masses. Yukawa couplings. Charges current couplings. The Cabibbo-Kobayashi-Maskawa matrix and CP violation. Neutral current couplings. The Glashow-Iliopoulos-Maiani mechanism. Gauge boson and Higgs couplings. Radiative corrections and loops. Cancellation of the chiral anomaly. Limits on the Higgs mass. Comparison with experiment. Outlook.

**INFORMATIONS  
GENERALES  
GENERAL INFORMATION**

**AVIS A LA CLIENTELE DU RESTAURANT NO. 1  
(COOP), Bât. 501 - Site de Meyrin**

Pour satisfaire à une demande pressante de la part de la clientèle, notamment des Utilisateurs du CERN, des travaux de réaménagement partiel de la distribution des plats chauds auront lieu entre jeudi 26 février et samedi 14 mars 1998.

Ces travaux sont financés par le concessionnaire dans le but non seulement d'améliorer la qualité de l'équipement mais surtout de créer un coin grillades qui permettra de varier davantage ses prestations y compris le soir et le week-end.

Tout sera mis en oeuvre pour limiter les inconvénients à la clientèle, surtout en matière de bruit pendant les heures des repas.

La 'COOP' et le Comité de Surveillance des Restaurants remercient par ailleurs tous les clients de leur patience et indulgence pendant cette période et restent persuadés qu'ils profiteront pleinement des nouvelles prestations dès la fin des travaux.

Comité de Surveillance des  
Restaurants, tél. 77551

**LECTURE SERIES**

**2, 3, 4, 5 & 6 March**

11.00 to 12.00 hrs – Council Chamber

**The cosmic large-scale structure, dark  
matter and the origin of galaxies**

by C. FRENK / Durham University, GB

In this series of lectures, I will review the main events and processes which are thought to have led to the build of structure in the Universe. First, I will provide an overview of some basic ideas such as inflation, Big Bang nucleosynthesis, the microwave background radiation and gravitational instability. I will then discuss the evidence for dark matter in the universe and current ideas on the nature and amount of this dark matter, including their consequences for the values of the fundamental cosmological parameters. Next, I will review the processes that give rise to the cosmic large-scale structure, starting with a discussion of the main fluctuation damping mechanisms at early times and finishing with a description of the non-linear phases of evolution. I will discuss how these calculations compare with observations and present the current status of competing cosmological models. Finally I will summarize the most recent and very exciting developments in observational and theoretical studies of galaxy formation, including the discovery of primordial galaxies.

**THE QUARK MACHINES**

This new book on CERN and its work, by Gordon Fraser and published by the UK Institute of Physics, is on sale at the Reception Shop, Building 33, price 30 SFr.

**NOTICE TO USERS OF RESTAURANT NO. 1 (COOP),  
Building 501 - Meyrin site**

In response to insistent requests from the clientèle, in particular CERN Users, work is due to start on the partial transformation of the hot meal distribution system on Thursday, February 26, 1998 and is expected to be completed by Saturday, March 14, 1998.

These transformations are financed by the concession-holder not only to improve the quality of the equipment but in particular to install facilities for grilling meat and fish, thereby increasing the variety of dishes on offer, including in the evening and at week-ends.

Every effort will be made to minimise inconvenience, especially with respect to noise at meal-times.

The 'COOP' and the Restaurant Supervisory Committee thank all clients for their patience and indulgence during this period and trust that they will take full advantage of the new facilities as soon as the work is completed.

Restaurant Supervisory  
Committee, tel. 77551